

# Developing Evidence-Based Strategies for Cardiovascular Prevention and Control through Global Research Networks

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"Prevention of cardiovascular disease is a lifetime opportunity for ... individuals, families, communities, and the health care system."

Susan B. Shurin, M.D., Acting Director National Heart, Lung, and Blood Institute



### WORLD HEALTH DAY - APRIL 7, 2013

# Know your numbers

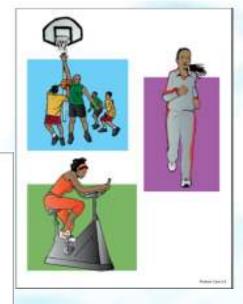
Check your blood pressure. Care for your heart.

140 Hypertension 90



### How to control risk factors?









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Other Challenges

Struggling Schools

Other Issues?

Low income/ Limited money

Limited access to healthy choices (food, exercise)

Social
Determinants
of Health

**Unemployment** 

Poor Health

Immigration Status

Poor Housing

Crime





## **NHLBI Community Health Workers Initiative**





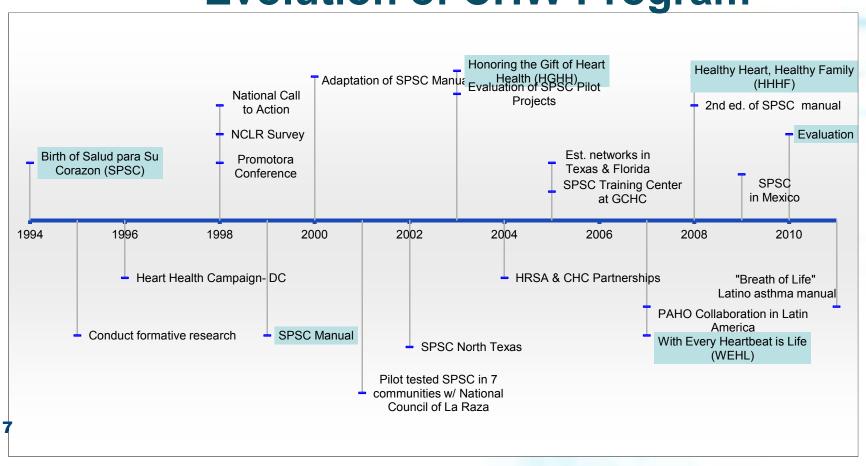


### The Vision of the Initiative

To empower community health workers (CHWs) to be an integral part of a public health approach to decrease health disparities in cardiovascular, lung, and blood diseases in underserved and minority communities.



### **Evolution of CHW Program**





### **CHW Heart Health Manuals**

Your Heart, Your Life/Su Corazón, Su Vida Latinos

With Every Heartbeat is Life
African Americans

Honoring the Gift of Heart Health American Indians and Alaska Natives

Healthy Heart, Healthy Family Filipino Americans





#### **Professional Associations**

Association of Black Cardiologists (ABC)

#### **Government Agencies**

- Department of Housing and Urban Development (HUD)
  - Public Housing Resident Organizations
- Health Resources and Services Administration (HRSA)
- Indian Health Service (IHS)
- Pan American Health Organization (PAHO)
- Promotores Networks

#### **Academia**

- School of Public Health-El Paso Regional Campus
- The University of Texas- Health Science Center at Houston

