

Title of Intervention: Prevention of stroke in urban China

Intervention Strategies: Campaigns and Promotions, Group Education, Supportive Relationships, Environments and Policies

Purpose of the Intervention: To reduce the incidence of stroke

Population: Community residents

Setting: Two communities in Beijing, China; community-based

Partners: The Beijing Neurosurgical Institute, Shanghai Medical University

Intervention Description:

- Campaigns and Promotions: Flyers, booklets and bulletins were distributed to all households in the intervention community every three months. These materials explained the role of hypertension, cardiovascular disease and diabetes in stroke risk and described the risk factors for these illnesses.
- Group Education: Three or four lectures were provided each year.
- Supportive Relationships: High blood pressure counseling was provided. Individuals with high blood pressure received regular blood pressure measurement and were advised to take appropriate preventive and therapeutic measures. They were asked to visit study clinics where lifestyle modification recommendations were made and drug therapy was initiated, if necessary.
- Environments and Policies: A stroke surveillance system was developed and implemented in the community.

Theory: Not mentioned

Resources Required:

- Staff/Volunteers: Graphic designer, health care provider, lecturers
- Training: Not mentioned
- Technology: Computer, audiovisual facilities
- Space: Clinic space,
- Budget: Not mentioned
- Intervention: Manual of operations, flyers, booklets, bulletins, audiovisual materials
- Evaluation: Questionnaires, blood pressure monitoring equipment, balance beam scale, stadiometer

Evaluation:

- Design: Cohort
- Methods and Measures:
 - Self-report questionnaires were used to obtain information about the prevalence of hypertension, heart disease, smoking and drinking along with knowledge of hypertension
 - Screening at clinics provided information about hypertension
 - Stroke incidence was monitored via a stroke surveillance system.

Outcomes:

- Short Term Impact: Hypertension increased in both cohorts, but increased less in the intervention group. Awareness of hypertension increased in the intervention cohort. The percentage of those taking hypertensive medication increased significantly in the intervention cohort.
- Long Term Impact: Compared with the control community, the death risk of first-ever stroke in the intervention community decreased significantly, especially that of hemorrhagic stroke. Compared with the control community, the recurrence risk of first-ever stroke from the intervention community decreased significantly. The 3.5-year cumulative incidence of stroke was significantly lower in the intervention cohort compared to the control cohort.

Maintenance: Not mentioned

Lessons Learned: The results of the study demonstrate that a community-based intervention for stroke is both feasible and effective in China. Health education for the residents of communities may prevent individuals with normal blood pressure from developing hypertension and improve overall health awareness and knowledge.

Citation(s):

Fang, X. H., R. A. Kronmal, et al. (1999). "Prevention of stroke in urban China: a community-based intervention trial." *Stroke* 30(3): 495-501

Jiang, B., W. Z. Wang, et al. (2004). "Effects of urban community intervention on 3-year survival and recurrence after first-ever stroke." *Stroke* 35(6): 1242-7.