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**Research Article**

**PREVALENCE AND AWARENESS OF HYPERTENSION  
AMONG PATIENTS, ABOVE 40 YEARS IN MEDICAL WARD  
OF DIVISIONAL HEAD QUARTER TEACHING HOSPITAL  
MIRPUR**

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**Abstract:**

**Introduction:** It is a medical condition in which the blood pressure in the arteries is persistently elevated. Hypertension is becoming an important public health problem worldwide. However, only a few studies included elderly people, and fewer still have focused exclusively on this segment of the population.

**Objective:** The objectives of the present investigation were to evaluate the prevalence and awareness among elderly individuals of medical ward

**Methodology:** Study Design is Cross sectional study. This study is conducted in divisional head quarter teaching hospital Mirpur AJK. Sample Size is 100 patients. Sampling Technique is Convenient sampling. Questionnaire comprises of 20 questions, was used to find prevalence and awareness of Hypertension among elderly patients of divisional head quarter teaching hospital Mirpur. Data has been analyzed by using SPSS 20. Results will be described in percentage and frequencies. Data will be described by PIE charts and tables.

**Results:** Results show that among 100 sample patients, most of the patients are of ages between 40-50 years (52%), while prevalence of hypertension is more in patients with ages between 51-60 years (64.7%). As the entire sample patients are above the age of 40 years so 100% are married. Fatty diet habits and sedentary life style are the risk factors among the patients belong to good socioeconomic status.

**Conclusion:** The study depicts that there is always an overall flow of hypertension among the old guys/individuals of ages between 40-50 years. Old persons living in the good socioeconomic and urban areas owned more hypertension.

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## INTRODUCTION:

Hypertension also known as high blood pressure. It is a medical condition in which the blood pressure in the arteries is persistently elevated. Blood pressure is expressed by two measurements, systolic and the diastolic pressures in the arterial system. The systolic pressure occurs when the left ventricle contracts; the diastolic pressure occurs when the left ventricle is relaxed prior to the next contraction. Normal blood pressure at rest is within the range of 110–140 mmHg systolic and 60–90 mmHg diastolic. Hypertension is present if the resting blood pressure is persistently at or above 140/90 mmHg for most people, but varies slightly between males and females.[1]

Hypertension is becoming an important public health problem worldwide. A recent report on the global burden of hypertension indicates that nearly 1 billion people [more than one seventh of the world's population] had hypertension in 2016, and this is predicted to increase to 1.56 billion by 2025.[2] Subjects with hypertension are known to have a two-fold higher risk of developing coronary artery disease [CAD], four times higher risk of congestive heart failure [CHF] and seven times higher risk of cerebrovascular disease and stroke [CVA] compared to normotensive subjects.[3] Hypertension has been identified as one of the leading risk factors for mortality, and is ranked third as a cause of disability adjusted life-years.[4] Existing data suggests that the prevalence of hypertension has remained stable or has decreased in economically developed countries during the past decade, while it has increased in developing countries.[5] However, the increase in the prevalence rates of hypertension needs to be quantified so as to plan for effective prevention strategies which are urgently needed in developing countries.

However, only a few of these studies included elderly people, and fewer still have focused exclusively on this segment of the population. The objectives of the present investigation were to evaluate the prevalence and awareness among elderly individuals of medical ward. During survey We also examined the impact of sociodemographic characteristics and known risk factors for high blood pressure on the prevalence, awareness, treatment and control of hypertension in the elderly population.

The present era has shown an upsurge in the incidence of hypertension among the general population aged 40 years or more. Estimates suggested that approximately 972 million [26.4%] adults around the globe had hypertension in the year 2015.[6]

These numbers are expected to approach 1.56 billion [29.2%] by the year 2025, a 60% rise in the total number of people affected.[7] Due to a higher growth rate, lower socioeconomic status and presence of a greater array of risk factors, developing nations will constitute the bulk of this increase. In Pakistan, cardiovascular diseases have been predicted to overtake the infectious disease as the major cause of morbidity and mortality within the next decade.[8]

Hypertension being a silent killer remains asymptomatic until complications like coronary artery disease, stroke, and renal failure develop. This necessitates the need for appropriate diagnosis followed by treatment along with compliance of the patient. The 1990 to 1994 National Health Survey of Pakistan showed that about 70% to 85% of Pakistani hypertensive patients were unaware of their disease.[9]

Realizing the need for uniform guidelines for the management of this common condition, Joint National Committee [JNC] and International Society of Hypertension [ISH] had proposed guidelines, which helped to reduce inappropriate approaches and have proved to be an, cost effective option for treating patients. Despite of all the present evidence, this potentially lethal chronic disease continues to be inadequately diagnosed and treated. Even in the Developed world, the proportion of hypertensive patients with properly controlled blood pressure is reportedly low.

