Cardiovascular Issues in Latina Women: Focus on Prevention

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Director, Women’s Cardiovascular Medicine Program
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Objectives

- Review Burden of CVD in Women
- Define the Risk Categories
- Discuss Treatment Recommendations
- Lessons from our Research
- Discussion
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Leading Causes of Death for All Males and Females

CVD & other major causes of death for all males and females (United States: 2008)

A indicates CVD plus congenital CVD (ICD-10 I00-I99, Q20-Q28); B, cancer (C00-C97); C, accidents (V01-X59,Y85-Y86); D, CLRD (J40-J47); E, diabetes mellitus (E10-E14); F, Alzheimer disease (G30). Source: NCHS and NHLBI.
Heart disease is also the Leading Cause of Death for Latinos

![Bar chart showing the percent of total deaths by gender for different categories.](chart.png)
Incidence of CVD by Age and Sex

![Graph showing the incidence of CVD by age and sex. The graph displays the number of cases per 1000 person years for different age groups and gender. The data indicates a higher incidence of CVD among older age groups, particularly for men.](image-url)
Prevalence of CVD by Age and Sex

![Bar chart showing prevalence of CVD by age and sex](chart.png)
## Sex/Gender Differences in CVD Burden (AHA, 2008)

<table>
<thead>
<tr>
<th></th>
<th>MEN</th>
<th>WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remaining lifetime risk at age 40</td>
<td>2/3</td>
<td>1/2</td>
</tr>
<tr>
<td>CVD (CHD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deaths</td>
<td>391,886 (216,050)</td>
<td>421,918 (190,301)</td>
</tr>
<tr>
<td>Prevalence</td>
<td>39.9 M (37.4%)</td>
<td>42.7 M (35%)</td>
</tr>
<tr>
<td>Latinos</td>
<td>30.7%</td>
<td>30.9%</td>
</tr>
<tr>
<td>CVA</td>
<td></td>
<td></td>
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<tr>
<td>Deaths</td>
<td>216,050</td>
<td>190,301</td>
</tr>
<tr>
<td>Prevalence</td>
<td>2.8M (2.7%)</td>
<td>4.2M (3.3%)</td>
</tr>
<tr>
<td>CHF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevalence</td>
<td>3.1M (3%)</td>
<td>2.6 M (2%)</td>
</tr>
</tbody>
</table>
What Does this Mean for Women? (AHA)

- More women die of heart disease than men
- One death per minute
- One in 25 female deaths from breast CA; one in 2 from heart disease (2008)
- Death rates are increasing for younger women (age 35-44)
- Women age >45 are less likely than men to survive a first heart attack (74% vs 81%)
  - younger women fare worse (42% die w/in 1 yr of MI vs 24% of men)
- Women of color and of low SES status are disproportionately affected (28% higher death rates)
National Distribution of Heart Disease Deaths

Heart Disease Death Rates, 2000-2006
Adults Ages 35+, by County

Age-Adjusted Average Annual
Deaths per 100,000

195 - 362
363 - 430
431 - 473
474 - 522
523 - 547
Insufficient Data

Number of Counties
632
648
629
624
608
2

Rates are spatially smoothed to enhance the stability of rates in counties with small populations.

ICD-10 codes for heart disease: I00-I09, I11, I13, I20-I25

Hispanics in the U.S.
(U.S. Census Bureau)

- 62% Mexican American
- 13% Puerto Rican
- 5% Cuban American
- 12% Central and South America
- 8% Other

-2/5 of Hispanics in the U. S. were not born in the U.S.

National Distribution of Heart Disease Deaths in Latinos and Women

Heart Disease Death Rates, 2000-2006
Hispanics Ages 35+, by County

Heart Disease Death Rates, 2000-2006
Women Ages 35+, by County

Ratios are spatially smoothed to enhance the visibility of areas in counties with small populations.

What Does this Mean for Latinos?

