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FAMILY PLANNING

How conditional cash transfers to promote institutional delivery can also influence postpartum contraception: Evidence from Rajasthan, India

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ABSTRACT

Objective: To examine the association between the receipt of benefits from a conditional cash transfer (CCT) scheme—Janani Suraksha Yojana (JSY)—and postpartum contraceptive use in Rajasthan, India. *Methods:* Data from 2920 women who had delivered in the year preceding the interview were used. Univariate and multivariate analyses were used. *Results:* Adoption of postpartum contraception was limited among study participants. Even so, women who had experienced the benefits of JSY were more likely than those who had not to have received postpartum contraceptive counseling (odds ratio [OR] 1.66; 95% confidence interval [CI], 1.38–2.00) and to have adopted contraception within 3 months of delivery (OR, 1.31; 95% CI, 1.02–1.68). *Conclusion:* The present findings make a case for special efforts to use the increased opportunity women experience to interact with the health system as a result of CCTs for promoting maternal and newborn health practices, including postpartum contraception.

1. Introduction

There is growing evidence from numerous countries that conditional cash transfers (CCTs) have leveraged sizeable gains in access to health services [1,2]. Janani Suraksha Yojana (JSY) is a CCT program in India intended to encourage institutional delivery and to provide access to care during pregnancy and in the postpartum period. Official statistics show that JSY has increased the number of institutional deliveries in India from 10.8 million in 2005–2006 to 17.6 million in 2012 [3]. Evaluations of JSY thus far have assessed its effects on the uptake of maternal health services and on improving newborn health [4–6]. Evidence, however, remains limited about its effects on postpartum contraceptive use.

Launched in 2005, JSY is currently implemented in all states of India, with a special focus on states that have performed poorly in health and demographic indicators. In the low-performing states—including Rajasthan, where the present study was located—all pregnant women who deliver in a government facility or an accredited private facility in rural areas are given Rs 1400 (approximately US $23), and in urban areas Rs 1000 (approximately $17) [7]. In the remaining states, the scheme is restricted to women having their first or second delivery, women aged 19 years or older, and women belonging to poor households. Under the scheme, the potential beneficiaries are encouraged to register to receive at least 3 prenatal check-ups, opt for institutional delivery, and seek postpartum and newborn care, although JSY cash is disbursed to the women immediately after delivery.

Accredited Social Health Activists (ASHAs) have an important role in enabling women to benefit from JSY. Their responsibilities include identifying pregnant women and facilitating their registration for prenatal services; ensuring that pregnant women receive at least 3 prenatal check-ups; identifying functional government health facilities or accredited private health facilities for referral and delivery; counseling pregnant women to undergo institutional delivery; arranging transport for pregnant women to reach the health center for delivery or treatment of complications; escorting pregnant women to a health facility and staying with them until they are discharged; counseling women about breastfeeding their newborn; arranging immunization of newborns until the age of 14 weeks; making a postpartum visit within 7 days of delivery; and promoting family-planning services [7].

Evaluations of JSY have demonstrated that it has succeeded in increasing the uptake of maternal health services and improving newborn health. We hypothesized that JSY, in combination with the ASHAs who have a pivotal role in enabling women to access the program, can lead to increased interactions between women and healthcare providers, which in turn can lead to increased postpartum contraceptive counseling and contraceptive uptake.

The present paper examines differences between JSY beneficiaries and non-beneficiaries in receiving postpartum contraceptive counseling, in adopting contraception within 3 months of delivery, and in method choice made by contraceptive users. An assessment

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of the effects of JSY on postpartum contraception is timely in India. Although contraceptive use has increased over the decades (55%–60% of currently married women in India use some method of contraception), a substantial proportion of currently married women have an unmet need [8]. Routine postpartum check-ups offer an excellent opportunity for providing contraceptive counseling and services, thereby reducing the unmet need for contraception; however, efforts to promote postpartum contraceptive services continue to be limited.

2. Materials and methods

2.1. Study setting

The study was conducted in the state of Rajasthan, India. With a maternal mortality ratio of 318 per 100 000 live births, it has the third highest maternal mortality ratio among all states in India [9]. Moreover, the use of maternal health services is limited; in 2009–2010, 55% of women had 3 or more prenatal check-ups and 70% delivered in a health facility [6]. The coverage of programs such as JSY also remains far from universal. An evaluation conducted by the UNFPA reported that only half of women who had delivered in the year preceding the survey had received financial assistance under JSY [5].

