



Xu hướng nào về tình hình THA Việt nam qua chương trình tầm soát toàn quốc MMM 2018 của ISH?

HUYNH VAN MINH, FACC, FAsCC, MISH
Vietnam Society of Hypertension

Author and co-authors in 2018 MMM

May Measurement Month 2018: an analysis of blood pressure screening results from Vietnam

Huynh Van Minh¹, Nguyen Lan Viet², Cao Thuc Sinh³, Phan Nam Hung⁴, Nguyen Thi Mong Ngoc⁵, Ngo Van Hung⁶, Tran Kim Son⁷, Nguyen Ta Dong⁸, Doan Chi Thang⁸, Nguyen duc Thuan⁹, Nguyen dinh Thoan¹⁰
Hoang Anh Tien¹, Thomas Beaney^{11,12}, Anca Chis Ster¹¹, Neil R. Poulter¹¹

¹ Department of Cardiology, University of Medicine and Pharmacy, Hue University, 6 Ngo Quyen, 530000 Hue city, Vietnam;

² Department of Cardiology, Vietnam Heart Institute, 1 Ton that Tung, 100000 Hanoi, Vietnam;

³ Department of Cardiology, Vinh Medical School, 161 Nguyen Phong Sac, 460000 Vinh, Vietnam;

⁴ Department of Cardiology, Quinhon Hospital, 106 Nguyen Hue, 820000 QuiNhon, Vietnam;

⁵ Department of Administration, PhuYen Health Service, 4 To Huu, 620000 Phu Yen, Vietnam;

⁶ Department of Cardiology, Daklak Hospital, 2 Mai Hac De, 630000 Ban MeThuot, Vietnam;

⁷ Department of Cardiology, Cantho Medical and Pharmacy University, 179 Nguyen Van Cu, 900000 Can Tho, Vietnam

⁸ Department of Cardiology, Hue Central Hospital, 16 Le Loi, 530000 Hue, Vietnam;

⁹ Department of Administration, Lamdong Health Service, 6 Tran hung Dao, 670000 Dalat, Vietnam,

¹⁰ Department of Administration, Nhatrang Health Service, 3 Han Thuyen, 650000 Nha Trang, Vietnam;

¹¹ Imperial Clinical Trials Unit, Imperial College London, Stadium House, 68 Wood Lane, London, W12 7RH, UK.

¹² Department of Primary Care and Public Health, Imperial College London, St Dunstan's Road, London, W6 8RP, UK.

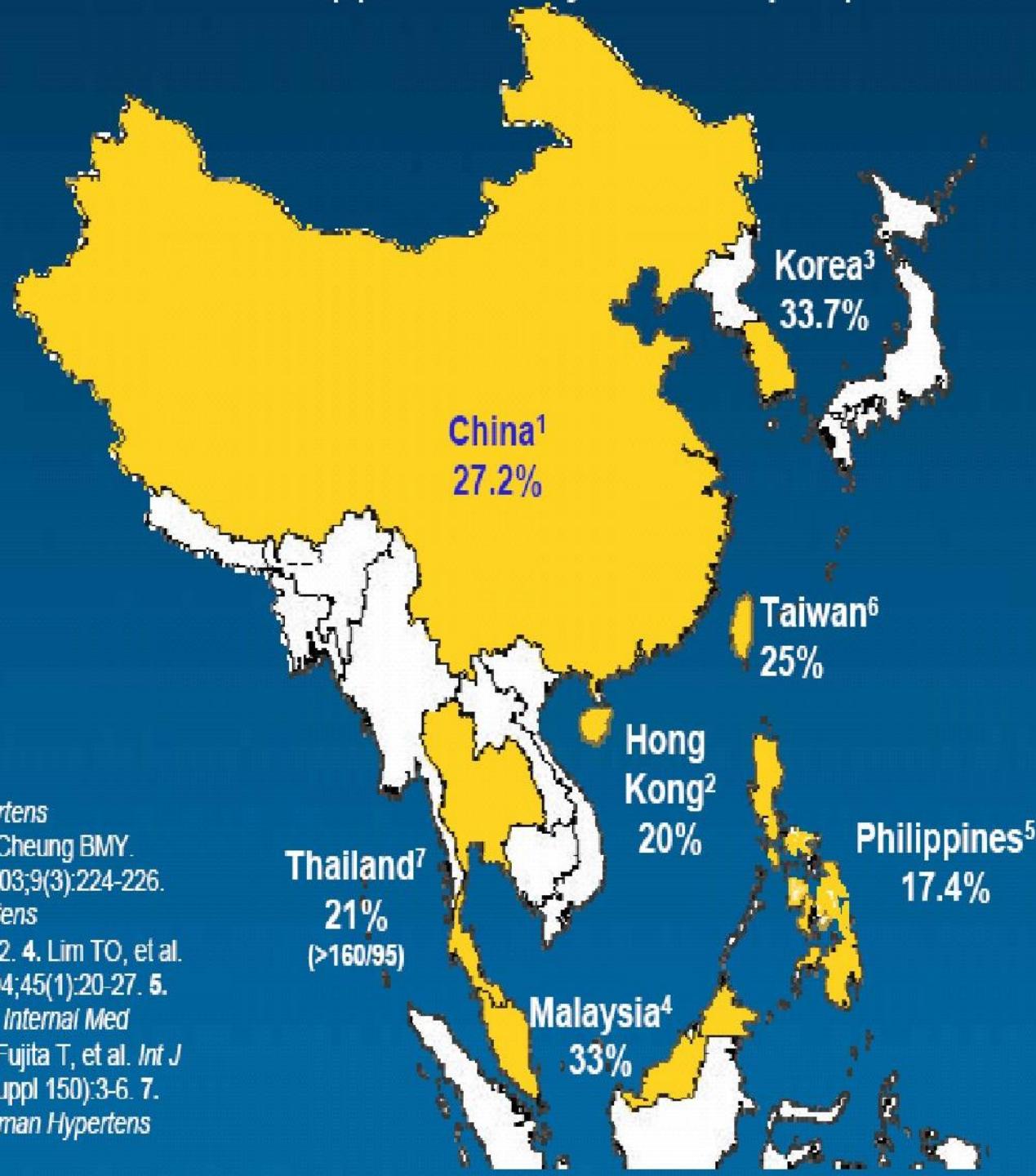


MỞ ĐẦU

Classification of HTN following the developing countries

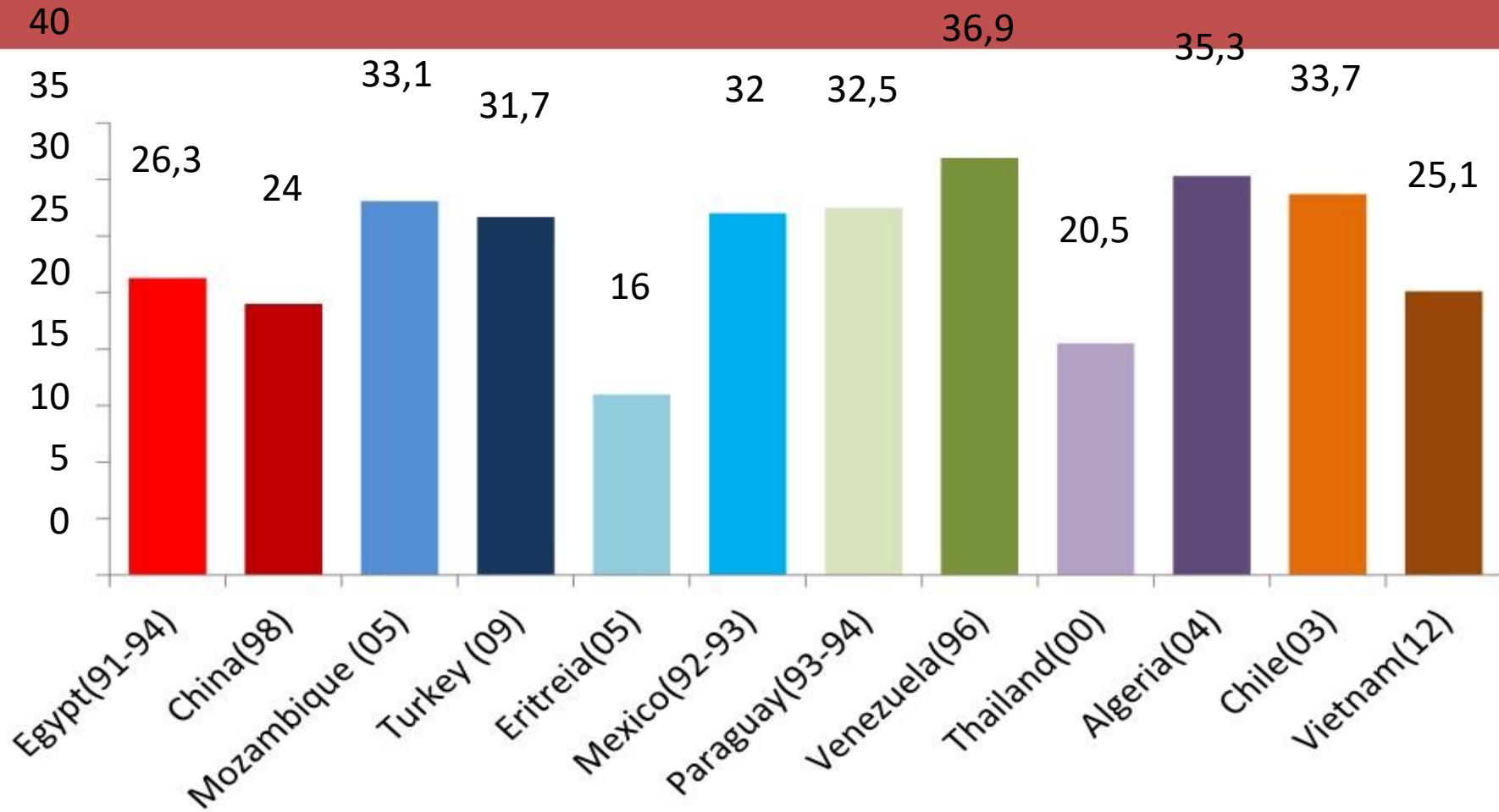
Very low (<10%)	Bangladesh (rural); Cameroon (rural); Ethiopia (rural); India (rural); Iran (rural); Nigeria (rural); Sudan
Low (<20%)	Cameroon (urban); Congo (urban); Democratic Republic of the Congo; Eritrea; Ethiopia; north India (rural); Iran; Liberia; Nepal; Nigeria (urban)
Intermediate (20-30%)	China; Costa Rica; Cuba; Egypt; Ethiopia (urban); Ghana; Jamaica; Pakistan; Senegal; South Africa; Thailand; The Gambia; Turkey; Uganda (rural); Vietnam
High (>30%)	Algeria; Brazil; Chile; Ecuador; Ghana (urban); north India (urban); Mexico; Mozambique; Tanzania; Zimbabwe
Very high (>40%)	Burkina Faso; Paraguay; Seychelles; Venezuela

Compiled from survey data (1990-2011).^{45,1425}



Refs: 1. Gu DF, et al. *Hypertens* 2002;40:920-927. 2. Cheung BMY. *Hong Kong Med J* 2003;9(3):224-226.
3. Jo I, et al. *J Hypertens* 2001;19(9):1523-1532. 4. Lim TO, et al. *Singapore Med J* 2004;45(1):20-27. 5. Dans AL, et al. *Phil J Internal Med* 2005;43:103-115. 6. Fujita T, et al. *Int J Clin Pract* 2006;60(Suppl 150):3-6. 7. Singh RB, et al. *J Human Hypertens* 2000;14:749-763.

