New tools:

- ❑ Virtual courses
- ❑ HEARTS App
- ❑ ENLACE
- ❑ ESTIMA tool

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HEARTS in the Americas
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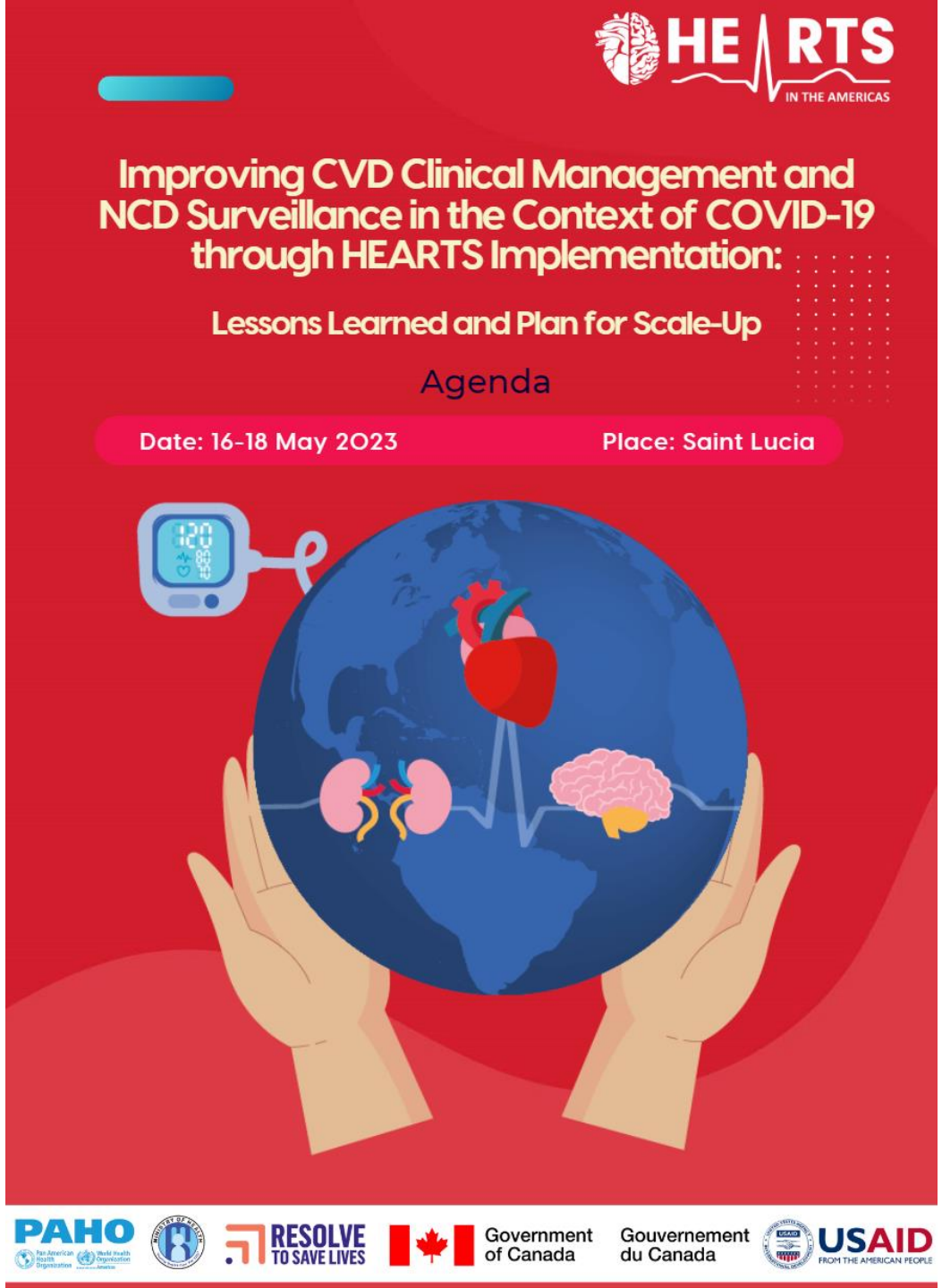


Why HEARTS in the Americas has been developing virtual courses?

Disparity among PHC professionals in the Region to access updated educational information on hypertension, CVD, and risk factors.

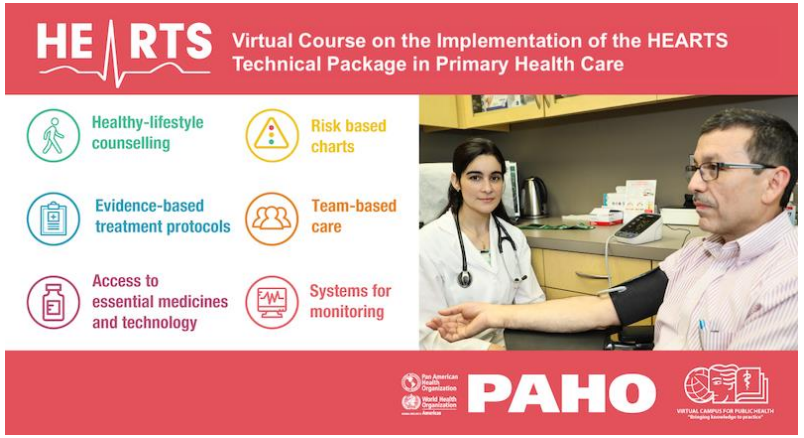
Rapid turnover of health personnel in PHC centers.

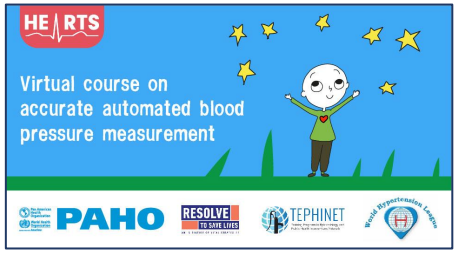
PHC physicians are responsible for assessing and providing accurate treatment approaches to patients with hypertension and CVD risk factors.

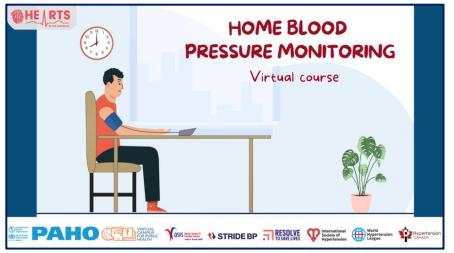
NPHCW play an important role in diagnosing hypertension and catching potential patients to receive adequate pharmacological treatment.

