

CONFERENCE ABSTRACT

Effects of provider incentives in integrated healthcare delivery system reform: a quasi-experiment on patients with chronic diseases in rural China

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Background: Provider incentive was a key strategy in facilitating the integrated healthcare delivery reform, however information about the appropriate form and evidence was insufficient in low- and middle-income countries (LMICs). From July 2012 to December 2014, we implemented a multi-faceted intervention in Qianjiang County in Chongqing Municipality of Southwestern China, to realize and prove the effectiveness of an integrated care model among patients with chronic diseases, and to compare the effects with/without provider incentives.

Methods: A quasi-experiment was performed with 2 treatment groups and one control group. One treatment group was intervened with multi-disciplinary team (MDT) together with other strategies to improve the continuity of care (COC) between primary-secondary-tertiary care, and the physicians in the other treatment group was additionally provided with financial incentives besides the integrated delivery intervention, in the form of performance-based prospective payment system. The control group conducted usual care without any inter-professional collaboration and implemented traditional "fee-for-service" system. In total, 6 towns were randomized into these 3 groups and 1641 patients with hypertension and 332 with Type 2 Diabetes were enrolled under stratified sampling strategy. Data including health outcomes, medical expenses and provider behaviors were collected at the baseline study and followed up for 30 months based on the official health records, questionnaires and claims data.

Results : Compared to the control group, the blood pressure (BP) was decreased by 6.7% in double treated group and 5.9 % in single treated group; the health related quality of life (HRQoL) was increased by 15.5% and 8.2% in double and single treated group, respectively. The COC was increased by 10.4% in both groups after intervention, and another 26.9% increase in double treated group compared to single treated. Doctors' willingness to cooperate was increased by 13.1% and the likelihood of using an upper level hospitalization service was reduced by 0.16% compared to single treated group. Reimbursed inpatient spending was reduced by 12.43%. All $P < 0.05$.

Discussion: The integrated healthcare delivery model improved both the health outcomes of patients with chronic diseases and professional collaborative behaviors from multi-institutions, while reducing the potential medical expenses by lowering the likelihood of using upper level services – which was much more expensive. And the provider incentives had been proved with marginal effects in the above areas.

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Conclusions: Policy makers in LMICs are suggested to implement proper provider incentives system when conducting integrated healthcare delivery system reform.

Lessons learned: The doctors were the most difficult stakeholders to be influenced by the policy, which reminded us the necessity of fully negotiation (usually several rounds) with the policy executors before a reform was completely initiated.

Limitations: The trial implementation was not perfect and the results were contaminated to some extent. By process evaluation of trial exposure , enrollment, reach and following up, we had found out that the effective implementation to be 60% utmost, which might suggest that the actual effect might be underestimated.

Suggestions for future research: The trial driven cost may hinder many potential reforms in LMICs. Therefore economic evidence such as cost-effectiveness analysis may be needed before generalization.

Keywords: provider incentives; integrated care; health outcomes; medical expense; inter-professional collaboration