Prevalence of HTN in developing countries



Characteristics of hypertension in Asians

1. High prevalence and low control rates
2. High sodium and low potassium intakes.
3. High night-time BP and low dipping.
4. High stroke and low coronary event rates.

Asia Pacific Region is projected to bear brunt of HTN disease burden

- More than 25% of the world's population is estimated to have hypertension¹
- Up to 66% of some subtypes of CVD in the AP region can be attributed to hypertension²

	Estimated number of people with hypertension (millions) ¹	
	2000	2025
India	60.4	107.3
China	98.5	151.7
Other Asia	38.4	67.3

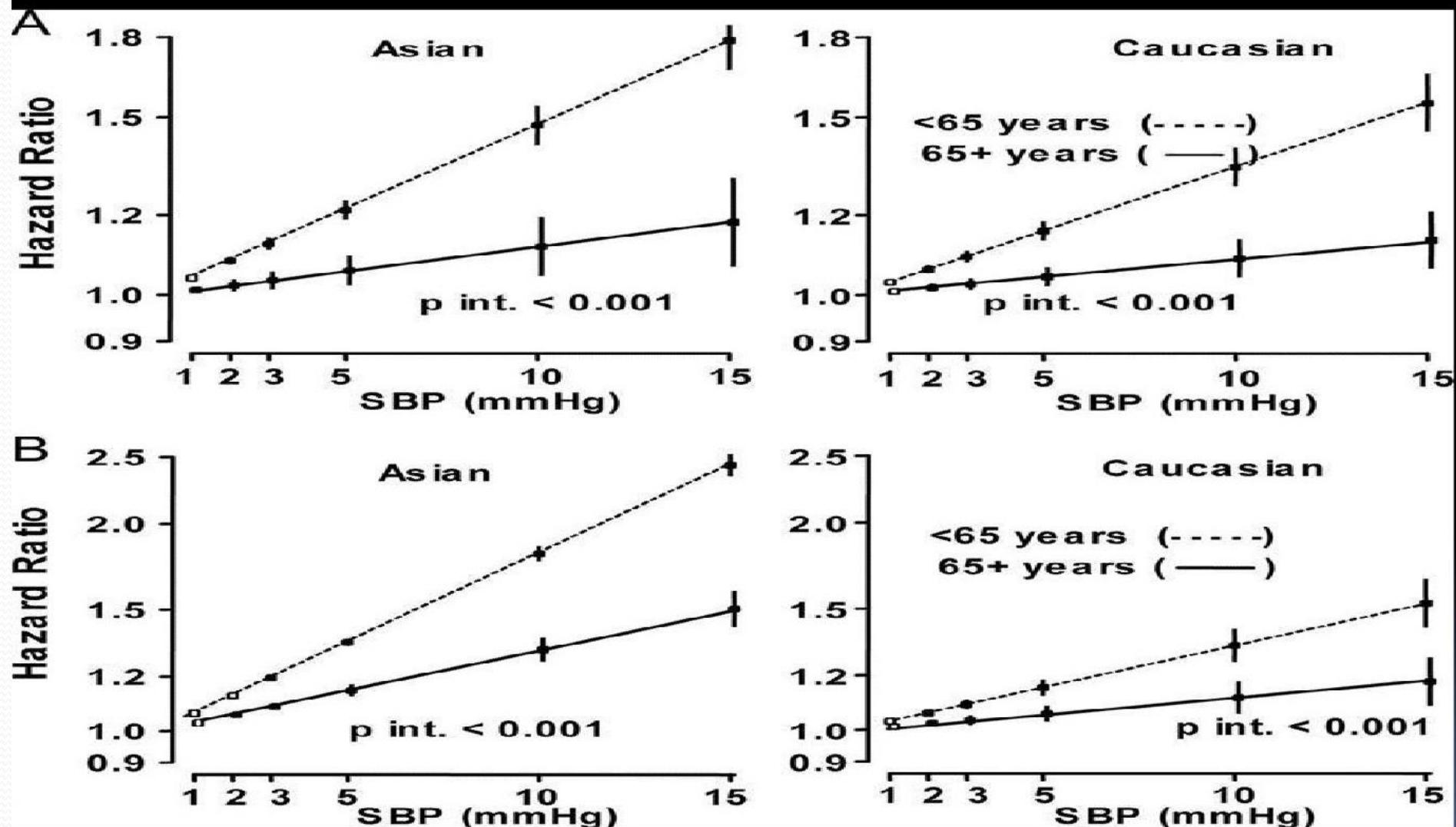
↑ 56%

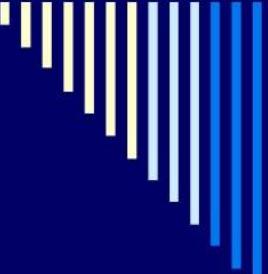
↑ 65%

↑ 57%

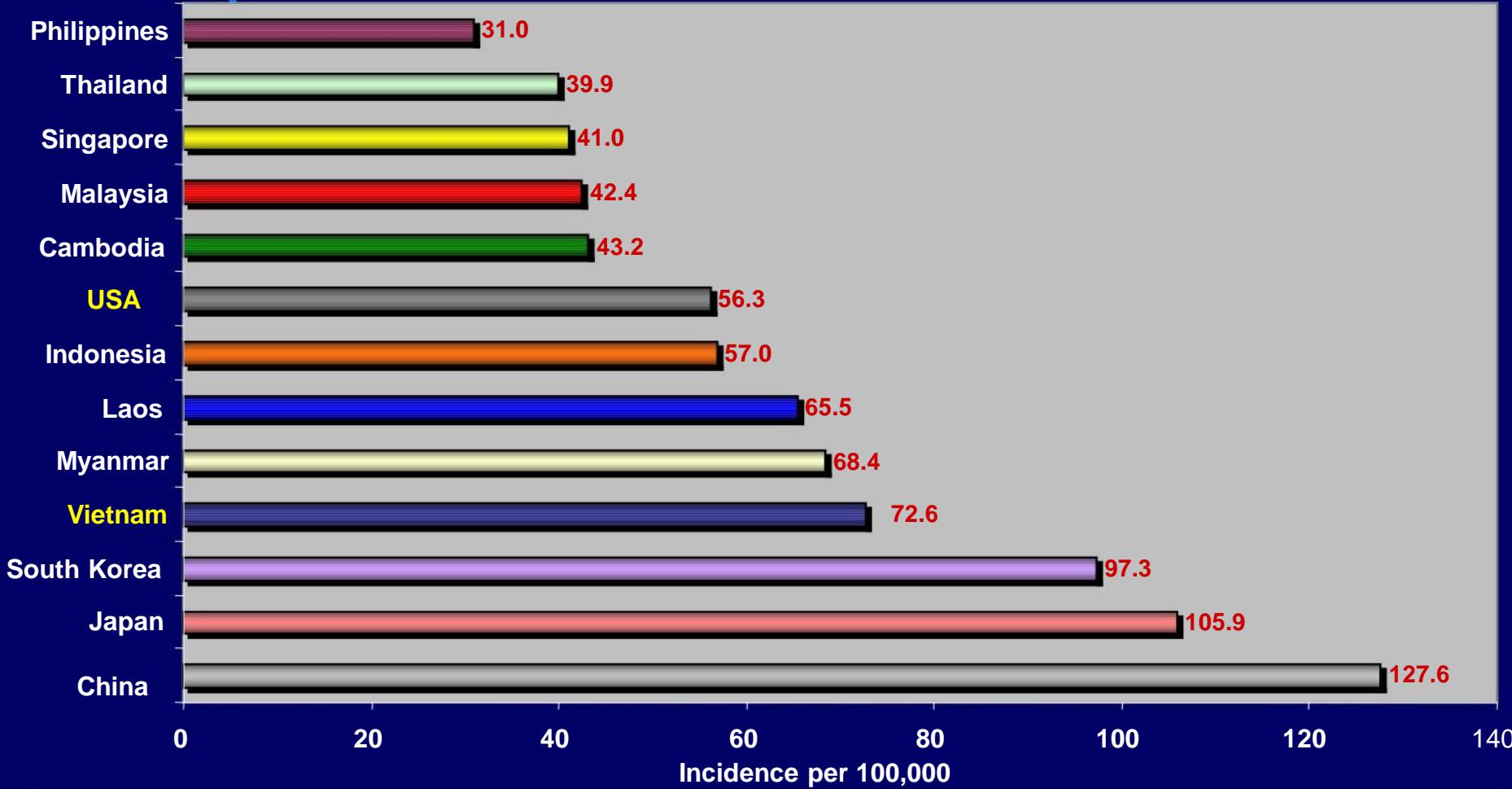
1. Kearney PM, et al. Lancet 2005;365:1567-76.
2. Martinuik AL. J Hypertens 2007;25:111-7.

Asians at greater risk of HTN-related complications vs Caucasians



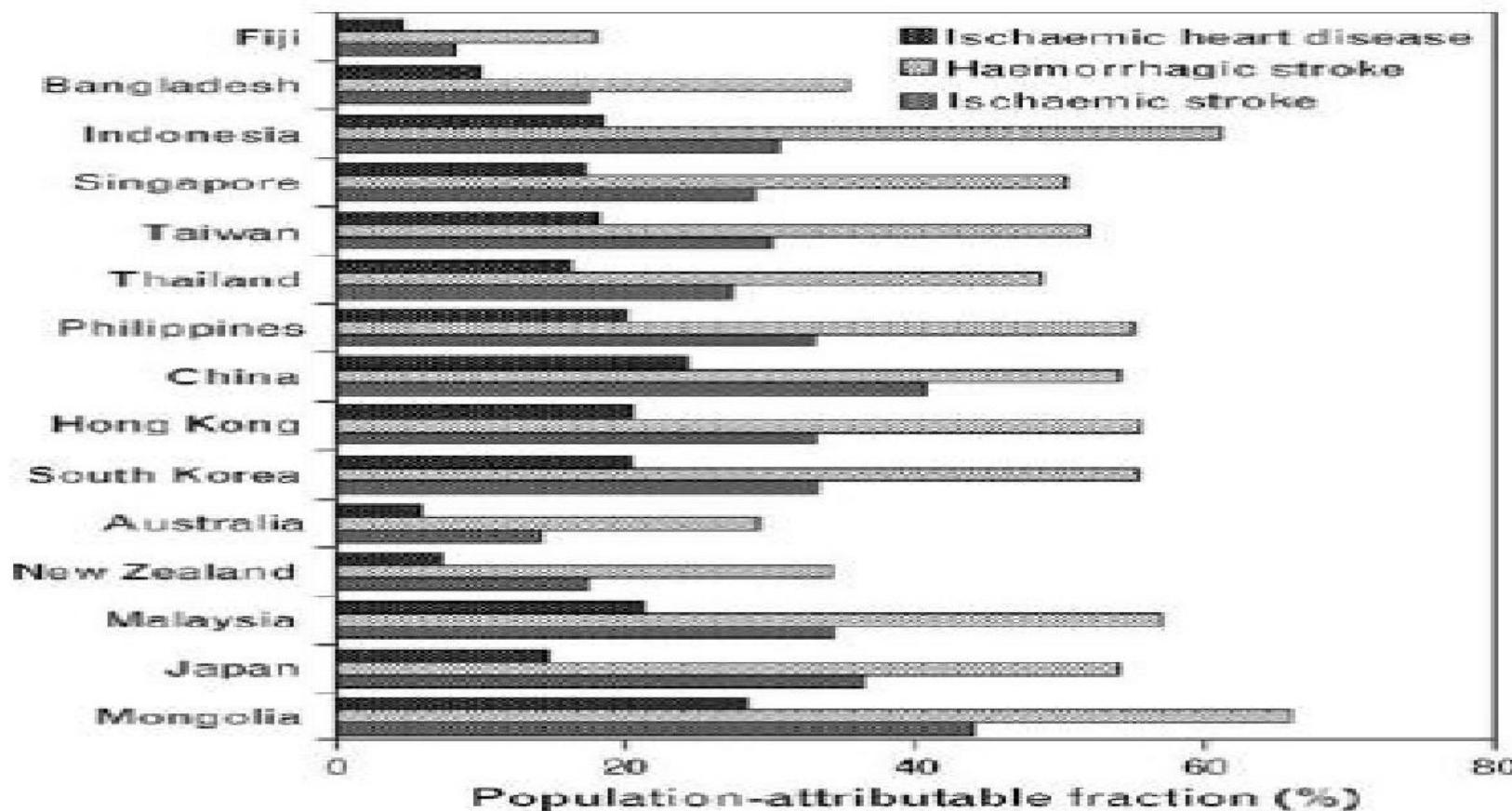


Incidence of Stroke in the Asian Pacific Region (2002)



