



# HEARTS

IN THE AMERICAS



**PAHO**



**HEARTS**

**IN THE AMERICAS**

**The relevance of the prevention and control of hypertension and launch of a new resource to improve practices on blood pressure measurement**

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**PAHO**

# Hypertension Control

Hypertension management is centered in primary care and should focus on the few things that are important for population prevention of CVD.

- **SCREEN BP, and DIAGNOSE HYPERTENSION**, assess and intervene on associated CVD risks, **TREAT TO TARGET, MONITOR AND EVALUATE PERFORMANCE.**

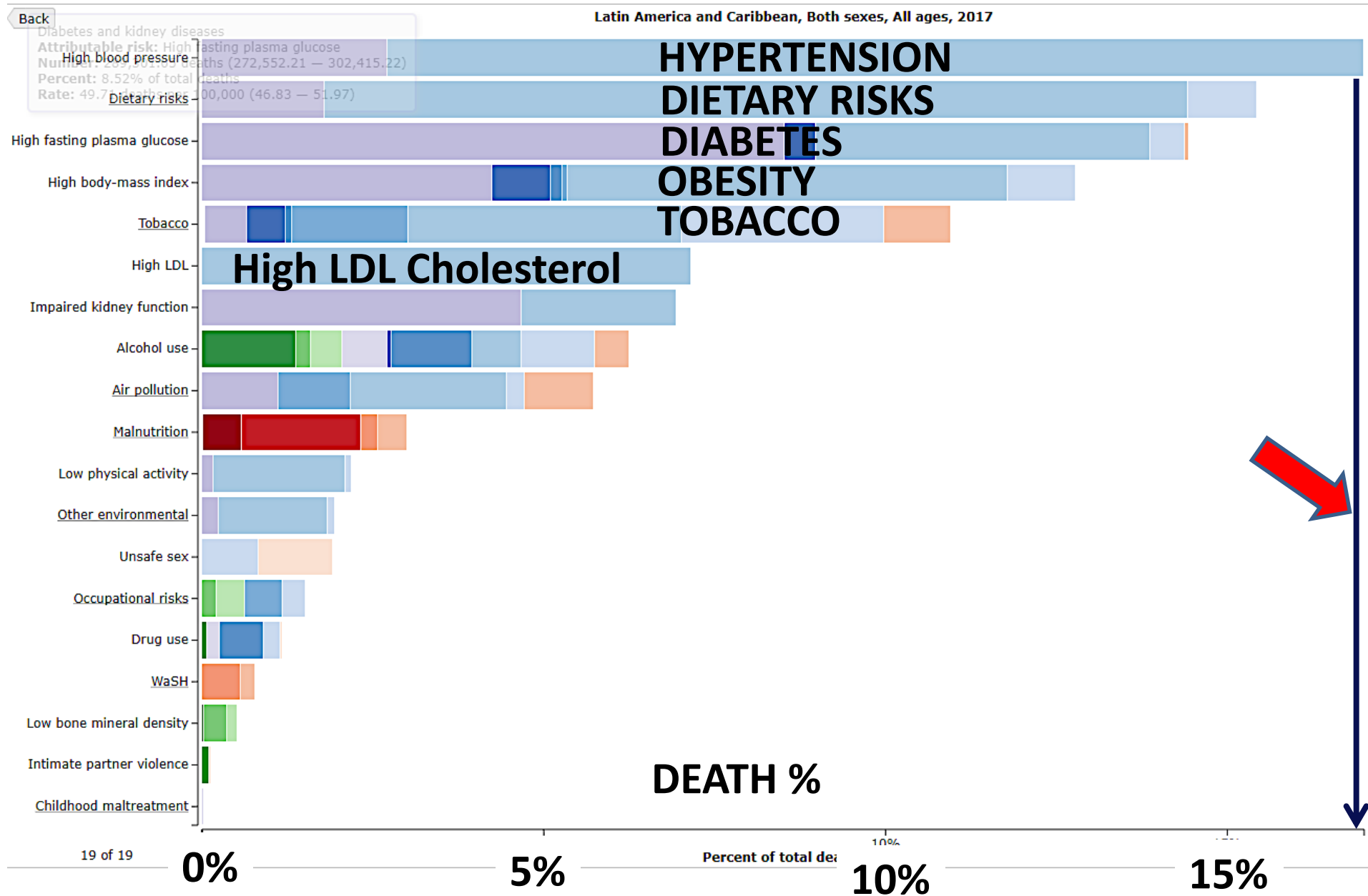
A public health approach to primary care is needed.