PAHO Pan American Health Organization World Health Organization Americas HEARTS IN THE AMERICAS

HEARTS Virtual Courses







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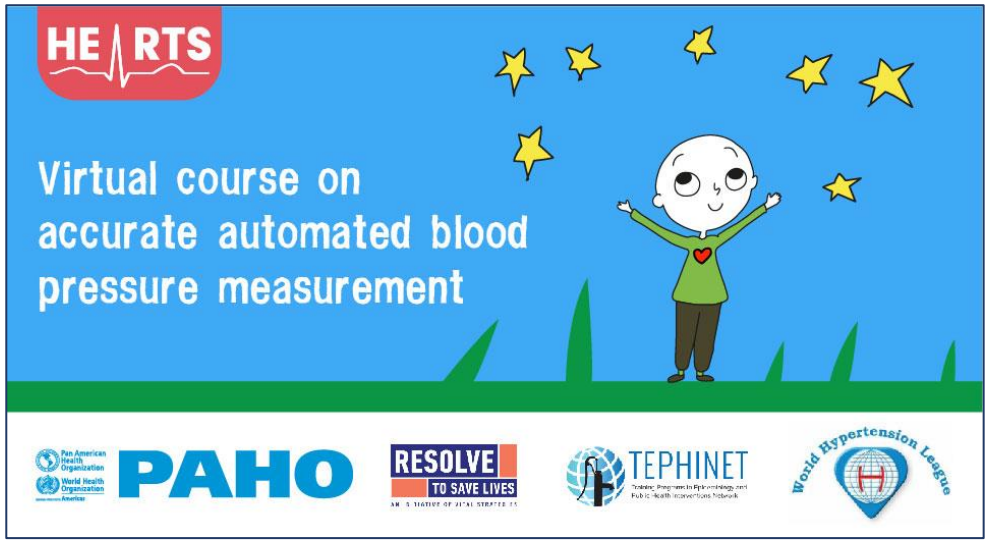
HEARTS Virtual Courses



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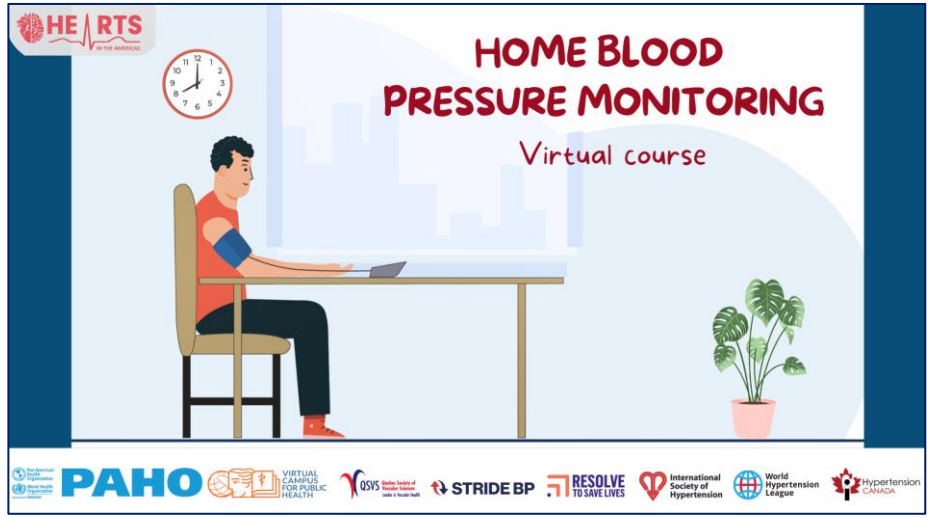
HEARTS Virtual Courses



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HEARTS IN THE AMERICAS

- Select country and calculate
- How to get an accurate blood pressure reading
- Estimate cardiovascular risk
- **Clinical pathway - Therapeutic recommendations**
- Other calculations
  - Glomerular Filtration Estimation
  - Body Mass Index
- Instructions for using the calculator
- HEARTS in the Americas

PAHO

Pan American Health Organization

World Health Organization Regional Office for the Americas

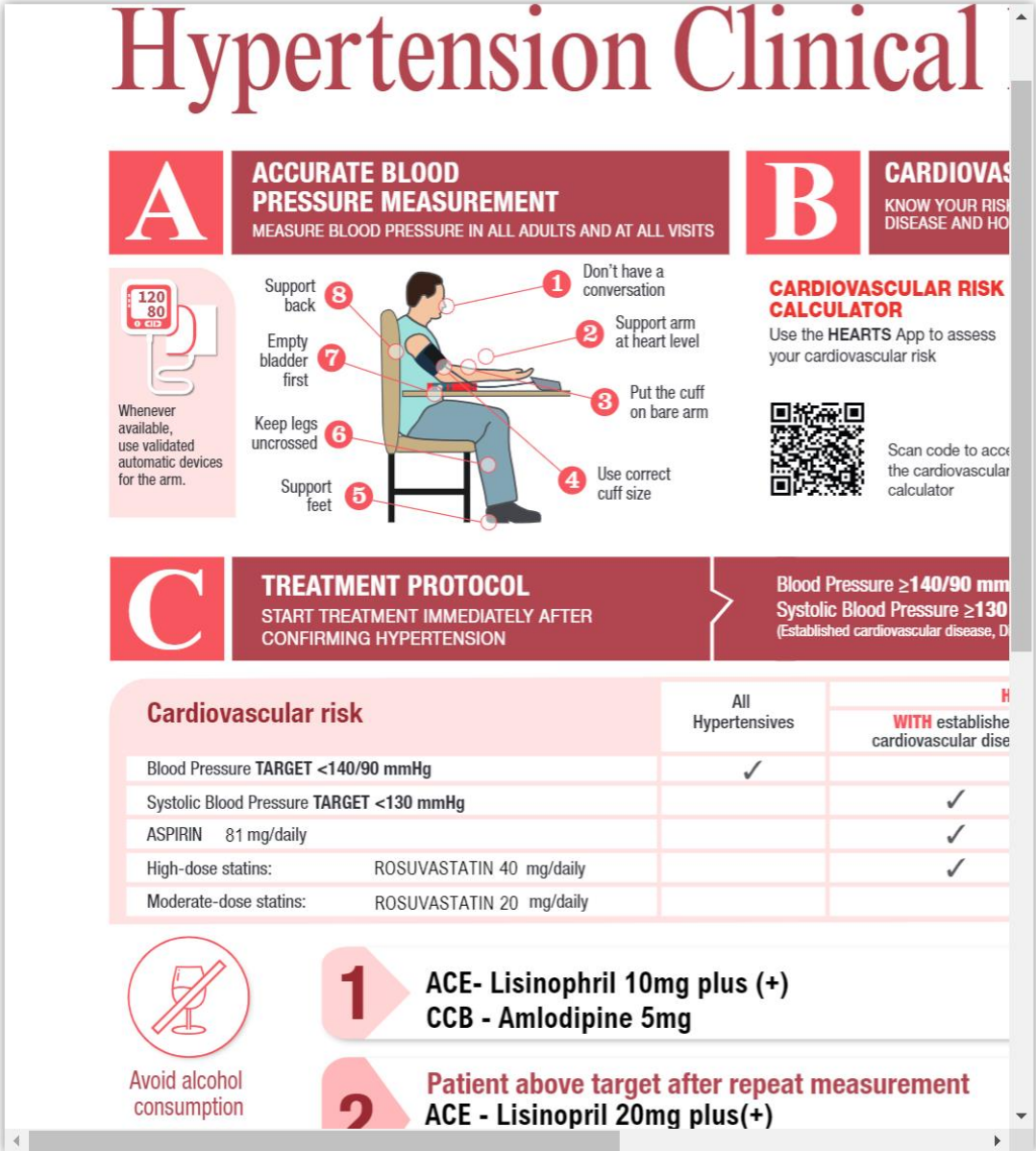
This work was carried out with the financial contribution of the Centers for Disease Control and Prevention in Atlanta, GA. U.S. HHS / CDC Award # 6 NU2HGH000081-01-01

