



Does hospital competition improve health care delivery in China?



Jay PAN^{a,b,1}, Xuezheng QIN^{c,*}, Qian LI^{b,1}, Joseph P. MESSINA^{d,2}, Paul L. DELAMATER^{e,3}

^a West China School of Public Health, Sichuan University, Chengdu 610041, China

^b West China Research Center for Rural Health Development, Sichuan University, China

^c School of Economics, Peking University, Beijing 100871, China

^d College of Social Sciences, Michigan State University, 203A Berkey Hall, East Lansing, MI 48824, USA

^e Department of Geography and Geoinformation Science, George Mason University, 4400 University Drive, MS 6C3, Fairfax, VA 22030, USA

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ABSTRACT

This paper analyzes whether hospital competition is associated with improved health care delivery in China, particularly in the dimensions of health care quality and cost. We explore the differences in competition over time and across regions to examine the relationship in an environment wherein the hospital industry is largely state owned, the price of medical care is partially regulated, and hospitals can compete on both quality and cost. Using provincial- and individual-level data, along with a set of outcome indicators, we find that hospital competition is significantly correlated with lower observation room mortality, shorter outpatient waiting time, and fewer outpatient costs, while we do not find evidence that would suggest negative influences of competition on the other measures of hospital performance. Our results offer new evidence in support of competition-based reforms in China's health care sector and provide implications for other developing countries facing similar health care challenges.

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"Competitive markets are the best way yet found for efficiently organizing the production of goods and services." World Development Report (1991)

1. Introduction

Whether hospital competition leads to improvements in health care service delivery has been a topic of considerable debate worldwide. Using provincial- and individual-level empirical data from China, this paper explores the relationship between hospital competition and health care quality and costs. Improving the performance of service delivery in China's public hospitals is among the five priorities of China's new health system reform (CPC Central Committee and State

* Corresponding author. Tel./fax: +86 10 6275 7237.

E-mail addresses: panjie.jay@gmail.com (J. Pan), qin.econpku@gmail.com (X. Qin), liqian820@gmail.com (Q. Li), jpm@msu.edu (J.P. Messina), pdelamat@gmu.edu (P.L. Delamater).

¹ Tel.: +86 28 8550 1272; fax: +86 28 8550 1528.

² Tel.: +1 517 353 1715.

³ Tel.: +1 703 993 1217.

Council, 2009; The State Council, 2009). Understanding the potential relationship between competition and the performance of the health care market and service delivery, through an approach based on empirical evidence, may prove significant for further public policy initiatives.

In 2006, the Chinese Government initiated an ambitious health system reform aimed at tackling the widely expressed national problem of “*kan bing gui, kan bing nan* (getting medical care is expensive and difficult).” Specifically, “*kan bing gui* (getting medical care is expensive)” relates to health care financing and payment mechanisms, while “*kan bing nan* (getting medical care is difficult)” relates to access to health care and service delivery. From an economic perspective these two problems are closely related: 1) insufficient supply may lead to upward price pressures, resulting in more expensive medical care and 2) greater payment capabilities, through rising incomes or expanding health insurance coverage, may encourage consumer demand and lead to increased levels of unmet medical demand. Recently, China's health reform programs have successfully widened the availability of health care services, i.e., extending health insurance coverage among the general population (Yip et al., 2012). However, future challenges remain, particularly in how to deepen the reforms via promoting health care quality and reducing health care costs.

In China, public hospitals dominate the health care industry in terms of market share, number of employees and patient load in both the outpatient and inpatient sectors (see Table 1). This leaves little space for non-public hospitals to develop and grow. Within this organizational framework, we believe service delivery can be promoted along two pathways: 1) internally (“*nei zeng huo li*”) by enhancing the performance of the current public hospitals and 2) externally (“*wai jia tui li*”) by incentivizing private capital to enter the market and thus compete with the public sector. Current health policy reforms in China follow these two approaches: the regulatory reform that separates the operational control and regulatory oversight of public hospitals intends to promote the internal competition among them (Pan, Liu, & Gao, 2013); the introduction of private and foreign investment in the health care industry intends to promote the external competition between the public and non-public hospitals (Liu, Li, Hou, Xu, & Hyslop, 2009). Despite these competition-driven reforms, consensus has not been reached on whether increased hospital competition can effectively improve health care service delivery.

Under the general economic theory, competition effectively and broadly mobilizes production (World Bank, 1991). In a competitive market, manufacturers improve technologies and processes in a relentless pursuit to lower costs, and new technologies catalyze competition by diffusing widely and rapidly among manufacturers (Porter & Teisberg, 2004). Consequently, less competitive producers will gradually be driven out and the market restructured, leading to declining value-adjusted prices (Porter, 1980). This theory generally holds true for industries such as computers, mobile communications, banking as well as a number of others (Porter & Teisberg, 2006). Thus, many believe that market competition is the most efficient approach to address the health care challenges (Grand, Propper, & Robinson, 1992).

However, special characteristics of health care markets complicate the application of classic economic theory in predicting the effectiveness of competition, as the premises for perfect competition do not exist (e.g., Dranove, 2011; Gaynor, 2006; Gaynor & Town, 2011). First, health care service is a differentiated product (Dranove, 2011; Robinson & Luft, 1985), as agency driven preferences and patterns of disease vary across regions and scales (Gaynor & Vogt, 2000; Satterthwaite, 1979, 1985). Thus, even under market-clearing equilibrium, a patient will still receive differentiated health care services in any given hospital. In this regard, the health care market is monopolistically competitive. Second, information asymmetry is abundant in health care and can lead to market failure. This is because suppliers have better knowledge of the diseases, treatments and demand than the patients, placing them in a

Table 1
Distribution of healthcare service provision in China in 2010.

	Outpatient		Inpatient	
	No. of visit (100 million)	Proportion (%)	No. of admission (1 million)	Proportion (%)
<i>By ownership type</i>				
Public hospital	18.74	91.90%	87.24	91.60%
Non-public hospital	1.66	8.10%	8.00	8.40%
<i>By for-profit status</i>				
Not for-profit hospital	19.45	95.39%	90.82	95.37%
For-profit hospital	0.94	4.61%	4.41	4.63%
<i>By level</i>				
Tertiary hospital	7.60	37.27%	30.97	32.52%
Secondary hospital	9.31	45.66%	51.16	53.72%
Primary hospital	1.46	7.16%	4.64	4.87%
Not-leveled hospital	2.02	9.91%	8.47	8.89%
<i>By type of services provided</i>				
General hospital	15.11	74.10%	75.05	78.80%
TCM hospital	3.28	16.09%	11.68	12.26%
Specialty hospital	1.68	8.24%	7.33	7.70%
Other hospital	0.32	1.57%	1.18	1.24%

Data source: Health Statistical Yearbook of China 2011.

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