

Increasing institutional delivery and access to emergency obstetric care services in rural Uttar Pradesh: Implications for behavior change communication

Background

DLHS -3 (2006-07) data reveal that in rural Uttar Pradesh (UP), only about one-fourth of women delivered their last child in an institution¹. In 2005 Janani Suraksha Yojana (JSY) was launched as an intervention to address the barriers to institutional delivery, through the introduction of community-based women volunteers called Accredited Social Health Activists (ASHAs). Women in rural areas in low performing states are given cash assistance of Rs 1,400 for an institutional delivery and Rs 600 for a home delivery conducted by a skilled birth attendant. ASHAs are given a performance linked fee; ASHAs are paid Rs 600 for each woman they motivate for ANC and institutional delivery. ASHAs receive an initial training of three weeks in various aspects of maternal and child care. While initial evaluations of the JSY show improved rates of institutional delivery and that ASHAs provide valuable support during pregnancy and childbirth, the scheme needs closer examination to assess how its performance could be enhanced so as to meet MDG 4 and 5^{2,3}.

In October 2009, the Population Council conducted a formative study in UP to determine the impact of the JSY scheme on the current status of institutional delivery in rural UP, understand the facilitating factors and barriers in delivering in a health facility, and identify programmatic and behavior change communication (BCC) initiatives that could accelerate the adoption of institutional delivery. The project was funded by the Bill and Melinda Gates Foundation.

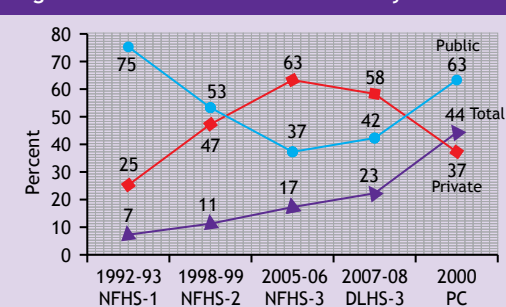
Methodology

The formative study was conducted in two phases. First, a survey was conducted covering 4,754 households, 4,472 currently married women aged 15-34 years who had delivered a child in the last three years, 2,274 husbands, 2,372 mothers-in-law, 289 ASHAs, 284 AWWs, 161 ANMs, 316 local private practitioners, 251 panchayat members (including Village Health and Sanitation Committee members) and staff at 144 government health facilities (PHCs and CHCs) from 225 villages in 12 districts spread across the Western, Central and Eastern regions of UP. In the second phase, 308 in-depth interviews were conducted with family-level, health care providers and panchayat members to complement the information gathered in the quantitative survey. The qualitative study was conducted in 24 villages: eight villages each from three districts, one district from each of the three regions.

Key findings

Status: Figure 1 shows that from NFHS-1 to DLHS-3 the percentage of institutional deliveries has increased at a very slow pace.

Figure 1: Trend in institutional delivery in rural UP



¹Data from NFHS-1, NFHS-2, NFHS-3 and DLHS-3 presented in this policy brief are based on an analysis, conducted by the Population Council, of currently married women aged 15-34 in rural UP who had given birth in the last three years.

²CORT. 2008. *Assessment of Janani Suraksha Yojana in Uttar Pradesh*. Vadodara, India. CORT. Sponsored by UNICEF, New Delhi.

³Development Research Services (DRS). 2009. *Current Evaluation of Janani Suraksha Yojana in Uttar Pradesh*. Unpublished report. DRS, Delhi.



this decision [to deliver in a facility] because the ASHA told us that we would get Rs 1,400 and she said that she would also come along...”

The data also indicate that the place of previous delivery significantly influences the place of the next delivery (χ^2 test, $p < 0.001$). For example, among women with more than one child who had delivered their previous to last delivery in home, 70 percent again opted for an home for their last delivery (Table 2).

Table 2: Influence of place of previous to last delivery on place of last delivery, women (percent)

Previous to last delivery	Last delivery		Total
	Institution	Home	
Institution	76	24	794
Home	30	70a	2,695

Note: Among women with 2 or more children (N=3,489).

A small shift (30 percent) from home to institutional delivery was observed due to the JSY and/or possible maternal complications. Among 24 percent of women who had shifted the place of delivery from institution to home, reasons for doing so were because labor pain started at night (27 percent), lack of transportation (25 percent) and cost considerations (34 percent). The perception that delivery was normal and hence it was not necessary to go to a facility (63 percent) further reinforced the decision to deliver at home.