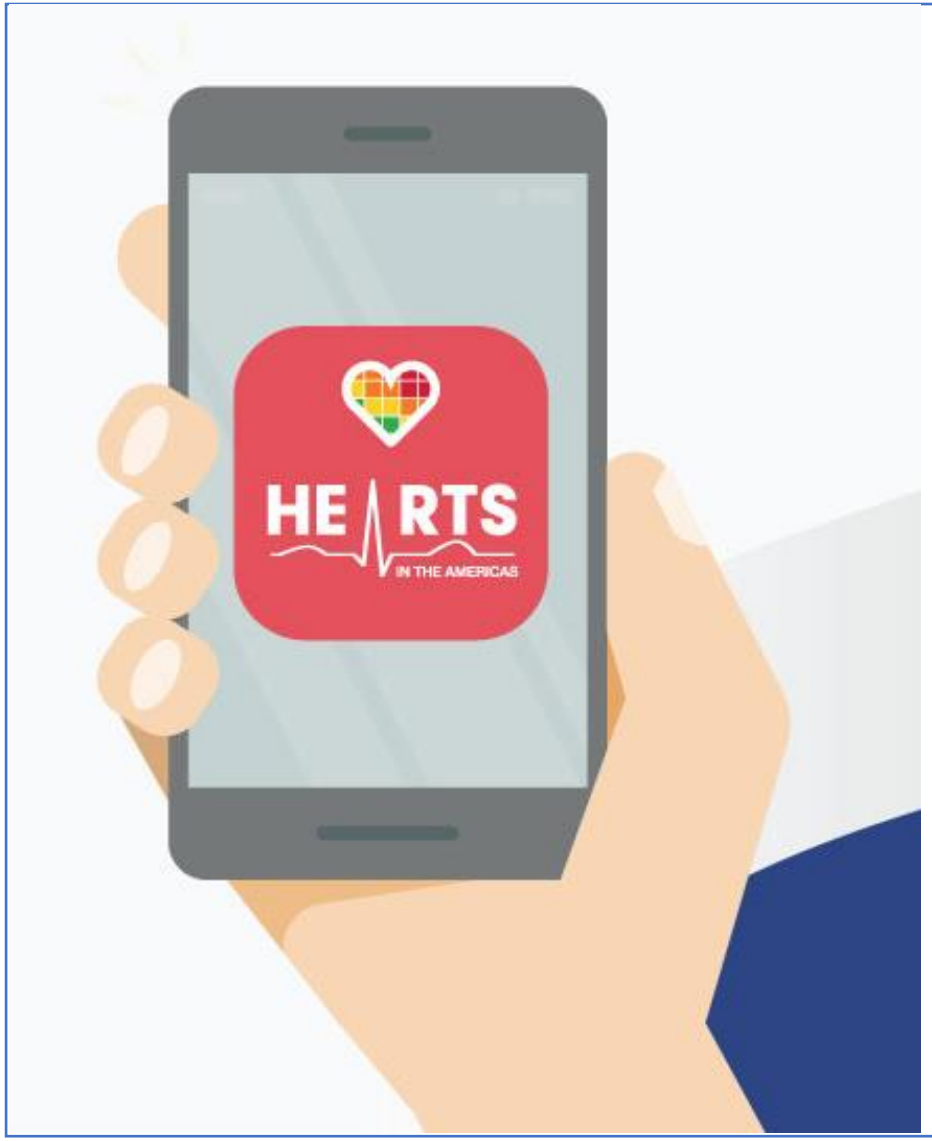
Clinical pathway - Therapeutic recommendations

Trinidad and Tobago

Trinidad and Tobago

Open PDF





- The HEARTS app is not intended to replace clinical judgment.
- It aims to help health professionals and individuals to improve their understanding of CVD risk and the importance of addressing modifiable risk factors and to support proven interventions.
- The optimization of this tool depends on using it properly and ensuring consistent implementation of the given recommendations.
- The HEARTS app is an important tool that can help improve the efficiency of interventions and the quality of care in PHC.

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HEARTS IN THE AMERICAS

Ordunez, P., Tajer, C., Gaziano, T., Rodríguez, Y. A., et al. (2022) The HEARTS app: a clinical tool for cardiovascular risk and hypertension management in primary health care. Rev Panam Salud Publica, 46, e46.

enlace

Linking DATA to ACTION

PAHO data portal on noncommunicable diseases, mental health, injuries and risk factors that bring data on a comprehensive set of indicators.