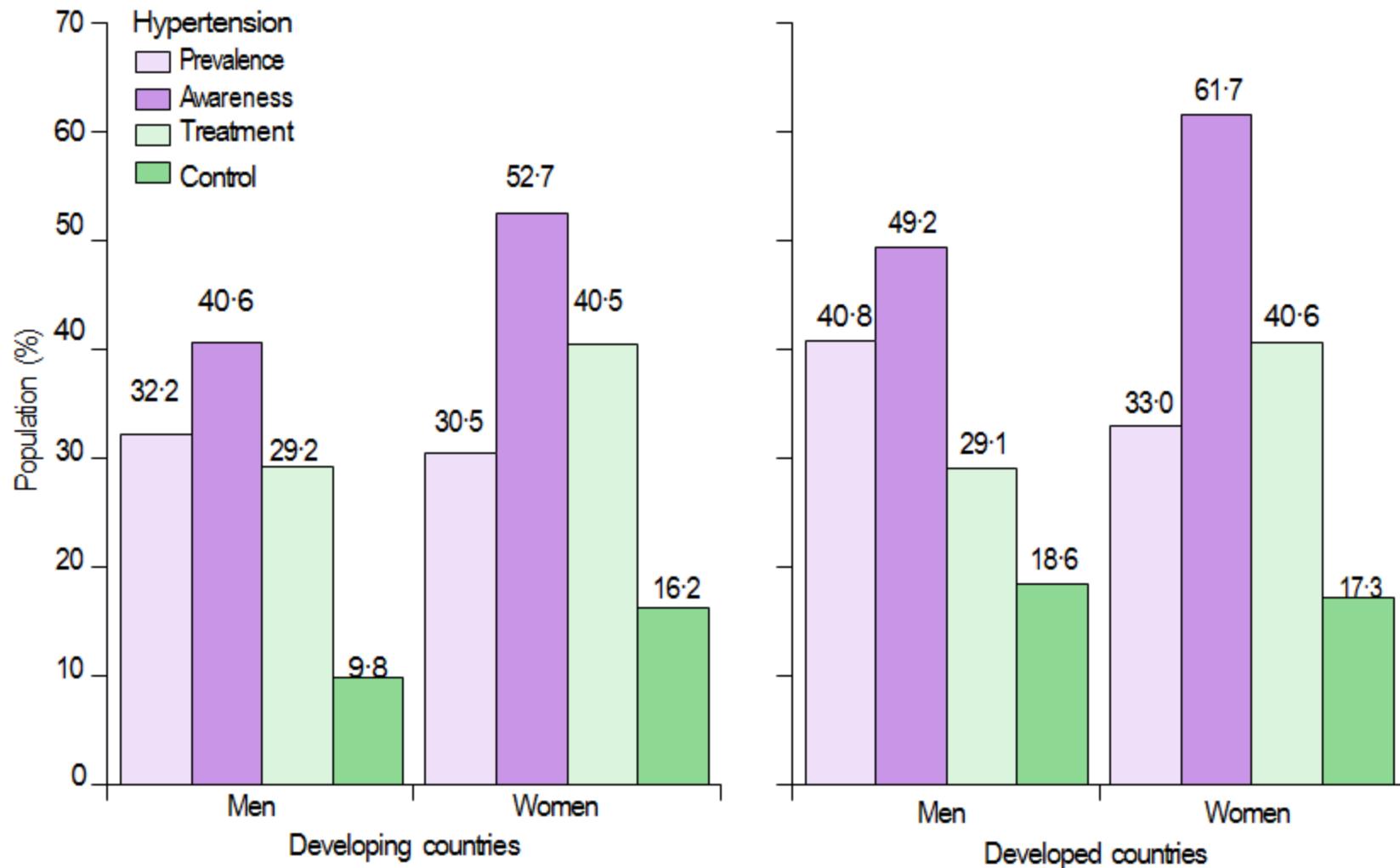
More hemorrhagic, ischemic strokes than IHD in Asean Pacific attributable to HTN

Fig. 3



Population-attributable fractions for cardiovascular disease deaths due to hypertension in men.

Awareness & capacity of HTN control in developing countries & developed countries

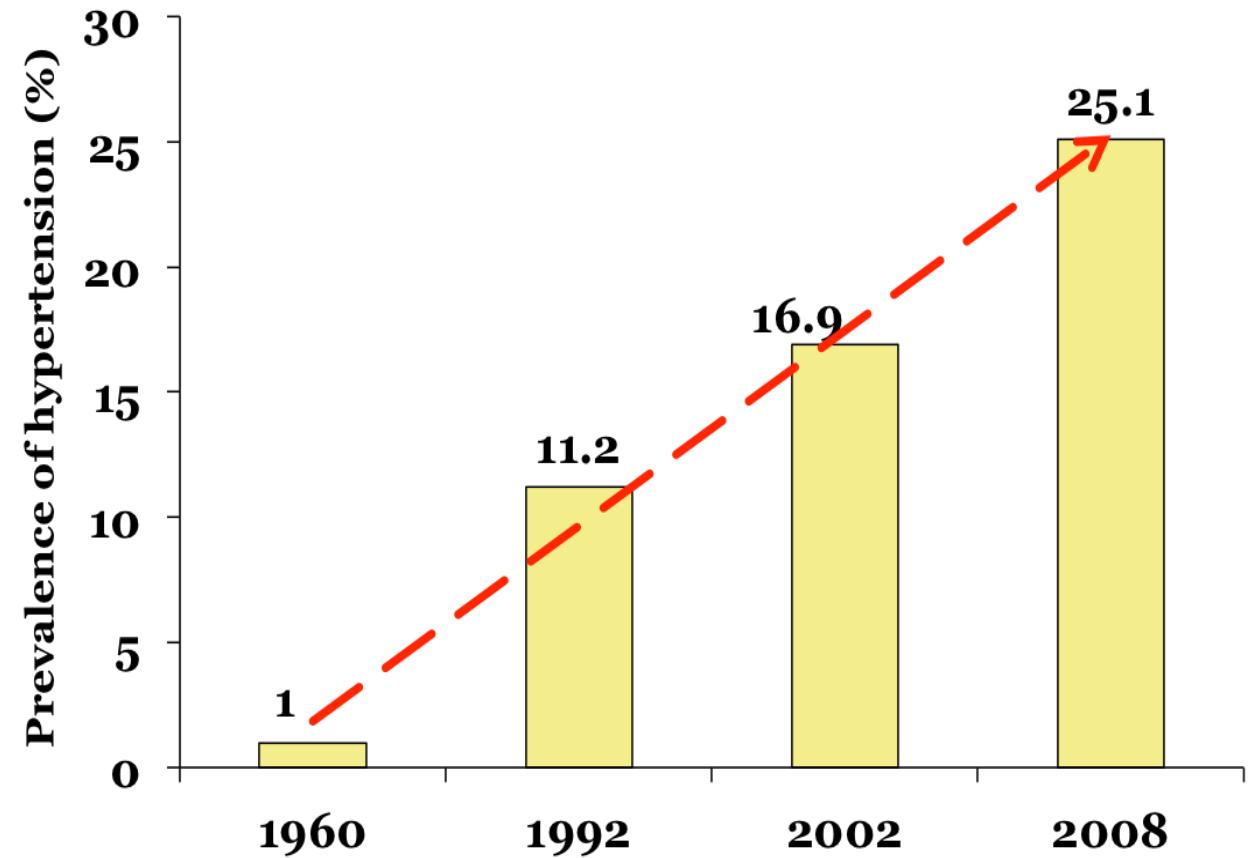


Trend of hypertension in Vietnam



NATIONAL PROGRAM OF PREVENTION - CONTROL OF HYPERTENSION-

Prevalence of hypertension in Vietnam



- 1960: Dang Van Chung et al.: Hypertension among adult population in Northern Vietnam.
- 1992: Tran Do Trinh et al.: Hypertension among Vietnamese people aged 18 years and over.
- 2002: Truong Viet Dung et al.: Hypertension among Vietnamese adults aged 25 to 64 years old.
- 2008: Our survey.: Hypertension and its risk factors among Vietnamese adults aged 25 years and over.

National Health Survey 2001 – 2002.



ONLY 46.5% AWARENESS

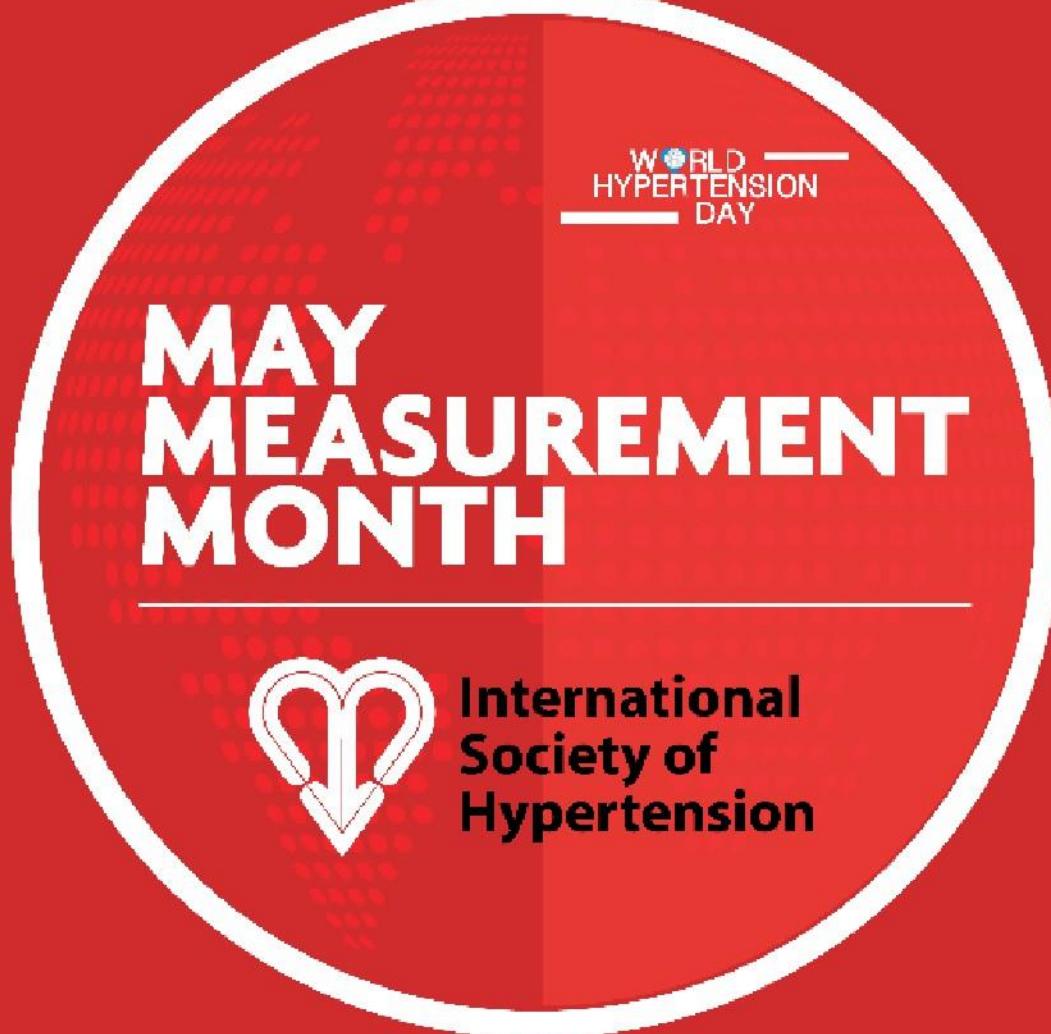
Hypertension: Awareness, Treatment & Control + by National Income: 2003 - 2009. PURE Study

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

AND SO MMM WAS BORN



VIETNAM

HOW WE ARE FINANCED?



