

【关注】柳叶刀：三明医改为全球医疗改革提供了“中国方案”的鲜活样本



2025年6月21日，国际医学期刊《柳叶刀》刊发《三明模式：改革中国的卫生系统》。文章指出：三明模式通过增加医疗体系透明度、重塑药品供应链、重构医保分配机制，**为全球医疗改革提供了“中国方案”的鲜活样本**。文章充分肯定三明医改在控制成本的同时保障服务质量，破解了医疗资源分配与利用的深层矛盾，成为中国深化医改、推进健康中国建设的重要实践标杆。

The Sanming model: reforming China's health system

One small city's bid to rescue its health finances has transformed the way health care is managed across China. Chris McCall reports.



China's health system has changed radically since the death in 1976 of the founder of the People's Republic of China, Mao Zedong. Many Chinese people then lived in agricultural communes with health services provided by so-called barefoot doctors—medical workers sent in after only very brief training to learn on the job. Over the following decades, China's health education system re-established itself and better facilities became available while the economy grew at a staggering pace. In less than half a century, China's health-care system has gone from rudimentary to high-tech. However, the pace of change has been too fast for some, pushing ordinary Chinese people into debt to access basic health care, while others jumped the queue with so-called red envelopes, full of cash. Hospitals technically owned by the state had to generate their own income, and costs rose exponentially. The general health of China's people is now vastly better. But it has come at a cost. These issues precipitated a crisis in the southern city of Sanming in 2011. A local health fund was US\$31.5 million in deficit, prompting local officials to think about how health care is delivered.

"A lot of people were complaining that it is very difficult to access health care because it is too expensive", said Winnie Yip, Professor of Global Health Policy and Economics at the Harvard TH Chan School of Public Health at Harvard University, who has studied the Sanming model extensively. Many pilot reform schemes set up did not last, she said, but Sanming's approach was unique and its motivation for change was very high. "Sanming took a more systemic approach", said Yip. More

than a decade on, the reforms that the Sanming Healthcare Reform Leadership Office pioneered are de facto national policy. They are now part of a long debate about whether the future of China's health system lies with the private sector or greater state control.

Although most Chinese hospitals remain technically owned by the state, that can mean a local level of government, a province, the military, or something else. The ruling Communist Party has representation of one kind or another at many levels

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of health governance. There are many true private health services now, but they represent a minority of services provided. Overwhelmingly, care is still through state services.

What most of the state hospitals have in common is small subsidies. Yip estimates they cover around 6–10% of costs. They have therefore been forced to behave like privately owned hospitals in other countries, generating as much revenue from as many sources as possible. This could mean less acute cases were seen in facilities that, medically speaking, should be reserved for the more seriously ill. There were lots of stories where hospitals would require a significant deposit to provide treatment, Yip said. People would be forced to borrow money, she said. Doctors' salaries were fairly low and some would ask for red envelopes for preferential treatment, although in recent years there has been a crackdown on those practices, and they can now be heavily punished.

"Before, if you don't give an envelope, don't even think you can see the doctor", Yip said.

In 2011, the Sanming region had an ageing population of about 3 million people, with 22 hospitals and more than 15 000 medical staff. Its urban employees' basic medical insurance fund could not provide the services it was supposed to. Its deficit of \$31.5 million was equivalent to 14.4% of the municipal government's revenue, as detailed by accountancy giant KPMG in a later report. In 2012, Sanming launched local reforms, led by a determined deputy mayor, Zhan Jifu. "Our medical insurance fund deficit was the primary trigger for change, but to solve that took us into underlying issues of inadequate and overly expensive medical services, drug price inflation and overprescribing", Zhan said, as quoted in the KPMG report, problems that were not unique to Sanming.