Users can explore data and share insights to support the efforts to reduce NCDs and improve the well-being of people in the Region of the Americas.

The data disseminated is provided by the PAHO Member States or obtained from official national sources.

Measures of morbidity and mortality are estimated by the WHO or PAHO technical units.

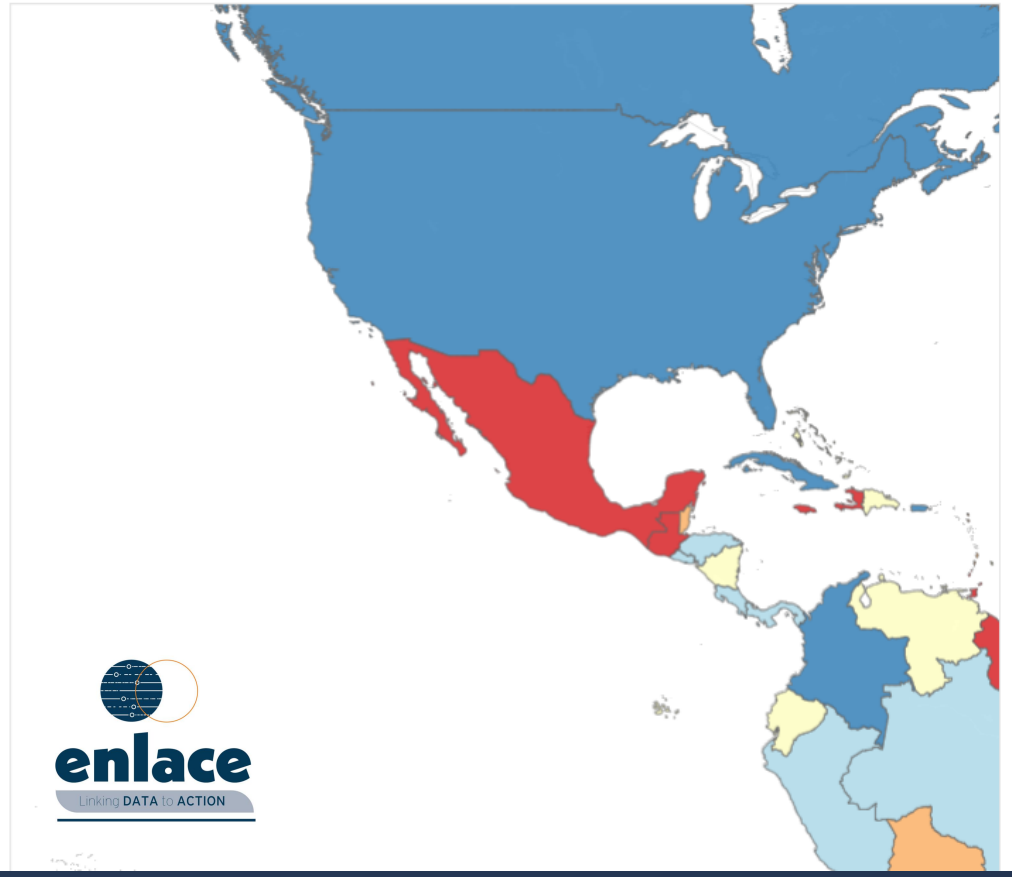
Burden of Diabetes mellitus: level by country

Rates per 100,000 population

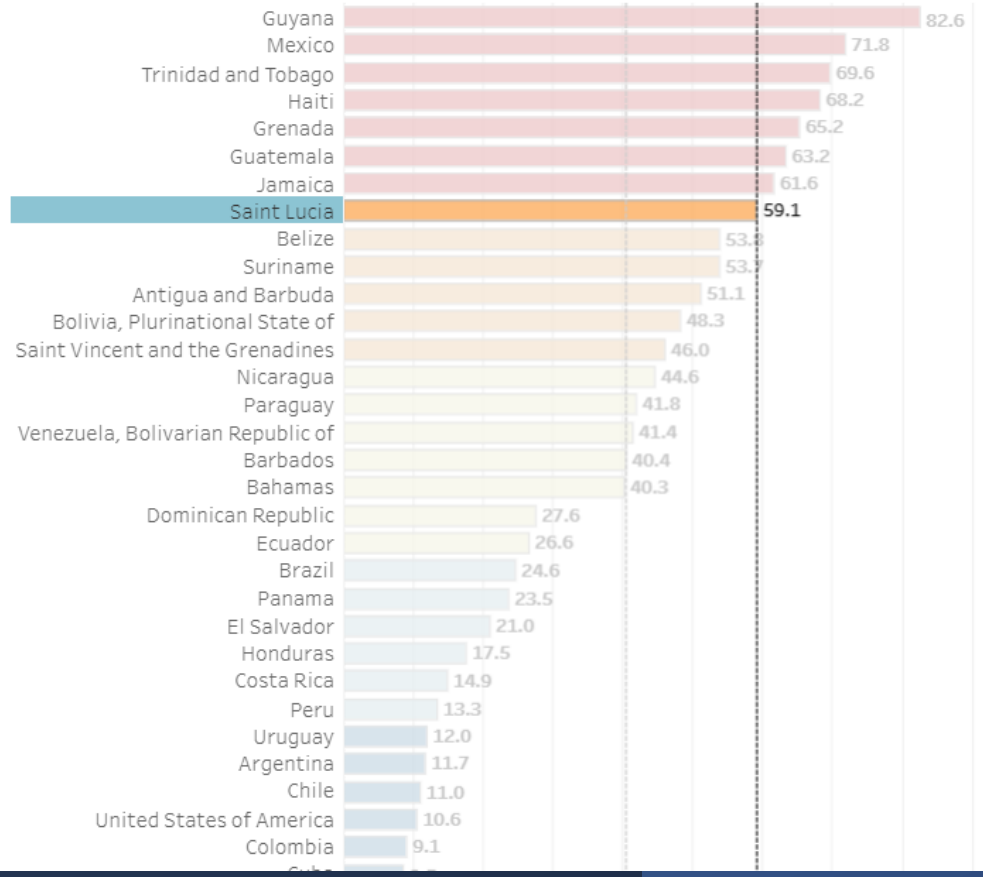
Hover for info

Measure	Age group	Sex	Year
Deaths	Age-standardized	Both sexes	2019

Quintiles — Quintile 1: 0 to 20% | Quintile 2: 20 to 40% | Quintile 3: 40 to 60% | Quintile 4: 60 to 80% | Quintile 5: 80 to 100%



enlace
Linking DATA to ACTION



HTN:CVD EstimaTool

Use the selectors below to set specific scenarios

1.- Location or population group

Location name

LATIN AMERICA AND THE CARIBBEAN

Total population

656,098,097

2.- Programmatic intervention

Scale up population hypertension control (%)

from baseline:	to target:
28.7	50.4

by scaling up:

Diagnosis (Awareness) among people with hypertension (%)

from baseline:	to target:
63.2	80.0

Treatment among those aware of the condition (%)

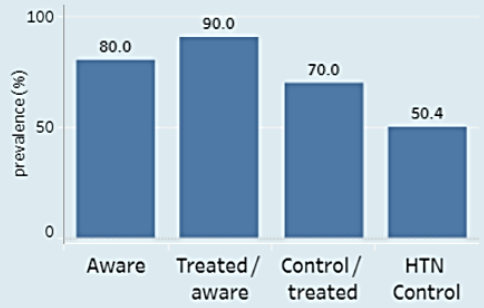
from baseline:	to target:
85.0	90.0

Hypertension control among those treated (%)

from baseline:	to target
53.4	70.0

Hypertension treatment cascade indicator targets

Interaction: *hover over the chart to update results*



3.- Number of years to reach the target?

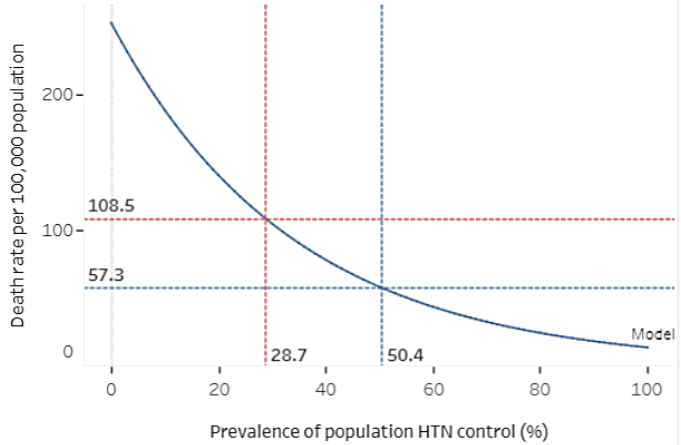
5

Expected ischemic heart disease (IHD) and stroke deaths averted by scaling up the population hypertension (HTN) control based on data from 36 countries of the Region of the Americas, 1990-2019

Ischemic heart disease		Stroke	
51.2	335,727	19.7	129,404
deaths per 100K pop could be averted	absolute deaths could be averted	deaths per 100K pop could be averted	absolute deaths could be averted

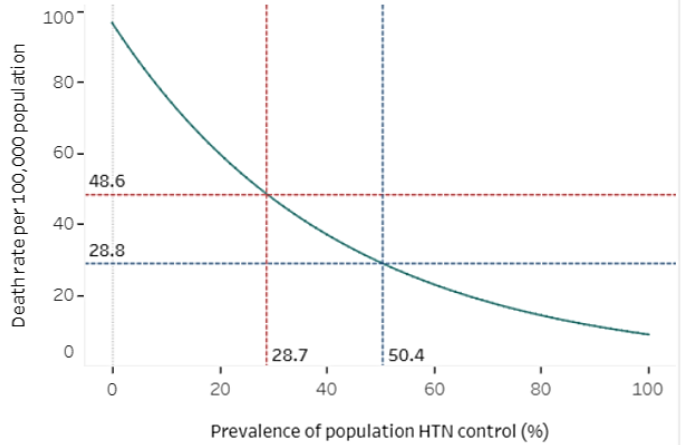
Predictive model for ischemic heart disease mortality

Expected mortality rate for the level of population HTN control

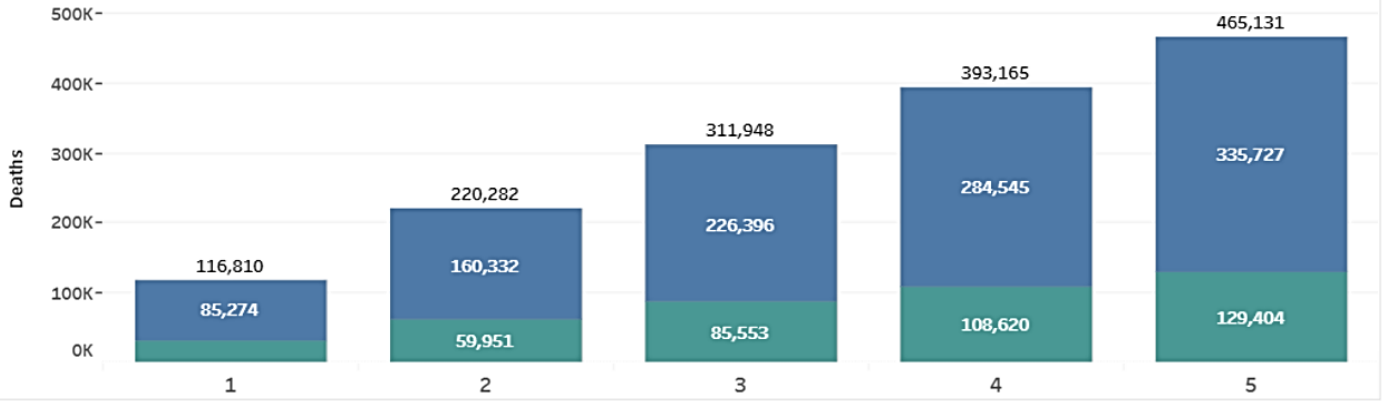


Predictive model for stroke mortality

Expected mortality rate for the level of population HTN control



Cumulative deaths averted from ischemic heart disease and stroke over years



Summary of results

HTN:CVD EstimaTool

Use the selectors below to set specific scenarios

1.- Location or population group

Location name

Trinidad and Tobago

Total population

1,525,663

2.- Programmatic intervention

Scale up population hypertension control (%)

from baseline:	to target:
20.9	50.4

by scaling up:

Diagnosis (Awareness) among people with hypertension (%)

from baseline:	to target:
60.0	80.0

Treatment among those aware of the condition (%)

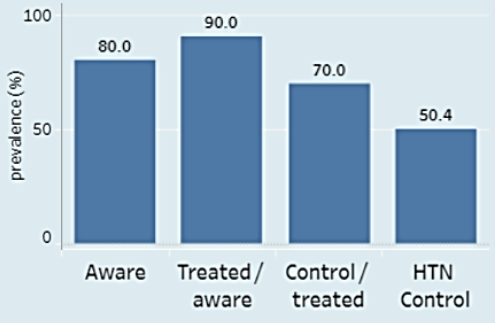
from baseline:	to target:
77.8	90.0

Hypertension control among those treated (%)

from baseline:	to target
44.8	70.0

Hypertension treatment cascade indicator targets

Interaction: *hover over the chart to update results*



3.- Number of years to reach the target?