- The population of individuals aged 65 and older is growing rapidly as well as becoming more diverse.
- Latinos aged 65 and older are estimated to be the largest racial/ethnic minority in this age group by 2019, and women outlive men.
- This will lead to further diversity in the cardiovascular disease population, especially for Latina women.
- There are a number of vascular determinants to dementia and cognitive decline, with increased risk in Latinos.
CVD Mortality Trends

Cardiovascular disease mortality trends for males and females (United States: 1979–2008)

CVD excludes congenital cardiovascular defects (ICD-10 I00-I99). The overall comparability for cardiovascular disease between the International Classification of Diseases, 9th Revision (1979–1998) and International Classification of Diseases, 10th Revision (1999–2008) is 0.9962. No comparability ratios were applied. Source: National Center for Health Statistics.
Multiple Barriers to Heart Health in Women

- Recognized by less than half of all women, and by even fewer racial/ethnic minority women

  (Mochari, et.al. J Women’s Health, 2012)

- Misperception that ‘It’s a man’s disease’; 36% of women do not perceive themselves as at risk

- Women have poor knowledge of own CAD risk factors

- Failure to link risk factors to CAD

- 25% report lack of emphasis by health care providers

- Lack of health care provider emphasis on ‘how to’ make lifestyle changes

Social Determinants of Health

Factors in the social environment that contribute to or detract from the health of individuals and communities

- Socioeconomic status
- Transportation
- Housing
- Access to services
- Bias (e.g., race, gender, or class)
- Social or environmental stressors
- Others
Disparities in Heart Care for Women

- **Under recognized** as the leading killer
  - 46% of women are unaware
  - Only 53% would call 911 for symptoms
  - 8% of PCPs, 17% of cardiologists recognize greater death toll for women

- **Under diagnosed**
  - More subtle symptoms; other symptoms may predominate
  - If symptoms, often not referred for further studies

- **Under treated**, even if with risk factors, post MI, or known CAD

- **Higher mortality** - age adjusted

--Yet...It is estimated that up to 90% of heart disease is preventable--
Emphasis of Current Guidelines for Women is on Prevention
(Mosca, L. Circulation, 2011)

- Women’s global lifetime risk for CVD is high (50%)
- Revised CV risk classification
- Distinction between effectiveness (benefits & risks observed in clinical practice) and efficacy (benefits observed in clinical research)
- Revisions re. aspirin, HT, folic acid and antioxidant supplements
- New practical tips for lifestyle therapies (priority for intervention)
Objectives

- Review Burden of CVD in Women (national and local perspective)
- Define the CVD Risk Categories
- Discuss Treatment Recommendations
- Inspiration from our Research
- Discussion
Global CVD Risk

Subclinical disease:
- Hypertension
- Diabetes
- Lipids
- Menopause
- Sex
- Age

Clinical disease:
- LVH
- Coronary calcification
- Carotid stenosis
- Inflammation
- Endothelial dysfunction
- Stroke
- PVD
- Angina
- MI
- Sudden death
- Heart failure
Early Lesion - Fatty Streak
Mature Atherosclerotic Lesion
Ruptured Atherosclerotic Plaque
New Classification of Lifetime CVD Risk in Women

Risk Groups

1. HIGH RISK

2. AT RISK (expanded category)

3. IDEAL RISK (smaller category)
‘High’ Risk Women
(>=1 high risk state)

- Clinically manifest CHD
- Clinically manifest Cerebrovascular disease
- Clinically manifest Peripheral vascular disease
- Abdominal Aortic Aneurysm
- DM (higher prevalence in Latinas)
- CKD or ESRD
- 10-year Framingham risk score >= 10%
Framingham risk score

The scoring sheet is available at:
www.nhlbi.nih.gov/about/framingham/riskabs.htm
### Framingham Risk Score (Women)

#### Total Cholesterol (mg/dL)

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>20-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
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<tr>
<td>&lt;160</td>
<td>0</td>
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<tr>
<td>160-199</td>
<td>4</td>
<td>3</td>
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<td>1</td>
<td>1</td>
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<tr>
<td>200-239</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
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<tr>
<td>240-279</td>
<td>11</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>2</td>
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<tr>
<td>≥280</td>
<td>13</td>
<td>10</td>
<td>7</td>
<td>4</td>
<td>2</td>
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#### Cigarette Smoking

<table>
<thead>
<tr>
<th>Points</th>
<th>20-34</th>
<th>35-39</th>
<th>40-44</th>
<th>45-49</th>
<th>50-54</th>
<th>55-59</th>
<th>60-64</th>
<th>65-69</th>
<th>70-74</th>
<th>75-79</th>
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<tr>
<td>Nonsmoker</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Smoker</td>
<td>9</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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#### CHD Risk

