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Determinants of the use of different types of health care provider in urban China: A tracer illness study of URTI

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ABSTRACT

With the reform of urban health delivery systems in China, concern has been growing about the effect of these changes on health care demand and utilization at basic-level health institutions, especially Community Health Services Centers (CHC). Using data from the fourth China National Health Services Survey (NHSS) that was conducted in 2008, the authors conducted a tracer illness study of urban people with acute upper respiratory tract infections (URTI) to examine the factors that affect their use of different outpatient health care providers. The study addresses the observed demand for both public and private providers and is believed to be the first to attempt this for urban China. The findings indicate that overall private clinics are important sources of medical care for low consumption households, that insured patients are less likely to use private clinics and more likely to use CHC and that children are more likely to see a high-level provider. A number of other factors, including city size and severity of illness were found to play a role in determining provider utilization. We discuss the policy implications of the results in terms of meeting the health care needs of the urban population in China.

1. Introduction

The implementation of market-oriented health system reforms in China, which has coincided with increasingly high user fees for health care, mean that patients are now free to use whichever level of provider they can afford. A number of serious problems have resulted, including the co-existence of idle and overburdened facilities, inefficient resource allocation and high medical expenses [1]. For example, high-level, high-cost hospitals are often overloaded with patients, whereas basic-level, lower-cost urban facilities are underutilized. Concerns relating to the utilization of different types of health care provider and implications for the rational use of medical resources have been growing [2,3].

The health care delivery system in urban China had been characterized by the 'three-tier network' of street clinics, district hospitals, and city hospitals. However, changes related to the economic reforms of the 1980s brought new challenges to this system. Referral mechanisms essentially ceased to function, with patients using any provider that they could afford. Partly in response to this situation, major urban health care policy reforms were adopted by the central Chinese government in 1997. From 1999, it has been formally promoting the development of Community Health Services Centers (including affiliated Community Health Service stations) as major providers of primary health care. In 2002, the government further encouraged enterprises, institutions, social organizations and even individuals to invest in the establishment of CHCs and promoted the incorporation of CHCs into urban health care insurance

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schemes. The aim is to establish CHC networks nationwide as the major providers of primary health care by the year 2010.

Enormous changes have occurred in the Chinese urban health care system over recent years, with many district and community hospitals being converted into CHCs and the specialists who used to work in these hospitals being retrained to become general practitioners (GPs). By the end of 2007, almost every city had developed community health services and a total of 27,069 CHCs (including Health Service stations) had been established (Chinese Health Statistical Yearbook (CHSY)) [4]. As a result, the urban three-tier network is moving toward a two tier system based on CHCs and city hospitals, which include various General and Specialist Hospitals at and above county level. However, a two-way referral system has yet to be established [5] and there are still no regulatory barriers to the use of any level of health care provider by urban residents.

The CHCs and city hospitals are predominantly owned by government. However, in 2007 government provided only 14.3% and 8.5% of their total revenues [4], with the great majority of their income derived from patient fees. At the end of 2007, there were also 129,882 group or solo practice private clinics and 3306 private hospitals, mainly in urban areas [4]. These accounted for 44.85% and 1.14% of total registered medical institutions excluding village clinics. The distinction is based on the capacity to admit inpatients, with Ministry of Health (MOH) regulations requiring that medical institutions designated as 'hospitals' should have at least 20 beds [6]. The development of private hospitals has been relatively slow and urban residents mainly use the other types of health care provider described above.

City hospitals are usually perceived to be the providers of higher quality of care at a higher price, whereas CHCs and private clinics are regarded as providers of lower quality care at a lower price. In addition, private clinics predominately provide curative services, while CHCs also provide health promotion education, disease prevention, family planning and other public health services. With the reform of the health delivery system, the utilization rates of the various health care providers have also changed. Findings from the fourth NHSS indicate that the percentage of initial outpatient visits to primary medical institutions in urban areas (mainly CHCs and private clinics) increased dramatically from 36.6% in 2003 to 48.3% in 2008 [7].

In the context of recent changes in the health delivery system, It is imperative to examine the factors influencing health care demand in urban China. Most of the existing literature on the demand for health care in urban China (e.g. Li et al. [8]), has focused on the overall utilization level or probability. Of those that have investigated use by type of provider, none has controlled for the biases associated with various types of illness (Zhou and Rao [9]; MOH 2003 [10]; Yang et al. [11]; Qian et al. [12]). This is an important limitation which may affect the accuracy of model estimation. Some studies have identified disease-related variables as more important than social and demographic variables for predicting the use of different providers (Fosu [13]; Pillai et al. [14]).

The approach adopted here, in line with many other studies (e.g. Kroeger [15], Newbold [16], Henderson et al. [17]), is to question the extent of the relationships between the use of a particular type of healthcare provider and three types of influencing factors:

- predisposing factors (social and demographic characteristics),
- the perceived need for care (perceived characteristics of perceived illness), and
- enabling factors (access to health care).

To assess these relationships, the current study follows a number of international studies that have restricted analysis to specific types of illness (Pillai et al. [14]; Borah [18]; Luong et al. [19]). This has approach rarely been adopted in China. Furthermore, while the demand for private care providers has received extensive attention in other developing countries (Dow [20]; Sahn et al. [21]; Habtoma and Ruys [22]), there are hardly any such studies for urban China. Finally, some international studies show that children have their own patterns of health care demand and utilization (Borah [18]; Mwabu et al. [23]; Damen [24]; Pokhrel and Sauerborn [25]) but there are few such studies involving children in urban China. This paper attempts to fill each of these gaps in the available literature.

The paper is organized as follows. Section two describes the data and defines the variables in the study. Section three reports the empirical results. The last section provides a discussion of relevant issues and policy implications.

2. Data and variables

The data for this study come from the fourth NHSS, which was conducted in 2008. Following a multi-stage stratified random sampling framework, 46,510 members of 16,802 households in urban areas were selected to provide information on a range of factors including their reported heath care needs, demands, utilization and expenditures. Questions concerning children were answered by parents or guardians. The survey also contains a rich set of socio-economic and demographic information on the respondents. For illness episodes not involving hospitalization during the 2 weeks preceding the day of the survey, the survey collected details of the first outpatient visit including type of provider, health care received and out-of-pocket expenditures.

2.1. Choice of tracer condition

Self-reported acute upper respiratory tract infection (URTI) was reported by more sampled individuals than any other disease. Moreover, URTI is a common ailment that can be treated by all providers. It was therefore regarded as an appropriate tracer illness that could be used to identify the factors influencing the use of different types of health care provider. There were 1058 outpatients who met the criteria for inclusion in the study. Of these, 521 (49.2%) opted for self-treatment, 124 (11.7%) used private clinics, 235 (22.2%) used CHCs, and 178 (16.8%) sought care at city hospitals.