The reforms combined several different supervisory bodies. They increased doctors' pay, in some cases doubling it, but also cracked down on illicit payments. Furthermore, they introduced a new form of bonus, calculated based on the kinds of illnesses doctors had treated. They hiked charges to better reflect the true cost of treatment, but also tackled inequities in health insurance, and tried to build up services in about 1700 villages and small towns under its jurisdiction. Less urgent cases were referred there. They also launched a Healthy Sanming website where the public could see how funds were being used. They also tackled the challenging issue of drug supply. The website published the prices patients should be charged for drugs. KPMG said that in the process, three local drug distribution companies went out of business.

For the KPMG report see <https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2016/11/sanming-real-story-of-grass-roots-healthcare-transformation-china.pdf>

For studies of the impacts of the Sanming Model see *Risk Manag Healthc Policy* 2025; 18: 205–16 and *Health Policy and Planning* 2025; 32: 1135–45



Chinese President Xi Jinping visits Shaxian General Hospital in Sanming City to learn about local health-care reforms, March 2011

By 2015, the deficit had turned into a surplus of \$19.5 million, according to KPMG. Sanming is in Fujian province, and President Xi Jinping is Fujian's former governor. He and other senior figures in the government and ruling Communist Party have been vocal in their support for the Sanming model. In 2019, the Chinese Government formally asked other areas to look to Sanming when formulating their own local policies. In 2024, the National Healthcare Security Administration (NHSA) issued a policy to promote the model to develop new ideas in health insurance. Numerous studies have shown that the Sanming model generates significant cost savings. The evidence for true health outcomes is less clear, but health economists say there is no evidence that they are worse.

Qiao Jianrong of WHO's China office says Sanming's changes could be summarised as the three Ms: medicines, medical care, and medical insurance. "Key elements of the Sanming approach include operational autonomy for the hospital, performance based annual salaries for hospital directors, reducing drug prices while increasing prices for medical services to reflect their true costs, and the change from a fee-for-service model to payment based on diagnosis related groups", said Qiao. "Study results show that Sanming's reform has successfully reduced medical costs

without sacrificing health service quality."

It has also led to a fundamental change in the way drugs are supplied across China. Previously, there were mark-ups at multiple levels of the supply chain, which could inflate the price of drugs five-fold or more. Sanming pooled drug procurement and introduced a new two-invoice system, manufacturer to distributor, and distributor to hospital. Only with these two invoices would the insurance body holding the funds pay, which greatly reduced drug costs. This model has since been replicated nationwide, in a system called Volume Based Procurement.

Health economist Justin Wang said there have been ten batches of drugs included in this scheme since 2019, with another currently on the way, all overseen by the NHSA. The government argues that this system

"Study results show that Sanming's reform has successfully reduced medical costs without sacrificing health service quality."

maximises use of limited resources and ensures patients benefit from low prices. "It is now front and centre for all of the pharmaceutical companies in China", said Wang, head of LEK Consulting's China practice, acknowledging there was some resistance. "The hospitals are not entirely happy about it. This takes away their right to choose drugs freely." WHO data show that between 2018 and 2022, prices of 294 key drugs in China decreased by 53% on average as a result, and their quality improved.

Sanming's ideas involve the state taking back a degree of control on a system that had become increasingly free-wheeling. However, market-led reforms have played a key role in the remarkable improvement in China's health statistics, and the debate over state versus private health care is far from over. In 2021, life expectancy

in China was 77.6 years, well above the world average and an increase of more than 6 years since 2000, according to WHO data. Tuberculosis remains a substantial problem, with 52 cases per 100 000 people in 2023, which was less than half the rate in 2000. Maternal mortality rates were 16 deaths per 100 000 births in 2023, which is about one-eighth of the figure from 1985. Most Chinese people are now enrolled in a medical insurance scheme, although there are still challenges in simplifying this system.

China has 1.4 billion people and Sanming is a small city. Health economists say its model cannot address all the health systems' problems. The ideas pioneered there might transfer well to similar areas, but less so in mega-cities such as Shanghai and Beijing that have tens of millions of people. Transport is highly developed there, making it easy to shop around for health care. True private health services are growing rapidly, with considerable government support, particularly in large cities and some specialist areas such as for dentistry and ophthalmology.

