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POSTER ABSTRACT

The effects of tiered healthcare service delivery on the cost control and quality improvement in rural China: an interrupted time series analysis

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Introduction: Worldwide, many countries have established their own gatekeeper system. Tertiary hospitals in China have experienced explosive growth both in the quantity and quality since 2009. However, the healthcare delivery system in China is fragmented for its weak coordination between different faculties. And it was not well prepared for the tremendous and complex needs, especially the grassroots healthcare faculties whittled by the tertiary hospitals. Moreover, it has caused the increasing of total health expenditure and occurrence of catastrophic health expenditure.

Policy context and objective: To deal the unreasonable resources distribution among the tertiary-grassroots faculties and urban-rural areas, and establish a high-value healthcare delivery system. In January 2013, the tiered healthcare service delivery was first implemented among Qinghai and Hubei province. Given emerging problems might influence the current policy analysis from different perspective may achieve contrasting results, it is necessary to evaluate the secular effects of the previous pilots and synthesis its experience for the following programs with the similar contextual settings.

Targeted population: The New Rural Cooperative Medical System enrollee in the Dangyang.

Highlights: A quasi-natural experiment was designed in Dangyang, Hubei province. And the policy were piloted in October 2014, policies related to this reform and claim data from January 2011 to December 2015 were collected from the New Cooperative Medical Scheme (NCMS) enrollees. First, the patients are motivated to take the grassroots faculties for the initial treatment-seeking, with different reimbursement ratio settings varied with the delivery system levels. Second, all the county-level hospitals have to establish the integrated delivery system with more than township faculties. Third, all community healthcare centers should carry out the family doctors system and the grassroots faculties in rural areas should be equipped with a physician good at the Traditional Chinese Medicine.

The outcomes indicated the changes in cost and patients flow were included to evaluate its effects and calculated monthly based on the claim data. Policy analysis and interrupted time series analysis model were designed to estimate the before-after changes in the indicators with Stata version 13.0. All the cost data was adjusted according the 2016 China Health Statistics Yearbook.

The actual reimburstment ratio and the proportion of total medical expenses in township hospitals increased significantly in the first month of the implementation of the tired medical system policies, and has reversed the orginal downward trend. Meanwhile, the upward trend and level of out-of-pocket has significantly declined. However, the level and trend of proportion of health expenditure and patient visits in health care facilities outside Dangyang did not decreased significantly, so does the average length of stay and average total cost. The proportion of total patient visits in township hospitals increased at first, but not reversed significantly in the long term.

Conclusions: Although this policy has not achieved all its expected outcomes temporarily, it has reduce the out-of-pocket cost for patients and improve the effectiveness of the grassroots facilities. Further studies should focus on the more comprehensive evaluation of health system and an appropriate control group should be found.

Keywords: hierarchical healthcare service delivery; cost control; patients flow; interrupted time series analysis; rural china