May Measurement Month (MMM): 2017

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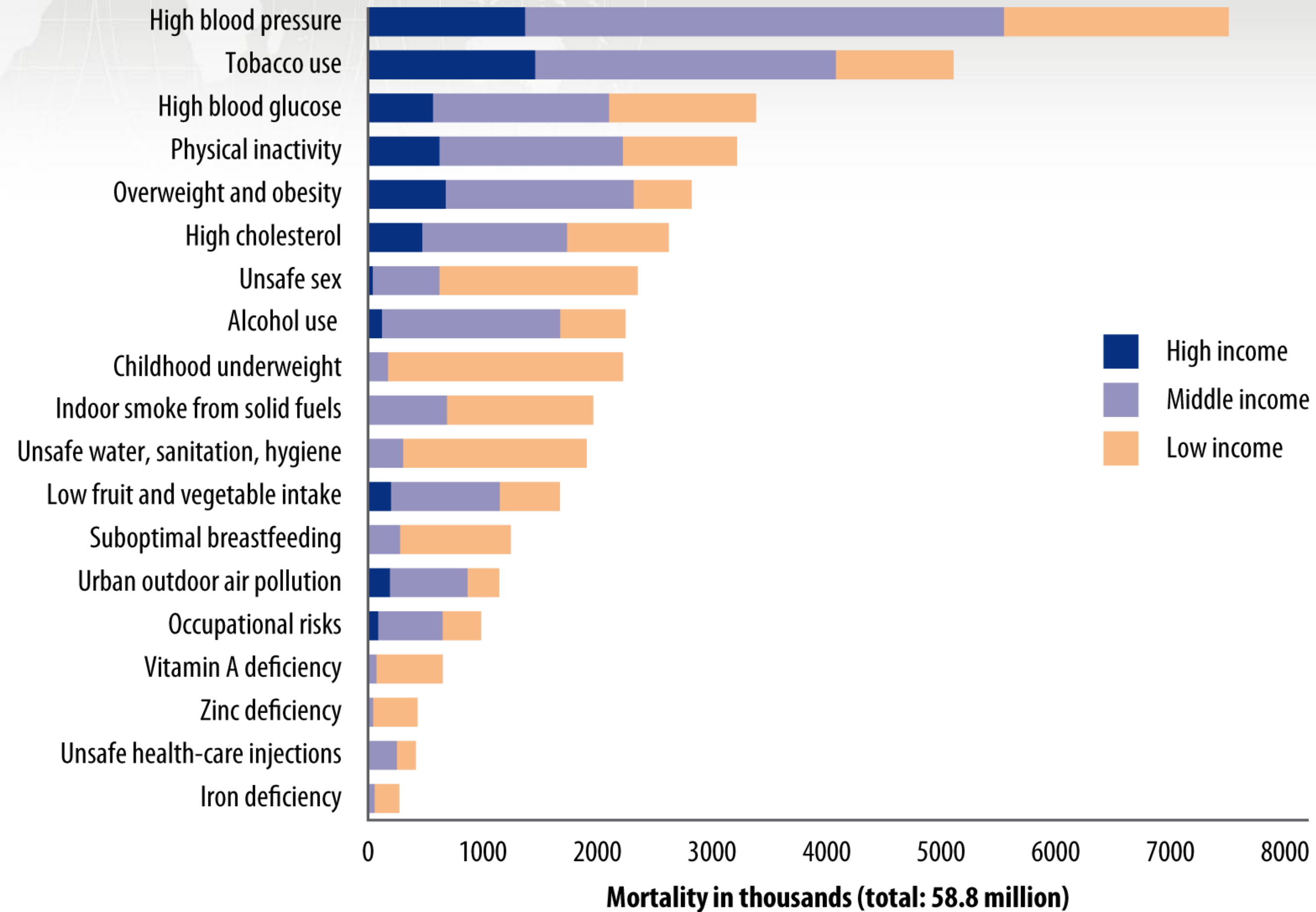
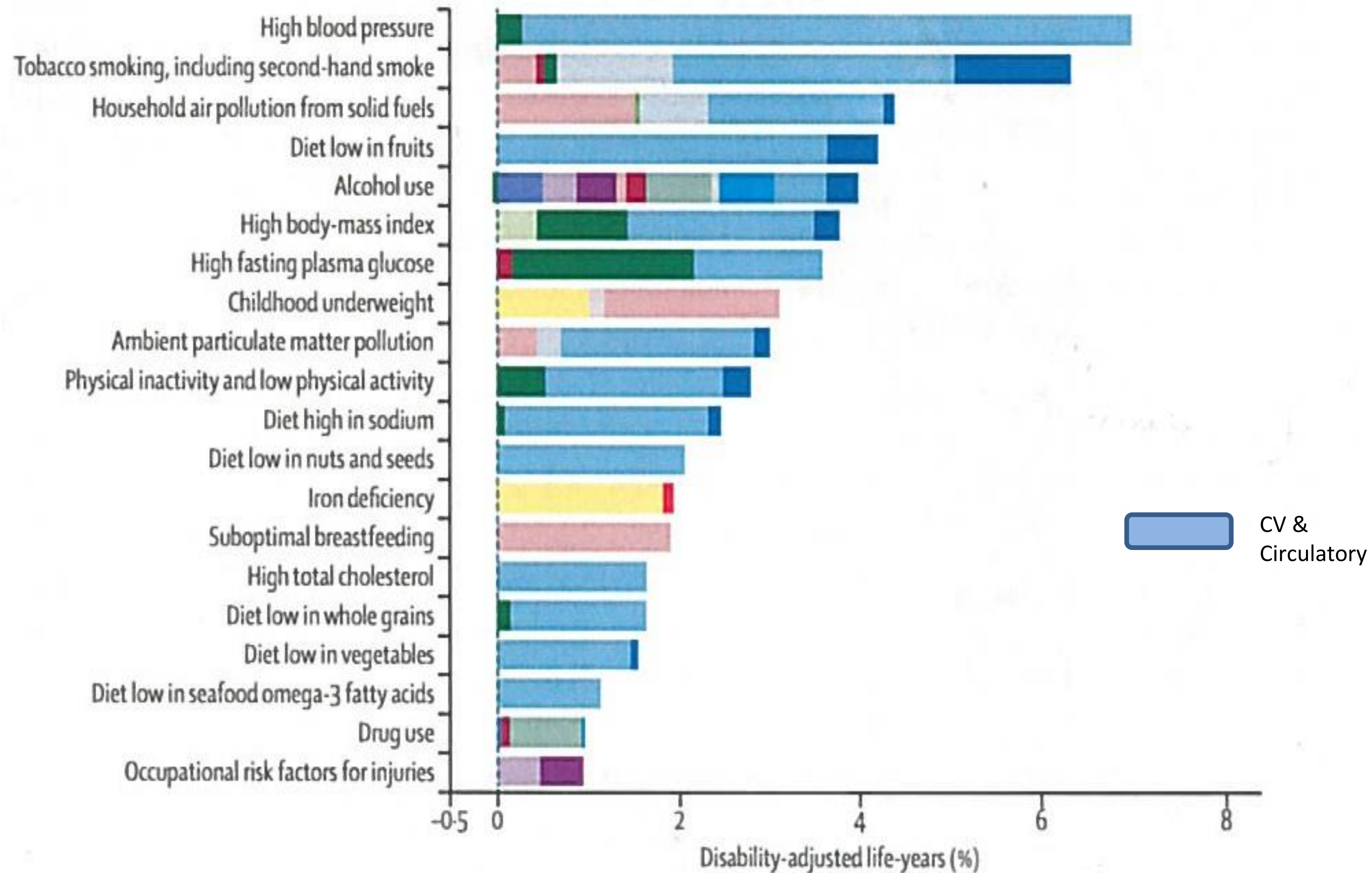
ISH/WHL – African Region