The size of the elderly segment of the population is increasing in developing countries as the latter undergo a demographic transition, with a concomitant increase in life expectancy. Indeed, it is estimated that by the year 2025 the majority of the elderly people worldwide will reside in developing countries [10,11].

Developing countries are thus likely to face an enormous burden of chronic non-communicable diseases in the near future. Of these diseases, hypertension is one of the most important treatable causes of mortality and morbidity in the elderly population [12] and accounts for a large proportion of cardiovascular diseases in the elderly population [13,14].

A number of randomized control trials in developed countries have established that treatment of high blood pressure in the elderly population significantly reduces cardiovascular morbidity and mortality [15,16]. Several community-based investigations

have served to emphasize that hypertension is rapidly emerging as a major public health problem also in

developing countries[17].

#### MATERIAL AND METHOD:

- OBJECTIVES:
- To Know the prevalence and awareness of hypertension among elderly
- Study Design: Cross sectional study
- Place and Duration: This study is conducted in divisional head quarter teaching hospital Mirpur AJK.
- Sample Size: 100 patients.
- Sampling Technique: Convenient sampling.

#### RESULTS:

##### OVERALL PREVALENCE:

TABLE 1: PREVALANCE OF HYPERTENSION

Total population	Hypertensive%	Normotensive%
100	49	51

This whole sample of 100 individuals was taken from the Patients of medical ward of Divisional Head Quarter Teaching Hospital Mirpur AJK. All people were above the age of 40 and most were in the range of 40-60. Among these 100 Patients we found 49, GENDER DISTRIBUTION:

Males=65%

Females=35%

which are hypertensive while 51 are non-hypertensive.

Most were males and data was collected by asking them questions directly from questionnaire and explaining it to them.