<table>
<thead>
<tr>
<th>Points</th>
<th>10-y Risk (%)</th>
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<tr>
<td>&lt;1</td>
<td>&lt;9</td>
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<tr>
<td>9</td>
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<tr>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
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<tr>
<td>12</td>
<td>1</td>
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<tr>
<td>13</td>
<td>2</td>
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<tr>
<td>14</td>
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<tr>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>4</td>
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<td>17</td>
<td>5</td>
</tr>
<tr>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>19</td>
<td>8</td>
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#### Systolic Blood Pressure

<table>
<thead>
<tr>
<th>Points</th>
<th>Untreated</th>
<th>Treated</th>
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<tbody>
<tr>
<td>&lt;120</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>120-129</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>130-139</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>140-159</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>≥160</td>
<td>4</td>
<td>4</td>
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</table>

#### HDL-C (mg/dL)

<table>
<thead>
<tr>
<th>Points</th>
<th>20-34</th>
<th>35-39</th>
<th>40-44</th>
<th>45-49</th>
<th>50-54</th>
<th>55-59</th>
<th>60-64</th>
<th>65-69</th>
<th>70-74</th>
<th>75-79</th>
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<tbody>
<tr>
<td>&gt;60</td>
<td>-1</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>50-59</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>40-49</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>&lt;40</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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</tbody>
</table>

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50% of Women are High Risk  
(Multiethnic WHI)  
Cook N R et al. Circulation 2012;125:1748-1756
‘At Risk’ Women

- >= 1 major CV risk factor including
  - Smoking
  - Poor diet
  - Physical inactivity *(highest prevalence in Latinas)*
  - Obesity, especially central adiposity *(high prevalence in Latinas)*
  - FHx premature CV disease
    * first degree male < 55
    * first degree women < 65
  - HTN (> 120/80) or on Rx
  - HLP (TC > 200 or HDL <50) or on Rx
Additional ‘At Risk’ Women

- Subclinical atherosclerosis (e.g., coronary calcification)
- Poor exercise capacity on ETT and/or abnormal heart rate recovery
- Autoimmune collagen vascular Dz (SLE, RA, etc.)
- Pregnancy-associated metabolic disorders:
  - pre-eclampsia
  - gestational DM
  - gestational HTN
- Metabolic Syndrome (highest prevalence in Latinas)
Metabolic Syndrome in Women

increased risk for CV event

3 or more of the following:

HTN (> 130/85 or on Rx)
High TG ( > 150)
Low HDL (< 50)
Elevated FBS (> 100 or on Rx)
Central obesity (waist > 35”)
Different Prevalence of Risk Factors in Latina Women
(% of Population >20 Years of Age; AHA, 2006)

<table>
<thead>
<tr>
<th>RISK FACTOR</th>
<th>All Women</th>
<th>White</th>
<th>African Amer</th>
<th>Hispanic</th>
<th>Asian</th>
<th>Native Amer/Alaskan</th>
<th>Pacific Islander</th>
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<tbody>
<tr>
<td>Not Exercising</td>
<td>26</td>
<td>22</td>
<td>34</td>
<td>40</td>
<td>24</td>
<td>32</td>
<td>24</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>33</td>
<td>31</td>
<td>45</td>
<td>29</td>
<td>-</td>
<td>21†</td>
<td>-</td>
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<tr>
<td>Tobacco Use</td>
<td>20</td>
<td>21</td>
<td>19</td>
<td>13</td>
<td>7</td>
<td>37</td>
<td>7</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>19</td>
<td>20</td>
<td>18</td>
<td>14</td>
<td>28†</td>
<td>-</td>
<td>27†</td>
</tr>
<tr>
<td>Overweight/Obese</td>
<td>62</td>
<td>57</td>
<td>77</td>
<td>72</td>
<td>35†*</td>
<td>61</td>
<td>35†*</td>
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<tr>
<td>Diagnosed Diabetes</td>
<td>6</td>
<td>5</td>
<td>13</td>
<td>11</td>
<td>6†*</td>
<td>16†</td>
<td>-</td>
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<tr>
<td>Undiagnosed Diabetes</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Metabolic Syndrome</td>
<td>23</td>
<td>23</td>
<td>21</td>
<td>27</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</table>
‘Ideal’ CV Risk Women

- Framingham global risk <10% (new cut point)
  
  AND

- Healthy lifestyle:
  - diet (DASH) AND
  - exercise (150 min/wk mod intensity) or 75 min/wk vigorous or both
  
  AND

- No CV risk factors:
  TC <200 off Rx
  BP < 120/80 off Rx
  FBS <100 off Rx
  BMI <25
  no smoking
What are Some of the Benefits of ‘Ideal’ CV Risk?