Capetown 2017

Deaths attributed to 19 leading factors, by country income level, 2004



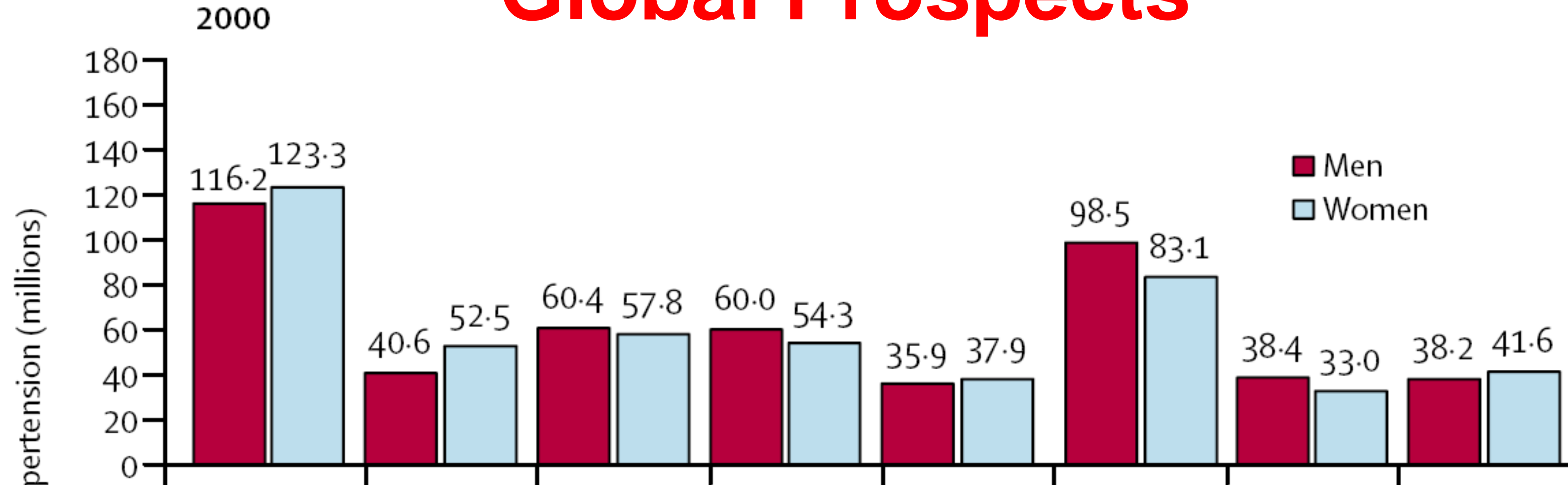
Global Burden of Disease Due to Risk Factors by disease type: 2010