"I don't think it is a model that can be readily transferred", said Zhuo Chen, visiting Professor in Health Economics at University of Nottingham Ningbo China. The main success of the Sanming model, he said, has been controlling costs, adding that it also reduced the incentives for doctors to over-treat.

Yip agreed that although parts of the Sanming model would be hard to implement nationwide, she said parts could still be applied in more densely populated areas. Nevertheless, she told *The Lancet* that the Sanming model addresses some fundamental problems in how the health system had been managed. "It is about transparency", she said. "This is a thing that China as a country has wanted to do but has not been able to do."

Chris McCall

以下为《三明模式：改革中国的卫生系统》文章原文：

一座小城市拯救医疗财政的尝试，已改变中国医疗管理的整体模式。

自 1976 年以来，中国的医疗体系发生了根本性变革。当时，许多中国人生活在农业公社，医疗服务由所谓的“赤脚医生”提供——这些医务人员仅接受过简短培训，边工作边学习。在随后的几十年里，随着中国经济以惊人的速度增长，医疗教育体系得以重建，更完善的医疗设施也逐步普及。在不到半个世纪的时间里，中国的医疗体系已从基

础简陋发展至高科技水平。然而，变革的步伐对部分人而言过快：普通民众为获取基本医疗服务背负债务，另一些人则通过塞满现金的“红包”插队就医。名义上属于国有资产的医院不得自行创收，医疗费用呈指数级增长。如今，中国人的整体健康水平大幅提升，但这一切并非没有代价。2011 年，这些问题在南方城市三明引发了危机——当地医保基金赤字达 3150 万美元，促使地方官员重新思考医疗服务的提供方式。

哈佛大学陈曾熙公共卫生学院全球卫生政策与经济学教授叶文妮（Winnie Yip）深入研究过三明模式，她指出：“许多人抱怨看病难、看病贵。”她表示，此前许多试点改革方案未能持续，但三明的改革路径独具特色，且推动变革的动力极强。“三明采取了更系统化的改革思路。”十多年后，由三明医改领导小组办公室首创的改革措施已成为事实上的国家政策。这些改革如今也卷入了一场长期争论：中国医疗体系的未来，究竟应依赖私营部门，还是强化政府管控？

尽管多数中国医院在名义上仍属国有，但“国有”可能意味着隶属于地方政府、省级单位、军队或其他主体。执政党在医疗治理的多个层级都设有不同形式的代表机构。如今，中国已涌现出许多真正的私营医疗服务，但它们仅占医疗服务总量的一小部分——绝大多数医疗服务仍通过公立体系提供。

多数公立医院的共同之处在于政府补贴微薄。叶文妮估算，补贴约覆盖 6%-10% 的运营成本。因此，这些医院被迫像其他国家的私立医院一样运作，尽可能从多种渠道创收。这可能导致一些本应留给重症患者的医疗资源被轻症病例占用。叶文妮提到，曾有许多医院要求患者支付高额押金才能接受治疗，民众不得不举债就医。此外，医生薪资水平较低，部分医生会索要红包以提供优先治疗——尽管近年来这类现象已受到严厉打击，涉事者可能面临重罚。“以前，如果你不给红包，连见医生的机会都没有。”叶文妮说。

2011 年，三明地区约有 300 万老龄化人口，下辖 22 家医院和 1.5 万余名医务人员。当地城镇职工基本医疗保险基金已无法按规定提供服务，3150 万美元的赤字相当于市政府财政收入的 14.4%——这一数据在毕马威（KPMG）后续的报告中得到详细披露。2012 年，在坚定推进改革的副市长詹积富的领导下，三明启动了地方改革。“医保基金赤字是推动变革的主要诱因，但要解决这个问题，我们必须直面医疗服务不足且价格高企、药价上涨和过度处方等根本问题。”詹积富在毕马威报告中提到，这些问题并非三明独有。

