

## Chapter 7

# The Impact of the New Rural Cooperative Medical Scheme on Township Hospitals' Utilization and Income Structure in Weifang Prefecture, China

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### ABSTRACT

*The New Rural Cooperative Medical Scheme was gradually introduced from 2003 in China. This paper is based on a representative survey of 24 randomly selected township hospitals in Weifang prefecture over the period 2000-2008. Using a generalized form of differences-in-differences model, it aims to assess the effect of the reform on the utilization and income structure of the township hospitals. The estimations provide three main results linked to the effects of the New Rural Cooperative Medical Scheme on the behavior of the key stakeholders (households, health care providers and Health Bureau). Firstly, the reform had positive impacts on the utilization of township hospitals, particularly on the inpatient activity, but no significant impact on their income structure. Secondly, a decrease in the burden of hospitalization costs for households is suggested by the higher positive impact of the reform on the volume of inpatients in poor areas than in the other ones. Lastly, the marginal impact of the reform decreases over time.*

### 1. INTRODUCTION

Since the beginning of the 21<sup>st</sup> century, China has been committed to ambitious social reforms directed mainly towards its rural population. The New Rural Cooperative Medical Scheme – a community-based health insurance scheme – which reformed the rural health insurance system covering less than 10% of

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the rural population at the beginning of the 2000's, constitutes one of the pillars of this action (for more details, please see Eggleston et al., 2008; Wagstaff et al., 2009a; Yip & Hsiao, 2008). One major objective of the implementation and scaling up of the New Rural Cooperative Medical Scheme was to increase the utilization of health services and more specifically of township hospitals – the largest health care providers (outpatient and inpatient care) at the primary level of the Chinese health care system. Another objective was to reduce health costs which had risen to very high levels this was partly caused by the over-prescription of drugs. The sale of medicines was more profitable for hospitals than the delivery of those medical services not associated with high-tech diagnosis. Therefore, hospitals tended to over-prescribe drugs. A half of health spending in China was dedicated to drugs spending in 2007 (Sun et al., 2008). Big efforts have been made to change the behavior of health care providers, to control drugs and service prices through the insurance scheme and the setting of a reimbursement ceiling. With the insurance reform, we can expect both 1) an increase of the medical activity and 2) that outpatient and inpatient services become more profitable than the sales of medicine, resulting on declining share of them in hospital income.

Considering the importance and the stakes of the reform, many studies have shown interest in the performance of the New Rural Cooperative Medical Scheme and in the enrollment and satisfaction determinants of individuals with regard to this scheme (Liu et al., 2008; Wagstaff et al., 2009a; Wang et al., 2006; Wang et al., 2008). Estimates have been made of the effect of the reform – implementation and reimbursement modalities – on demand access, utilization, financial protection, financing and efficiency of health services (Audibert et al., 2013; Barbiaz et al., 2010; Brown & Theoharides, 2009; Hou et al., 2014; Hu et al., 2012; Lei & Li, 2009; Sun et al., 2009; Yip & Hsiao, 2009). Results highlighted are mixed due to the multiplicity of the schemes' modalities and contexts (Brown et al., 2008; Feng & Song, 2009) related to the existing differences between Chinese regions and the management of the New Rural Cooperative Medical Scheme by the local authorities (Hou & Li, 2011). Such heterogeneity of the impact of community-based health insurance is also reviewed in different countries by Diaz et al. (2013). Dror's publications study also the effect of community-based health insurance, but with emphasis on the demand-side, on the insured: enrolment factors, equity of financial access, etc. He also shows important disparities of the effect of reform according to context. Overall, the literature, on China or others countries, mainly focuses on demand-side effect of the community-based health insurance.

Globally, results show that throughout China, the reform increased the utilization of health services at all health facility levels (village health stations: Barbiaz et al., 2010; township hospitals and county hospitals: Wagstaff et al., 2009a). Nevertheless, the effects are not homogeneous with regard to the health facility levels and the medical services considered: the New Rural Cooperative Medical Scheme appears to positively affect the number of outpatient visits at village health stations (Barbiaz et al., 2010) and county hospital level, but the effect is less clear at township hospitals level (Wagstaff et al., 2009a). The New Rural Cooperative Medical Scheme seems also to have a positive effect on the income of village health stations (Barbiaz et al., 2010) and township hospitals (Wagstaff et al., 2009a), but does not affect the composition of their income (Barbiaz et al., 2010).

Therefore, more case studies are necessary to assess the specific effects of reform in a given context and thus improve our knowledge about the local and singular effects of its implementation regarding the behavior and the responses of the households and health care providers (demand and supply sides). The need to take into account regional heterogeneity when findings are interpreted in a more general context is a point particularly made by You & Kobayashi (2009) in their review of the New Rural Cooperative

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