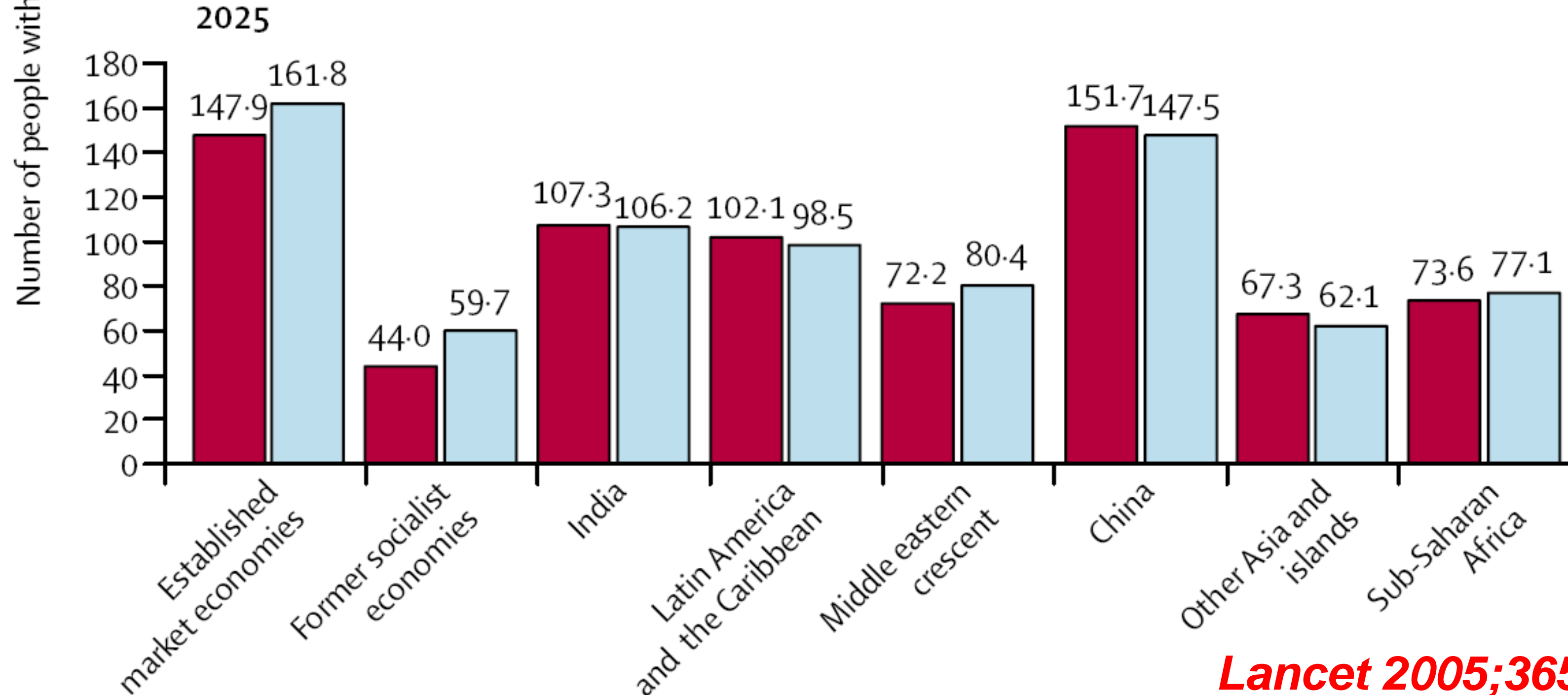


CV & Circulatory

Lancet 2012

Hypertension: Size of the Problem - Global Prospects





Lancet 2005;365:217-23

Hypertension: Awareness, Treatment & Control[†] by National Income: 2003 – 2009. PURE Study

Income level	n	Aware (%)	Treated (%)	Controlled (%)
High	6263	49.0	46.7	19.0
Upper Middle	18123	52.5	48.3	15.6
Lower Middle	23269	43.6	36.9	9.9
Low	10185	40.8	31.7	12.7
Total	57840	46.5	40.6	13.2

[†] <140/90

Chow et al. JAMA 2013

In 2017 World Hypertension Day will expand to become May Measurement Month

Aims:

- To highlight the need for increased screening for raised BP.
- To identify and reduce the BPs of over 2 million people whose raised BP requires intervention according to current guidelines.

MAY MEASUREMENT MONTH

WORLD HYPERTENSION DAY

Initiated by the International Society of Hypertension and the World Hypertension League

MMM Design & Logistics

- A global cross-sectional survey of the BPs of 25 million volunteer adults (age $\geq$ 18years) who have not had their BPs measured since April 30, 2016 will be carried out in at least 100 countries.
- Each country will establish as many screening sites as possible (100/country on average will be required).
- Each site will need on average to recruit 100 screenees per day for 25 days during the month of May 2017. Hence 100 x 100 x 100 x 25 = 25 million!
- BPs will be measured under standard conditions.
- Those found to be 'hypertensive' will all be provided with written dietary and lifestyle advice which on average have been shown to lower systolic BP by at least 10mmHg. In addition, depending on local facilities such individuals will be provided with a referral to receive medications and/or follow up facilities.
- A treatment algorithm tailored to local conditions to be developed.