Driven by ISH



International
Society of
Hypertension

Supported at country level



Thank you to our supporters

OMRON



Dự án truyền thông đa phương tiện thuộc dự án Ngày Đầu Tiên hướng tới bệnh nhân Tăng huyết áp

Dự án Ngày Đầu Tiên

1
NGÀY ĐẦU TIÊN

Ngày Đầu Tiên – Tăng Huyết Áp

Ngày Đầu Tiên – Đái Tháo Đường

Ngày Đầu Tiên – Corner

Because I say so
(BISS)

Nurse Training

Chương trình tầm soát Tăng huyết áp định kỳ Servier phối hợp Phân hội THA và MMM tổ chức

Chương trình hỗ trợ nâng cao kỹ năng tư vấn của Điều Dưỡng/
Y tá

Dự án Phi Lợi Nhuận vì cộng đồng Servier ký biên bản ghi nhớ với Bộ Y Tế để giúp bệnh nhân Việt Nam cải thiện nhận thức về bệnh THA và ĐTD

Chuỗi các Kios tư vấn chuyên biệt cho bệnh nhân THA và ĐTD đặt tại các bệnh viện trên cả nước

GIẢI PHÁP TRONG QUẢN LÝ TĂNG HUYẾT ÁP /ĐÁI THÁO ĐƯỜNG

ĐIỀU TRỊ

- Phương pháp/thuốc/can thiệp chất lượng, hiệu quả, ít tác dụng phụ
- Giá thành hợp lý

NGÀY ĐẦU TIÊN

DỊCH VỤ HỖ TRỢ

1. Thông tin về phòng ngừa
2. Sàng lọc để BN được phát hiện bệnh sớm
3. Thông tin để BN hiểu, tăng tuân thủ

CHẨN ĐOÁN SỚM

- Trang thông tin [Ngaydautien.vn](#)
- Chiến dịch tuyên truyền về THA, ĐTD
- Ứng dụng dự đoán nguy cơ mắc bệnh, cách phòng tránh

TUÂN THỦ DÀI HẠN

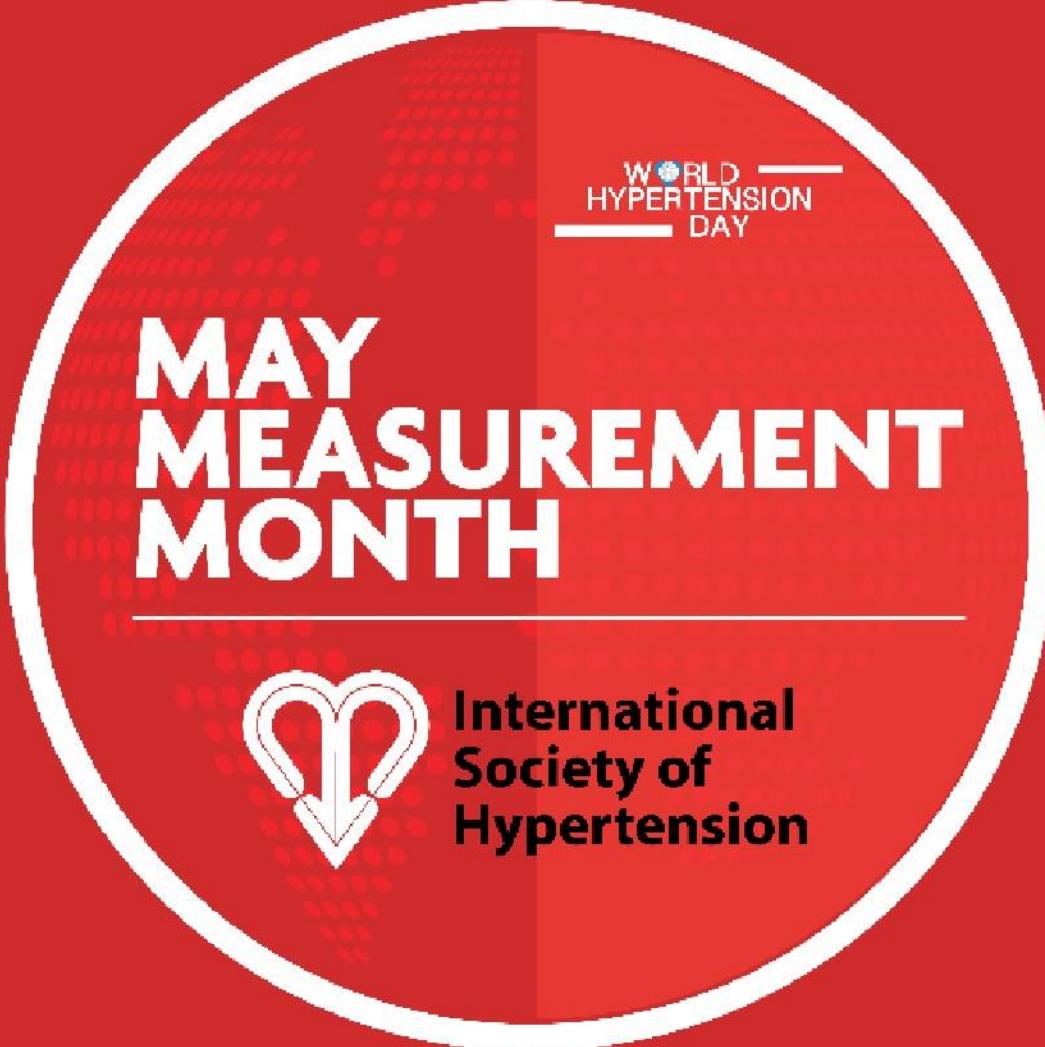
- Mô hình **phòng tư vấn Ngày Đầu Tiên** tại Bệnh viện
- Chương trình **tầm soát** THA và ĐTD
- Trang thông tin [Ngaydautien.vn](#)
- Ứng dụng theo dõi HA, glucose tại nhà

The selected cities / No of participants

1. Hanoi /3.701
2. Vinh/1.497
3. Hue/1.906
4. QuiNhon/705
5. TuyHoa/699
6. BanMeThuot/324
7. CanTho/543
8. SERVIER/1.130

Total: 17.332





WORLD
HYPERTENSION
DAY

MAY MEASUREMENT MONTH



International
Society of
Hypertension

RESULTS

VIETNAM MMM18

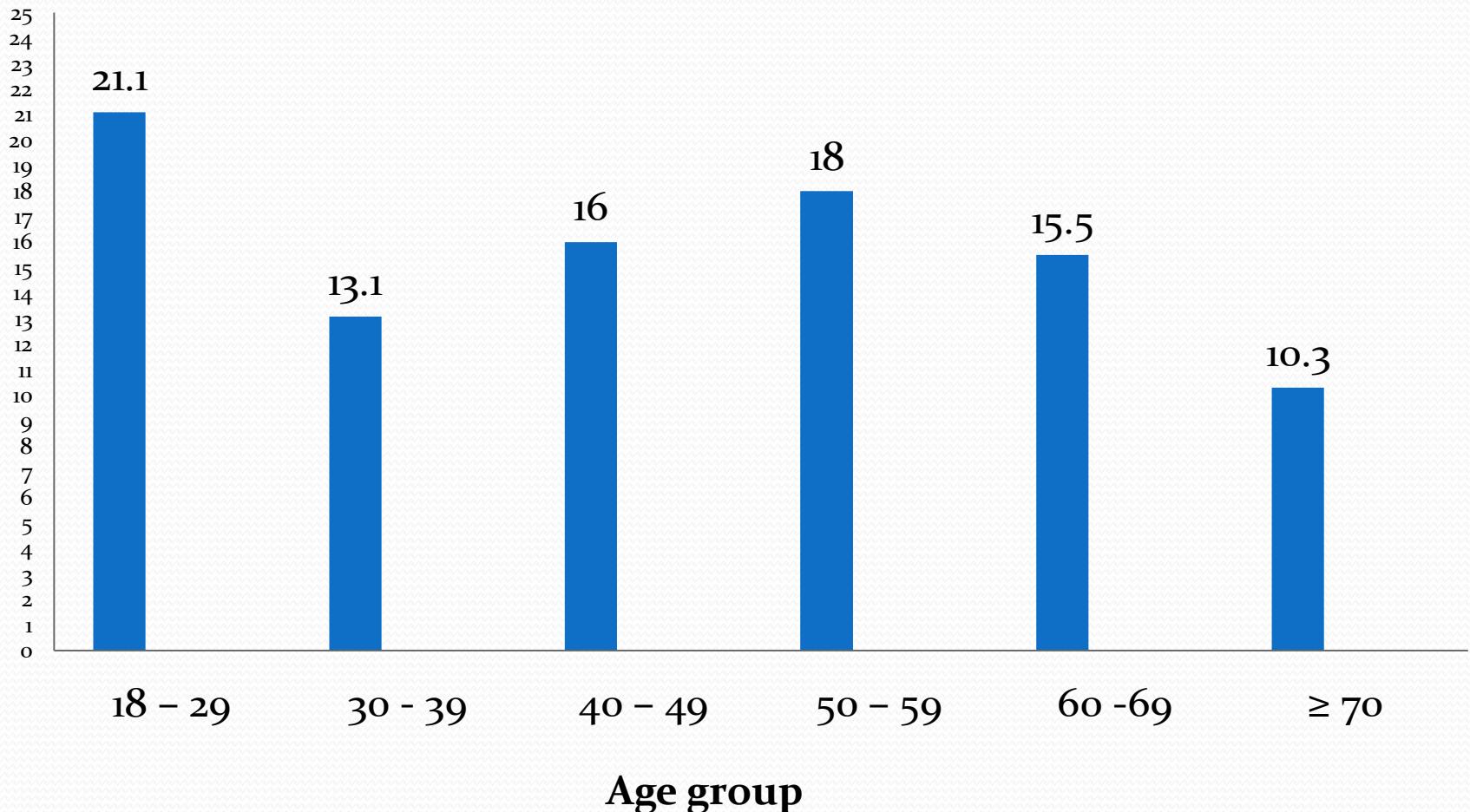
Characteristics of participants*

Gender	Female	Male	Unknown
	9834 (56,7%)	7458 (43,0%) *	38 (0,2%)
Age (years)	Mean \pm SD		47.03\pm17.89
Ethnicity	Kinh		Other
	15.053 (86,9%)		1808 (10,4%) *
On antihypertensive medication	No	Yes	Unknown
	13888 (80,1%)	3304 (19,1%)*	148(0,9%)
Diabetes	No	Yes	Unknown
	13699 (79,0%)	1201 (6,9%) *	2432 (14,0%)
Curent smoker	No	Yes	Unknown
	14187 (81,9%)	3058 (17,6%)*	87 (0,5%)
Alcohol intake	Rarely	\geq 1 per week	Unknown
	12547 (81,9%)	1573 (9,1%)	542 (3,1%)
BMI (kg/m ²)	Mean \pm SD		21.68 \pm 2.88
BP ever recorded	12.878		74,3%
Total participants		17332	100,0%

