China has a population of 1.35 billion, of which 642 million live in rural areas. To reduce rural people’s disease-related burden and relieve poverty induced by disease, the Chinese Government launched the New Rural Cooperative Medical Scheme (NRCMS) in 2002. NRCMS has offered financial protection to rural citizens, gradually scaling-up nation-wide from 2003 onward. The NRCMS is a co-payment subsidised voluntary health insurance programme for rural residents, co-financed by individual contributions and both central and local governments. The compensation began with reimbursement for hospitalisation costs and gradually expanded to outpatient care. In 2015, the minimum fund pooled per capita will reach 380 RMB nationwide as proposed by the State Council. With a national average participation rate of over 95 percent at the end of 2014, the NRCMS plays a vital role in accommodating the health needs of the rural residents.

One pilot area in the FHS China study, Hanbin County in western China, launched the NRCMS in January 2007. In the initial phase of the implementation, the NRCMS substantially improved health care access and utilisation among participants. The volume of patients in local health institutions increased dramatically since the NRCMS made healthcare more affordable. Following further development of NRCMS, there was a risk that limited funds would not be able to match increasing demand for healthcare. Overall financing of NRCMS increased by 78 percent between 2007 and 2009, but average reimbursement rate only improved by 11 percent. The reasons for this are:

- **Unregulated treatment by medical staff:** Due to incentives to chase the “mark-up” in medicine and health materials, physicians were motivated to over-treat or inappropriately prescribe in order to make profit, resulting in waste of scarce health resources.

- **Fee-for-service payment approach:** With the continuing comprehensive health reforms in other domains, such as essential drug systems and hospital reforms, fee-for-service is not an appropriate payment approach in improving efficiency of fund utilisation. In fact, the average inpatient spending increased by 27.26 percent in 2009 in contrast to 2007. To some extent, funds did not reach the people who had the greatest need, and therefore there was no significant effect on average household out-of-pocket health spending.

The evolving deficit brought increasing pressure to policymakers from local government, such as the Bureau of Finance, Bureau of Development and Reform, Bureau of Health and NRCMS Management Office. They were eager to explore an advanced and adaptive payment approach to improve the efficiency of NRCMS utilisation.

Based on the needs and willingness of Hanbin health authorities, the FHS China team selected Hanbin as one of three pilot areas in China to strengthen capacity building of local health policymakers and assist them to explore alternative payment methods in light of the current issues.

What changes took place?

The efficiency of fund utilisation has improved distinctly and the risk of overspending has been controlled better than expected. By 2012, the trend of overspending had been contained, with a good balance between financing income and overall expenditure. Furthermore, the rate of reimbursement to participants improved to 50.7 percent and 53.3 percent on average in 2012 and 2013 respectively.

Based on the experiences and achievements during the initial implementation of the NRCMS, the scheme in Hanbin County covers 83 conditions through local
hospitals. Local practitioners are now familiar with the operation of the scheme and its clinical pathways. Furthermore, the success of payment reform integration with the clinical pathways has boosted local practitioner confidence. Fee-for-bed and single-case payments have replaced fee-for-service.

Hanbin County is considered an outstanding pilot of the NRCMS payment reform, and its experience has been shared with others throughout and beyond Shaanxi province in western China. Meanwhile, health policymakers from Hanbin are encouraged by the provincial government to expand participant benefits through continuing payment reform, including trialling outpatient payment.

The experience of FHS’ engagement in the process has increased local policymaker and stakeholder awareness and application of evidence-based decision-making in the implementation of the payment reform scheme.

How did FHS contribute to the changes?

In order to strengthen capacity building of local health policymakers and assist them to explore alternative payment methods, the FHS China team conducted two sets of activities: training and mentoring.

Hanbin local policymakers and stakeholders, including health sector managers and staff, were invited to participate in training seminars and workshops delivered by domestic and international experts focusing on conceptual topics such as stimulating innovation, learning by doing, and the application of complex adaptive systems thinking. This training provided opportunities for participants to develop a deeper understanding of health systems research, and gain practical skills for designing and implementing their own payment reform strategy.

Supported by the FHS China team, local health policymakers with other stakeholders then designed a plan for the adapted and contextually-relevant implementation of payment reform. The Hanbin health authorities decided to adopt the plan and different payment approaches, such as single-case payment and fee-for-bed, were introduced over time to improve the efficiency of fund utilisation for inpatient services.

To ensure the success of clinical pathway and case payment implementation reform, the FHS China team provided technical assistance in close collaboration with local practitioners over a six month period. FHS researchers carried out a baseline study, screening of priority conditions, cost estimations, input to the development of clinical pathways, support to the development of necessary regulations, and construction of a monitoring and evaluation framework. Finally, based on existing treatment strategies, and with input from national clinical experts, pathways were developed and further refined by and adapted to local contexts through discussion. These pathways were used as a basis to derive appropriate case payment rates following negotiations between local payers and providers, and were incorporated into each hospital’s electronic information system.

Next steps

Hanbin health authorities will continue to roll out and evaluate the payment reforms, and share the city’s experience with others in China. The FHS China team is working on a report about the Health Payment Reform for the National Health and Family Planning Commission, and will highlight the experience of Hanbin City through this.

Key references

China Policy Influence and Research Uptake Team (2015) ‘How have medical institutions responded to national healthcare reform in China?: Site investigation in pilot area of Hanbin District, Shannxi Province’, Future Health Systems Blog, 18 May


Future Health Systems is a research consortium working to improve access, affordability and quality of health services for the poor. We are a partnership of leading research institutes from across the globe, including: Johns Hopkins Bloomberg School of Public Health; China National Health Development Research Center; International Centre for Diarrhoeal Disease Research, Bangladesh; Institute of Development Studies, UK; Indian Institute of Health Management & Research; and Makerere University School of Public Health, Uganda.