- Greater longevity
- Dramatic reductions in risk for CVD events both short and long-term (7- vs 20-fold)
- 92% reduction in SCD
  
  *(Nurse’s Health Study, 2011)*

- Greater QOL in older ages
- Lower Medicare costs at older ages
The ‘Hispanic Paradox’
Death Rates for Latino Women are Lower Despite Higher Risk Profile

Age-Adjusted Heart Disease Death Rates per 100,000 (CDC, 2009)

<table>
<thead>
<tr>
<th></th>
<th>Hispanics/Latinos</th>
<th>Non-Hispanic White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>153.8</td>
<td>231.1</td>
</tr>
<tr>
<td>Women</td>
<td>99.8</td>
<td>142.1</td>
</tr>
<tr>
<td>Total</td>
<td>124.2</td>
<td>180.9</td>
</tr>
</tbody>
</table>

17.5% overall mortality advantage!
The ‘Hispanic Paradox’

- Being born Latino adds years to your life!
- Life Expectancy (average)
  - Hispanics 80.6 years (Latinas 83.4 years)
  - non-Hispanic whites 78.1 years
  - African Americans 72.9
- In Latinos, life expectancy is little influenced by socioeconomic or educational level compared to other racial groups
- As Hispanics become a larger proportion of the U.S. population, will their current longevity advantage diminish rapidly?

CDC; Longevity Report: MacArthur Foundation Research Network on an Aging Society
The ‘Hispanic Paradox’

Biological, Behavioral and Psychosocial Factors

- Place of birth $\rightarrow$ socioeconomic advantage
- New immigrants healthier than home country population (depends on level of acculturation, age)
- “Barrio advantage” to individual health (close social relationships promote simpatia, familismo, personalismo)
- Lower smoking rates
- [No paradox: Inaccurate counting of Hispanic deaths $\rightarrow$ falsely low mortality]
Prevalence of Coronary Calcium Scores by Sex/Ethnicity

![Diagram showing prevalence of coronary calcium scores by sex/ethnicity.](chart.png)
Objectives

- Review Burden of CVD in Women (national and local perspective)
- Define the CVD Risk Categories
- Discuss Treatment Recommendations
- Inspiration from our Research
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Clinical Recommendation Categories

1. Lifestyle Interventions - priority
2. Major Risk Factor Intervention
3. Preventive Drug Interventions

(Presumed of equal efficacy in racial/ethnic groups)
Lifestyle Interventions

For All

- Smoking cessation
- Physical activity (mod and/or vigorous)
- Heart-healthy diet (fruits, vegetables, grains; low sodium, sat and trans fats, alcohol, total calories)
- Weight maintenance/reduction (BMI 18.5-24.9)

For High Risk

- Cardiac rehabilitation (ACS, CHD, CVA, PVD, CHF)
- Psychosocial factors- evaluation for depression
- Omega 3 fatty acid supplements (1800 mg EPA/dy) for lowering of lipids
Specific Dietary Recs for Women
(2,000 cal diet)

- **Fruits/vegetables**: >=4-5 cups/dy
- **Fish**: 2/wk (oily fish)
- **Fiber**: 30 g/dy (whole grain products)
- **Nuts/legumes/seeds**: >=4/wk (beans, peas, seeds, walnuts, almonds)
- **Sat Fat**: < 7% cal= <14g/dy
- **Cholesterol**: < 150 mg/dy
- **Alcohol**: <=1/dy (4 oz wine, 12 oz beer, 1-1.5 oz spirits)
- **Sodium**: < 1500 mg/dy
Specific Physical Activity Recs for Women