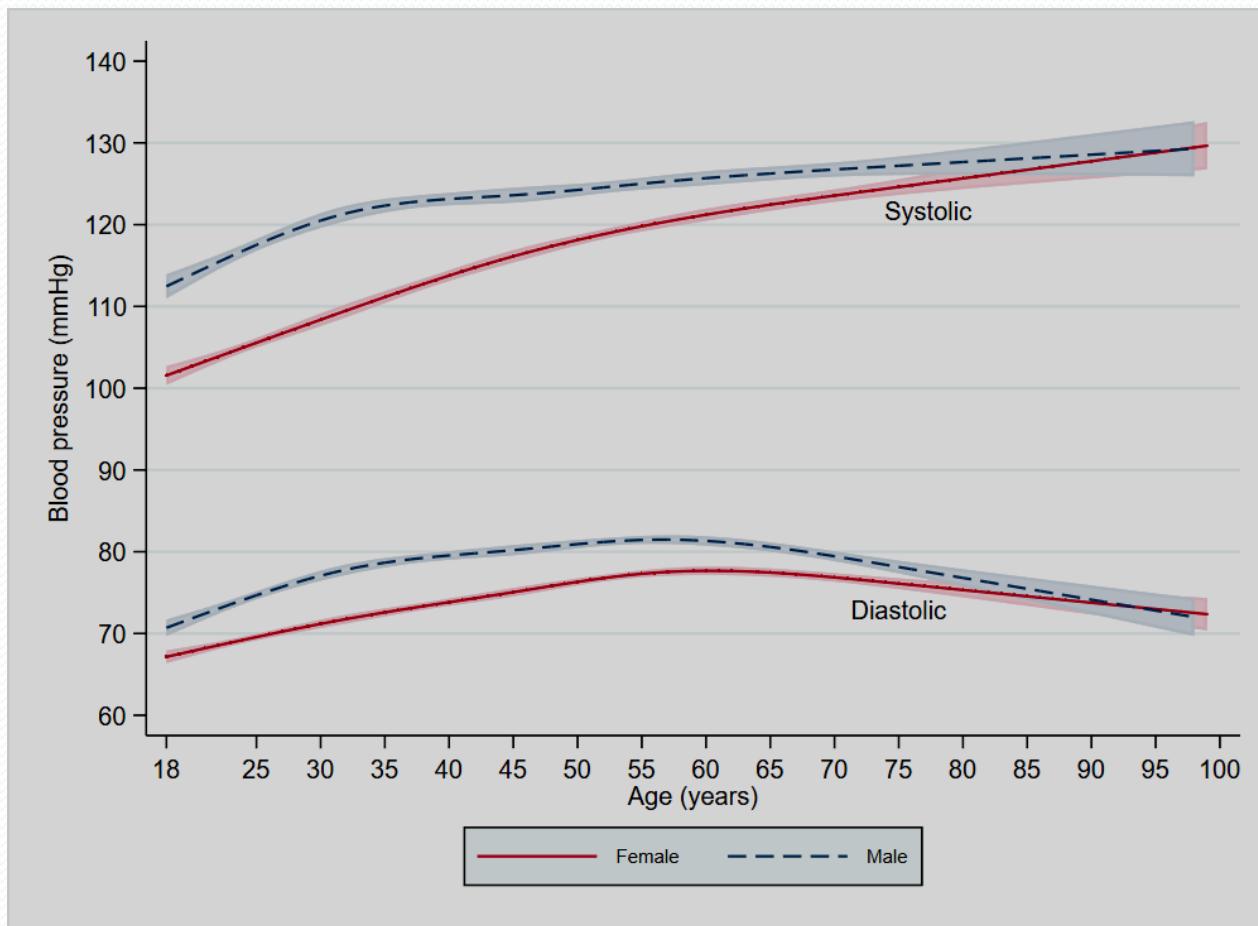
* p<0,05 , Excel analysis were offered by Xin Xia and Elsa Kobeissi, MMM statistic team