Barriers

Perception of normality, cost and transportation: Key reasons for not delivering at a health facility were the perception that the delivery was normal and hence it was not necessary to go to a facility (66 percent), elder's (mothers-in-law and husbands) decision (35 percent), poverty leading to non-availability of ready cash to meet immediate expenses/institutional delivery costs too much (33 percent), start of labor pain at night (22 percent) and non-availability of transportation (20 percent). A similar pattern of responses was observed among mothers-in-law and husbands. However, husbands more frequently reported reasons such as convenience of home (69 percent), cost considerations (30 percent) and faith in the *dai's* delivery skills (19 percent). For example, a husband said “Home delivery is better....Rs 2,000 will be needed immediately for hospital delivery.... 4-5 people will be troubled ...to accompany the woman ... we have to find a vehicle... money has to be given to the doctor, nurse, everybody, and there will be loss of work, so Rs 1,400 is of no use...Rs 600 is required for the vehicle. My wife's previous delivery was also at home.... if there is any problem then we will go to a facility.”

Lack of delivery preparedness: Delivery preparedness in general was poor; only 50 percent of women who delivered in an institution (N=1,979) reported some delivery preparedness, primarily keeping clean cloth to use during

However, the study shows that with the introduction of the JSY the rate of institutional delivery jumped to 44 percent by the end of 2009⁴. Interestingly, with the introduction of the JSY the trend of using private facilities has been reversed; while the use of private facilities for delivery increased steeply from 1992-93 to 2005-06 (NFHS-1 to NFHS-3) after the introduction of JSY, this trend completely changed and the share of public-private clinics in institutional delivery changed from 37:63 in 2005-06 to 63:37 in 2009.

Reasons for opting for institutional delivery: In case of women, husbands, and mothers-in-law, the main reason for institutional delivery was their concern regarding the safety of the mother and child (Table 1). For example, a mother-in-law said, “We get good care in the hospital and both the mother and child will be safe. They follow hygienic practices so there will be no infection....” Other frequently reported reasons by all stakeholders were that “it was pre-decided...based on earlier experiences” or it “was advised due to complications”.

Table 1: Reasons for institutional delivery (percent)

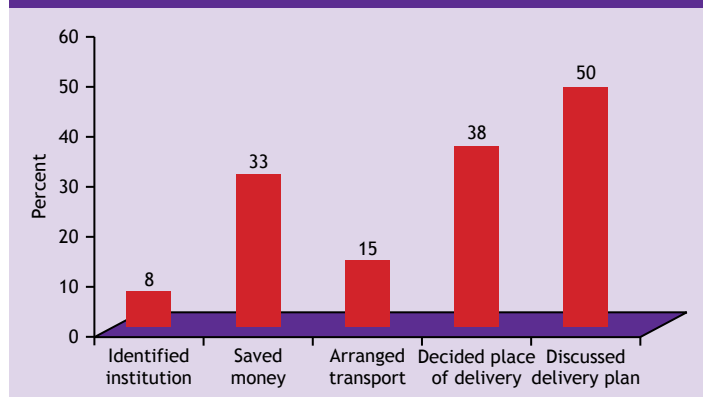
Reasons	Women	Mother-in-laws	Husbands
Safe for mother	59	62	74
Safe for child	55	56	73
Pre-decided	32	24	32
Advised due to complications	20	17	26
Advised during ANC	8	5	7
ASHA motivated	11	11	8
ASHA accompanied	12	8	10
JSY incentive	16	14	22
Total	1,979	1,140	1,045

For more husbands (22 percent) than women (16 percent) and mothers-in-law (14 percent) the JSY incentive was an important reason for delivery in an institution because it subsidized the cost of the delivery. Indeed, being advised by the ASHA / ANM, their selling of the concept of “safety for mother and child” and the facilitating role of the ASHA at the time of delivery are significant factors in increasing institutional delivery. As one woman commented, “We took

⁴D.S. Varma, M.E. Khan and A. Hazra. 2010. “Promoting Institutional Delivery and Access to EmOC,” in M.E. Khan, Gary Darmstadt, T. Usha Kiran and D. Ganju, eds. Shaping Demand and Practices to Improve Family Health Outcomes: A Formative Study in Rural Uttar Pradesh. New Delhi: Population Council (forthcoming).

delivery, cleaning the room where delivery would be conducted or keeping a new blade for cord cutting without the crucial components like arranging transportation, identifying an institution for delivery or an emergency and saving money (Figure 2). Women who delivered at home reported far less delivery preparedness for all indicators as compared to those who delivered in a facility.

Figure 2: Delivery preparedness reported by women



Quality of care: Poor quality of client-provider interaction and the lack of basic services like electricity in the facility were identified as barriers to institutional delivery. One woman mentioned, *“When I reached the labor room the nurse told me to get on to the bed and lie down. When I was slow she said, ‘Did you come to deliver a baby or to do a drama? If you don’t climb up I will beat you’. Another nurse who was standing nearby beat me on my leg and told me to climb up quickly...”*

Bad behavior of the facility staff was mentioned more often by women who delivered at home than in a facility. However, 80 percent of women who delivered in a facility generally overlooked these limitations. Their key priority was safe delivery; they were satisfied following the delivery and were ready to recommend institutional delivery to others.