#### **Community-based Organizations**

#### Clinics

CHCs and FQHCs

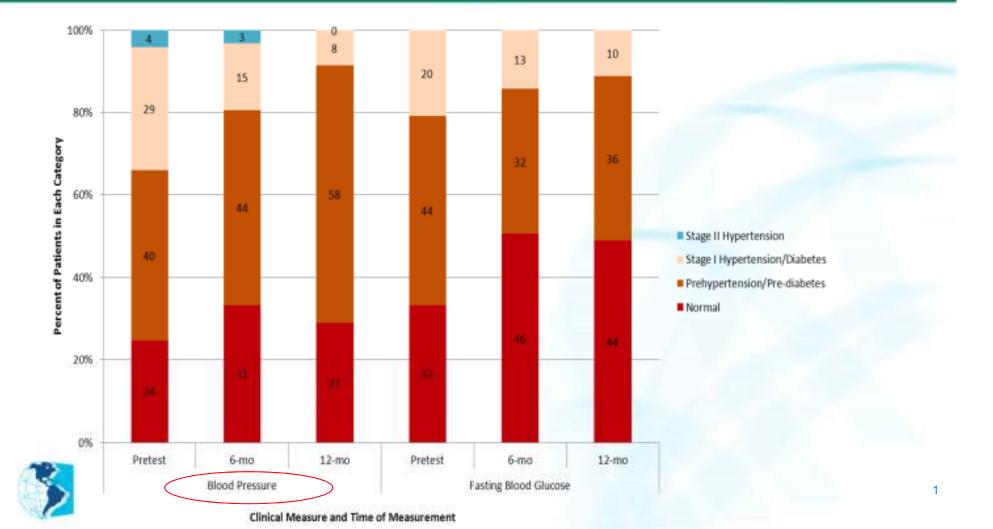
#### **CHW Networks**



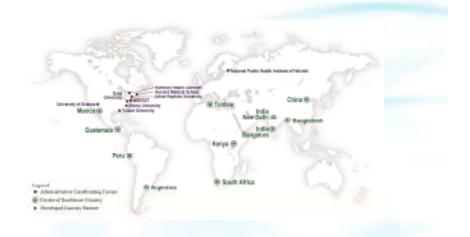
# **Key Partnerships**

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- **NHLBI Research to Results: Global Health**
- Provides international leadership in research, training, and education to reduce noncommunicable chronic diseases worldwide
- Network of 11 NHLBI-UnitedHealth Group Centers of Excellence in Global Health established in 2009
- NIH and five international research centers launched the Global Alliance for Chronic Diseases in 2009- RFA on Hypertension



Non-communicable chronic diseases account for ~60% of deaths and 47% of global burden of disease

Hypertension affects an estimated 1 billion people worldwide







### National Heart, Lung, and Blood Institute

## **Global Health Initiative**

### **Preventing Chronic Disease**

 Goal: To establish Centers of Excellence to combat non- communicable chronic cardiovascular and pulmonary diseases (CVPD) in developing countries

#### Each Center of Excellence:

- Enables research capacity building
- Trains future chronic CVPD investigators
- Conducts research on new or improved approaches, programs, and measures to prevent or treat chronic
   CVPD



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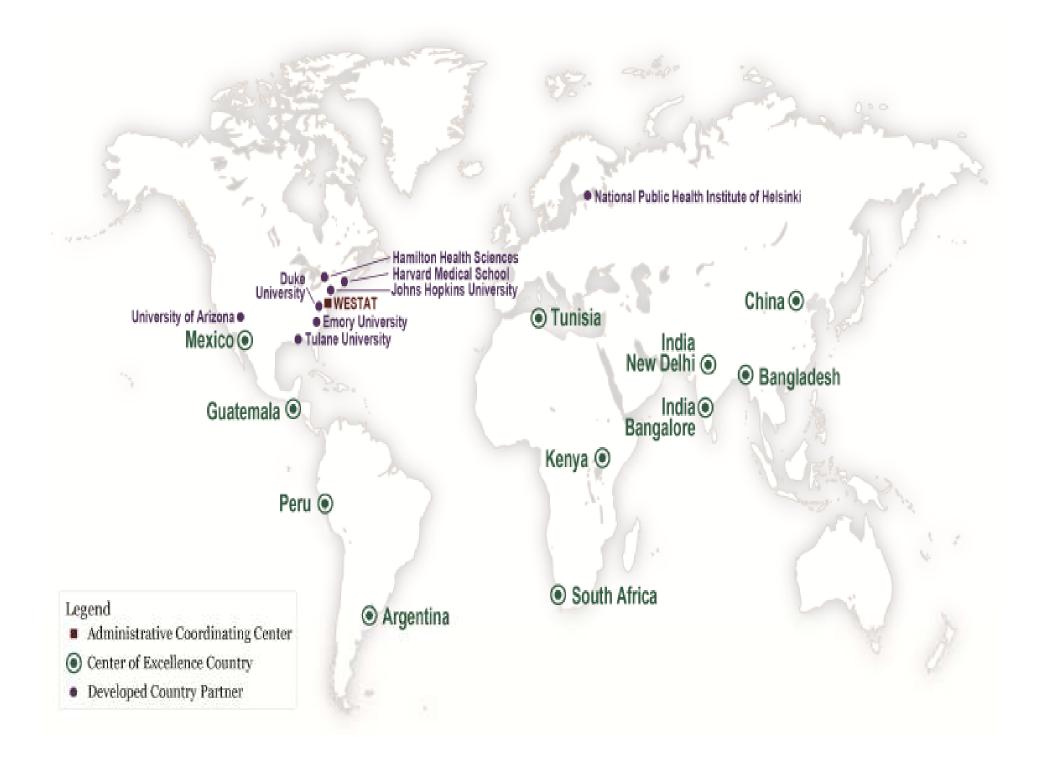
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- Partnership between NHLBI and UnitedHealth Groupestablished June 8, 2009
- Network of 11 Collaborating Centers
- Centers have a network of local and international partners, in developing and developed countries