- **Moderate intensity**: min 150 min/wk; 300 min better (5 hrs)
- **Vigorous intensity**: min 75 min/wk; 2 ½ hrs/wk better

  -- *Combination of moderate/vigorous encouraged* --

  -- *For weight loss: 60-90 min/dy minimum* --

- **Muscle-strengthening** also recommended
Major Risk Factor Interventions:
ever tighter cut points

- **HTN - JNC VII; goal BP < 120/80**

- **Lipids**
  - **LDL <100** ( <70 if high risk; includes DM)
  - **TG <150**
  - **HDL > 50**

- **DM (HgA1C < 7.0)**
Preventive Drug Interventions - ASA

---Reduces first heart attacks in men, first strokes in women---

- **High risk women**: ASA 75-325 mg/dy (or Plavix)

- **Women age >65**: ASA 81 mg every other day for stroke prevention

- **At risk women**: if benefits outweigh risks (GI bleeding, hemorrhagic stroke)

- **Healthy women**: not routine
Other Preventive Drug Interventions

- **ACEi (ARB)** - in all women after ACS/MI, CHF (EF <40%), DM
- **Aldosterone Antagonists** - in all women on standard Rx with EF < 40% and with CHF symptoms
- **B-blockers** - in all women with MI/ACS, CHF, and CVD even if nl EF

-- all underutilized in women --
Management of MI - in hospital (CDC)

No differences between Hispanics and Whites in % being Rx’d ASA, BB, ACEi/ARB post MI
Not Useful for the Prevention of CVD in Women in Any Risk Category

Class III

- **Menopausal Therapy** - initiation or continuation
  - HT
  - SERMs
- **Antioxidant Supplements** (B-carotene, C, E)
- **Routine use of Aspirin** in healthy and ‘ideal risk’ women age < 65
- **Folic acid** (w/ or w/o B6 or B12 supplements)
Objectives

- Review Burden of CVD in Women (national and local perspective)
- Define the Risk Categories
- Discuss Treatment Recommendations
- Lessons from our Research
- Discussion
Are Educational Heart Disease Preventive Interventions Effective in Women? (Our National and Local Experience)

1. National
   * DHHS-OWH: Outcomes in National Model Women Heart Programs (n=1,310; diverse cohort)
   * DHHS-OWH: Outcomes in National Community Organizations (n=1,052; diverse cohort)

2. Local:
   * Outcomes in African American women in our local Community (n=45)
   * Pilot to evaluate outcomes in Latina women in our local Community (n=42)
“Outcomes of Comprehensive Heart Care Programs in High-Risk Women”

Villablanca et.al. J. Women’s Health, 2010

(n=1,310 patients at six U.S. women’s heart programs)
Study

- **Goals**: improve knowledge, reduce CVD risk, and attain Healthy People 2010 objectives among women in model women’s heart programs.

- **Intervention**: A 6-month pre/post-longitudinal educational intervention of high-risk women.

- **Methods**:
  - 5 integrated components: education/awareness, screening/risk assessment, diagnostic testing/treatment, lifestyle modification/rehabilitation, and tracking/evaluation
  - Comprehensive heart care utilizing 2007 AHA guidelines
Findings

- **Measures:** surveys, clinical, laboratory, and FRS

- **Results:**
  - At 6 mos, statistically significant improvements in fund of knowledge, risk awareness, and clinical outcomes.
  - Participants (15% Latina) attained or exceeded >90% of the Healthy People 2010 objectives.
“Outcomes of National Community Organization Cardiovascular Prevention Programs for High-Risk Women”

Villablanca, et.al. *J. CARDIOVASC. TRANS. RES.*, 2009

(n=1,052 enrolled by 4 research sites in 32 communities in the US)
Goals: reduce cardiovascular disease (CVD) risk in women by implementing a CVD prevention health promotion program in faith- and community-based sites.

Intervention: A 4-month pre/post educational intervention of high-risk women + 3 months of maintenance.