Gender distribution

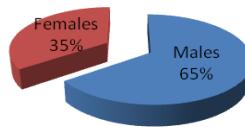


FIG 1: GENDER DISTRIBUTION AMONG THE COLLECTED POPULATION

#### CROSS RESULTS:

TABLE 2: GENDER DITRIBUTION OF PREVALANCE OF HYPERTENSION

Gender	Total	Hypertensive	Normotensive
Male	65	29	36
Female	35	20	15

% of Males, hypertensive = 44.6%

% of Males, normotensive = 55.5%

% of Females, hypertensive = 57.14%

% of Females, normotensive = 42.86%

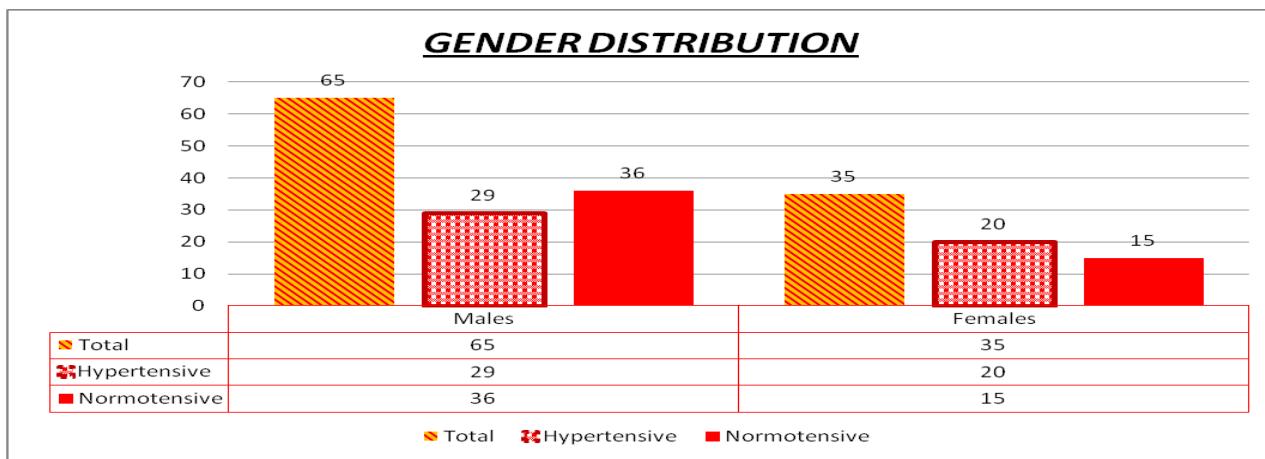


FIG 2: GENDER DISTRIBUTION OF PREVALENCE OF HYPERTENSION

## AGE DISTRIBUTION:

40-50 Years=52%

51-60 Years=34%

&gt;60 Years=14%

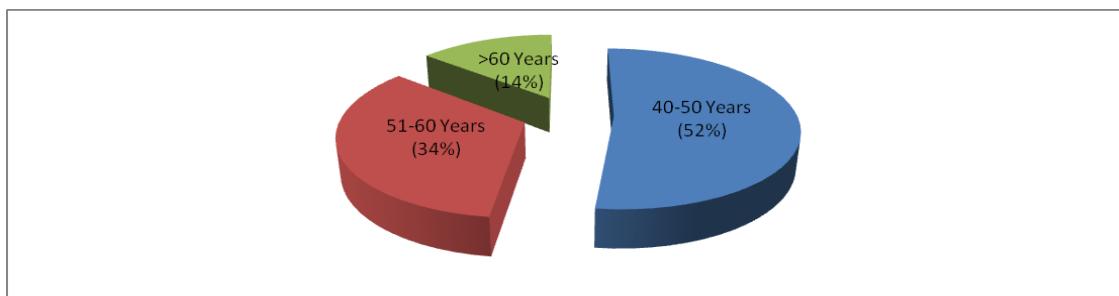


FIG 3: AGE DISTRIBUTION AMONG THE COLLECTED POPULATION

## CROSS RESULTS:

TABLE 3: A TABULAR REPRESENTATION OF THE AGE DISTRIBUTION OF PREVALANCE OF HYPERTENSION

Age Distribution	Total	Hypertensive	Normotensive
40-50years	52	19	33
51-60years	34	22	12
>60 years	14	8	6

% of 40-50 years, Hypertensive = 36.5%

% of 40-50 years, Normotensive = 63.5%

% of 51-60 years, Hypertensive = 64.7%

% of 51-60 years, Normotensive = 35.3%

% of &gt;60 years, Hypertensive = 57.14%

% of &gt;60% years, Normotensive = 42.86%

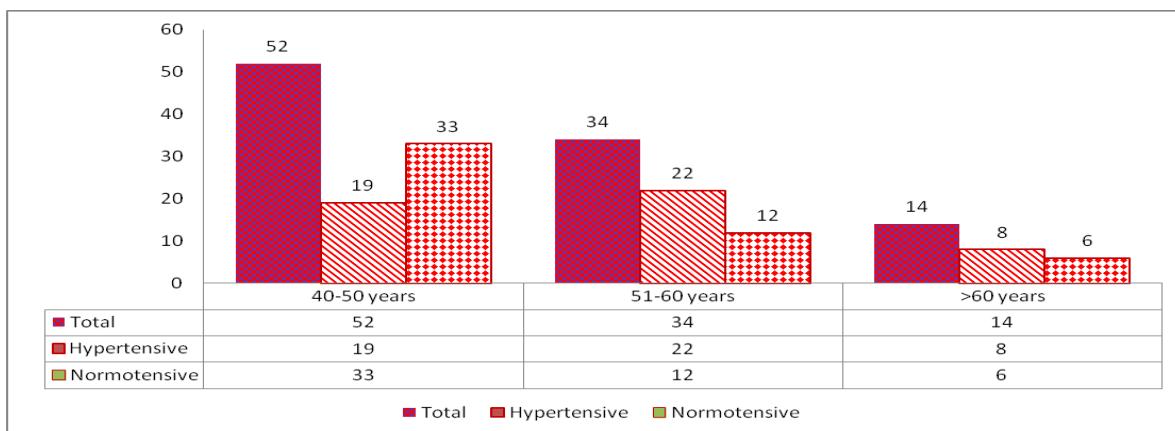


FIG 4: AGE DISTRIBUTION OF PTREVALENCE OF HYPERTENSION

Results show that among 100 sample patients, most of the patients are of ages between 40-50 years [52%], while prevalence of hypertension is more in patients with ages between 51-60 years [64.7%].