Age group distribution

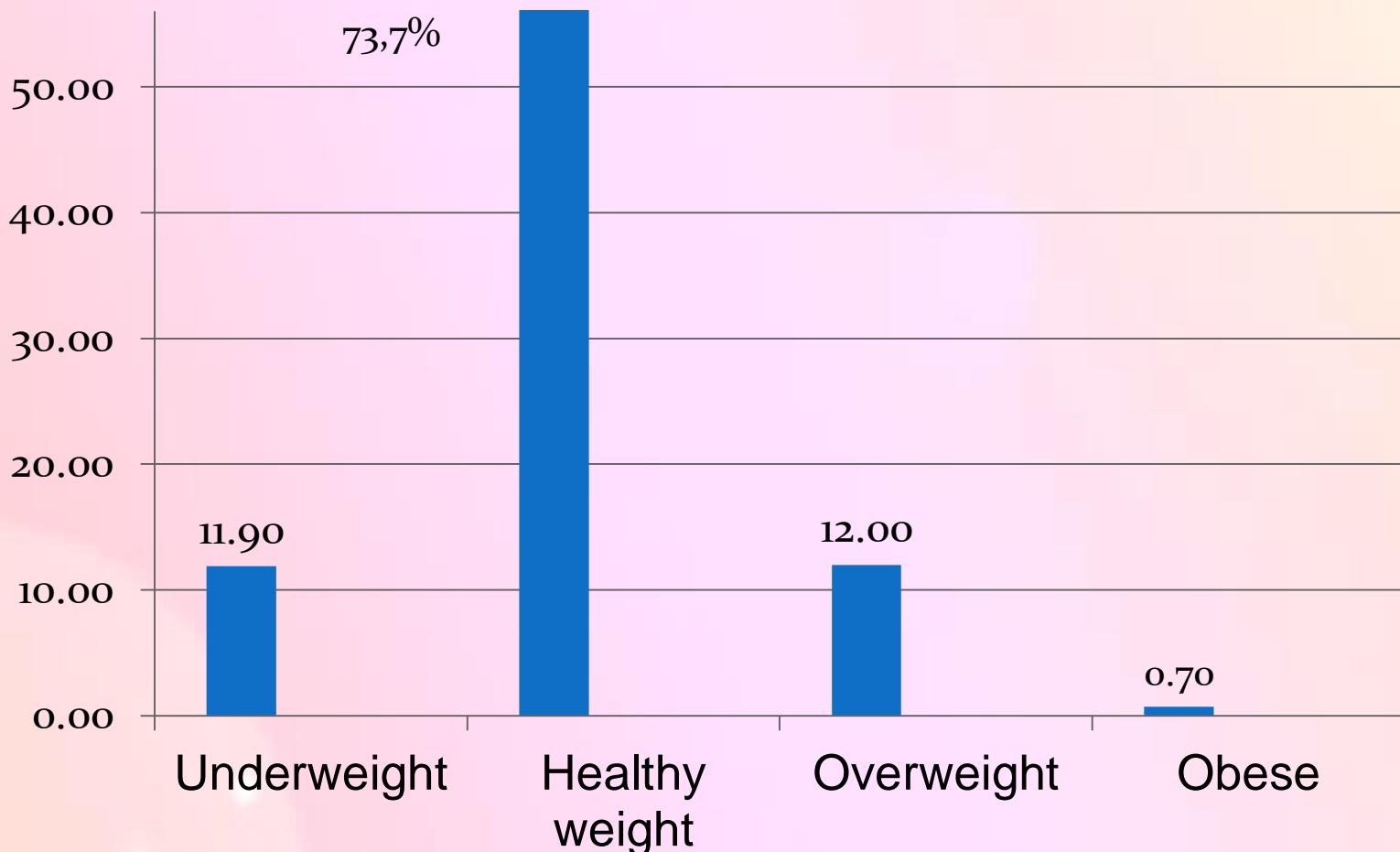
Percentage %



Trend of BP both sexes in normal subjects

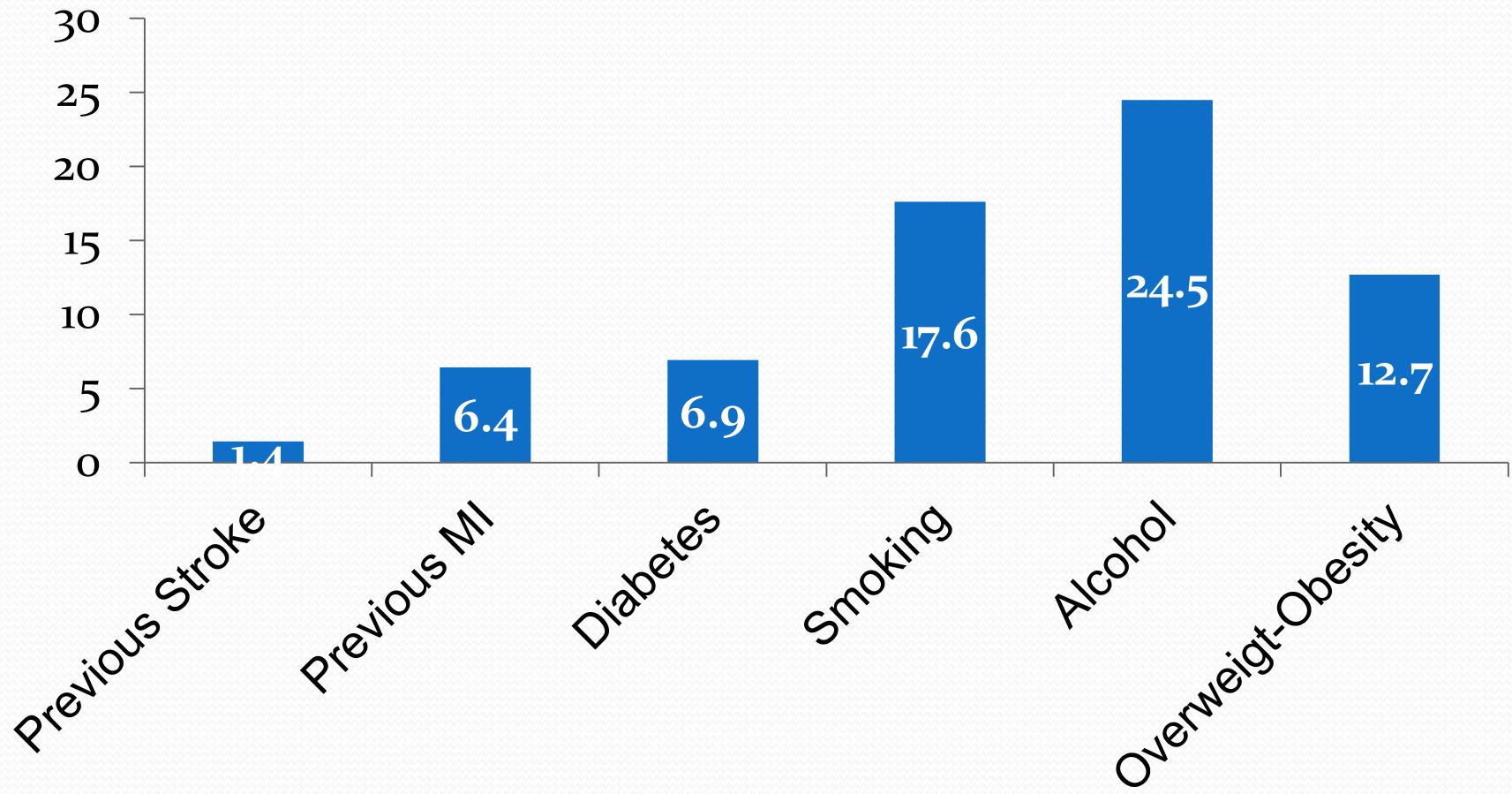


Mass index distribution

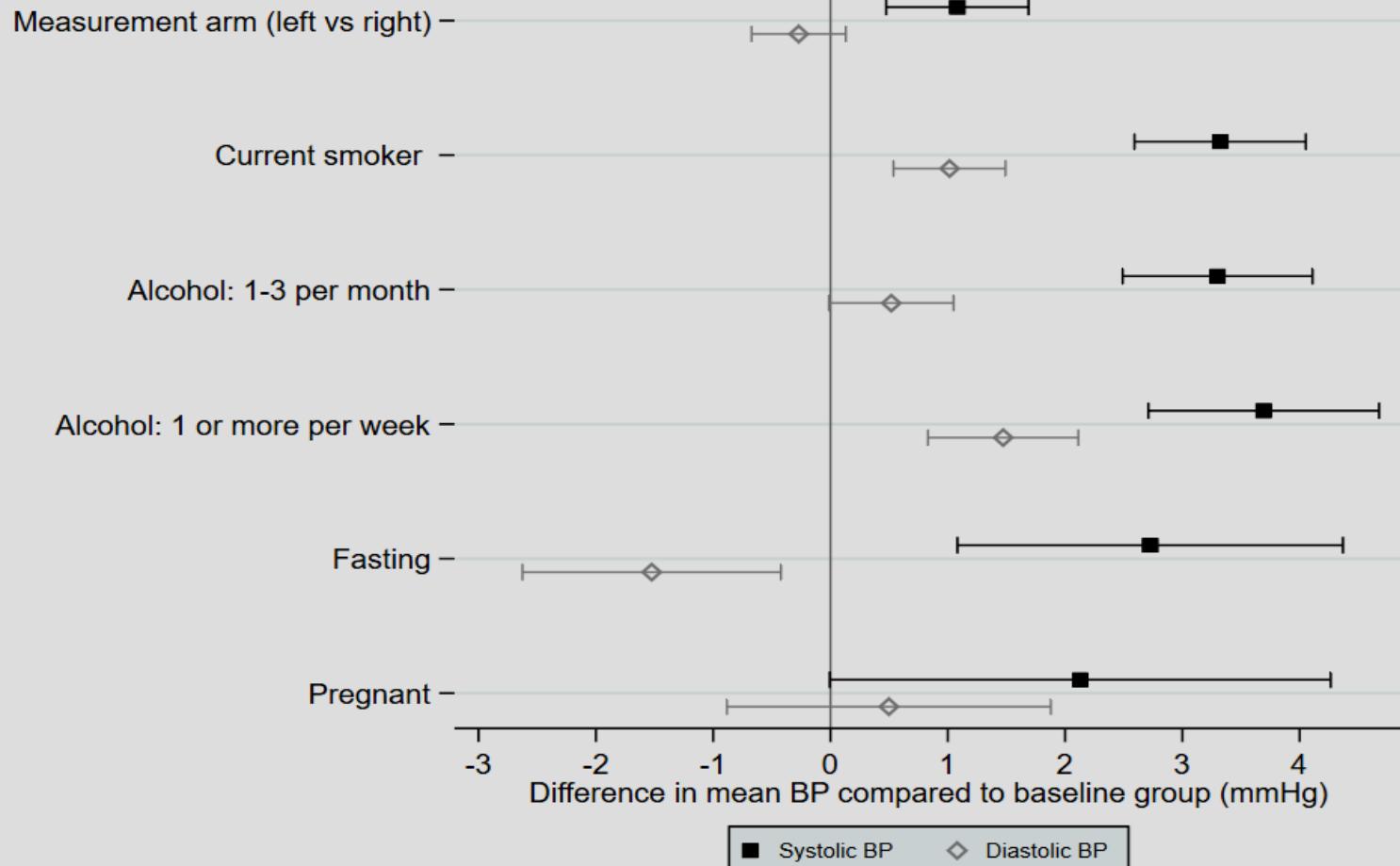


Most of the subjects with normal mass index accounted for 73.7%,
overweight - obesity accounted for 12.7%

CVD risk factors distribution



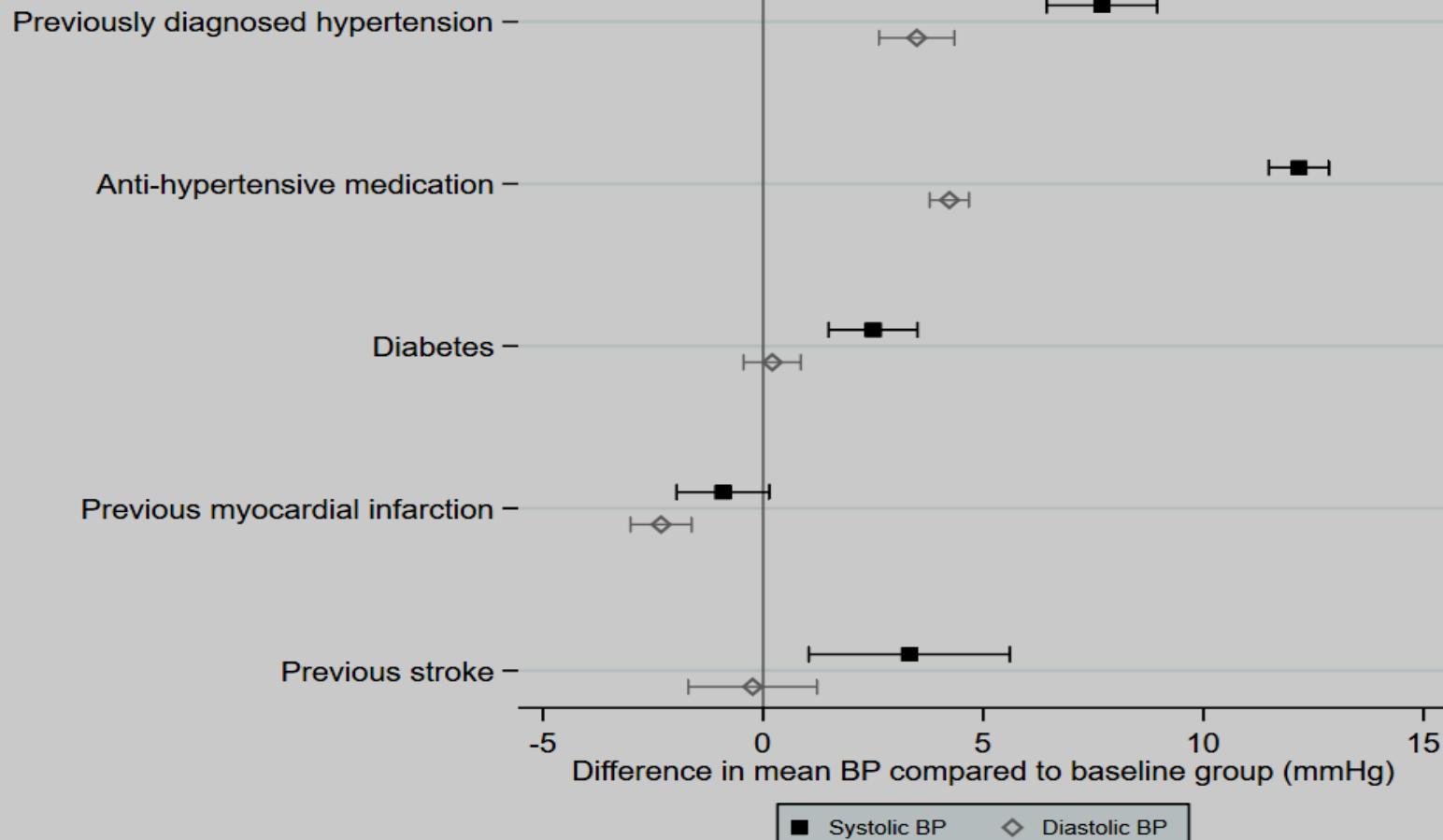
CVD risk factors distribution



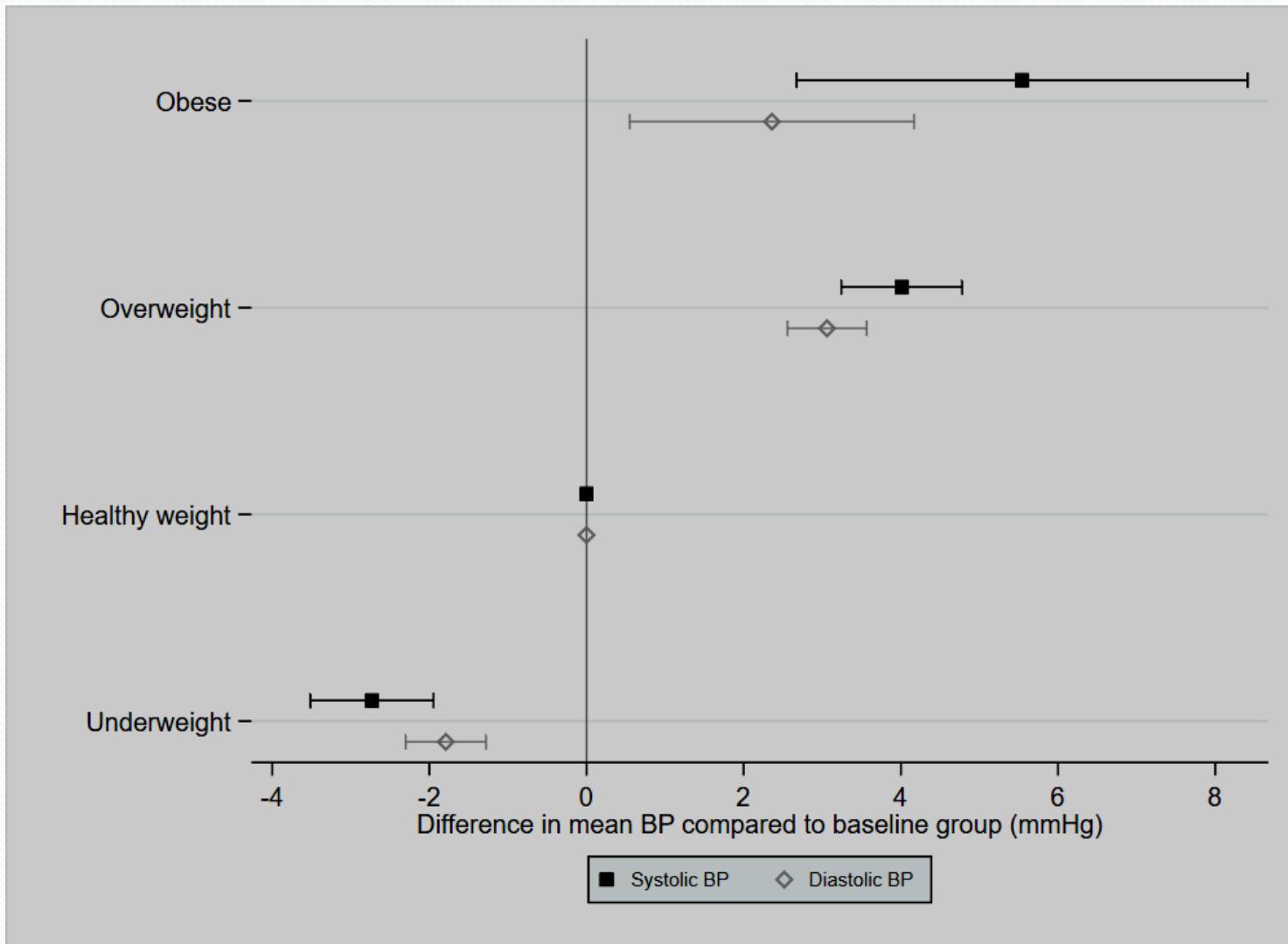
Crude and age/sex-standardised BP measurements after imputation, using WHO world standard populations*