Methods:
- 8 bi-weekly counseling sessions conducted over 4 mos (6 of the major CVD risk factors [smoking, diabetes, hypertension, cholesterol, obesity, and physical inactivity] + signs and symptoms of a heart attack and stroke
- 4–6 maintenance sessions over 3 additional mos
Results

- **Measures/Instruments:** surveys, medical screenings, health behavior counseling, risk behavior modification, and stages of change

- **Results:**
  - Significant improvement was attained in 28 secondary outcomes (15% Hispanic cohort)
  - No improvement in primary outcomes (physical activity and weight).
“UC Davis Latina Heart Study”
ongoing

- **Goals:** reduce cardio-metabolic risk and inflammatory burden in high risk Latina women (local), (n=42, age 22-71, mean 49)
- **Intervention:** 4 month pre/post, community-based CVD educational intervention
- **Methods:**
  - 8 bi-weekly counseling sessions conducted over 4 mos
  - six of the major CVD risk factors (smoking, diabetes, hypertension, cholesterol, obesity, and physical inactivity)
  - signs and symptoms of a heart attack and stroke
  - healthy lifestyles
“Latina Heart Study”
ongoing

- **Measures/Instruments:** surveys, medical screenings, metabolic syndrome, inflammatory markers (TNFα, hs-CRP and IL-12)

- **Baseline Data Results:**
  - Significant lack of awareness of heart disease, symptoms, and risk factors
  - High risk profile
  - Opportunity for intervention
Low CVD Risk Factor Knowledge in Latina Women

Baseline Knowledge of CVD Risk Factors

Percent Correct Response

- Secondhand Smoke
- Saturated fat
- HTN
- BMI Overweight/Obesity
- Waist
- Diabetes
Underestimate of Personal CV Risk in Latina Women

Personal Risk Factors

- Overweight or Obese: 65.85% (Self-Reported), 84.1% (Actual)
- Physical Inactivity: 80.49% (Self-Reported), 80.49% (Actual)
- Family CVD History: 46.34% (Self-Reported), 70% (Actual)
- High Cholesterol: 14.29% (Self-Reported), 48.8% (Actual)
- Current Smoker: 2.56% (Self-Reported)
- Diabetes: 7.07% (Self-Reported), 17.1% (Actual)
- Hypertension: 11.63% (Self-Reported), 29.5% (Actual)
Poor Knowledge of MI Symptoms in Latina Women

Knowledge of Symptoms of a Heart Attack

Percent Correct Response

- Chest pain alone
- Diaphoresis
- SOB
- Nausea
- Fatigue
- Jaw pain
- Arm/shoulder pain
- Back/below breast pain

Pain/Discomfort in Chest With or Without...
<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC &gt;200</td>
<td>49%</td>
</tr>
<tr>
<td>TG &gt;150</td>
<td>32%</td>
</tr>
<tr>
<td>HDL &lt;50</td>
<td>27%</td>
</tr>
<tr>
<td>LDL &gt;100</td>
<td>78%</td>
</tr>
<tr>
<td>SBP &gt;140</td>
<td>25%</td>
</tr>
<tr>
<td>Overweight/Obese</td>
<td>34%/50%</td>
</tr>
<tr>
<td>FBS &gt;100</td>
<td>17%</td>
</tr>
<tr>
<td>Metabolic Syndrome</td>
<td>27%</td>
</tr>
</tbody>
</table>
Objectives

- Review Burden of CVD in Women (national and local perspective)
- Define the CVD Risk Categories
- Discuss Treatment Recommendations
- Lessons from our Research
- Summary and Discussion
Practical CVD Risk Prevention in Women: What Can be Done by Practice Delivery Teams?

- Evaluate Risk:
  - Medical Hx, Family Hx, Pregnancy complication hx
  - Symptoms of CVD
  - Physical exam (including BMI, waist)
  - Labs (including FLP, FBS)
  - Framingham risk assessment (if no vascular disease or DM)
  - Depression screening in women with CVD
What More Can be Done?

- Implement Lifestyle Recommendations
- Implement Risk Factor Management
- Implement Additional Pharmacotherapy if CVD event, CHF, other conditions
- Avoid Interventions shown to not be useful
- Educate, counsel, educate- especially in high risk groups!
The weight of the evidence indicates efficacy, yet suboptimal treatment and low knowledge/awareness, of women with known CVD risk factors (and those with proven obstructive CAD), despite evidence and guidelines.

1. What should be the priority for addressing **BARRIERS** to guideline implementation?

2. Should **QUALITY MEASURES** be based on implementation of guidelines?

3. What **STRATEGIES** could optimize implementation of guidelines?