- Simple interventions.
- Done correctly (**ESPECIALLY MEASURING BP**).
- Systematically applied in all.

# Why hypertension control is urgent and important

- Very high burden of disease associated with hypertension.
- Treatment will greatly reduce the disease burden.
- Treatment is, in general, highly cost effective and can be cost saving. There is a good return on investment.
- Hypertension detection, treatment and control rates are low in HIC, MIC and > LIC.
- Very high levels of hypertension control can be achieved and are associated with marked improvements in outcomes.
- Hypertension control is now a (long overdue) major national and global priority to reduce the burden of heart disease and stroke that is viewed as a major threat to global economic development.

# Latin America and Caribbean DEATHS 2017



# Attributable Risk of Lifestyle to hypertension

Lifestyle-risk factor	Attributable risk
Obesity (overweight)	32 (17-52)%
High Dietary Sodium	32%
Low Dietary Potassium	17%
Western Diet	31%
Excess Alcohol Intake	3%
Lack of Physical Activity	17%

**DIET- 81%**

Committee on Public Health Priorities to Reduce and Control Hypertension in the U.S. Population, Institute of Medicine. A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension. National Academy of Sciences , 1-187. 2011. National Academies Press.

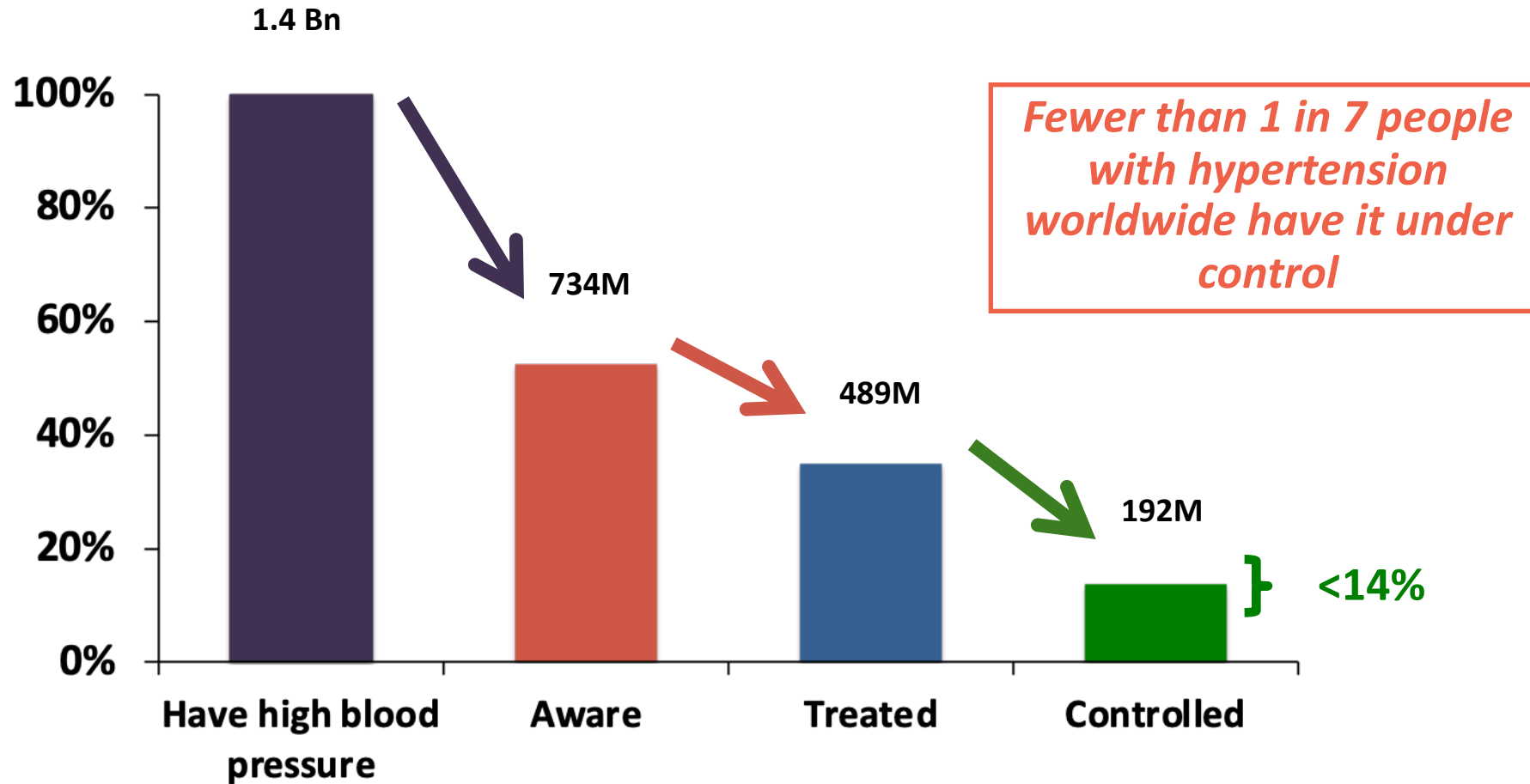
The attributable risks are country specific

