Regional Updates on CVD Trends and Actions: Latin America and the Caribbean

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Institute of Medicine of the National Academies
KEY MESSAGES

1. The magnitude of CVD in Latin America and the Caribbean is significant, with a large burden and cost to the region.

2. The greatest and most sustainable impact has come from policy, structural, systemic and environmental interventions (e.g., smokefree environments, tobacco tax, banning trans fats, salt reduction).
TRENDS
Population: 569.2 mill.
Rapid urbanization: 41% in 1950 to 75% in 2000
Country Income classification

Low income
- Haiti

Lower-middle
- Bolivia
- Colombia
- Dominican Republic
- Ecuador
- El Salvador
- Guatemala
- Guyana
- Nicaragua
- Paraguay
- Peru

Countries excluded from the analysis

Not classified
- Anguilla
- French Guiana
- Guadeloupe
- Martinique
- Montserrat
- Saint Pierre and Miquelon
- Turks and Caicos Islands
- Virgin Islands (UK)

Upper-middle
- Argentina
- Belize
- Brazil
- Chile
- Costa Rica
- Cuba
- Dominica
- Grenada
- Jamaica
- Mexico
- Panama
- St. Kitts and Nevis
- St. Lucia
- St. Vincent & Grenadines
- Suriname
- Uruguay
- Venezuela

High
- Antigua & Barbuda
- Aruba
- Bahamas
- Barbados
- Bermuda
- Canada
- Cayman Islands
- Netherlands Antilles
- Puerto Rico
- Trinidad & Tobago
- United States
- Virgin Islands (US)

World Bank, 2007
Higher proportion of deaths in early age groups in Lower Income countries

Source: Mortality reported by Member State and registered in PAHO Mortality Database, 2008
Stroke Mortality Rates, 2000

Figure 4  Age standardised (world standard) death certification rates per 100 000 for cerebrovascular accidents in 12 countries of the Americas in 2000 (unless otherwise specified).

The CARMELA Study: Risk Factors for CVD in Seven Latin American Cities
# CARMELA Study

**Director:** Dr. Herman E. Schargrodsky

<table>
<thead>
<tr>
<th>Country</th>
<th>City</th>
<th>Institution</th>
<th>National Coordinator</th>
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<tbody>
<tr>
<td>Argentina</td>
<td>Buenos Aires</td>
<td>CEMIC</td>
<td>Dr. Carlos Boissonnet</td>
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<tr>
<td>Chile</td>
<td>Santiago de Chile</td>
<td>Católica University</td>
<td>Dr. Ximena Berrios</td>
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<td>Colombia</td>
<td>Bogota</td>
<td>Javeriana University</td>
<td>Dr. Alvaro Ruiz</td>
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<td>Ecuador</td>
<td>Quito</td>
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<td>Dr. Francisco Benitez</td>
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<td>Mexico</td>
<td>Mexico D.F</td>
<td>Mexicano Institute of the Social Security</td>
<td>Dr. Jorge Escobedo</td>
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<td>Peru</td>
<td>Lima</td>
<td>Cayetano Heredia University</td>
<td>Dr. Raúl Gamboa</td>
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<td>Venezuela</td>
<td>Barquisimeto</td>
<td>ASCARDIO</td>
<td>Dr. Ricardo Granero</td>
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Sampling Methods

- Cross-sectional study
- Probabilistic sampling of about 200 subjects by age-sex groups, aged 25 to 64 years (N=11,550)
- Multiple-stage stratified sampling by clusters
- Common basic design for each participating city

Study Procedure

- Cholesterol
- Triglycerides
- HDL - LDL
- Glycemia
- Waist – hip circumference
- BP – HR
- Weight
- Height
- Carotid ecography
Current smokers or have quit smoking in the last year.
Standardized rates. Prevalence and 95% CI.

Smoking prevalence among adults

Comparable calculations adapted to the age group from 15-100 years of age

Tobacco consumption is defined as a **current daily smoker**

Smoking Prevalence among Youth

Comparable calculation adapted to the 13-15 age group
Definition of tobacco consumption is that of current daily smoker

Source: Global Youth Tobacco Survey (GYTS). PAHO/WHO and CDC. There is no information for Canada and St. Vincent and the Granadines.
Systolic BP ≥140 mmHg or Diastolic BP ≥90 mmHg or taking medication for HBP
Prevalence and 95% CI

Hypercholesterolemia: total cholesterol ≥ 240 mg/dl.
Standardized rates. Prevalence and 95% CI.

