

was performed in the intervention population. Electronic system was developed for hypertension screening and administration. A baseline survey was performed using multi-stage random sampling methods in 8 counties of mid-western rural area in 2007. Participants aged 25 and above were recruited for a questionnaire survey, physical examination and blood pressure measurement. A total of 20 087 participants aged 25 and above completed in the survey. The final evaluation survey using same questionnaire was performed in 2010, classified in intervention (4071 participants) and control (2145 participants) group. Intervention effect was evaluated by the difference compare between two surveys.

Results Mean systolic blood pressure (SBP) and diastolic blood pressure (DBP) in the baseline population in 2007 were 134.46 and 83.50 mm Hg, respectively, and those in 2010 were 132.47 and 80.80 mm Hg in the intervention group and, and 133.45 and 81.12 mm Hg, in the control group. Significant decreases of SBP and DBP were found between the baseline population in 2007 and the intervention population in 2010. Insignificant decreases were found between the intervention and control population in 2010. Mean blood pressure of hypertensive in 2007 baseline, 2010 intervention and control population were 153.05/91.68 mm Hg, 150.47/87.50 mm Hg and 153.23/88.59 mm Hg respectively. Significant decrease of blood pressure was found in intervention population after intervention. Decrease of SBP showed significant difference in intervention control group compared with control in 2010.

Distribution of non-hypertensive with normal, high normal BP, hypertensive at 1, 2 or 3 grade in 2010 intervention population were 19.19%, 48.61%, 18.82%, 9.69%, 3.70% respectively. Proportion of hypertensive at 1, 2 or 3 grade decreased compared with 2007 baseline population while that of normal and high normal BP increased. Compared to 2010 control population, proportion of hypertensive in 2010 intervention population was lower than control population. Awareness, treatment and control rate of hypertension in 2010 intervention population increased significantly by 24.82%, 34.83%, 15.34% compared with 2007 baseline population, also higher than that in 2010 control population. Moderate physical activity and low intake of salt and fat were found to be influence factors for BP control.

Conclusions Community comprehensive intervention produced significant effects on blood pressure control, greater in hypertensive than in normotensive. Awareness, treatment and control rate of hypertension as well as knowledge related with hypertension get improved in intervention group.

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EFFECT OF COMPREHENSIVE INTERVENTION ON BLOOD PRESSURE CONTROL IN CHINESE RURAL POPULATION

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Objectives To evaluate effects of community comprehensive intervention on blood pressure control in mid-western rural area of Shandong province, China.

Methods A comprehensive non-communicable disease control project was launched in mid-western rural area of Shandong province from 2007 to 2010. Health education focusing on a balance diet, physical activity promotion and tobacco and alcohol control