



HEARTS IN THE AMERICAS



PAHO



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HEARTS Technical Meeting
Protocols and Medications for Hypertension
Panama, November 19-20, 2019

Pedro Ordunez MD PhD
PAHO WDC



PAHO

Principles of **HEARTS** interventions

HEARTS, led by WHO, in partnership with relevant global stakeholders, is fully aligned with the Global Agendas: SDGs, UHC, PHC, NCDs.

The scaling of a successful and innovative hypertension control program should lead to a significant reduction of the CVD burden.

HEARTS in the Americas

Strategies for Implementation and Strengthening

Implementation:

- 1st cohort [BAR, COL, CHI, CUB]
- 2nd cohort [TT, ECU, ARG, PAN]
- 3rd cohort [SLU, PER, RDO, MEX]
- 4th cohort [BVI, DOM, BRA]
- **132 (+121 CHI) health centers across the Region**
- **1,645,600 adults in the first 11 countries**
- **Coverage: ↑ ~ 20% [from 30% - 40% to 50% to 70%]**
- **Control/treated ↑ from 30% - 40% to 50% to 70%)**

Innovations/catalyzers:

- **Protocols and medications**
- Regulation and devices
- Standardization and data collection
- Implementation research and program evaluation
- Training and education

Implementation

HEARTS Technical Package

- Part of the essential WHO interventions to reduce NCD morbidity and mortality
- Strategic, practical toolkits for CVD management in primary care
- Standardized protocols for prevention, service delivery, referral, and monitoring

HEARTS
Technical package for cardiovascular disease management in primary health care



Healthy-lifestyle counselling

HEARTS
Technical package for cardiovascular disease management in primary health care



Evidence-based treatment protocols

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Technical package for cardiovascular disease management in primary health care



Access to essential medicines and technology

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Technical package for cardiovascular disease management in primary health care



Risk-based management

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Technical package for cardiovascular disease management in primary health care



Team-based care

HEARTS
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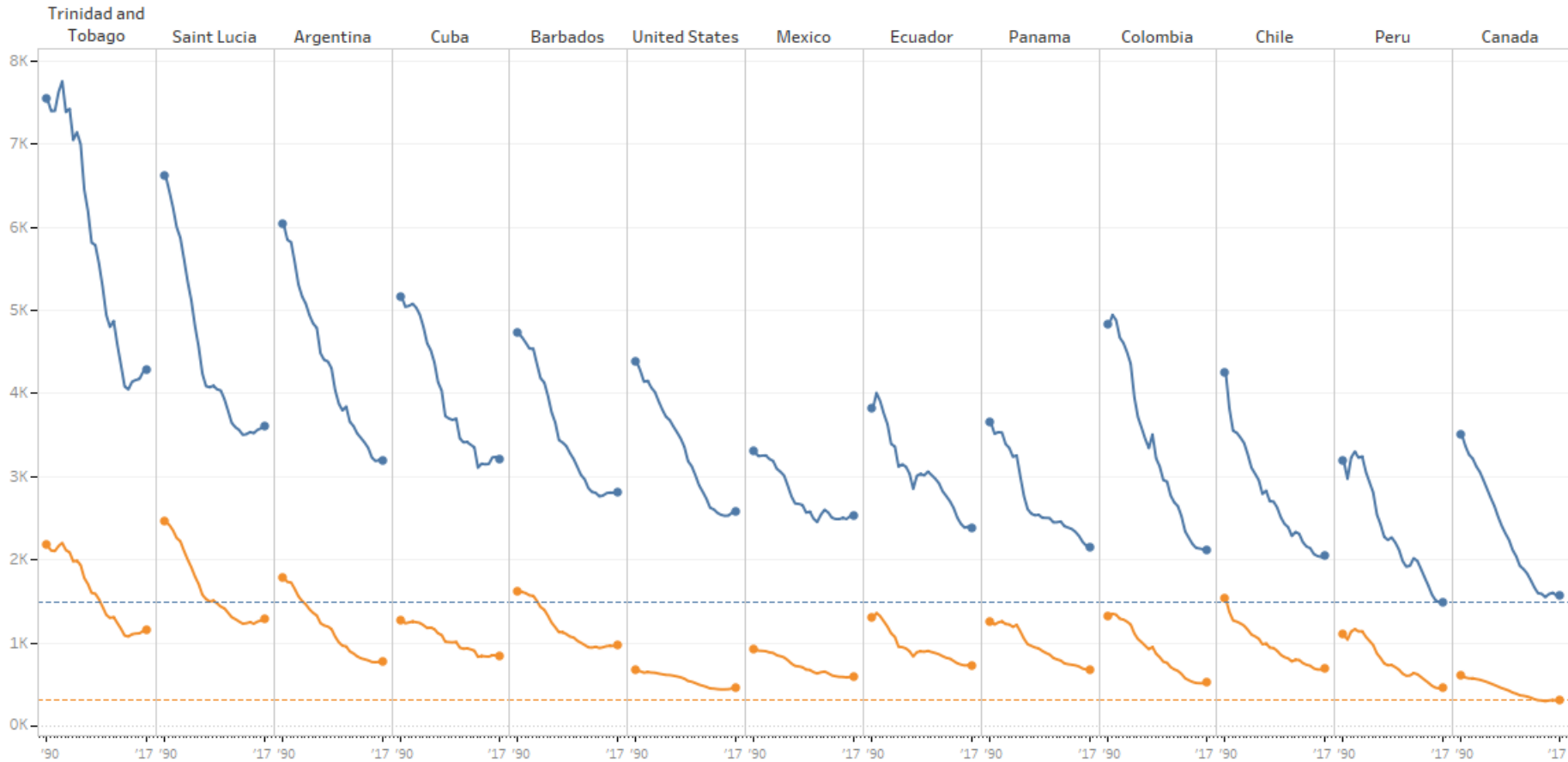