Total participants	Number with hypertension	Proportion of all participants with hypertension (%)	Proportion of hypertensives aware (%)	Proportion of hypertensives on medication (%)	Proportion of those on medication with controlled BP (%)	Proportion of all hypertensives controlled (%)
17332	5260	30,3%	66,4%	62,8%	53,4%	33,5%

Co-morbidities in hypertensive group

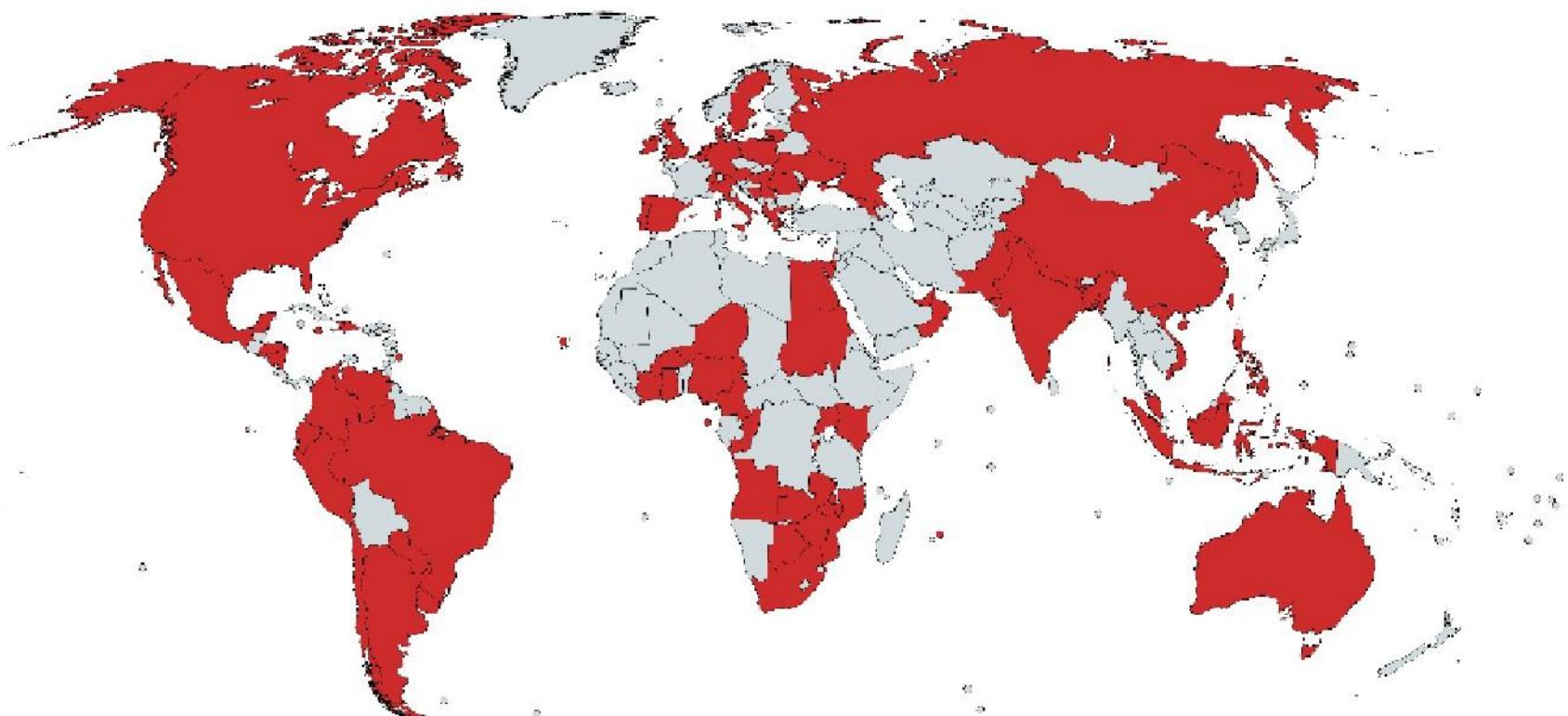


Change blood pressure with Body Mass Index (BMI)*



Discussion

A TRULY GLOBAL CAMPAIGN



100 countries participated
1.2 million data sets collected

A SIMPLE MEASURE TO SAVE LIVES

#checkyourpressure

IMPROVE PUBLIC ENGAGEMENT SOCIAL MEDIA



♥ Social Media profiles updated **@maymeasure**



The infographic has a red background with a white grid pattern. At the top, it says "A SIMPLE MEASURE TO SAVE LIVES" and "#checkyourpressure". On the left, it states "The No.1 Contributing risk for global death is high blood pressure". In the center, it says "10 Million lives are lost needlessly each year due to high blood pressure". On the right, it says "Only 1/2 of people with high blood pressure, know it". There is also a large blue graphic of a blood pressure cuff on the right side.

A SIMPLE MEASURE TO SAVE LIVES

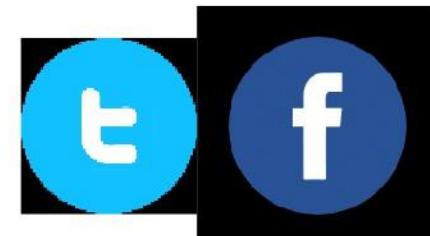
#checkyourpressure

The No.1 Contributing risk for global death is high blood pressure

10 Million lives are lost needlessly each year due to high blood pressure

Only 1/2 of people with high blood pressure, know it

♥ Continue with Hashtags:
#checkyourpressure #maymeasure

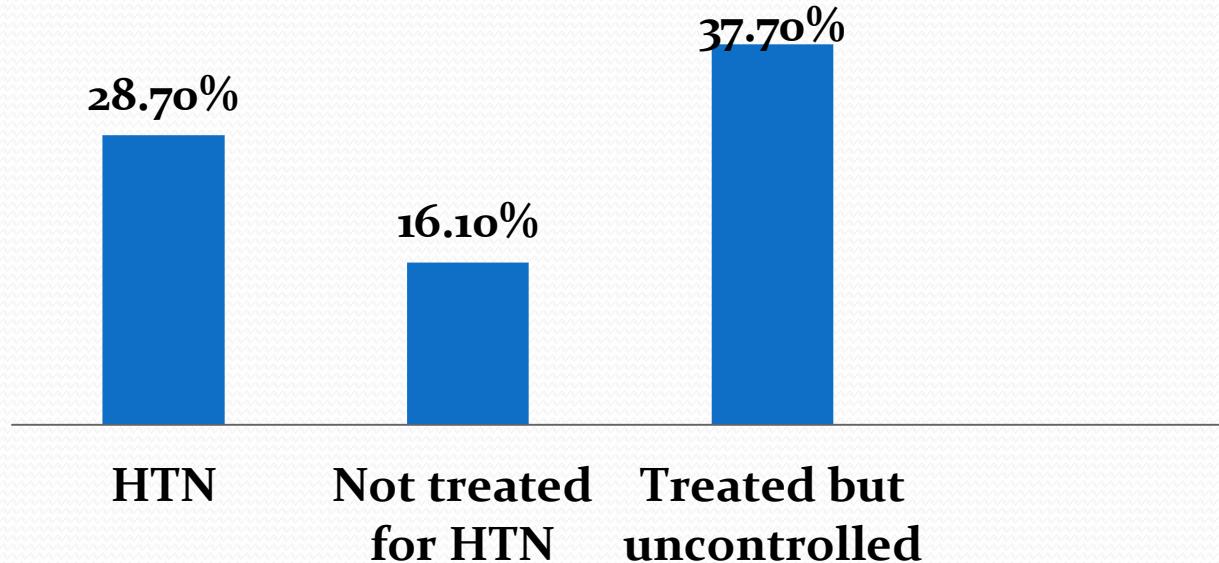


Results of MMM 2018 with hypertension, worldwide, by region

Region	Number with hypertension	Proportion with hypertension (%)	Proportion of hypertensives aware (%)	Proportion of hypertensives on medication (%)	Proportion of those on medication with controlled BP (%)	Proportion of all hypertensives controlled (%)
South Asia	132 173	33.8	59.5	56.9	70.4	40.0
East Asia	93 499	30.7	64.0	59.1	63.2	37.3
South-East Asia and Australasia	104 148	35.4	50.8	50.1	48.7	24.4
Americas	76 574	40.4	76.7	70.6	60.9	43.0
Sub-Saharan Africa	37 603	24.8	43.6	33.1	45.1	15.0
Northern Africa and Middle East	24 579	26.3	35.7	32.1	58.6	18.8
Europe	33 504	41.6	71.0	62.0	48.9	30.3
Worldwide	502 079	33.4	59.5	55.3	60.0	33.2

Results from linear regression models adjusted for age, sex and antihypertensive treatment after amputation*

Participants with HTN	%	Denominator	Participants with HTN and not receiving treatment	%	Denominator	Participants receiving treatment but with uncontrolled BP	%	Denominator
3154	28,7	10989	1509	16,1	9344	620	37,7	1643



* Excel analysis were offered by Xin Xia and Elsa Kobeissi, MMM statistic team

The RFs of HTN in developing countries

Non-modifiable factors

- Age
- Genetic predisposition⁴⁰
- Family history
- Susceptible ethnic origin
- Dark skin colour
- Low birthweight

Modifiable factors (environmental or lifestyle)