# The impact of treating hypertension on heart disease and stroke

A 10 mm Hg reduction in systolic blood pressure (about 1 drug) reduces chances of

- Stroke 27%
- Heart failure 28%
- Coronary heart disease 17%
- Premature death 13%

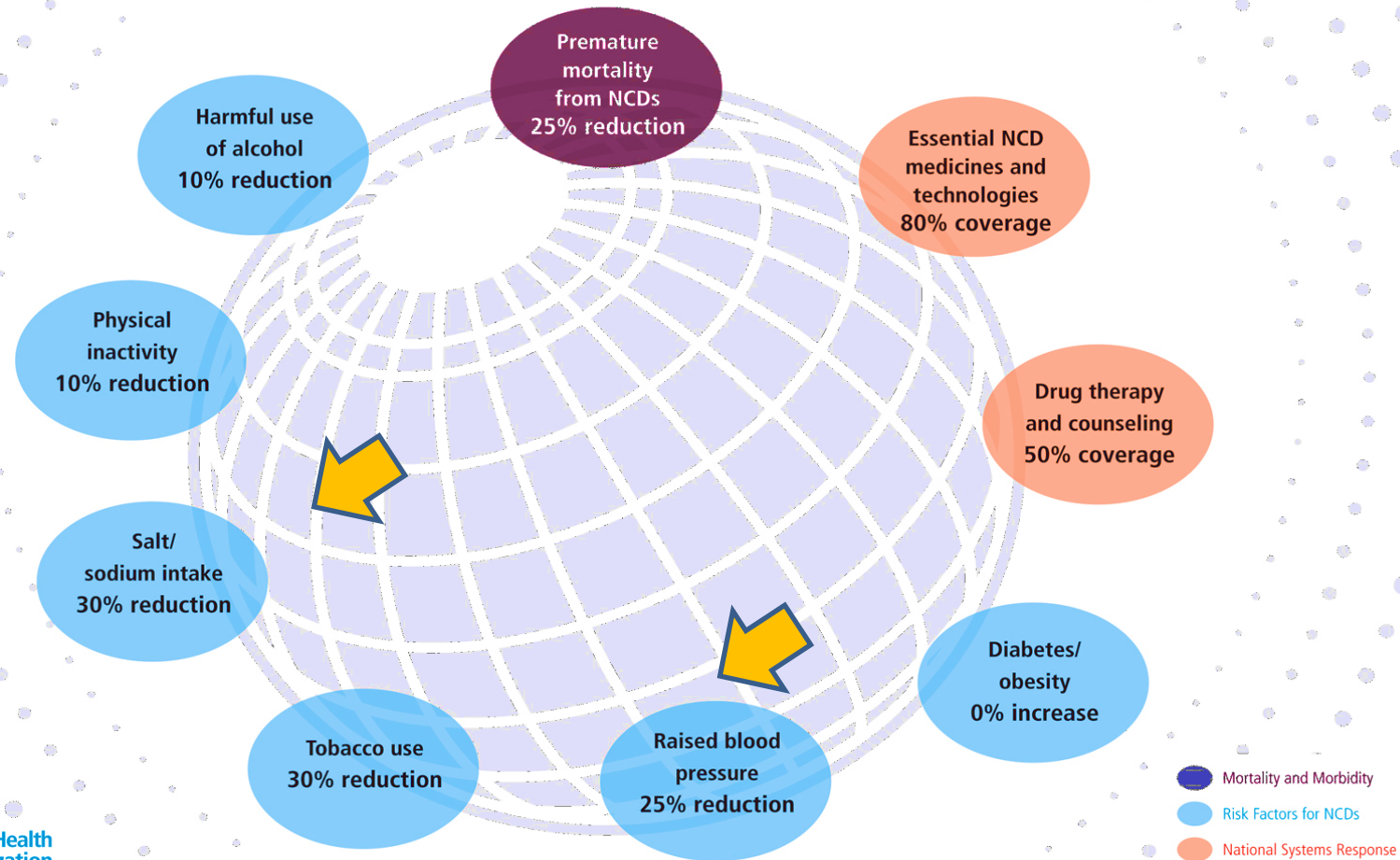
## Most People With Hypertension Globally Do Not Have It Under Control