Systems for monitoring

Trends in Premature Mortality due to Cardiovascular Diseases and Stroke in Selected Countries, 1990-2017

Age-standardized Years of Life Lost rates per 100 000 population

■ Cardiovascular diseases ■ Stroke



Source: Estimates from the Global Burden of Diseases Study 2017. IHME



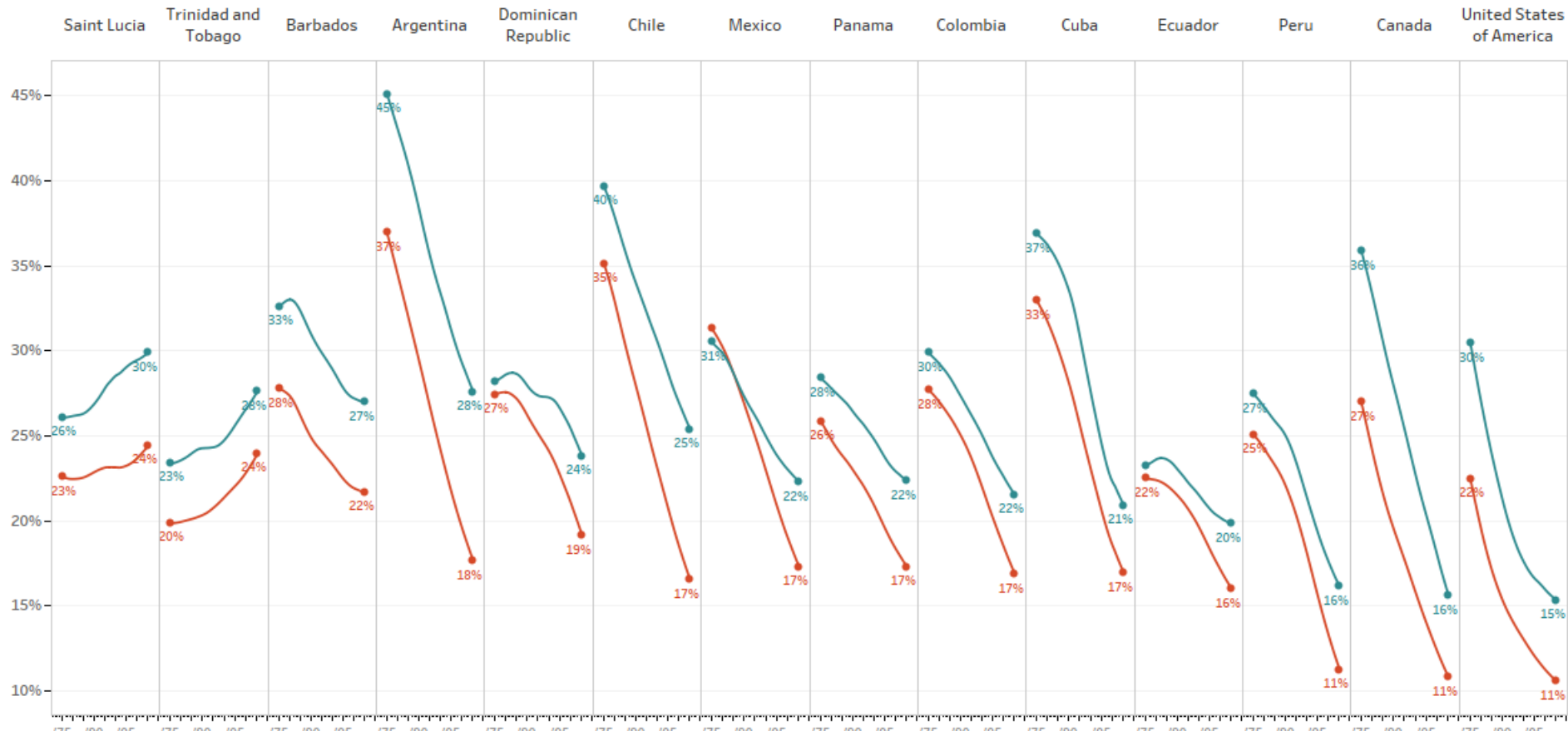
IN THE AMERICAS

Trends in Prevalence of Raised Blood Pressure by Sex in Selected Countries, 1975-2015