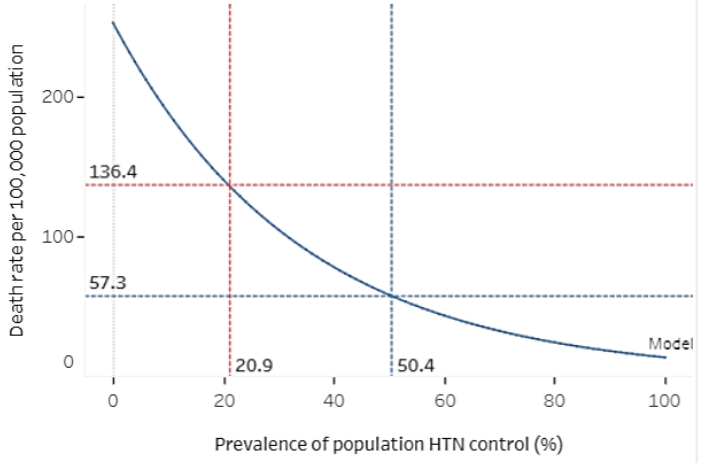
5

Expected ischemic heart disease (IHD) and stroke deaths averted by scaling up the population hypertension (HTN) control based on data from 36 countries of the Region of the Americas, 1990-2019

Ischemic heart disease		Stroke	
79.1 deaths per 100K pop could be averted	1,207 absolute deaths could be averted	29.7 deaths per 100K pop could be averted	454 absolute deaths could be averted

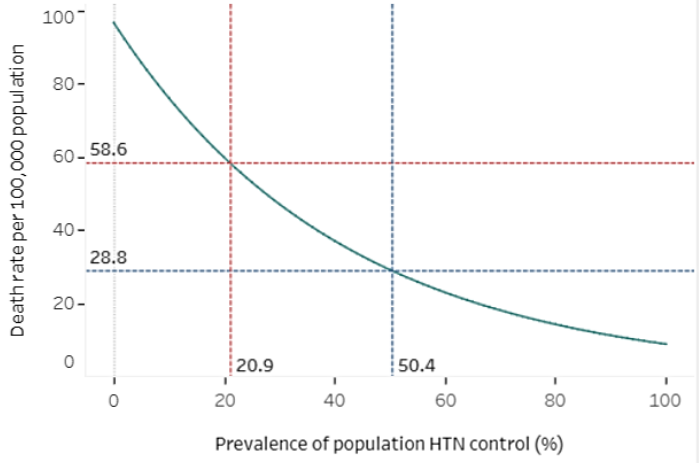
Predictive model for **ischemic heart disease** mortality

Expected mortality rate for the level of population HTN control

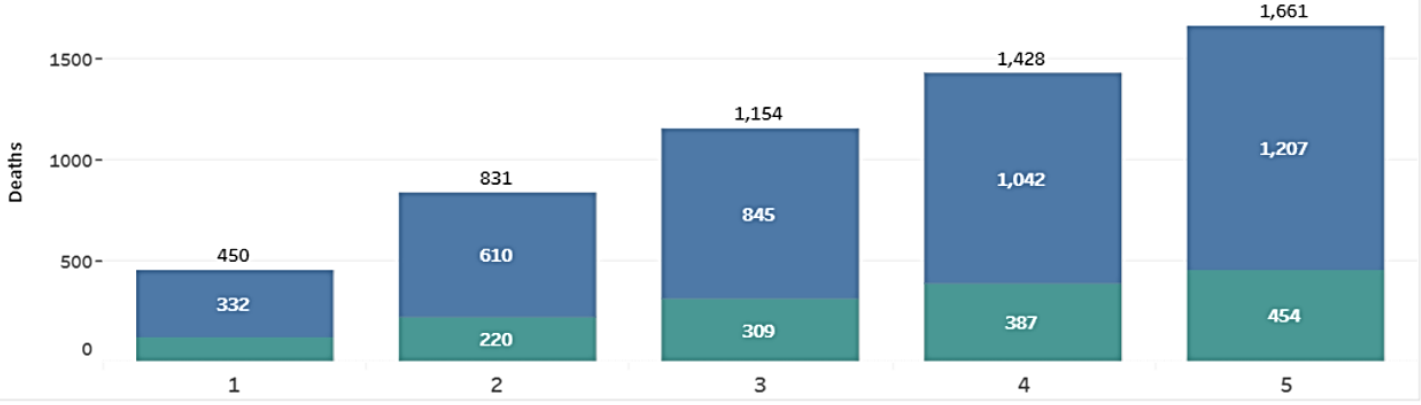


Predictive model for **stroke** mortality

Expected mortality rate for the level of population HTN control



Cumulative deaths averted from **ischemic heart disease** and **stroke** over years



Summary of results

HTN:CVD EstimaTool

Use the selectors below to set specific scenarios

1.- Location or population group

Location name: Trinidad and Tobago

Total population: 1,525,663

2.- Programmatic intervention

Scale up population hypertension control (%)

from baseline:	to target:
20.9	90

by scaling up:

Diagnosis (Awareness) among people with hypertension (%)

from baseline:	to target:
60.0	80.0

Treatment among those aware of the condition (%)

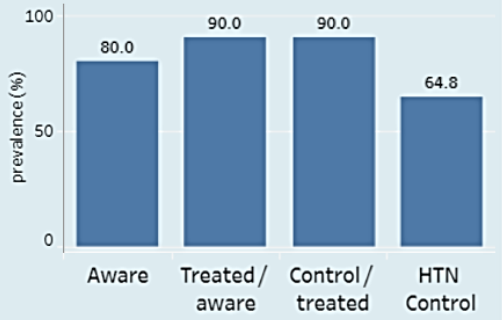
from baseline:	to target:
77.8	90.0

Hypertension control among those treated (%)

from baseline:	to target
44.8	90.0

Hypertension treatment cascade indicator targets

Interaction: *hover over the chart to update results*



3.- Number of years to reach the target?

