

Trends in prevalence and management of hypertension in China from 1991-2009

1991年から2009年の中国における高血圧症の有病率と管理の推移に関する研究

Abstract

Objective: In this article I will describe the prevalence and incidence of hypertension in China, and trends in awareness and treatment, using the China Health and Nutrition Survey (CHNS). I will also identify the factors associated with prevalence and management of hypertension and estimate the effect of increased health insurance coverage on the management of hypertension using a propensity score matching technique.

Methods: I used individual-level data from the population-based CHNS (1991-2009) for blood pressure, body mass index, medication status and other socio-economic variables. New subjects aged above 35 in each wave were used for prevalence analysis. Incidence of hypertension was estimated among participants aged over 35 without hypertension on entry to the study who were involved for two or more waves after 1991, with non-missing age data and two blood pressure results. I used multi-level logistic

regression to estimate the risk factors associated with prevalence and management of hypertension. I also calculated the average treatment effects of health insurance on management of hypertension using propensity score matching.

Results: Prevalence of hypertension in 2009 was 31.5% (95% CI: 28.5-34.7%) with a significant trend over time since 1991. The hypertension incidence rate among those aged over 35 for the 19 years was 4.72 per 100 person-years (4.56-4.89), with an incidence rate of 5.15 per 100 person-years (4.90-5.41) in men and 4.37 per 100 person-years (4.16- 4.59) in women. The proportion of hypertensive patients aware of their condition increased from 31.7% (28.7-34.9%) in 1991 to 51.1% (45.1-57.0%) in 2009. The proportion of those in treatment with controlled blood pressure increased slightly to 32.1% (24.2-40.8%) in 2009. Elderly people, men, obese people, and heavy drinkers were at higher risk of having hypertension. Among diagnosed hypertensives, health insurance increased the probability that they would receive treatment by 28.7% (5.0-52.3%) in a propensity-score matched analysis.

Conclusion: Increased coverage of health insurance and improved health care packages can be effective in increasing hypertension treatment. Current health insurance packages for hypertension treatment need to be improved and expanded to meet the increasing prevalence of hypertension associated with aging and changing lifestyles in China. The rate of control amongst people in treatment for hypertension remains, however, relatively low in China. Despite the high treatment rate, health insurance has little effect on promoting awareness or control of hypertension. The Chinese health system should pay more attention to promoting the quality of treatment being received, access to drugs or adherence to management guidelines.

Keywords: Population-based survey, hypertension control, risk factors, health insurance, health system