# WHO: 9 global NCD targets for 2025

## Set of 9 voluntary global NCD targets for 2025



# GLOBAL BEST PRACTICES

- 1) HEARTS- lead by WHO
- 2) RESOLVE TO SAVE LIVES
- 3) KAISER PERMINENTE
- 4) PAHO HEARTS IN THE AMERICAS(e.g. CUBA & CHILE)
- 5) YAROSLAVL RUSSIA
- 6) CANADA
- 7) SAO PAULO CALL TO ACTION

**Designed to be**  
**More effective**  
**More efficient**  
**More cost effective**

**What NGOs**  
**can do**

# WHO with Partner Organizations



## Modules

Healthy-lifestyle counselling

Evidence-based treatment protocols

Access to essential medicines and technology

Risk based charts

Team-based care

Systems for monitoring

Implementation guide

↓ Tool for the development of a consensus protocol for treatment of hypertension

📄 pdf, 590kb

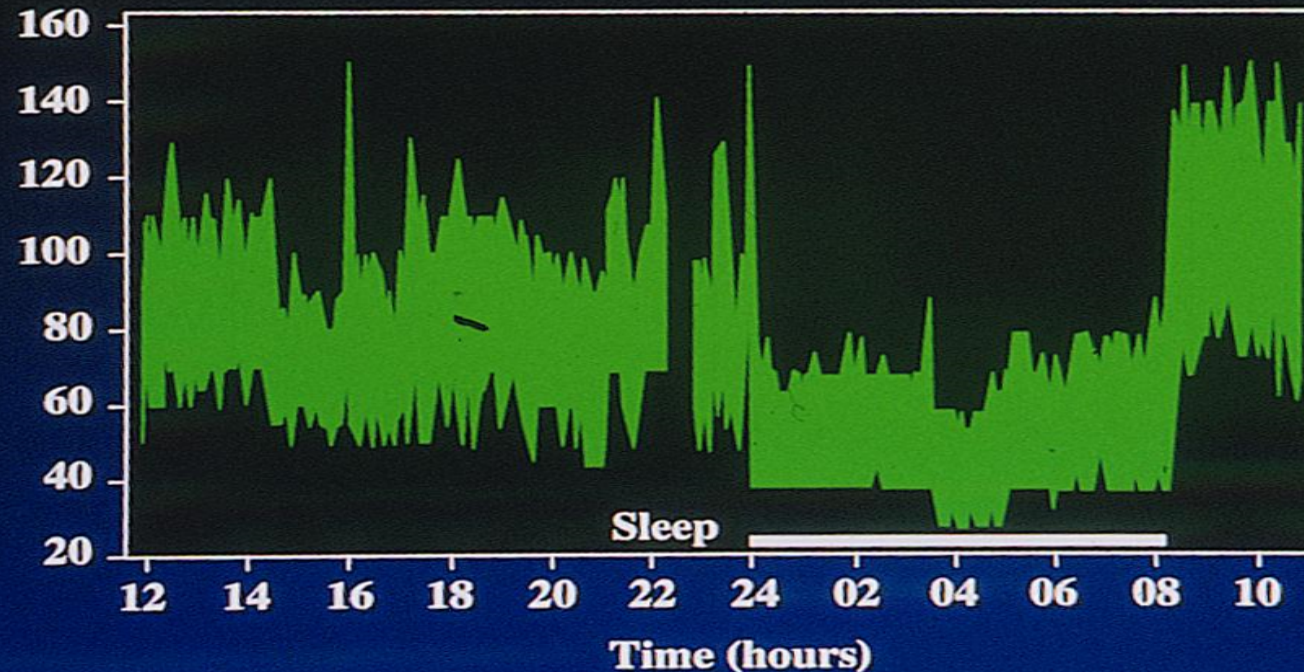


# Assessment of office blood pressure

## The need for an enhanced approach

Physiologic variability of blood pressure presents challenges in assessing usual basal blood pressure