改革措施整合了多个监管机构，在提高医生薪资（部分岗位薪资翻倍）的同时，打击灰色收入。此外，改革引入了新的奖金机制，根据医生治疗的病种计算奖金。政府上调了医疗收费以更真实地反映治疗成本，同时解决医保不公平问题，并尝试在辖区内约 1700 个村镇加强基层医疗服务，将非紧急病例转诊至基层。当地还推出了“健康三明”网站，公众可在上面查询资金使用情况。改革也直面药品供应这一棘手问题——网站公布了患者应支付的药品价格。毕马威指出，在此过程中，三家本地药品经销公司倒闭。

根据毕马威的报告，截至 2015 年，三明的医保赤字已转为 1950 万美元的盈余。三明市隶属于福建省，国家主席习近平曾担任福建省省长。他和政府及执政党的其他高层明

确表示支持三明模式。2019 年，中国政府正式要求其他地区在制定地方政策时借鉴三明经验。2024 年，国家医疗保障局（NHSA）发布政策，推广三明模式以创新医保管理思路。大量研究表明，三明模式显著降低了医疗成本。尽管其对健康 outcomes 的真实影响尚未完全明确，但医疗经济学家表示，没有证据表明改革损害了健康服务质量。

世界卫生组织（WHO）中国办公室的乔建荣将三明改革总结为“三医联动”：医药、医疗、医保。“三明模式的核心要素包括医院运营自主权、院长年薪制（基于绩效）、降低药价同时提高医疗服务价格以反映真实成本，以及从按服务收费模式转向按疾病诊断相关分组付费（DRG）。” 研究结果显示，三明改革成功降低了医疗成本，同时未牺牲服务质量。

这一模式还从根本上改变了中国的药品供应体系。此前，药品供应链的多个环节存在加价，药价可能被抬高五倍甚至更多。三明通过药品集中采购引入“两票制”（药企到经销商、经销商到医院），医保基金仅在收到这两张发票后才予以支付，大幅降低了药品成本。这一模式随后在全国推广，形成“带量采购”（Volume Based Procurement）体系。

医疗经济学家王 Justin 指出，自 2019 年以来，国家医保局已组织十批药品纳入带量采购，目前还有一批正在推进。政府称该体系最大化利用了有限资源，确保患者享受低价药品。“如今，这已成为所有中国药企的核心议题。” 艾意凯咨询（LEK Consulting）中国业务负责人王 Justin 表示，尽管改革面临一些阻力，“医院对此并非完全满意，因为这剥夺了它们自由选择药品的权利。” 世卫组织数据显示，2018 至 2022 年间，中国 294 种重点药品价格平均下降 53%，且质量有所提升。

三明模式核心理念是政府重新收回对医疗体系的部分控制权——该体系此前已逐渐走向过度市场化。然而，市场化改革在中国健康指标的显著改善中也发挥了关键作用，关于公立与私立医疗的争论远未结束。根据世卫组织数据，2021 年中国人均预期寿命达 77.6 岁，远高于世界平均水平，较 2000 年增长逾 6 年。结核病仍是重大公共卫生问题，2023 年发病率为 52/10 万，不足 2000 年的一半；2023 年孕产妇死亡率为 16/10 万例活产，约为 1985 年的八分之一。如今，多数中国人已纳入医保体系，但简化医保系统仍面临挑战。

宁波诺丁汉大学健康经济学客座教授卓辰认为：“我不认为三明模式能轻易在全国推广。” 他指出，该模式的主要成功在于控制成本，并减少了医生过度治疗的动机。

叶文妮也认同，尽管三明模式的部分措施难以在全国推行，但某些元素仍可应用于人口更密集的地区。不过，她向《柳叶刀》表示，三明模式解决了医疗体系管理中的一些根本问题。“关键在于透明度，”她说，“这是中国一直想做却未能做到的事。”（南方医科大学副教授 张露文/译