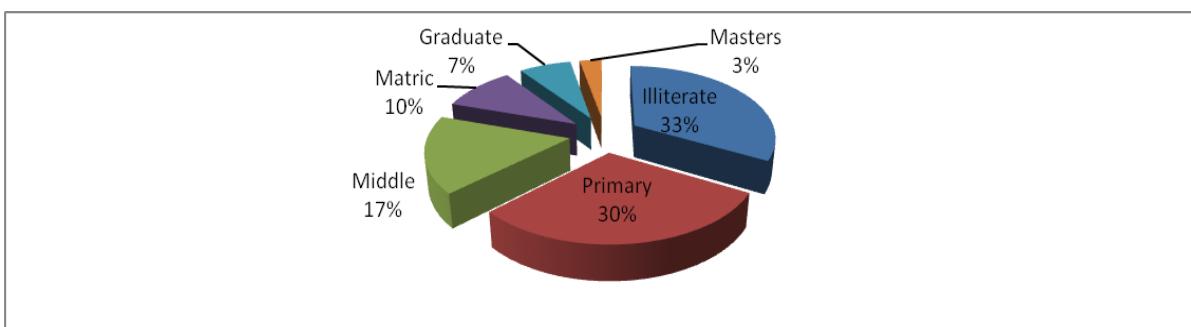


FIG 5: EDUCATIONAL STATUS AMONG THE COLLECTED POPULATION

From our sample of patients, we found more people are literate which accounts 67%. Prevalence of hypertension is more in illiterate patients which accounts 60.6%. So we can say hypertension is more common in illiterate people as they have no care of their diet, their way of life and have no idea of risk factors of hypertension.

#### FREQUENCY OF RECENT BLOOD PRESSURE CHECKUP:

Total Patients=49

Within last month=44 = 89.79%

Within 6 months=5 = 10.21%

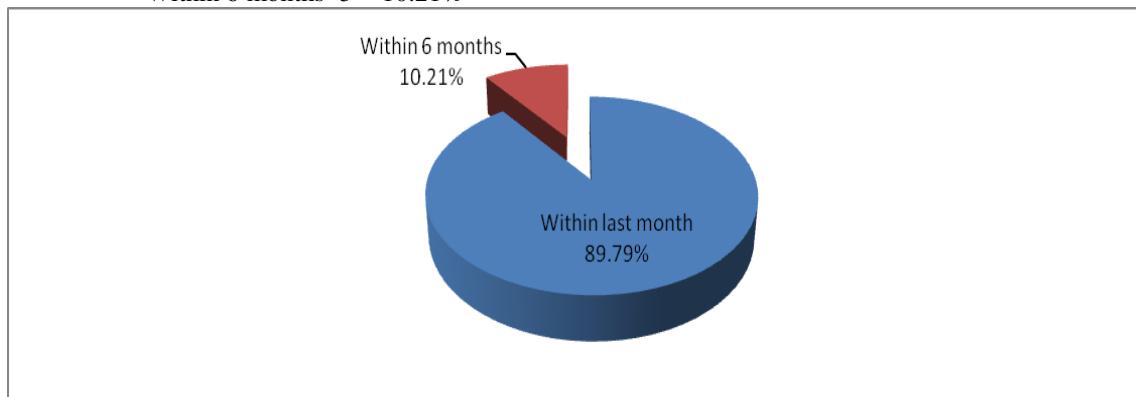


FIG 11: FREQUENCY OF RECENT BLOOD PRESSURE CHECKUP

Information from the patients reveals that almost 90% of them had their last blood pressure checkup in the last month, which show patients have more concern with their high blood pressure.

