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The Impact of Contracting in and Contracting out Basic Health Services: The Guatemalan Experience

JULIAN CRISTIA [a], ARIADNA GARCÍA PRADO [b] and CECILIA PELUFFO [c,*]

[a] *Inter-American Development Bank, Washington, USA*
[b] *Public University of Navarra, Pamplona, Spain*
[c] *Northwestern University, Evanston, USA*

Summary. — This paper uses a difference-in-difference strategy to evaluate a program in Guatemala that expanded access to health services through two contracting modalities. In the contracting-out model NGOs were responsible for all administrative and clinical procedures, while in the contracting-in model NGOs focused on administrative tasks and employed public employees to provide services. The evaluation design allows comparing results across both contracting models as well as with an area that did not receive additional services. Both models achieved modest results regarding immunization coverage and prenatal care, though contracting in performed slightly better. We also compare program phases and discuss policy implications.

Key words — health services, contracting out, contracting in, Guatemala, Latin America

1. INTRODUCTION

Improvements in health services can increase longevity, improve health outcomes, and increase productivity (Mayer, 2001; Strauss & Thomas, 1998). Better immunization coverage, for instance, has proved to be crucial not only for reducing mortality but also for increasing productivity (Bloom, Canning, & Weston, 2005). Indeed, a full third of the welfare gains in developing countries in the last four decades can be attributed to improvements in longevity and health (Becker, Philipson, & Soares, 2005). Needless to say, despite this evidence, millions of individuals in developing countries remain without access to basic health care services. One popular policy option to improve health outcomes entails contracting the provision of health services to the private sector (Palmer, Strong, Wali, & Sondorp, 2006).

Governments may improve health access and service delivery through contracting by selecting efficient suppliers and providing proper economic incentives by linking payments to the achievement of pre-defined targets (Loevinsohn & Harding, 2005). However, critics of contracting arrangements argue that the strategy is beset by a number of problems: high administrative costs, scarcity of potential providers that can participate in competitive bidding, the fragmentation that results from contracting, and the low capacity of governments to monitor private providers (Leonard, Bloom, Hanson, O'Farrell, & Spicer, 2013; Palmer *et al.*, 2006). Because of the strengths of the theoretical arguments on both sides, it is an empirical issue whether contracting to the private sector can enhance the provision of health services.

Studies that evaluated programs that contracted health services to the private sector have aimed to address two central questions: (a) do these programs improve coverage of health services? and (b) do these programs generate better health outcomes using the same level of resources when compared with public provision of services? Both questions are highly relevant for policy purposes. The first can shed light on whether expanding programs that contract the delivery of health services can yield improvements in health coverage. The second can help to determine whether governments should provide health services by contracting to the private sector or by public provision.

Unfortunately, the existing empirical evidence has not provided definite answers to those questions due to three major challenges. First, most evaluations have not used proper counterfactuals to generate plausible estimates of the effects of the programs. The review of the literature by Liu, Hotchkiss, and Bose (2008) found that, of 13 evaluations of contracting programs in primary health care, 12 used before–after or cross-sectional comparisons to estimate effects. Second, several evaluations have used data collected from health clinics as opposed to household surveys. Effects estimated using health clinic data may be biased due to incentives for providers to over-report results to meet targets in contracting arrangements. Finally, to address both questions described above it is necessary to contrast areas where: (i) additional funding is used to contract the private sector to increase health coverage; (ii) additional similar funding is used to increase health coverage through public provision; and (iii) no additional funding for improved health coverage is provided. To the best of our knowledge, no study has addressed both questions in the same context. [1]

This paper evaluates a large contracting program implemented in Guatemala in 1996 that aimed to provide a basic package of child and maternal health services to rural, poor, and primarily indigenous communities. This program was named the Coverage Extension Program ("Programa de Extensión de Cobertura" or PEC). To provide services, the

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government chose an outreach model in which NGOs set up medical teams that made monthly visits to targeted communities. The program experienced two distinct expansion phases. The first expansion period took place between the inception of the program in 1996 and 2000, when about 3 million individuals were covered. The second expansion period started in 2004 and by 2007 the PEC provided coverage to 4.3 million individuals, or one third of Guatemala's population.