MMM: Recruitment of 25 million Screenees

(a) Identification of National Organisers:

- **Via 6 ISH/WHL Regional Advisory Groups (RAGs)**
  - Africa
  - Central & S America
  - Asia and Australasia
  - Eastern Europe and Middle East
  - W Europe
  - N America
- **Via ISH International Forum**
- **Via WHL member organisations, regional offices etc**
- **Via Lancet Commission on Hypertension**

(b) Site Selection via national organisers

(c) Site volunteer staff recruitment

- 2 volunteers/day/site

(d) Screenee recruitment

25 African Countries Involved:

Angola Benin Burundi
Cameroon Cape Verde Congo Chad
DRC Ghana Ivory Coast Kenya
Malawi Mali Mozambique
Niger Nigeria Rwanda
Somaliland Sudan Tanzania
Togo Tunisia Uganda
Zambia Zimbabwe

El Djazair (Algiers)
Rabat
MOROCCO
Tripoli
Cairo
ALGERIA
LIBYA
EGYPT
WESTERN SAHARA
MAURITANIA
Nouakchott
Asmara
ERITREA
Dakar
SENEGAL
Banjul
GAMBIA
Bissau
Bamako
Niamey
N'Djamena
DJIBOUTI
Djibouti
GUINEA
Conakry
SIERRA LEONE
Freetown
Monrovia
LIBERIA
SOUTH SUDAN
Juba
CENTRAL AFRICAN REP.
Bangui
Addis Ababa
ETHIOPIA
Porto Novo
EQUATORIAL GUINEA
SAO TOME & PRINCIPE
Libreville
GABON
Brazzaville
Kinshasa
Muqdisho (Mogadishu)
SEYCHELLES
Victoria
Luanda
ATLANTIC
OCEAN
COMOROS
Moroni
MADAGASCAR
Antananarivo
MAURITIUS
Port Loui
Lusaka
NAMIBIA
Windhuk
BOTSWANA
Gaborone
Pretoria
Johannesburg
Maputo
Mbabane
SWAZILAND
LESOTHO

National activity: An Example

Below is the email communication we've sent the major professional organizations like the Philippine Academy of Family Physicians (PAFP), which has more than 10,000 active members all throughout the country. We've sent similar letters to the Philippine College of Physicians (PCP), composed of around 7000 internists; and the Philippine Heart Association (PHA), with around 1,500 cardiologist-members. The Philippine Society of Hypertension (PSH) will remain the national coordinating organization.

We're also banking on the support of our Department of Health which has an extensive grassroots network which we can hopefully tap. I'm in personal communication with the secretary (minister) of DOH by email,

And as of yesterday she emailed me and said she'll just assign someone from her department to co ordinate with us.

Sources of Screenees

- Occupational health - Companies
  - Universities
  - Medical Schools
- Pharmacy chains
- Shopping malls (&other ‘pop-ups’)
- Sporting events
- Clinics – GP/hospital
- Churches
- Other ideas?

MMM Data Collection

- Standardised BP measurement
- Other data - limited
- Direct data entry to an App (if needed - recorded to Excel spreadsheet to App)
- Database and Central Stats in London
- Ethical Clearance – devolved to national level

The MMM App

- Data Collection App will be
  - Available on Apple iStore, GooglePlay and via Web
  - Secure
  - Available in all languages necessary (Cost - £399/language)
  - Inclusive of study SOPs etc
  - Downloadable to a single file
  - Include information and tick box for informed consent.
  - Developed for approximately £10k.

BP Measurement

a) BP should preferably be measured by an automated electronic device, but can also be measured by a conventional sphygmomanometer using a stethoscope.

b) If a sphygmomanometer is used, the first and fifth Korotkoff sounds (the appearance and disappearance of sounds) will correspond to the systolic and diastolic BP.

c) BP should be measured on the upper-arm

d) Measure the circumference of the arm (at the mid arm level) and ensure that the correct size of arm cuff is used
   - For arms with circumference < 32 cm, use regular cuff
   - For arms with circumference 32-42 cm, use large cuff
   - For arms with circumference >42 cm, use extra large cuff
   - Paediatric cuffs should be used for those whose arms are <20cm

e) The cuff should be placed at the heart level

BP Measurement (contd.)