Overweight and obesity

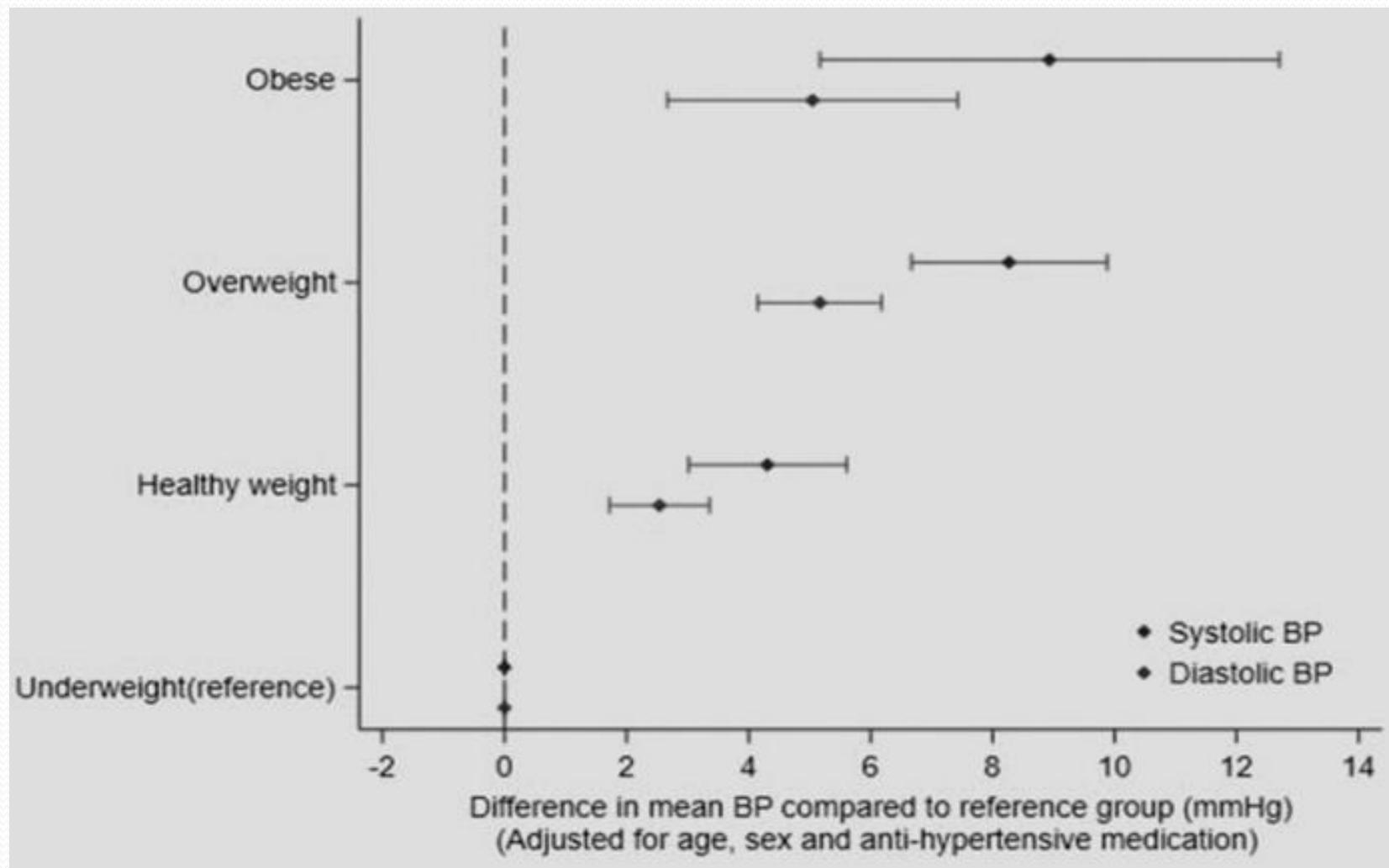
- Excess visceral (abdominal) fat
- Excess salt intake
- Low potassium intake
- Unhealthy diet,⁴¹ particularly excess calories, fats, and fructose
- Excess alcohol
- Sedentary occupation
- Reduced physical activity
- Psychological stress

- Urban living
- Smoking
- Vitamin D deficiency⁴²
- Low folic-acid intake⁴³

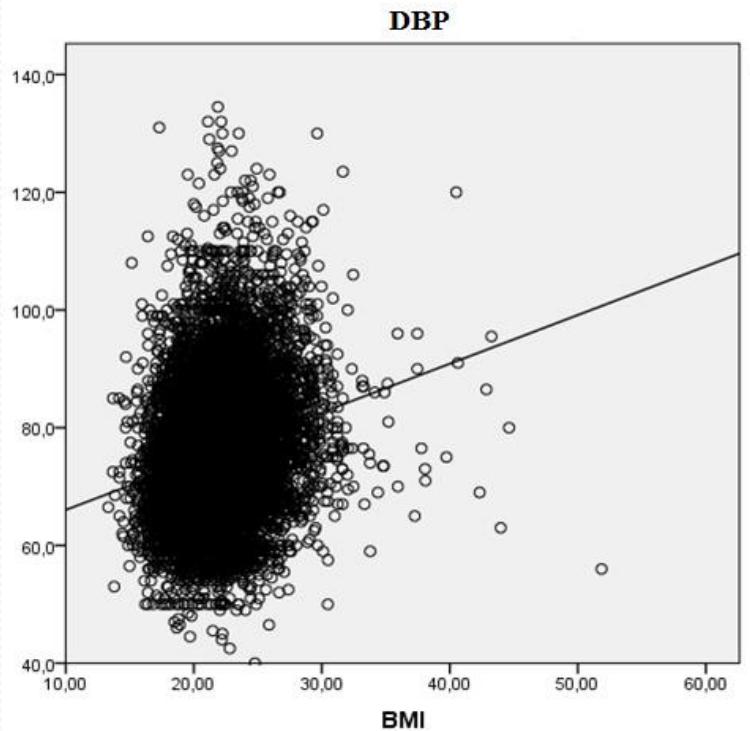
Other factors

- Dyslipidaemia
- Increased triglycerides⁴⁴
- Hyperuricaemia⁴⁵
- High gross national product per head⁴⁶
- Increased arterial stiffness⁴⁷
- Systemic proinflammatory state⁴⁸
- Undernutrition in childhood⁴⁹
- Sleep deprivation⁵⁰
- Prescription drugs (eg, non-steroidal anti-inflammatory drugs)
- Long-term exposure to noise⁵¹

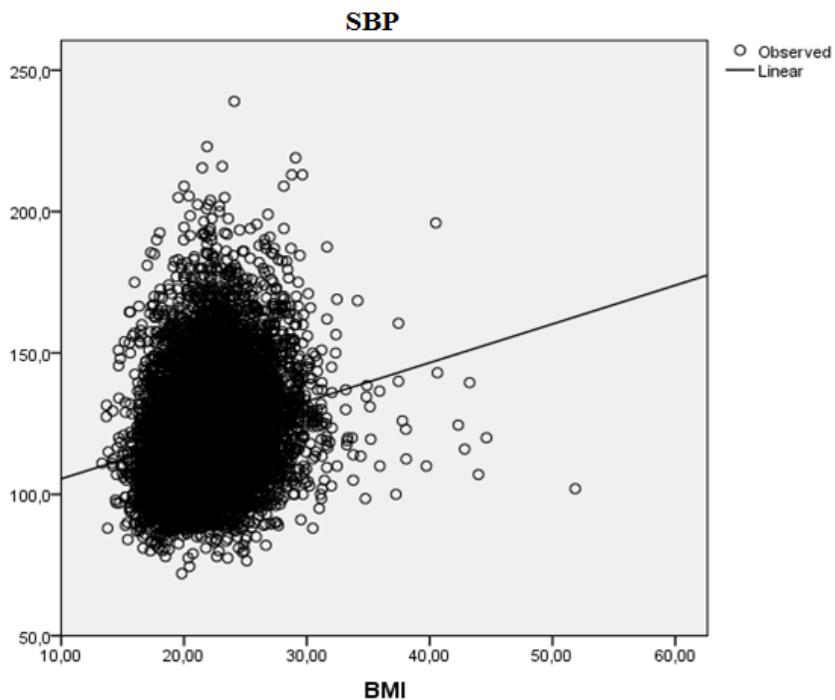
Change blood pressure with Body Mass Index (BMI)*



Coorelation between BMI and Blood Pressure

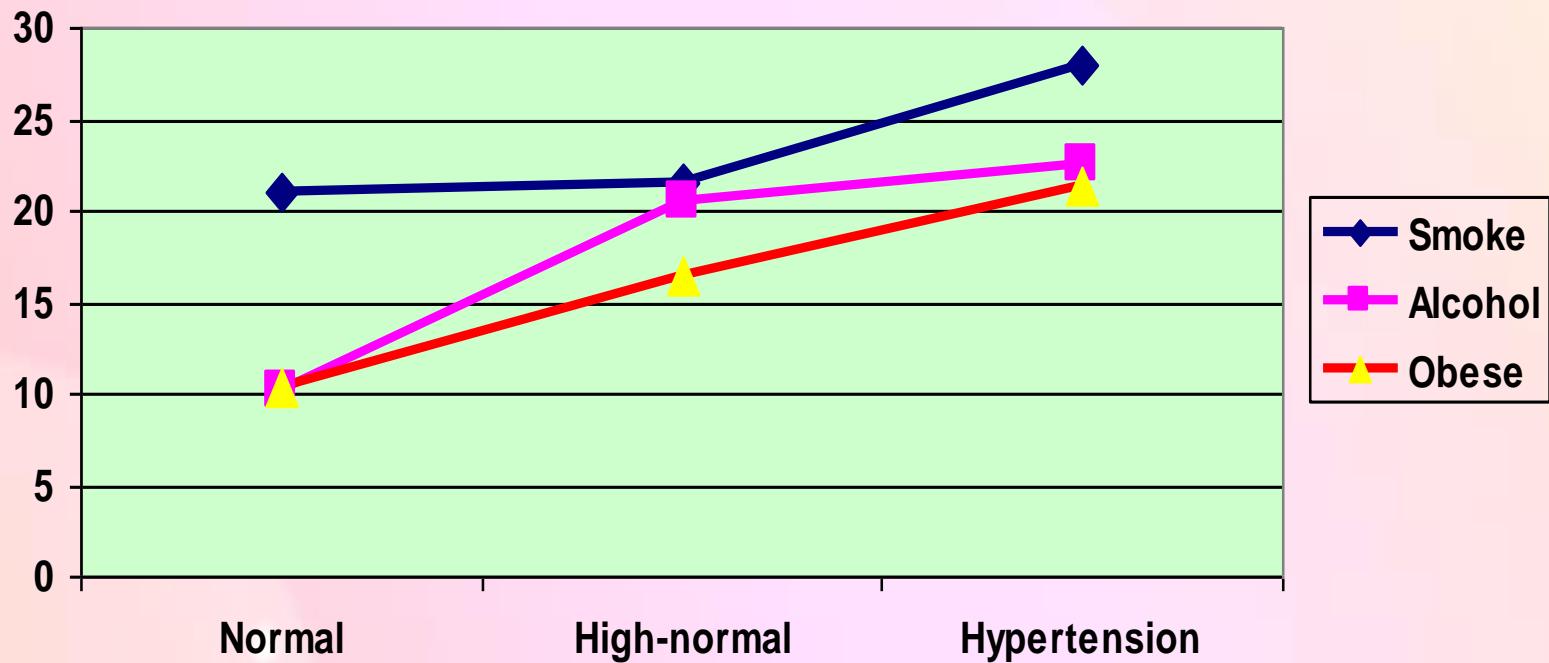


$$r=0,214 (p<0,001), DBP = 57,763 + 0,828 \times BMI$$



$$r=0,211 (p<0,001), SBP = 91,811 + 1,369 \times BMI$$

Relationship between risk factors for smoking, alcohol and obesity with hypertension.



The most common risk factors were smoking (17.5%), alcohol (13.3%) and obesity (12.7%), which accounted for high proportion of hypertension.



IN CONCLUSION



- ❤ The MMM program can be said to have been the most successful operation in Vietnam.
- ❤ **Metabolic risk factors** such as overweight-obesity, hyperglycemia may have a big impact on the high prevalence in Vietnam the recent years and trend to develop in the next decades.
- ❤ Hopefully, the upcoming ISH plan might help improve hypertension situation in Vietnam as well as in the world ./.

GIẢI PHÁP TRONG QUẢN LÝ BỆNH TĂNG HUYẾT ÁP/ĐÁI THÁO ĐƯỜNG



Mang lại NỤ CƯỜI HẠNH PHÚC cho BN Việt Nam

Cám ơn sự theo dõi quý vị và hẹn gặp lại

HỘI NGHỊ TĂNG HUYẾT ÁP VIỆT NAM LẦN THỨ IV

Ngày 8 & 9 tháng 5 năm 2020

Tại khách sạn Mường Thanh Luxury

81, Cái Khế, Ninh Kiều Cần Thơ,

www.tanghuyetap.vn