Our empirical analysis focuses on the first expansion period, from 1996 to 2000. During this period, two different modalities of health service extension were implemented simultaneously. In the contracting-out model NGOs were responsible for all aspects related to the provision of the package of health services. NGOs contracted and supervised personnel, purchased inputs, organized services, made payments, and acted as administrators. In the contracting-in model, NGOs focused on administrative tasks and employed public workers to provide health services. In this model, NGOs acted as financial managers, purchasing non-personnel inputs, maintaining records, and making payments. The actual provision of services, however, was performed by public employees directed and supervised by Ministry of Health personnel.[2]

The evaluation design involves comparing trends in health coverage indicators across three groups of communities that: (a) received additional services through a contracted-out model; (b) received additional services through a contracted-in model; and (c) did not receive additional services. Trends in health coverage indicators are estimated using two household surveys conducted in 1995 and 2002. Comparing trends in contracted-out and contracted-in areas, we assess the relative efficiency of the contracting-out model that provides full flexibility to NGOs regarding clinical and administrative functions.[3] Comparing trends in contracted-out areas with trends in areas that did not receive additional funding allows us to estimate the effects of expanding a contracted-out program on health coverage. This design aims to overcome the three major challenges described above by: (i) employing a difference-in-difference strategy to tackle baseline differences in outcomes across areas; (ii) using household surveys to avoid over-estimating effects because of biased reporting from health clinics; and (iii) tackling the central questions in the literature by comparing outcomes across the three described areas.

Our results on the effects of the program during the first period of expansion complement existing evidence on the effects of the program during the second expansion period reported in Cristia, Evans, and Kim (2011). The distinct feature of our study is that we can contrast the effects of the contracting-out and contracting-in models. Cristia *et al.* (2011) focused on the effects of the contracting-out model because this model was the only one expanded during 2004–07 (the contracting-in model was largely discontinued by 2004). In our study, we also qualitatively compare the effects documented during the first and second expansion periods to shed light on how programs' effects vary over time and discuss what underlying factors may drive those changes.

2. BACKGROUND

(a) *The Guatemalan health system*

The Guatemalan health system, like many other health systems in developing countries, is highly segmented and fragmented, and the lack of coordination among services often leads to duplication. It is structured and organized in such a way that a large percentage of the population is left without access to health services. This system is characterized by a tripartite organization composed of the Ministry of Health, the Guatemalan Social Security Institute (IGSS) and the private sector. The Ministry of Health is responsible for providing curative and preventive care for the entire population and is the largest agent in the health care system, providing services at practically no charge. It is also responsible for defining health sector policies and for coordinating the different agents in the sector. The IGSS provides retirement benefits and health services to workers in the formal sector and their families, and it runs its own health facilities, which are separate from those of the Ministry of Health. While members of the IGSS can use Ministry of Health facilities, only affiliated members can use IGSS facilities.

The remaining health services in Guatemala are provided by the armed forces and police health network, by NGOs and charitable organizations, and by the private, for-profit sector. There are two types of private, for-profit providers: (i) folk healers, herbalists, and other practitioners of traditional medicine; and (ii) providers in the modern private sector, which has grown primarily in urban areas, fueled by rising incomes and dissatisfaction with the quality of public sector care (Gragnolati & Marini, 2003). Regarding spending, total health expenditure per capita was $96 in 2000, while public health expenditure per capita amounted to $39 (World Bank, 2014).

Ministry of Health services are divided into three levels. The first level is composed of health posts that are geographically distributed across the country, generally located in somewhat densely populated areas, and staffed by a certified or auxiliary nurse who provides basic preventive and curative services and refers the most difficult cases to higher levels. The second level is composed of health centers of varying capacity, though all are staffed with at least one physician. The health centers are generally located in county (or, as they are known in Guatemala, municipality) capitals. Finally, the third level of care is provided by hospitals located in the most populated cities. This supply of services does not adequately reach the most isolated and disadvantaged populations of Guatemala—rural, poor, and indigenous populations—and has resulted in a highly unequal concentration of health services in urban and non-indigenous areas.

The problems of access to basic health services in Guatemala are found not only on the supply side, but also on the demand side (Becerril-Montekio & López-Dávila, 2011). Indigenous peoples, who constitute more than 40% of the population, tend to rely heavily on traditional medical services (traditional midwives and healers) and to distrust modern medicine. In general, this population has scant information about the medical benefits of preventive health measures. Moreover, limited efforts to adapt health care facilities and practices to local customs may undermine the uptake of services provided. Qualitative evidence suggests that geographic and financial factors, including the costs of transportation and medicine, may also play a role in the limited demand for formal health services (Gragnolati & Marini, 2003).

These supply and demand problems are reflected in basic health indicators, which show large inequalities between rural, poor, and indigenous populations and urban, affluent, and non-indigenous populations. For instance, maternal mortality for indigenous women was 211/100,000, compared to 70/100,000 for non-indigenous mothers (SEGEPLAN, 2006). Similarly, 29% of indigenous women delivered their babies in health care centers, compared to 70% for non-indigenous women. Health inequalities are also found among children: while 69% of indigenous children under 5 years old were stunted, this figure drops to 36% for non-indigenous children.