#### **Argentina**

South American Center for Cardiovascular Health (SACECH). Institute for Clinical Effectiveness and Health Policy (IECS) Buenos Aires

#### **Developed Country Partner**

•Tulane University Louisiana, USA

#### Activity sites

- Bariloche, Argentina
- Marcos Paz, Argentina
- Temuco, Chile
- Pando, Uruguay

#### Research Example

- -Conduct epidemiological study to identify major CVD risk factors for future intervention studies
- Evaluate the burden of CVD in the Southern Cone including costs and health services utilization.



#### Guatemala

Institute of Nutrition of Central America and Panama (INCAP) Guatemala City, Guatemala

#### Developed Country Partner

• John Hopkins University Maryland, USA

#### Activity sites

- N. America (S. Mexico Chiapas)
- C. America (Guatemala, Belize, El Salvador, Honduras, Nicaragua, Costa Rica, Panama)
- The Caribbean (Dominican Republic)

#### Research Examples

- -Assess cardiovascular status and the feasible environmental changes that are socially and culturally acceptable to improve lifestyle behaviors for children living in poor urban settings.
- -Adapt and validate an intervention model for CVD prevention in patients with diabetes and high blood pressure, which could be implemented in primary health care centers of Costa Rica (San José) and Southern Mexico (Chiapas).





#### Mexico

El Colegio de Sonora Hermosillo, Sonora, Mexico

#### **Developed Country Partner**

University of Arizona
 Tucson, Arizona

#### Activity sites

- Northern Mexico
- U.S. Mexico Border

#### Research Example

- -Adapt and validate a community-based prevention intervention program that utilizes community health workers, with an emphasis on physical activity and nutrition.
- Examine the role of promotores in NCD prevention within the Mexican health care system. Construct an empowerment model which includes individual, family and community changes in prevention programs



#### Peru

Universidad Peruana Cayetano Heredia Lima, Peru

#### **Developed Country Partner**

•Johns Hopkins University Maryland, USA

#### **Activity sites**

- Central Coastal Peru (Lima)
- North Coastal Peru (Tumbes)
- South Eastern Andes Peru (Puno)

#### Research Example

- Assess the cardiovascular risk factors profile in Lima (very urban) and Tumbes (less urban). Also assess disease progression, from a baseline disease-free status to hypertension and diabetes.
- Examine the prevalence of COPD in two Peruvian populations: one that burns solid fuels for energy and one that uses electricity/ kerosene.







# The whole is better than the sum of its parts

- Sub-committees: Epidemiology,
   Community Health Workers,
   Training,
   Pulmonary
- Regional networks: COEs in India and Latin America
- COEs working and publishing together
- Five <u>supplements</u> to support <u>collaborative work</u> across the COEs

- One <u>training supplement</u> on the Developmental Origins of Health and Disease (<u>DOHaD</u>)
- Develop <u>database</u> to aggregate
   COE <u>common data elements</u>
- Five <u>supplements</u> to align COES research with the GACC RFA on <u>Cookstoves and child mortality</u>
- Centers are interacting with policy makers





### **Collaborative Project in Latin America**

To determine the effects of mobile health (mHealth) technology, including short message services (SMS) and telephone calls, to promote lifestyle modification focused on reducing blood pressure and preventing progression from pre-hypertensive status to hypertension in individuals at poor urban clinics in Argentina, Guatemala, and Peru.

