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SUPPLEMENT ARTICLE

Regional trends in the use of short-acting and long-acting contraception accessed through the private and public sectors

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ABSTRACT

Objective: To examine trends in the source of modern contraception (public versus private sector); method choice (long-acting or permanent methods versus short-acting methods); and method and source combined. *Methods:* A retrospective analysis was conducted using data collected by national Demographic and Health Surveys and Reproductive Health Surveys during the period 1992–2012. The dataset included 18 low-income countries in Sub-Saharan Africa, 10 from Latin America and the Caribbean (LAC), and 8 from Asia. *Results:* A substantial proportion—between 40% and 49%—of modern contraceptive users relied on the private sector in Asia and LAC in the last 20 years, yet the proportion has been smaller in Sub-Saharan Africa, between 27% and 30%. Increased use of short-acting methods from both public and private sectors has driven the rise in contraceptive prevalence in Asia and LAC. Similarly, increased contraceptive prevalence in Sub-Saharan Africa reflected the increased use of short-acting methods obtained mainly through the public sector, with only limited use of long-acting or permanent methods through the private sector. *Conclusion:* The private sector has played a key role in the increase of modern CPR and the provision of modern contraceptives around the world, providing almost half of them in low-income countries. Yet, such increase was driven primarily by a more substantial role in the provision of short-acting methods than long acting and permanent methods.

1. Introduction

The public and private sectors can each play critical roles in family planning provision among low-income countries. Nevertheless, the private sector (comprising both for-profit and nonprofit organizations) is often overlooked as a key resource. As a consequence, it is essential for policy makers—local, regional, and global—to understand the role of both sectors when they design and structure family planning programs. Where do women obtain their family planning products and services? Have these patterns evolved over time? Such information can illuminate the relative roles of public and private sectors in family planning and suggest strategies for program design.

Several studies have attempted to explore these issues. Ayad et al. [1] analyzed Demographic and Health Survey (DHS) and Reproductive Health Survey (RHS) data obtained from 1986 to 1990. These researchers found that the private sector was more important for the supply of products and services (i.e. pill, injection, condom, and vaginal methods) than for provision of clinical methods of contraception (i.e. intrauterine device, implant, and female and male sterilization). Rosen and Conly [2] examined DHS data collected during the period 1986–1998 and found that almost half of all women using short-acting methods (SAM) that required regular resupply of commodities obtained their products from a commercial source. By contrast, this sector served less than 10% of all users of long-acting or permanent methods (LA/PM) during this time period. Ross et al. [3] reviewed data collected from 28 countries and concluded that the rate of private sector use had decreased in 13 countries, increased in 5 countries, and changed very little in 10 countries from 1985 to 2003. Khan et al. [4] analyzed the source mix for 29 countries, drawing on DHS data from 1986 to 2005. These investigators found that the proportion of women using the private sector in Sub-Saharan Africa had increased in approximately half of the countries evaluated but either decreased or remained the same in the other half. However, none of these studies analyzed the relative contribution of the private and public sectors by type of contraceptive method or method mix, across time and by geographic region.

The objective of the present study was to understand how family planning use has evolved over time, at both the country and regional level. The analysis aimed to address three broad questions. First, how has the source mix of modern contraceptive methods (public vs private sector) changed over time? Second, how has the method mix (LA/PMs

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vs SAM) changed over time? Third, what is the relative contribution of each method category, obtained through public and private sources, to increased rates of contraceptive use over time?

2. Material and methods

A retrospective analysis was performed using data from the DHS and RHS [5], limited to countries with three or more surveys conducted between 1992 and 2012. The DHS surveys that were conducted before 1992 could not be used as they did not include data on the type of provider. A full list of DHS and RHS surveys used in the present study is presented in Supplementary Material S1 (Table 1A). Due to the nature of our study, neither ethics approval nor informed consent was required or necessary.

The data were grouped into three time periods: 1992–2000 (period 1), 1998–2006 (period 2), and 2005–2012 (period 3). These groupings were designed to yield the maximum number of countries for the sample with at least one survey during each of the time periods. Some overlap between time periods was unavoidable owing to the timing of surveys across the different countries. If more than one survey was available for a particular country in a given time period, the survey that provided the largest difference in years with the survey in the subsequent time period was selected. Countries were further subdivided into three regions: 18 from Sub-Saharan Africa; 8 from Asia (including South Asia, Southeast Asia, and Near East); and 10 from Latin America and the Caribbean.

Country was set as the unit of analysis for the present study. Individual country estimates were obtained using the individual survey-based weights for all women of reproductive age, who were married or living in union. Regional means were then calculated by averaging the country estimates, assigning all countries equal weight.

In addition, regional averages were also estimated using another two-step process. First, individual country estimates were obtained using the appropriate weights built by DHS, defining all women of reproductive age, married or living in union as the unit of analysis. Second, regional means were calculated averaging the country estimates, but assigning year-specific population-based weights from the World Development Indicators [6].

