Hypertension: magnitude of the problem and key actions for its diagnosis and control

Norm Campbell MD
University of Calgary
Canada
Hypertension care should focus on the few things that are important for population prevention of CVD.

- Screen, diagnose, 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
- Systematically applied in all

Complexity empowers specialists but is disempowering and often impossible to implement for primary care.
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.
GLOBAL DEATHS 2017

Global Burden of Disease Study- Jan 2020

> 10 million deaths

DIET

HYPERTENSION

Global Burden of Disease Study- Jan 2020
Latin America and Caribbean DEATHS 2017

Attributable risk: High blood pressure
Number of deaths: 272,552.21 — 302,415.22
Per cent: 8.52% of total deaths
Rate: 49.79 — 51.97

Dietary risks
- High fasting plasma glucose
- High body-mass index
- Tobacco
- High LDL
- Impaired kidney function
- Alcohol use
- Air pollution
- Malnutrition
- Low physical activity
- Other environmental
- Unsafe sex
- Occupational risks
- Drug use
- WaSH
- Low bone mineral density
- Intimate partner violence
- Childhood maltreatment

High LDL Cholesterol

DEATH %

0%  5%  10%  15%
## Attributable Risk of Lifestyle to Hypertension

<table>
<thead>
<tr>
<th>Lifestyle-risk factor</th>
<th>Attributable risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obesity (overweight)</td>
<td>32 (17-52)%</td>
</tr>
<tr>
<td>High Dietary Sodium</td>
<td>32%</td>
</tr>
<tr>
<td>Low Dietary Potassium</td>
<td>17%</td>
</tr>
<tr>
<td>Western Diet</td>
<td>31%</td>
</tr>
<tr>
<td>Excess Alcohol Intake</td>
<td>3%</td>
</tr>
<tr>
<td>Lack of Physical Activity</td>
<td>17%</td>
</tr>
</tbody>
</table>


The attributable risks are country specific.
The impact of treating hypertension on heart disease and stroke

A 10 mm Hg reduction in 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

Fewer than 1 in 7 people with hypertension worldwide have it under control.

WHO: 9 global NCD targets for 2025

Set of 9 voluntary global NCD targets for 2025

- Harmful use of alcohol: 10% reduction
- Physical inactivity: 10% reduction
- Salt/sodium intake: 30% reduction
- Tobacco use: 30% reduction
- Premature mortality from NCDs: 25% reduction
- Essential NCD medicines and technologies: 80% coverage
- Drug therapy and counseling: 50% coverage
- Diabetes/obesity: 0% increase
- Raised blood pressure: 25% reduction

World Health Organization
GLOBAL BEST PRACTICES

1) HEARTS- lead by WHO
2) RESOLVE TO SAVE LIVES
3) KAISER PERMINENTE
4) PAHO HYPERTENSION PROGRAM (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 (available soon)
Team-based care
Systems for monitoring
Implementation guide

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

pdf, 590kb
Effective Hypertension Care As Pathfinder for PHC

Simple, Practical Protocol
Manage other chronic conditions; improve evidence-based care; reduce costs

Medication and Equipment Supply
Improve purchasing and supply chain management

Team-Based Care
Applicable to wide range of chronic health conditions

Patient-Centered Services
Improve patient support; access to and confidence in primary care; reduce reliance on hospital care; reduce financial and other barriers

Information Systems
Create feedback loops applicable to other conditions; strengthen data-driven culture of accountability and quality improvement

Accuracy validated automated manometers

Recently trained certified observers
Successful introduction of a hypertension control pilot program in 1 year– Matanzas Cuba
Hypertension care should focus on the few things that are important for population prevention of CVD.

- Screen, diagnose, 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
- Systematically applied in all

Complexity empowers specialists but is disempowering and often impossible to implement for primary care.