f) The patient's arm being used for the measurement should rest comfortably on a table

g) BP should be measured on one arm only, preferably left, and the arm used should be recorded

h) Prior to measurement:
- The participant should be seated with their backs supported and with their legs resting on the ground and in the uncrossed position for 5 min
- Participants should not have smoked immediately before or during the measurement

i) Three (3) BP readings should be taken and recorded on the app, with 1 min between readings.

j) For each BP reading, the automated BP devices also provide data on heart rate, and this information should also be captured on the mobile app.

k) If the auscultatory method/sphygmomanometer is used, the heart rate should be established during the 1 minute after each BP reading, and also recorded on the mobile app.

l) Definition of hypertension:
   i. being on at least one antihypertensive medication taken for raised BP or
   ii. the average SBP (mean of the last 2 of 3 readings) ≥ 140 mmHg and/or
   iii. the average DBP (mean of the last 2 of 3 readings) ≥ 90 mmHg

Other Data to be collected

- Collection of basic demographic information:

a) All information should be collected prior to BP measurements

b) The code of the participant should be first entered: COUNTRY/ SITE ID/ DATE/ CONSECUTIVE NUMBER

c) The following data should be collected: on all screenees (core-dataset)

  - Country code
  - City
  - Date
  - Time of day
  - When was your blood pressure (BP) last measured? (MM/YYYY)
  - What is your date of birth? (MM/YYYY)
  - What is your sex? (M/F)
  - Are you currently on blood pressure/antihypertensive treatment? yes/no
  - Do you have diabetes? yes / no / don't know
  - Do you smoke? yes /no

Other Data to be collected (contd.)

- What was the temperature of the room where the BP readings have taken place?
- Have you had a heart attack in the past? Yes/No
- Have you had a stroke in the past? Yes/No
- Do you consume alcohol? (Never or rarely/<once week/regularly)
- Which arm will be used to take the blood pressure reading? Left/right
- SBP (1-3)
- DBP (1-3)
- Heart rate (1-3)
- Self-declared ethnicity

In addition, the following variables will be recorded when available/possible

- Measured or Self-declared weight (kg/lbs)
- Measured or Self-declared height (cm/inches)

MMM: Handling "hypertensives" ($N \simeq 2$ million – globally)

- Tailored to local conditions and facilities
- Minimal treatment: 10 top tips (non-pharm)
- >140/90 – repeat on site within May
- Still >140/90 – as local facilities permit

MMM Funding

- **Central**
  - ISH annual RAG budget – Initial float
  - AZ/GSK/Novartis Foundation
  - OMRON/ Microlife etc
  - CDC
  - Others (?)
- **National**
  - Local charities (e.g. BHF in the UK)

Next Steps

1. Protocol/PIS/Consent forms
2. Ethical Clearance
3. Organising Sites and Volunteers
4. Promotion and Networking

CLINICAL STUDY PROTOCOL OUTLINE

Protocol Date: Feb 2, 2017

Version: International 1.0

Project title: MAY MEASUREMENT MONTH 2017 (MMM17)

Lead organisations: International Society of Hypertension (ISH) and World Hypertension League (WHL)

Confirmed publishing partnership: The Lancet

Sponsors: International Society of Hypertension, World Hypertension League, OMRON, Centres for Disease Control and Prevention (CDC)

CLINICAL STUDY PROTOCOL OUTLINE (Contd.)

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MMM Promotion

- Video – YouTube
- Social media
- ISH Website
- HTN News and bulletins
- Ambassadors – global/regional/national
- National initiatives
    - TV/Radio etc.
    - Governments

MMM: Added Value

- Central database on 25 million adults with research potential.
    - Lancet publications!
- Creation of a network to repeat MMM in 2018.
- Fast tracking development of sustainable available treatment.
- Forming new alliances and partnerships among national and international healthcare providers.

We need your help to change the face of hypertension worldwide!