



Systematic review of effective health system responses for the prevention and control of non-communicable diseases in ASIA

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Background

Health systems across high-, middle-, and low-income countries are facing challenges due to the increasing burden of non-communicable diseases (NCDs) and aging population (1). Lack of financial protection, limited access to essential drugs, shortages of trained health workers, and provision of continuous care for chronic conditions are some of the challenges facing health systems for managing chronic care (1). Some aspects of successful health systems include experimentation, appropriate selection of strategies and learning from other countries (2). Japan has succeeded in reducing mortality from chronic conditions, e.g., stroke and ischemic heart disease, through strengthening their primary health system. These public health efforts have contributed to increases in life expectancy since the 1960s (3). This study reviews the key interventions and tools to enhance the performance of health systems in selected countries in Asia.

Goal

The goal of this research is to review the cost-effectiveness of existing programmes and policies to strengthen health systems for chronic disease prevention and control. The review addressed the following research questions:

- Does any community intervention or health promotion activity for the prevention of diabetes, obesity, dyslipidemia or hypertension reduce cardiovascular events and mortality in East or Southeast Asian countries?
- Is there any cost-effective community intervention or health promotion activity for the prevention of diabetes, obesity, dyslipidemia or hypertension in East or Southeast Asian countries?

Methods

This is a systematic review of peer-reviewed published randomized controlled trials (RCTs) and quasi experimental studies on the prevention and control of NCDs in Asian countries. MEDLINE, the Cochrane Library and Ichushi were systematically searched for all available years using key words and subject headings. Full articles, in English and Japanese languages, reporting the effects of community intervention or health promotion on cardiovascular events (e.g. stroke; myocardial infarction) and overall mortality and/or reporting the cost effectiveness of these interventions were included in this study. Studies were excluded if they only had an abstract, were reviews, development, usability, or feasibility studies, had a non-Asian sample, described a hospital-based intervention or an intervention for which the end users were not patients with NCDs.

Results

The flow diagram of eligible studies is shown in figure 1. Out of 3,389 studies, only twelve full-text articles met all inclusion and exclusion criteria. Three papers were from Japan, seven from China/Hongkong SAR, and two studies were from South Korea. Four papers examined the effect of community intervention or health promotion on the incidence of cardiovascular events or mortality. The duration of interventions ranged from 21.5 months to 15 years, and targeted population with hypertension, diabetes, impaired glucose intolerance or obesity. Overall, the interventions were effective in reducing the incidence of stroke, cardiovascular disease mortality, or all-cause mortality depending on the studies. Eight studies examined the cost effectiveness of interventions on hypertension, diabetes, and obesity. The studies were generally found to be cost-effective, despite heterogeneity by types of outcomes and method of assessments.

Implications

The review revealed a significant lack of research on the effects of community intervention and health promotion on the incidence of cardiovascular events and mortality among individuals with underlying NCDs and NCD risk factors in East and Southeast Asia. This limits the potential to derive meaningful and evidence-based policy recommendations.

References

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Figure 1. Flow diagram of eligible studies

