

Cardiovascular disease risk reduction in rural China



POLICY BRIEF



Nurses taking blood tests

Cardiovascular disease (CVD) is the leading cause of morbidity and mortality worldwide. In China, CVD accounts for 38% of total mortality. CVD events are predicted to increase by 23% from 2010 to 2030, resulting in an additional 21.3 million CVD events and 7.7 million deaths. Meta-analysis has indicated that CVD risk reduction by treating hypertension or diabetes is not sufficient. A comprehensive approach based on drug therapies and lifestyle is needed. Based on preliminary effects of an exploratory study, in a rural primary healthcare setting in Zhejiang, China, we initiated a pragmatic, cluster randomised controlled trial (cRCT) to assess the health effects of the interventions over 2 years.

This is, to our knowledge, the first pragmatic cRCT that implements a comprehensive package at the primary healthcare level for high CVD risk hypertensive or diabetic patients.

Findings (all compared with control arm)

- ✓ Better drug adherence in the intervention arm (66% vs. 47%);
- ✓ Smoking rates were significantly reduced in the intervention arm (4% reduced vs. 2% increased);
- ✓ More patients in the intervention arm took less salt (50% vs. 34%);
- ✓ Patients in the intervention arm reported drinking less alcohol and had more exercise (32% vs. 15%, and 31% vs. 18%, respectively);
- ✓ Prescribing and taking of statins and aspirin, and prescribing (but not taking) of anti-hypertensives, were substantially higher.

Recommendations

- Raising coverage for essential medicines for hypertension and diabetes in primary care facilities;
- More intensive training of doctors;
- Innovative patient education;
- Improved health insurance cover for outpatients.

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This brief is informed by the following research:

1. Zou G, Wei X, Gong W, Yin J, Walley J, Yu Y, et al. (2014) Evaluation of a systematic cardiovascular disease risk reduction strategy in primary healthcare: an exploratory study from Zhejiang, China. *Journal of Public Health* doi.org/10.1093/pubmed/fdu013
2. Wei X, Zou G, Gong W, Jia Y, Yu Y, Walley J, et al. (2013) Cardiovascular disease risk reduction in rural China: a clustered randomized controlled trial in Zhejiang. *Trials* doi.org/10.1186/1745-6215-14-354

3. Wei X, Walley J, Zhang Z, Zou G, Gong W, Deng S, et al. (2017) Implementation of a comprehensive intervention for patients at high risk of cardiovascular disease in rural China: a pragmatic cluster randomized controlled trial. *PLOS ONE* doi.org/10.1371/journal.pone.0183169

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