Two districts, Alwar and Jodhpur, were purposively selected from among the 32 districts of the state for the study. The levels of sociodemographic and reproductive health indicators in these districts were close to the state averages. They also represent the eastern and western regions of the state. The study was fielded in both urban and rural areas. Sampling units were selected independently in rural and urban areas within each district via a 2-stage stratified systematic random-sampling procedure. At the first stage, blocks were selected; the 2001 census list of blocks served as the sampling frame for the selection of blocks. This list was first stratified using the percentage of the population belonging to scheduled castes and tribes; the next level of stratification was implicit for all strata, consisting of an ordering of blocks within each stratum by level of female literacy, ordered alternatively in increasing and decreasing levels of female literacy. The blocks were selected systematically from the stratified list, with selection probability proportional to size; thus, 3 rural blocks and 2 urban blocks were selected in each district. At the second stage, villages (rural areas)/census enumeration blocks (CEBs) (urban areas) were selected within each selected block, using a similar scheme. Thus, a total of 196 villages/CEBs were selected from rural and urban blocks of the 2 districts together. Within each selected village/CEB, all households were enumerated to identify eligible respondents. Villages/CEBs containing fewer than 200 households were linked to 1 or more adjoining villages/CEBs. Villages containing more than 300 households were divided into segments of 150–200 households and 1 segment was randomly selected. Approximately 44 530 households were enumerated.

In each district, the sample weight was calculated separately for rural and urban areas. The district weight was calculated taking into account differential non-response rates as well as design weights for rural and urban areas. For the combined sample of the 2 districts, the overall sample weights were calculated as the product of the design weight for each district (after adjusting for non-response) and the district weight.

2.2. Study design and participants

A cross-sectional study comprising a survey and in-depth interviews was conducted during September 2009–February 2010. Respondents included women younger than 35 years of age who had delivered in the year preceding the interview. The study was restricted to women aged below 35 years because childbearing at ages above 35 is rare in the study setting [8]. All eligible women identified were invited to participate in the study. In total, 5924 women were identified during the house-listing exercise; 4770 women were successfully interviewed, resulting in a response rate of 80%. While less than 2% of women refused to participate, 17% were not interviewed as they were not at home after 3 visits; the majority of these women were daughters of the head of the household who had returned temporarily to their natal home at the time of the house-listing exercise but then returned to their marital home by the time of the survey.

A detailed questionnaire was administered to eligible respondents. It was translated into the local language—Hindi—pre-tested, and further modified. In addition to questions on socioeconomic characteristics, the questionnaire included detailed questions about maternal and newborn care-seeking practices, quality of services received, and postpartum contraceptive use. Trained female investigators conducted the interviews at respondents' homes.

Of the 4770 women interviewed, 46% experienced the benefits of JSY. The sociodemographic characteristics of JSY beneficiaries and non-beneficiaries differed significantly [2]. Therefore, the analysis presented here was restricted to a matched sample of JSY beneficiaries and non-beneficiaries, selected using the technique of propensity score matching (PSM) to enable controlling for potential self-selection bias by identifying those respondents from the non-beneficiary group who would be most likely to have experienced the benefits [10,11].

For calculating the propensity score, background characteristics such as women's age, education, parity, religion, caste, and household wealth status were considered. Once the score was calculated, the value was used to identify a respondent from the non-beneficiary group with the nearest possible value to that of the beneficiary, without replacement. The matching was done separately for rural and urban areas. *F* test for goodness of fit was significant at $P \leq 0.0001$ for both urban and rural areas. The percentages of women who fell into the first–fifth quintiles were 26%, 21%, 18%, 18%, and 17%, respectively, among JSY beneficiaries; and 27%, 21%, 18%, 17%, and 17%, respectively, among JSY non-beneficiaries. A total of 3434 beneficiaries and non-beneficiaries were selected. Furthermore, given the focus of the paper on postpartum contraceptive use, the analysis was restricted to those who had delivered 4–12 months preceding the interview (2920 women). Percentages indicated in the tables are weighted but the number of respondents shown is unweighted.

2.3. Analysis

Two outcome indicators were used: receipt of postpartum contraceptive counseling and postpartum contraceptive use. The postpartum contraceptive counseling status measured whether health personnel, including ASHAs, advised the woman about the importance of postpartum contraceptive use during postpartum check-ups either at home or at the health facility. WHO guidelines indicate that when to start a contraceptive method after delivery will vary depending on whether a woman is breastfeeding [12]. For the purpose of the analysis presented here, postpartum contraceptive use was defined as contraceptive use within 3 months of delivery.

The receipt of JSY benefits measured whether the respondent had received cash assistance. Values of outcome variables obtained for beneficiary and non-beneficiary groups were first compared and χ^2 tests were used to test the significance of differences observed in the bivariate comparisons. Additionally, logistic regression analyses were used to account for potentially confounding effects that selected covariates might have had on the outcome measures. These covariates included rural–urban residence, husband's involvement in pregnancy-related care (i.e. whether the respondent's husband ever accompanied her to the health facility for prenatal, delivery, or postpartum services), steps taken by the provider during postpartum interactions to encourage the woman to continue using the service (i.e. whether the provider had reminded her about follow-up visits whenever she had a postpartum check-up), and study districts. For indicators related to postpartum contraceptive use, postpartum contraceptive counseling status was also controlled for. The background characteristics used to calculate the propensity score were not included in the regression model.