# Hypertension Surveillance in Rural Regions of Iran 

*Mohammad Hossein PANAHI 1,2, Ali Reza MAHDAVI HEZAVEH ${ }^{1}$, Tahereh SAMAVAT ${ }^{1}$, Alieh HODJATZADEH ${ }^{1}$, Elham YOUSEFI ${ }^{1}$<br>1. Ministry of Health and Medical Education, Tebran, Iran<br>2. Department of Epidemiology and Biostatistics, School of Public Health, Tebran University of Medical Sciences, Tebran, Iran

*Corresponding Author: Email: mohammadpanahi55@yahoo.com
(Received 09 Sep 2018; accepted 23 Sep 2018)

## Dear Editor-in-Chief

Hypertension increases the risk of different cardiovascular diseases, including stroke, coronary artery disease, and heart failure. This disease accounts for $54 \%$ of stroke and $47 \%$ of ischemic kidney disease in the world (1-4). The prevalence of hypertension is expected to increase from 1 billion to 1.56 billion in 2025 (5). Hypertension accounts for $13 \%$ of deaths in the world (6). One-half of the patients were unaware of their illness (7). National program for prevention and control of hypertension with the aim of preventing and controlling hypertension and its complications in people over 30 yr of age was implemented in 1992 and was completely integrated into the health system in 2004. Two screening cycles were conducted in rural regions of Iran in 2004 and 2007 and they have remained opportunistic since 2011. In this program, the assessment of blood pressure was based on twice measurements with an interval of 1-2 min. Diagnosis was confirmed by frequent measurements and diagnosis of the doctor (8).

In this program, patients with hypertension are treated by a doctor once every three months. Based on the results of the surveillance program in rural regions in the first quarter of 2015 recorded in the portal of Department of Noninfectious Diseases of the Department of Health shows that from approximately 7 million rural residents recorded in the portal of this department, 635000 patients with hypertension are under treatment (Table 1). Seventy-one percent of these patients were examined by a doctor in the first quarter. Overall, 12,000 people with hypertension have a history of heart attack and stroke. About 11,000 people are also suffering from other complications.
By lowering blood pressure cardiovascular risks such as myocardial infarction and stroke reduced by $20 \%-25 \%$ and $35 \%-40 \%$, respectively (9). Appropriate health care programs namely, lifestyle modification and effective treatment can reduce hypertension and its complications (10).

Table 1: Results of hypertension surveillance rural population of Iran

| Sex | Popula- <br> tion $>$ 30 | Number of pa- <br> tients $>$ 30 | Number of pa- <br> tients cared by $\boldsymbol{G P}$ | Number of <br> CVD and stroke | Other complica- <br> tions |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Male | 3425122 | $202437(5.91)^{*}$ | $138962(68.64)$ | $4996(2.47)$ | $3967(1.96)$ |
| Female | 3396140 | $431926(12.72)$ | $309591(71.68)$ | $7029(1.63)$ | $7454(1.73)$ |
| Total | 6821262 | $634363(9.30)$ | $448553(70.71)$ | $12025(1.90)$ | $11421(1.80)$ |

[^0]
## Conflict of interest

The authors declare that there is no conflict of interests.

## References

1. Rapsomaniki E, Timmis A, George J, et al (2014). Blood pressure and incidence of twelve cardiovascular diseases: lifetime risks, healthy life-years lost, and age-specific associations in 1. 25 million people. The Lancet, 383(9932):1899-911.
2. Angeli F, Reboldi G, Verdecchia P (2007). Hypertension, inflammation and atrial fibrillation. J Hypertens, 32(3):480-3.
3. Wolf-Maier K, Cooper RS, Banegas JR, G, et al (2003). Hypertension prevalence and blood pressure levels in 6 European countries, Canada, and the United States. $J A M A$, 289(18):2363-9.
4. Chen J (2010). Epidemiology of hypertension and chronic kidney disease in China. Curr Opin Nephrol Hypertens, 19(3):278-82.
5. Kearney PM, Whelton M, Reynolds K, et al (2005). Global burden of hypertension: analysis of worldwide data. The lancet, 365(9455):217-23.
6. Papathanasiou G, Zerva E, Zacharis I, et al (2015). Association of high blood pressure with body mass index, smoking and physical activity in healthy young adults. Open Cardiovasc Med J, 9:5-17.
7. Chockalingam $A$ (2007). Impact of world hypertension day. Can J Cardiol, 23(7):517-9.
8. Maftoon F, Farzadi F, AeenParast A, et al (2016). Evaluation of National Program on Prevention and Control of Hypertension: The Study Protocol. Adv Biores, 7(3): 15-20.
9. Antonakoudis G, Poulimenos I, Kifnidis K, et al (2007). Blood pressure control and cardiovascular risk reduction. Hippokratia, 11(3):114119.
10. Health NIo, National Heart L, Institute B (2003). Your guide to lowering blood pressure. Na tional Institutes of Health Publication, (03-5232):120.

[^0]:    *Data are shown as frequency (percentage)