Lack of privacy: During in-depth interviews, lack of privacy was identified as a barrier to institutional delivery. For example a woman mentioned, *“...there is no ‘purdah’ [curtain] at the PHC. They remove our clothes in front of everyone; hence delivery at home is better.”* Among the women who had a facility delivery, 37 percent were assisted by a doctor and 61 percent by an ANM/PHN. However, in response to an opinion question, 65 percent of all women reported that the presence of a male doctor would not discourage them from availing institutional delivery, if necessity demands; however, 35 percent of women noted that it would be unacceptable and they would not allow a male doctor to assist the delivery.

Frequent referrals to FRUs: In-depth interviews with women and front line health workers reveal that due to the lack of provider skills and essential emergency obstetric care (EmOC) facilities at PHCs, most women delivering their

first child or with any complication were referred to first referral units or the district hospital; leading to a further delay in receiving services. Although from the medical point of view, referring such cases is the correct practice, it is not appreciated by women or even some ASHA. As an ASHA reported, *“In case of any problem we take women to the PHC but the nurse at the PHC sends her to the district hospital. Women do not want to go to the district hospital as they are scared that they will be operated there. ...”*

Lack of EmOC services in PHCs and CHCs: Only 50 percent of the PHCs surveyed (N=90) had at least one staff member trained in EmOC but only 8 percent had access to an anesthetist. Further, only 17 percent of PHC were equipped with basic EmOC facilities. EmOC facilities were relatively better in the West (32 percent) as compared to the Central and Eastern regions (10 percent each). Of the CHCs surveyed, 41 percent were equipped with basic EmOC and only 17 percent were equipped with comprehensive EmOC services. This indicates that serious cases must be rushed to district hospital.

Facilitating factors

JSY scheme: JSY is the most important factor that has increased the rate of institutional deliveries in UP. Indeed, among women who delivered in a public facility, 74 percent reported that the JSY incentive was helpful as it subsidized their out-of-pocket expenses, which were estimated to be Rs. 1,897 in Western UP, Rs. 1,180 in the Eastern region and Rs. 1,144 in Central UP.

Further, the incentive given to ASHAs to promote at least three ANC check-ups has helped to increase ANC and contact between pregnant women and ANMs. This in turn has promoted institutional delivery. The logistic regression analysis shows that women who received at least three ANC check-ups were two and half times more likely (OR 2.61, $p < 0.001$) to opt for institutional delivery as compared to those who made no ANC visits.

Background characteristics: Women belonging to general castes (OR 1.49, $p < 0.001$) were more likely than others to deliver in an institution. Women who had studied up to



Class 6 were one and half times more likely to have an institutional delivery (OR 1.68, $p < 0.001$) than those with no education. The corresponding figure was higher (OR 3.49, $p < 0.001$) for women who were educated up to Class 6-12.

Place of last delivery: Among women of two or higher parity, those who had delivered their last child in an institution were seven times more likely (OR 6.94, $p < 0.001$) than those who delivered their last child at home to opt for an institutional delivery for their index child as well.

Contact with the ASHA: Women who were contacted by the ASHA during their last delivery were about three times more likely (OR 2.94, $p < 0.001$) to deliver in a health facility than others. Women who were not contacted by the ASHA were generally located in distant hamlets and small remote villages where the ASHA does not reside; women residing in these villages are predominantly from scheduled castes or other backward castes.

Distance from the facility: Women who live within a radius of 3 km from the Block PHC/ 24*7 PHC/CHC were more likely to seek (OR 1.22, $p < 0.001$) an institutional delivery than those live 5 km or more from the facility.

Implications for the BCC strategy

Segmentation of audience: At the macro level, the major audience segmentation could be families living in smaller and remote villages/ isolated hamlets that are generally inhabited by poor and less educated persons; these audiences can be reached mainly by IPC supported by radio, including community

radio. The use of mid-media such as wall paintings, posters and leaflets may also be effective. However, the reach of TV in such settings is limited because of the lack of electricity and household poverty. At the micro level, segmentation of families by place of previous delivery would be an effective good strategy. The study shows that families follow past practices for delivery: women whose previous delivery was at home have a high probability of delivering at home again and hence need focused attention and encouragement to motivate them to shift from home to the institution for their next delivery.

ANC visits offer a window for advice and counseling: The JSY has contributed to a significant increase in the percentage of pregnant women receiving three or more ANC check-ups and contact with ASHA during pregnancy. The ANM and ASHA enjoy the trust of the community in health matters. Increasing ANC visits offers a window of opportunity to advise women on multiple target behaviors, including institutional delivery. To make counseling effective, health providers need support in terms of improving communication skills and the provision of counseling aids.

Communication content: An important focus of messages should be increasing the perception of risk associated with home delivery among all stakeholders. Delivery preparedness is an important component that needs to be emphasized by the ASHA. As husbands and mother-in-laws are often the final decision-makers on place of delivery, focused audience-specific messages should be designed and disseminated through different media channels.

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