**New support from Medtronic** 



## **Attracting new partners**

- US-CDC
- Medtronic Foundation
- American Thoracic Society
- International Academy of Cardiovascular Sciences
- National Institute of Mental Health (NIH)
  - RFA-MH-13-040: "Challenges in Global Mental Health: Integrating Mental Health into Chronic Disease Care Provision in LMIC"





# WORLD HEALTH DAY - APRIL 7, 2013 Global Alliance for Chronic Know your numbers

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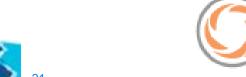














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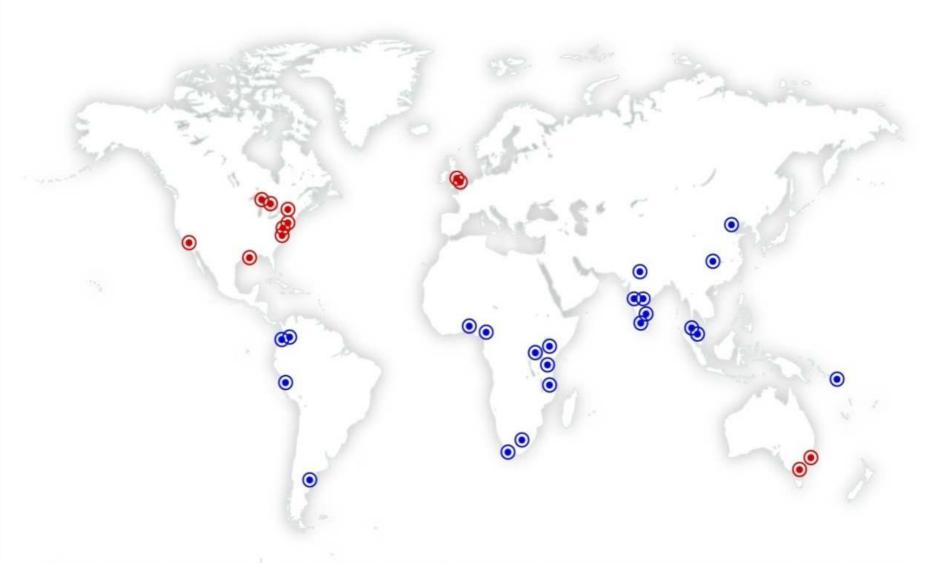






GLOBAL ALLIANCE FOR CHRONIC DISEASES AN ALLIANCE OF HEALTH RESEARCH FUNDERS

#### Research Alliance Aims to Reduce Impact of Hypertension Around the World



- Developed Country Institution
- LMIC Project Site

The Global Alliance for Chronic Diseases (GACD), composed of leading international public health research organizations, is coordinating a consortium of research projects on hypertension prevention and control in 15 low- and middle-income countries. Each research project is conducted through a partnership between investigators in a developed country institution and investigators and institutions in a low- and middle-income country. The projects are funded by four of the GACD members, with an investment of more than \$21 million over the next 3 to 5 years.

### **GACD Hypertension Program**

- 15 community-based research projects that will focus on implementing effective approaches to control high blood pressure
- The projects represent an investment of more than US\$21.8 million over three to five years
- Research in 15 different low- and middle-income countries:
  - Argentina
  - China
  - Colombia
  - Fiji
  - Ghana
  - India
  - Kenya
  - Malaysia

- Nigeria
- Peru
- Rwanda
- Samoa
- South Africa
- Tanzania
- Uganda





"International partnerships are crucial to fighting this massive epidemic. All nations are feeling the devastating impact of ...non-communicable diseases and, consequently, must be part of the solution. This convergence of interests presents exceptional opportunities - and enormous responsibilities - to those of us in the medical research community. " Roger Glass, Director, FIC, 2011









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谢谢你