Subjects with reported diabetes or glycemia $\geq 126$ mg/dl. Standardized rates. Prevalence and 95% CI.
Metabolic Syndrome according to ATP III

<table>
<thead>
<tr>
<th>Risk Factors (≥3)</th>
<th>Levels</th>
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<tbody>
<tr>
<td>Abdominal Obesity</td>
<td>Waist Circumference*</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>≥150 mg/dl</td>
</tr>
<tr>
<td>HDL-C</td>
<td>&lt;40 mg/dl hombres; &lt;50 mg/dl mujeres</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>≥130/≥85 mm Hg</td>
</tr>
<tr>
<td>Fasting Glucose</td>
<td>≥110 mg/dl</td>
</tr>
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* Men: > 102 cm; Women >88 cm

CARMELA Study
Metabolic Syndrome according to ATP III

Standardized rates. Prevalence and 95% CI.

BMI ≥ 30
Standard rates. Prevalence and 95% CI.

BMI / Overweight / Obesity - prevalence - BMI ≥ 30 kg/m²
2002

Country ISO Alpha Code

ARG  
BRB  
BRA  
CAN  
CRI  
CUB  
MEX  
PER  
TTO  
VEN

Males  
Females

Prevalence (%)

0  7.5  15  22.5  30  37.5  45  52.5  60  67.5  75

Source: PAHO
CARMELA Study

Conclusions

- CARMELA permits the evaluation of different CV risk factors with a uniform and comparable methodology.
- Prevalence of risk factors show significant differences among study cities.
- High levels seen for all common risk factors in almost all subgroups.
ACTIONS
Some Initiatives

• Trans Fat Free Americas (PAHO)
• Physical Activity Network of the Americas (CDC & Agita Mundo)
• Ciclovíás (Bogotá, PAHO)
• Dietary Salt Reduction Initiative (WHL)
• CARMEN (PHAC, PAHO)
• Tobacco control/FCTC implementation (IAHF, PAHO, FCA)
**Latin America and Caribbean: Tobacco Control Policies (FCTC)**

**Tobacco taxation**
- Brazil, Uruguay, México

**Banning advertisement, sponsorship and promotion of tobacco products:**

**Warning labels (pictorial):**
- Brazil, Uruguay, Venezuela, Chile, Panamá & Perú

**Cessation services:**
- Brazil & Uruguay offer free NRT
Smokefree Latin America

- Argentina (sub-national, 2006)
- México (sub-national, 2008)
- Panamá (national, 2008)
- Uruguay (national, 2006)
- Venezuela (sub-national, 2006)
- Colombia (national by ministerial resolution, 2008)
- Guatemala (national, 2009)
- Brazil (sub-national, 2009)
Community Interventions For Health (CIH)

- Mexico City
- Also India, China and UK
- Policy interventions in:
  - diet, physical activity, tobacco, worksites, schools, community
Comprehensive approach
CARICOM Heads of Government Summit
15 September 2007

Declaration of Port of Spain - "Uniting to Stop the Epidemic of Chronic Non-communicable Diseases"

Healthy Caribbean
Civil Society Coalition

Collaboration: Heart & Stroke Foundation of Barbados, PAHO and IAHF
Lessons learned

♦ Difficult to sell “prevention of cardiovascular diseases and stroke” in region

♦ Need to re-frame a more specific focus
Objective: “To protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke.” (FCTC, Art. 3)

ACTIONS: Implement FCTC (legal obligation for those that ratified)
- Taxation
- Smokefree environments
- Reducing smuggling
- Warning Labels
- Banning publicity, sponsorship and promotion
Obesity

Objective: Reduce overweight and obesity

ACTIONS:

- Economic and other incentives to reduce sugar, fat and salt in diet and increase fruits and vegetables
- Community-wide consumer education
- Food labeling
- Ban trans fats

- Nutritional standards for food in all government facilities/schools
- Limit/abolish all marketing to children
- Policies supporting breast feeding
Objective: To increase physical activity

ACTIONS:

- Daily school physical activity (60 min.)
- Community after-school physical activity
- Availability and accessibility of walkable spaces
- Progressively adapt towns to favour pedestrian/cycling with car restrictions
Individual approaches

♦ Treatment for smokers
♦ Screening, early diagnosis, counseling and treatment
  – Hypertension
  – Diabetes
  – Obesity
♦ Rehabilitation programs
Civil society in Latin America & Caribbean

- Advocacy
- Evidence base info
- Watchdog
- Service Provider / Health Promotion
Lessons learned (2)

• No amount of funding is sufficient for the task we have activism, guerrilla warfare, advocacy
• Strengthen civil society
• Don’t do anything not linked to policy or structural change
• What are the legal underpinnings (Constitution, human rights, labor protections, consumer laws)
Lessons learned (3)

• Play “watch dog” (shadow reports, independent monitoring)

• To change social norms, you need a social movement—de-medicalize
  – Modify public opinion, re-frame the issue
  – Organize coalitions to pressure gov’t

• Leverage and working collaboratively

• Identify and grow people and organizations
KEY MESSAGE

1. The greatest and most sustainable impact comes from policy, structural, systemic and environmental interventions (e.g., smokefree environments, tobacco tax, banning trans fats, salt reduction)

2. All else (education, public information, health promotion, awareness, communications campaigns, media outreach) is done to make structural and policy change.