Age-standardized prevalence of raised blood pressure ($\geq 140/90$ mmHg) in adult (18+ years) population

Men

Women



Source: Prepared by PAHO NMH based on estimates from the NCD Risk Factors Collaboration (NCD-RisC)

HEARTS Treatment Cascade

- Detection/Diagnosis of hypertension
- Treatment of those diagnosed with hypertension
- Control among those treated

List of Core/Innovative Antihypertensive Medications in the PAHO Strategic Fund

1. Amlodipine 5 mg
2. Chlorthalidone 12.5 mg; 25 mg
3. Lisinopril 20 mg; 40 mg
4. Lisinopril + Amlodipine 10 mg + 5 mg; 20 mg + 5 mg; 20 mg + 10 mg
5. Lisinopril + Hydrochlorothiazide 10 mg + 12.5 mg; 20 mg + 12.5 mg; 20 mg + 25
6. Telmisartan 40 mg; 80 mg
7. Telmisartan + Amlodipine 40 mg + 5 mg; 80 mg + 5 mg; 80 mg + 10 mg
8. Telmisartan + Hydrochlorothiazide 40 mg + 12.5 mg; 80 mg + 12.5 mg; 80 mg + 25 mg



IN THE AMERICAS

Protocol Scenarios: Actual, Acceptable, Preferable

HEARTS IN THE AMERICAS HYPERTENSION TREATMENT PROTOCOL

STEP 1 Measure blood pressure (BP) for all adults and in all consultations by trained personnel, following the recommended protocol and using validated manometers.

STEP 2 If BP is $\geq 160 / 100$ mmHg, start treatment immediately.

STEP 3 After 4 weeks If persists ≥ 140 or ≥ 90 persists

STEP 4 After 4 weeks If persists ≥ 140 or ≥ 90 persists

STEP 5 After 4 weeks If persists ≥ 140 or ≥ 90 persists

STEP 6 After 4 weeks If persists ≥ 140 or ≥ 90 persists **CONFIRM** that the patient has been taking the medications regularly and correctly. If so, refer the patient to a specialist.

HEALTHY LIFESTYLE COUNSELING FOR ALL PATIENTS

- Stop all tobacco use, avoid secondhand tobacco smoke.
- Avoid alcohol consumption.
- Increase physical activity to equivalent of brisk walk 150 minutes per week.
- If overweight, lose weight. BMI ≥ 25 kg/m².

Eat heart-healthy diet:

- Consume less than a teaspoon of salt a day.
- Eat 25 servings of vegetables / fruits per day.
- Eat healthy oils.
- Eat nuts, legumes, whole grains and foods rich in potassium.
- Limit red meat to once or twice a week at most.
- Eat fish or other foods rich in omega 3 fatty acids at least twice a week.
- Avoid added sugars.

Last updated: _____

HEARTS IN THE AMERICAS HYPERTENSION TREATMENT PROTOCOL

ACCEPTABLE PROTOCOL

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PREFERRED PROTOCOL

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PRECAUTIONS

- ACE inhibitors and ARAs
 - ACE inhibitors (and ARAs) should not be given to women who pregnant or may become pregnant.
 - They carry a small risk of angioedema; the risk is greater in people of African descent (not observed with ARAs).
 - Risk of hypotension, particularly if the patient has a chronic kidney disease.

Calcium channel blockers: the use of calcium channel blockers can cause mediator edema in up to 10% of patients, especially at high doses. If an ACE inhibitor or an ARAs is not being used.

Diuretics: can produce hypotension and can have adverse effects on lipid and glucose values.

SECONDARY PREVENTION

Cardiovascular risk

- Estimate the cardiovascular risk in all patients with hypertension.
- Patients with diabetes, coronary heart disease, stroke or chronic kidney disease are considered high cardiovascular risk.

Control goal

- The goal BP is $< 130/80$ mmHg in people with high cardiovascular risk, in patients with diabetes, coronary heart disease, stroke or chronic kidney disease.
- In patients with Type 2 Diabetes: BP $< 130/80$ mmHg. *egulate $< 7\%$ LD. < 100 mg/dL.

Treatment

- Add statins in all patients of high cardiovascular risk regardless of their cholesterol or LDL levels.
- Add statins in patients ≥ 40 years with moderate cardiovascular risk, with total cholesterol ≥ 3 mmol / L (100 mg / dl) or with LDL cholesterol ≥ 3 mmol / L (100 mg / dl).
- Add statins in patients ≥ 40 years with low cardiovascular risk, with total cholesterol ≥ 3 mmol / L (100 mg / dl).
- Consider adding statins in those with moderate cardiovascular risk.
- Aspirin: Add aspirin to all patients with high cardiovascular risk unless they have specific contraindications.

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