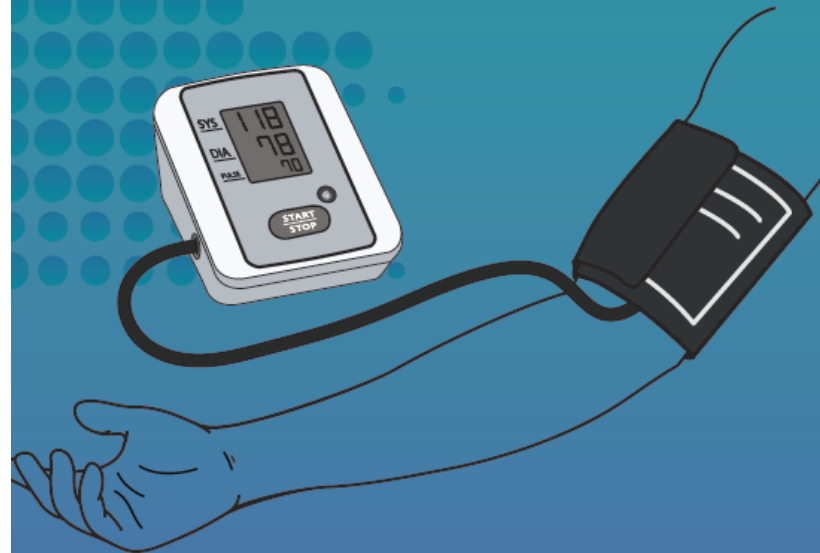
Arterial pressure (mmHg)