## SYMPTOMATIC HYPERTENSIVES:

Total=49  
Yes=46 = 93.8%  
Don't know=3 = 6.2%

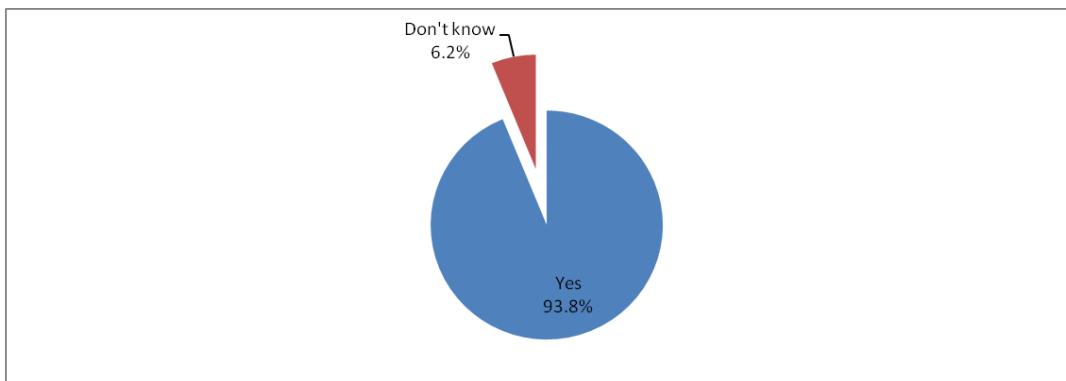
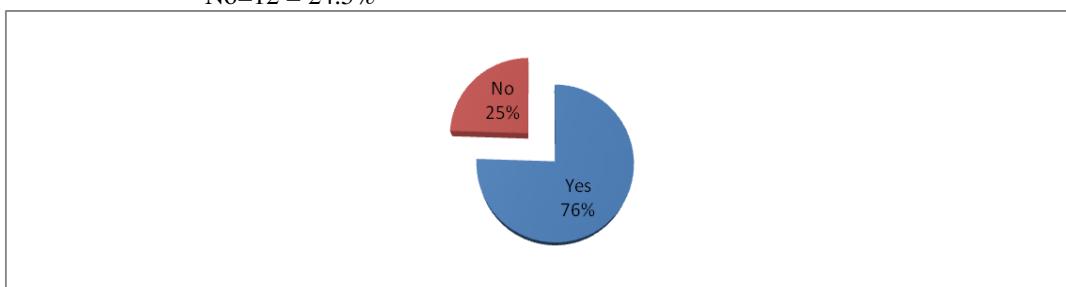


FIG 15: FREQUENCY OF SYMPTOMATIC PATIENTS

94% hypertensive patients among total of 49, experience symptoms of high blood pressure like headache, dizziness, blurred vision and chest pain while remainder don't know about this.