The modern contraceptive prevalence rate (CPR) was defined as the percentage of women aged 15–49 years, either married or living in union, who reported that they were using one or more modern methods of contraception. The assessment of method mix divided CPR into two categories: LA/PM (male and female sterilization, intrauterine devices, and implants) and short-acting methods or SAM (injectables, contraceptive pills, male condoms, diaphragms, sponges, and spermicides).

The source mix indicated whether the users of modern contraception obtained their methods from the private sector or the public sector. The private sector category included private clinics, private hospitals, private doctors, private pharmacies, and non-governmental organization facilities. Public sector providers included government clinics, government hospitals, government health centers, public family planning clinics, social security programs, and public field workers. The DHS also included "Other sources," which comprised shops, churches, and friends, as well as some other options that varied by country. The present study used country-specific definitions of private and public sector from each of the main survey reports and datasets.

Data were analyzed using Stata version 12.1 (StataCorp, College Station, TX, USA). All statements regarding differences over time were tested for statistical significance at the 5% level using regular t-tests. Unless noted, the stated differences were statistically significant.

3. Results

3.1. Trends in source mix

As shown in Figs. 1–3, the private sector represented the source for contraceptive methods for a large proportion of women in the Asia and LAC regions. 42% and 49% of women using family planning in these two regions, respectively, had obtained their method from the private sector during the period 1992–2000, a pattern that remained relatively stable over the study period. In LAC, 49% of all women using family planning methods sourced their method from the private sector in 1992–2000, although the proportion declined to 44% in 2005–2012 (Fig. 1). In Asia, the rate of private sector use increased from 42% to 45% over the same period (Fig. 2). In Sub-Saharan Africa, fewer women relied on the private sector to obtain family planning as compared to the other two regions, with rates of 27% to 30% recorded during the present study period (Fig. 3); however, the observed range was not statistically significant.

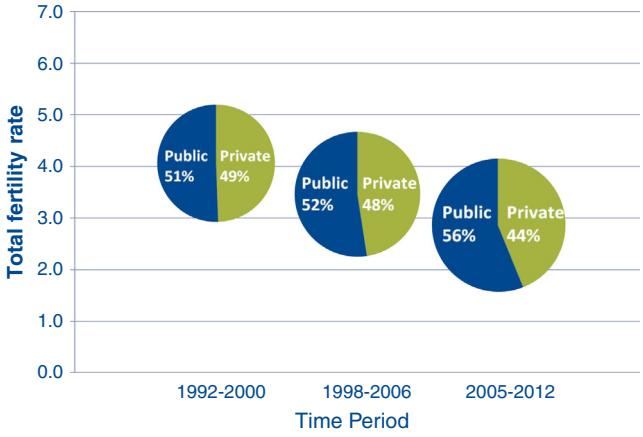

Fig. 1. Source mix for modern contraceptive methods in Latin America and the Caribbean region. The schematic shows the percentage of family planning users (aged 15–49 years, married or living in union) who obtained their methods from the private versus public sectors. The relative size of the circles indicates the modern contraception prevalence rates. Position of the circles refers to the total fertility rates (average number of children that would be born to a woman over her lifetime). Data sourced from the Demographic and Health Surveys and Reproductive Health Surveys, which were conducted in 10 Latin American and Caribbean countries, 1992–2012.

3.2. Trends in method mix

The use of LA/PM versus SAM was almost evenly split in both Asia and LAC, albeit with some changes in use over time (Figs. 4 and 5). In

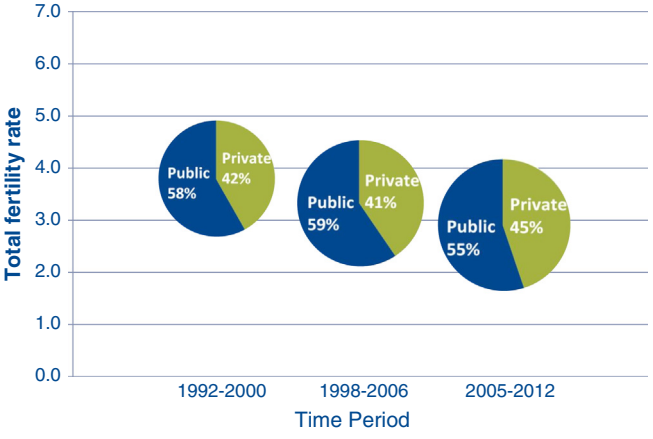

Fig. 2. Source mix for modern contraceptive methods in Asia. The schematic shows the percentage of family planning users (aged 15–49 years, married or living in union) who obtained their methods from the private versus public sectors. The relative size of the circles indicates the modern contraception prevalence rates. Position of the circles refers to the total fertility rates (average number of children that would be born to a woman over her lifetime). Data sourced from the Demographic and Health Surveys and Reproductive Health Surveys, which were conducted in eight Asian countries, 1992–2012.

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