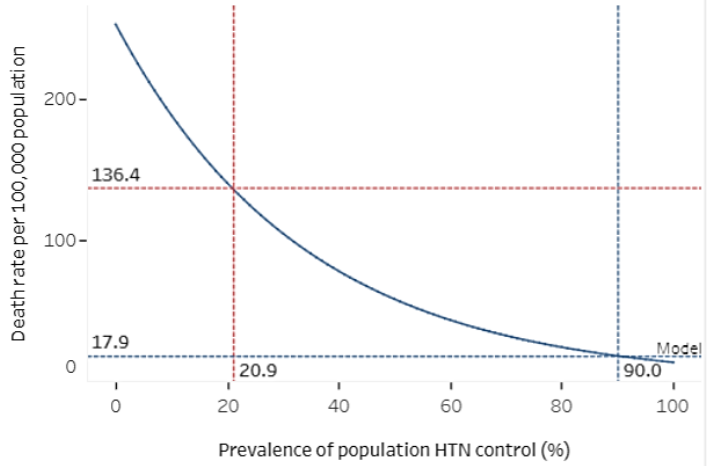
5

Expected ischemic heart disease (IHD) and stroke deaths averted by scaling up the population hypertension (HTN) control based on data from 36 countries of the Region of the Americas, 1990-2019

Ischemic heart disease		Stroke	
118.6 deaths per 100K pop could be averted	1,809 absolute deaths could be averted	47.4 deaths per 100K pop could be averted	724 absolute deaths could be averted

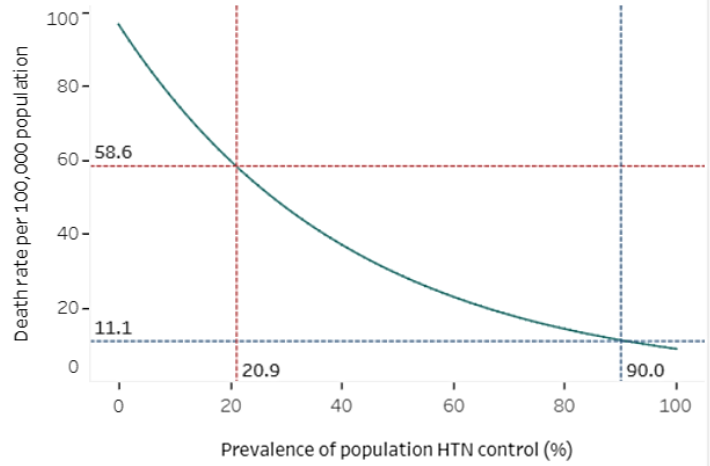
Predictive model for **ischemic heart disease** mortality

Expected mortality rate for the level of population HTN control

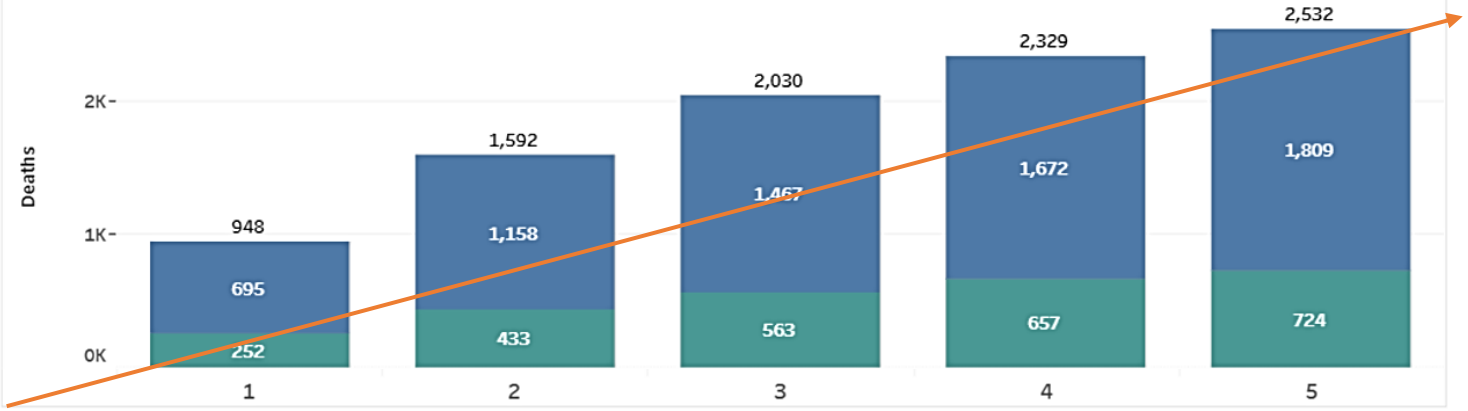


Predictive model for **stroke** mortality

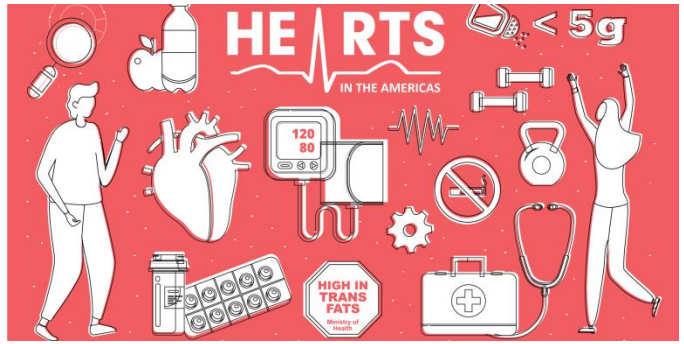
Expected mortality rate for the level of population HTN control



Cumulative deaths averted from **ischemic heart disease** and **stroke** over years



Summary of results



https://www.paho.org/journal/en/special-issues/hearts-americas

PAN AMERICAN JOURNAL OF PUBLIC HEALTH

Original research

Association between population hypertension control and ischemic heart disease and stroke mortality in 36 countries of the Americas, 1990-2019: an ecological study

Ramon Martinez[1], Patricia Soliz[2], Norm R. C. Campbell[3], Daniel T. Lackland[4], Paul K. Whelton[5], Pedro Ordunez[6]