## EFFECT OF HIGH BLOOD PRESSURE ON DAILY ACTIVITIES:

Total=49  
Yes=37 = 75.5%  
No=12 = 24.5%

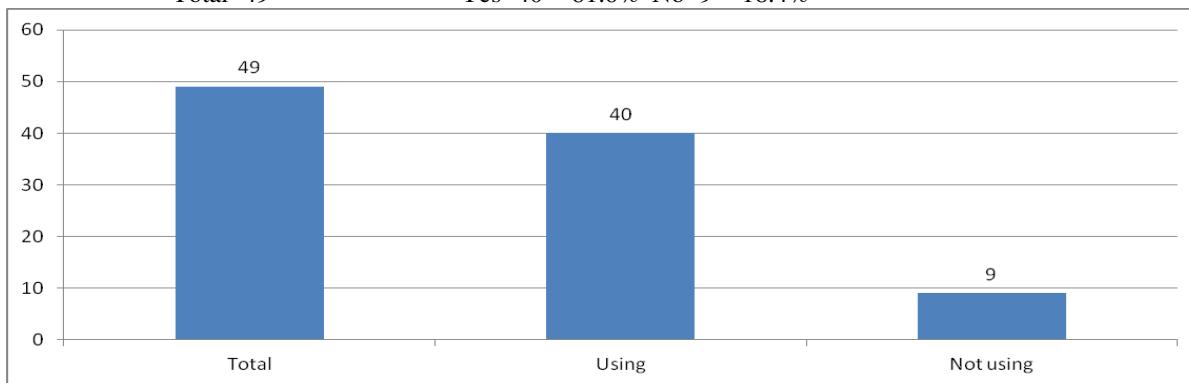


*FIG 16: FREQUENCY OF SYMPTOMATIC PATIENTS*

**High blood pressure effects daily activities of most of the hypertensive patients.**

## FREQUENCY OF PATIENTS HAVING MEDICATION OF HYPERTENSION:

Total=49 Yes=40 = 81.6% No=9 = 18.4%



**FIG 19: FREQUENCY OF PATIENTS HAVING TREATMENT OF HYPERTENSION**

## FREQUENCY OF PATIENTS HOSPITALIZED DUE TO HIGH BLOOD PRESSURE:

Total=49  
Yes=14 = 28.6%  
No=35 = 71.4%

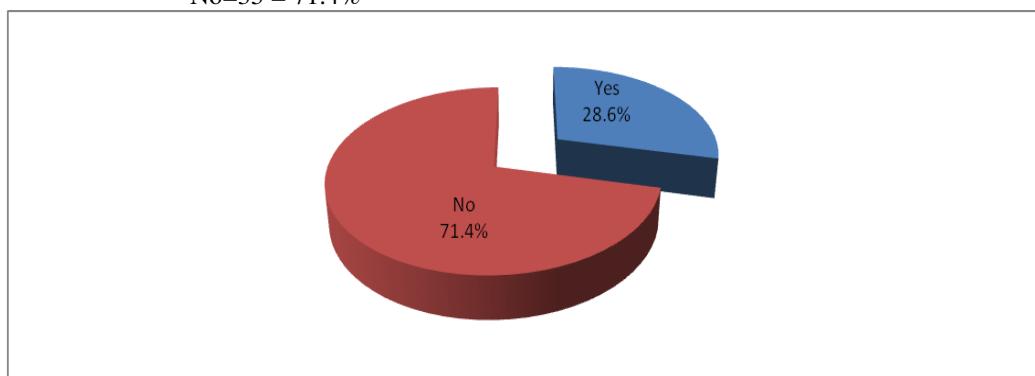


FIG 20: A PIE DIAGRAM SHOWING FREQUENCY OF PATIENTS HOSPITALIZED DUE TO HIGH BLOOD PRESSURE

82% patients using medication to control their blood pressure while the remainder don't. Among the hypertensive only 29% patients have been admitted in hospital due to their high blood pressure.

#### DISCUSSION:

With 20 indicators involving the personal details and evaluation of questions, this study was done to evaluate the prevalence of Hypertension elderly patients using the standard criteria. Most of the discussion has been made before while discussing the data.

The level of the respondents Prevalence and awareness of hypertension calls for enlightenment programs that will emphasize the important role of individuals in the prevention and management of hypertension and other cardiovascular risk factors as well as measures to encourage routine blood pressure checks.

Of the total 100 Patients , 49 are hypertensive while 51 are normotensives in the survey. The basis for the observed increase in hypertension prevalence with increasing number is not well known, however, Psychological stress has been related to higher blood pressure and unfavorable cardiovascular profile [Fauvel et al, 2001]. Our study shows the prevalence of hypertension among patients of medical ward, above 40 years of age.

Hypertension is a serious public health issue in developing countries. The Global Burden of Disease study shows that hypertension is one of leading cause of Mortality in the developing countries. Hypertension in old age is an important public health problem.

Primary-care doctors rarely diagnose Hypertension and when they do, they provide inappropriate

treatment. Moreover, studies of Hypertensive people, indicates that those with hypertension have poorer functioning, comparable to or worse than that of people with chronic medical conditions such as *lung disease, arthritis and diabetes*.

#### CONCLUSION:

HYPERTENSION is an important indwelling and rapidly progressing problem and a health degenerating disorder rapidly affecting our elders, more specifically the *male* population and it requires programmed care and attention. The study depicts that there is always an overall flow of hypertension among the old guys/individuals of ages between 40-50years. Old persons living in the *good socioeconomic and urban areas* owned more hypertension. *Sedentary life style* is another important indicator which many of hypertensive people have. *The recommended measures must be taken to minimize the impact of hypertension.*

#### RECOMMENDATIONS:

An awareness program be started for employees and dependents through print, cable network and direct group meetings. The medical persons of the industry must do this with the help from the professionals from outside for International Electrotechnical Commission [IEC]. It should focus on simple questions such as

What is hypertension? What are its signs and symptoms? What are the undetected/untreated?

Active case detection is crucial and should be done by periodic health check-up of people [also a high risk group]. Efforts should be made to encourage the

participation by informing that such check-up of apparently healthy persons are important and by this most of asymptomatic hypertensive patients are detected. Blood pressure must be recorded at least once in three months in general population and at least once in a month in those suffering from any grade of hypertension. In fact in such set up, there is no need for a special campaign to detect the hypertension but it should be integrated with the regular health check-up.

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