May Measurement Month 2018: an analysis of blood pressure screening in the Philippines

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Building on the gains of May Measurement Month 2017 (MMM17), the Philippine Society of Hypertension once again took part in MMM18 to raise awareness of high blood pressure (BP) in the country and to harness opportunistic BP screening in detecting unaware hypertensive individuals and referring them for treatment. We followed the standard MMM18 protocol designed by the International Society of Hypertension, utilizing convenience sampling with volunteer investigators, taking three sitting BP measurements of volunteer adults (≥18 years). Basic data on demographic, lifestyle, and environmental factors were also taken. We analysed 177 176 screened individuals from the Philippines. Of these, 29.1% (51 527) had also participated in MMM17, whereas 68.8% (121 893) were new screenees; and 14.2% (25 232) had their BP taken for the first time ever. After multiple imputation, 39.0% (69 126)

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Introduction

For more than four decades now, cardiovascular diseases (CVDs) and stroke remain the leading causes of mortality in the Philippines. Hypertension (HTN) is a major risk factor for CVDs and stroke and has been implicated as the cause for the deaths of tens of thousands of Filipinos yearly. Despite all efforts of governmental agencies (GAs) and non-governmental organizations (NGOs) to improve awareness, treatment, and control rates of HTN in the country, its prevalence has still been increasing, as shown in the national health surveys. The May Measurement Month screening in 2017 (MMM17) has shown that there was still a disconcerting number of unaware hypertensives, and more than half of those receiving treatment still had uncontrolled blood pressure (BP). With the lack of regular, organized screening programmes, opportunistic BP screening may play an important role to diagnose unaware hypertensives and those already on treatment but with inadequately controlled BP.

The Philippine Society of Hypertension (PSH) once again led an alliance of various GAs and NGOs to participate in MMM18, as part of a worldwide, month-long awareness and screening campaign initiated by the International Society of Hypertension (ISH) to raise awareness on raised BP, and highlight the gap in screening programmes.

Methods

For MMM18, more than 300 volunteer investigators from various parts of the country followed the standard MMM18 protocol designed by the International Society of Hypertension (ISH). The local volunteer investigators utilized convenience sampling, taking three sitting BP measurements of volunteer adults (≥18 years). Basic data on demographic, lifestyle, and environmental factors were also taken. Ethical clearance was secured for this nationwide BP screening. The volunteer investigators organized more than 300 sites nationwide—in rural health clinics of the Department of Health (DOH), government and private hospitals, pharmacies, schools, and clinics of individual doctor volunteers. As in MMM17, training for the volunteers was done via video recordings, but whenever feasible, face-to-face training was conducted.

Results

The volunteer investigators in the Philippines contributed 177,176 screened individuals to the global pool. Participants were 65.6% (116,221) female, had a mean age of 47.9 ± 16.7 years and a mean body mass index of 23.6 ± 4.4 kg/m². 29.1% (51,527) had already participated in MMM17 and 14.2% (25,232) had their BP taken for the first time ever. There were 4.6% (8191) diabetic patients, 1.3% (2236) reported having a previous myocardial infarction, and 1.2% (2201) reported having a previous stroke (see Supplementary material online, Table S1: Demographics and clinical risk factor profile of participants). After multiple imputation, 39.0% (69,126) were hypertensive. Of this number, 50.3% (34,795) were aware they were hypertensive. 49.9% (34,491) were on antihypertensive medication, 58.0% (20,010) of whom had controlled BP < 140/90 mmHg. Only 28.9% of all participants with hypertension had controlled BP. Systolic BPs and diastolic BPs were significantly higher in the overweight and obese, in those receiving antihypertensive medications, in patients with diabetes, and significantly lower in pregnant women. MMM18 has again shown that opportunistic BP screening, harnessing volunteers, is a pragmatic public health measure to improve awareness and treatment rates of raised BP.

An analysis of BP screening in the Philippines
Discussion

Although opportunistic BP screening, such as performed in MMM, has its biases and limitations thereby not necessarily representing the national situation, it nonetheless offers important insights into awareness of HTN in the country and identifies some gaps that need to be addressed. In MMM18, 14.2% (25 232) of the adult participants had their BP taken for the first time ever. This highlights the need for regular BP screening programmes. Opportunistic BP screening such as the MMM campaign can also help fill in the gap, particularly in countries where there are no regular, organized screening programmes.

It is quite interesting that the findings in this survey still closely follow the traditional rule of halves in HTN. After multiple imputations, 39.0% were hypertensive. Of this number, 50.3% were aware they were hypertensive. Almost half or 49.9% were on antihypertensive medication, 58% of whom had controlled BP <140/90 mmHg. Of the total number of hypertensive individuals, 28.9% had controlled BP. It is a challenge for local government health officials and healthcare professionals to improve awareness, treatment, and control rates. More than 7 out of 10 hypertensive Filipinos still have uncontrolled HTN, despite the availability of effective medications to control it. Long-term adherence has also been noted as a major problem that has to be addressed in the management of chronic medical conditions in the Philippines, as it is worldwide.

Although the data are quite limited, MMM18 also takes a glimpse on the association of BP on demographic, lifestyle, and environmental factors. There appears to be a very minimal elevation of DBP in smokers and regular alcohol drinkers (once or more per week), and an equally minimal elevation of SBP in those who regularly have 1 to 3 drinks a month. Nonetheless, a healthy lifestyle with cessation of smoking and moderation of drinking alcohol should remain an important goal in counselling the general population, especially hypertensive individuals.

Conclusions and implications

MMM18 reinforces the importance of interim screening programmes particularly in low- to middle-income countries where there is a general lack of a permanent screening and monitoring system.

With the dedicated efforts of volunteers, the entire campaign entails relatively minimal cost and can be considered a most cost-effective strategy in helping increase awareness, which should lead to better treatment and control rates.

The limited demographic data obtained in MMM18 may also provide medical practitioners and health officials a better understanding of the profile of their hypertensive population, and some nuances in managing their HTN.

Supplementary material

Supplementary material is available at European Heart Journal Supplements online.

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