# Importance of accurate BP assessment

WHO TECHNICAL  
SPECIFICATIONS FOR  
AUTOMATED NON-INVASIVE  
BLOOD PRESSURE MEASURING  
DEVICES WITH CUFF

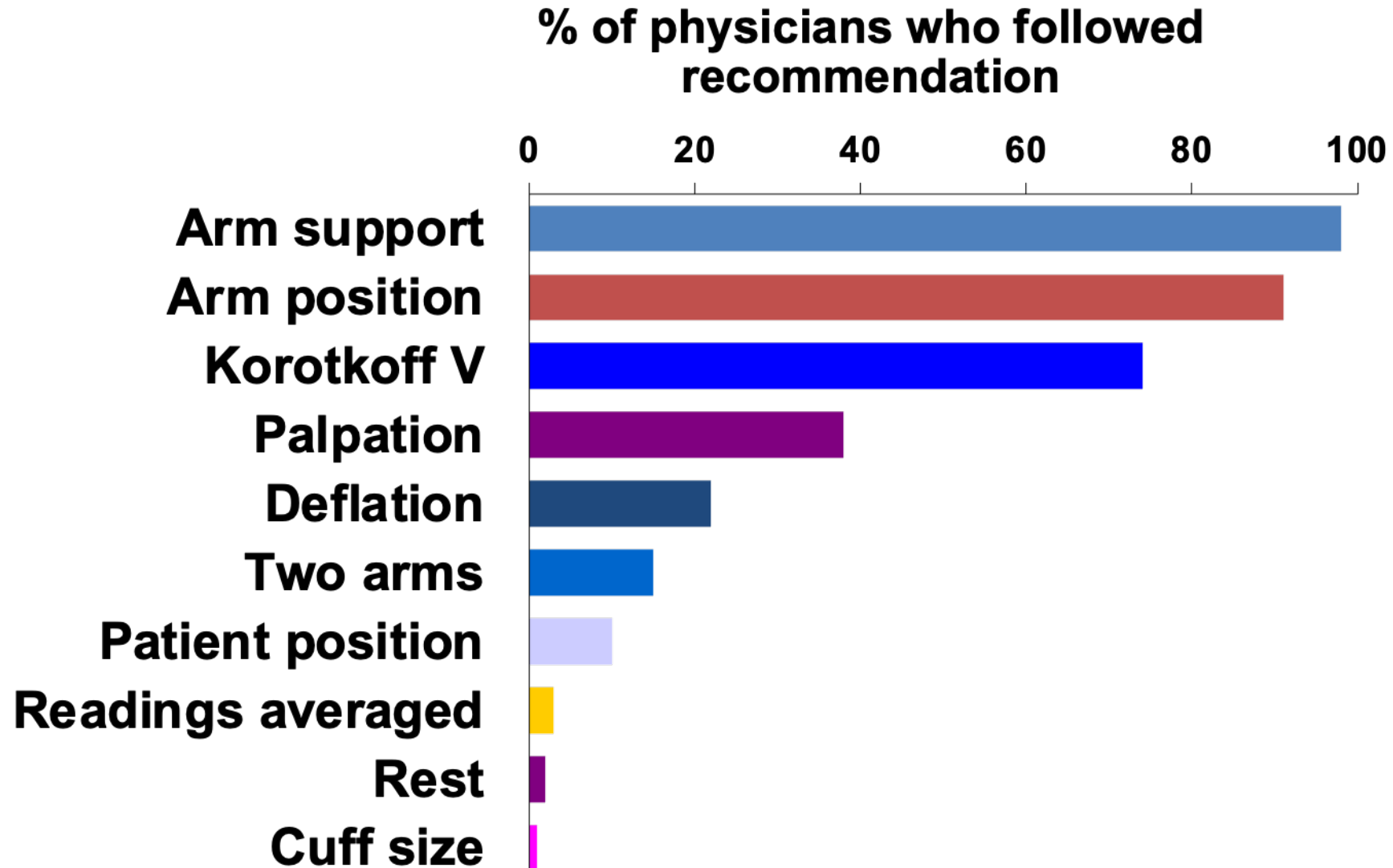
WHO MEDICAL DEVICE TECHNICAL SERIES



# Accurate reproducible basal BP assessment

- BP monitor (accuracy validated automated)
- Standardized patient preparation
- Quiet comfortable environment
- Standardized BP assessment technique

# How many clinicians follow recommendations for patient preparation, technique and equipment?



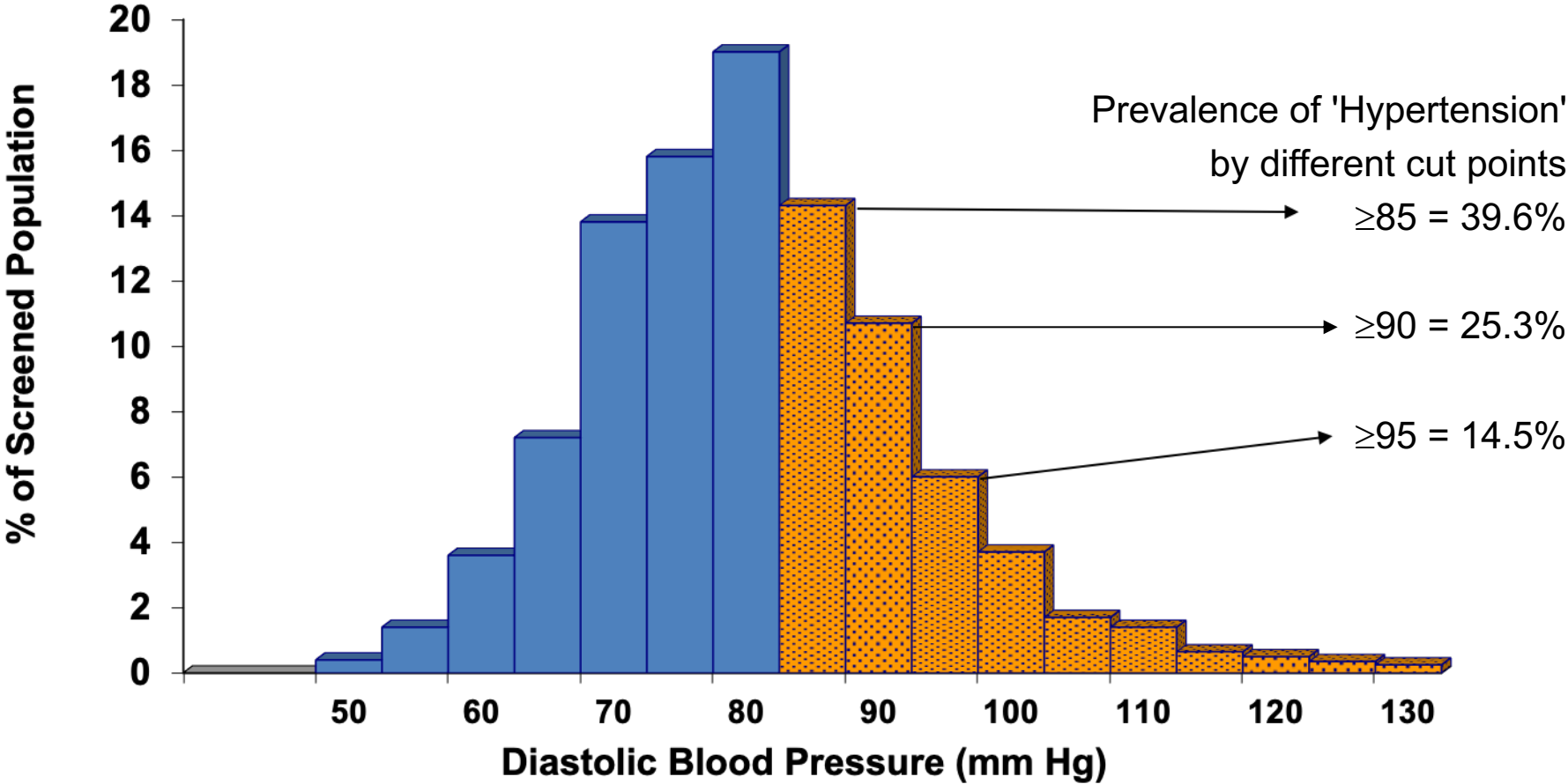
**57% of patients had a change in BP classification when going from usual to standardized measurement**