Suggested citation Martinez R, Soliz P, Campbell NRC, Lackland DT, Whelton PK, Ordunez P. Association between population hypertension control and ischemic heart disease and stroke mortality in 36 countries of the Americas, 1990-2019: an ecological study. Rev Panam Salud Publica. 2022;46:e143. https://doi.org/10.26633/RPSP.2022.143

ABSTRACT

Objective. To quantify the association between the prevalence of population hypertension control and ischemic heart disease (IHD) and stroke mortality in 36 countries of the Americas from 1990 to 2019.
Methods. This ecologic study uses the prevalence of hypertension, awareness, treatment, and control from the NCD-RisC and IHD and stroke mortality from the Global Burden of Disease Study 2019. Regression analysis was used to assess time trends and the association between population hypertension control and mortality.
Results. Between 1990 and 2019, age-standardized death rates due to IHD and stroke declined annually by 2.2% (95% confidence intervals: −2.4 to −2.1) and 1.8% (−1.9 to −1.6), respectively. The annual reduction rate in IHD and stroke mortality deaccelerated to −1% (−1.2 to −0.8) during 2000-2019. From 1990 to 2019, the prevalence of hypertension controlled to a systolic/diastolic blood pressure ≤140/90 mmHg increased by 3.2% (3.1 to 3.2) annually. Population hypertension control showed an inverse association with IHD and stroke mortality, respectively, regionwide and in all but 3 out of 36 countries. Regionwide, for every 1% increase in population hypertension control, our data predicted a reduction of 2.9% (−2.94 to −2.85) in IHD deaths per 100 000 population, equivalent to an averted 25 639 deaths (2.5 deaths per 100 000 population) and 2.37% (−2.41 to −2.33) in stroke deaths per 100 000 population, equivalent to an averted 9 650 deaths (1 death per 100 000 population).
Conclusion. There is a strong ecological negative association between IHD and stroke mortality and population hypertension control. Countries with the best performance in hypertension control showed better progress in reducing CVD mortality. Prediction models have implications for hypertension management in most populations in the Region of the Americas and other parts of the world.

Keywords Hypertension; cardiovascular diseases; mortality; noncommunicable diseases; Americas

In 2019, ischemic heart disease (IHD) and stroke were the first- and the second-leading causes of death, and the first- and the fourth-leading causes of disability-adjusted life years (DALYs), respectively, in the Region of the Americas (1,2). However, although age-standardized death and DALY rates for cardiovascular disease (CVD) decreased substantially between

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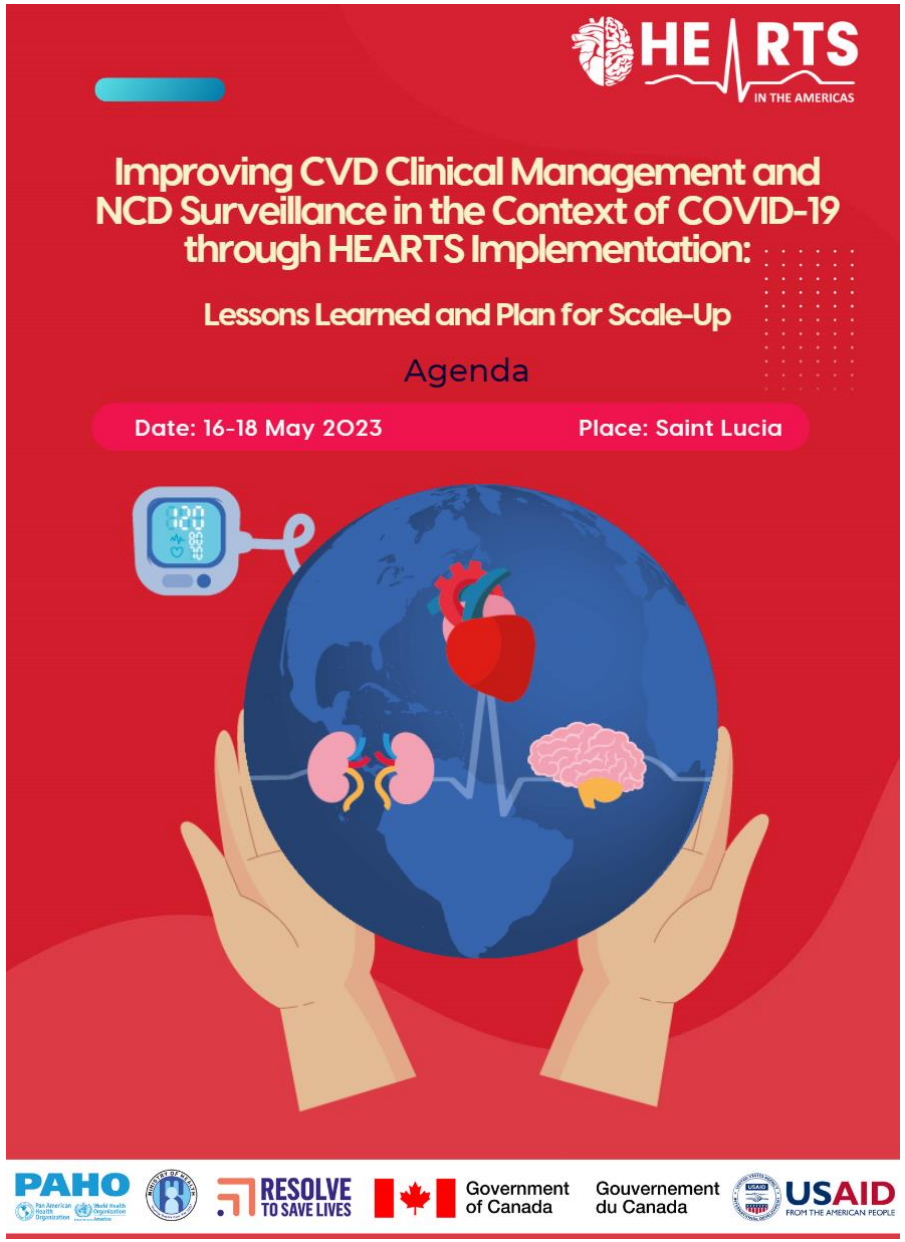
https://www.paho.org/en/enlace/tool-estimate-impact-population-hypertension-control-cvd-mortality



Thanks for your attention

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