China Rural Health Initiative - Primary Care Provider Study: A Large Cluster-Randomized Controlled Trial of High Cardiovascular Risk Management in Rural China

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Background: Worldwide, more than 80% of cardiovascular deaths occur in low and middle-income countries where innovative primary care strategies for the management of high-risk individuals are urgently needed.

Methods: The China Rural Health Initiative is a cluster randomized controlled trial designed to evaluate the effects of a low-cost, evidence-based intervention package targeting patients at high risk of cardiovascular disease. A total of 120 villages in Northern rural China with high burden of cardiovascular disease were randomized in equal numbers to the intervention program or to usual care. In the intervention villages, primary care providers were trained to identify, treat, follow up and, when appropriate, refer high-risk patients. Providers received periodic feedback on performance and a modest performance-based financial incentive. The impact of the intervention was assessed from independent random samples (with replacement) surveyed at baseline and after 2 years. Since blood pressure-related conditions are the leading causes of premature death and disability in rural China, the primary outcome was defined as village-specific change in mean systolic blood pressure. Secondary outcomes include village-specific changes in the proportions receiving regular (monthly) check-ups, anti-hypertensive medication, and aspirin (where indicated).

Results: Over 2 years, primary care providers identified and managed a total of 5,819 high-risk individuals in the 60 intervention villages. The impact of the intervention program will be assessed from random samples comprising 5,050 individuals at baseline and 5,060 individuals at 2 years, including 917 individuals who were randomly selected to participate in both surveys. Data cleaning and analyses are in progress and results will be reported at the meeting.

Conclusion: This is the largest-ever cluster randomized trial of a primary care intervention for the management of high cardiovascular disease risk in China. The results will have direct
implications for healthcare policy in China and indirect implications for other economically developing countries facing similar health challenges.

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