# Some factors impacting BP

Before measurement	SBP	DBP
Acute meal ingestion, mm Hg	-6	-5 to -1.9
Acute alcohol consumption, mm Hg	-23.6 to +24	-14 to +16
Acute caffeine consumption, mm Hg	+3 to +14	+2.1 to +13
Acute nicotine use or exposure, mm Hg	+2.8 to +25	+2 to +18
Bladder distension, mm Hg	+4.2 to +33	+2.8 to +18.5
Cold exposure, mm Hg	+5 to +32	+4 to +23
Insufficient rest period, mm Hg	+4.2 to +11.6	+1.8 to +4.3
<b>Patient positioning</b>		
Standing versus sitting, mm Hg	-2.9 to +5.0	+7
Supine versus sitting, mm Hg	-10.7 to +9.5	-13.4 to +6.4
Legs crossed at the knee, mm Hg	+2.5 to +14.9	+1.4 to +10.8
Unsupported back, mm Hg	Not significant effects	+6.5
Unsupported arm, mm Hg	+4.9	+2.7 to +4.8
Arm lower than heart level, mm Hg	+3.7 to +23	+2.8 to +12



# 5 mm Hg DBP Error Doubles the Number of Hypertensive Patients



Taylor. *Circ Res* 1977;40(5 Suppl 1):I106-9.

## Progress in the America's

- Scan of government policies related to use of accuracy validated automated manometers in the America's revealed few and fragmented policies or regulations.
- PAHO HEARTS IN THE AMERICAS meeting March 2020 focused in part on “WHO Technical specifications for automated non-invasive blood pressure measuring devices with cuff”
  - Several country representatives indicated the potential to quickly change procurement policies to align with the report recommendations
  - Cuba has is rapidly aligning and agreed has provided a report to the other regional countries.

## Progress in the America's

A new online resource has been developed to aid identification of validated devices. <https://www.menzies.utas.edu.au/documents/pdfs/Blood-pressure-devices.pdf>

## Progress in the America's

A brief online training and certification course (in Spanish, Portuguese and English) produced by the Pan America Health Organization with the World Hypertension League, Resolve to Save Lives, Lancet Commission Group on Hypertension, and Hypertension Canada.

<https://www.campusvirtualesp.org/en/course/virtual-course-accurate-automated-blood-pressure-measurement-2020>

To be available in French, Chinese, and Italian.

## Some BP assessment solutions

- Implementing the key recommendations of the WHO devices report to regulate procurement, and marketing of BP devices, train and certify those assessing blood pressure
- Use of out of the office BPs (home, community and ambulatory BP)
- PAHO assisting countries implement policies relating to blood pressure devices.
- Training and certification of those assessing BP

**BP measurement certification course produced by the Pan America Health organization with the World Hypertension League, Resolve to Save Lives and Lancet Commission group on Hypertension, Hypertension Canada.**

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