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Evaluation of coverage of Janani Suraksha Yojana in Anekal Taluk of Bengaluru Urban district

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ABSTRACT

Introduction: Maternal and Child health continues to be critical indicator to assess health status of any country. High maternal and childhood mortality points to the lack of accessibility to essential healthcare facilities and inequities in accessibility and affordability of the services. Janani Suraksha Yojana (JSY) is a Government of India's flagship health programme launched in April 2005, seeks to reduce maternal and neo-natal mortality by promoting institutional delivery.

Objectives: To estimate the program coverage of JSY, evaluate the quality of services availed under it by the beneficiaries, and enumerate the socio-demographic determinants governing its service coverage in Anekal Taluk, Bengaluru Urban District, Karnataka.

Materials and Methods: A community-based cross-sectional study was conducted from March 1 to May 30, 2022, in Anekal Taluk. The study utilized multi-stage random sampling, whereby seven public health facilities were selected by a lottery method. Face-to-face interviews were conducted using separate, pre-tested semi-structured questionnaires for 106 mothers who had live births after April 2020 and 56 ASHA workers. Data were entered into Microsoft Excel and statistical analysis was performed using SPSS version 25.0, with $p<0.05$ considered statistically significant.

Results: All 106 mothers had availed benefits under the JSY scheme While 85 (80.19%) beneficiaries were aware of the scheme, ASHA workers served as the primary source of information for 75.29% of them. Direct account transfers of the total designated cash benefits reached all 81 eligible BPL cardholders within 60 days post-delivery. Among the care providers, all 56 ASHA workers actively facilitated registrations, accompanied mothers for deliveries, and assisted with cash transfers. Majority of ASHA workers (92.8%) were of the opinion that their financial incentives were insufficient.

Conclusion: JSY service coverage and penetration within this high-performing district were found to be satisfactory. The proactive involvement of ASHA workers serves as a cornerstone for this success. Considering their contributions, restructuring incentive frameworks is required to maintain their long-term motivation.

Keywords: Janani Suraksha Yojana; Institutional Delivery; Cash Incentive; Maternal Health; ASHA workers; Program Evaluation.

INTRODUCTION

Maternal and Child health continues to be critical indicator to assess health status of any country. The necessary health-care facilities provided to mothers and children around the world to ensure their good health is pivotal to qualitative development.[1]

The JSY is a Government of India's flagship health programme launched in April 2005 under the National Rural Health Mission (NRHM). The scheme is a safe motherhood intervention and seeks to reduce maternal and neo-natal mortality by promoting institutional delivery. JSY intends to achieve this ambitious goal by providing a cash incentive to mothers and get them to deliver their babies in a health facility. There is also provision for cost reimbursement for transport and incentives to Accredited Social Health Activists (ASHAs) for encouraging mothers to go for institutional delivery. [2]

The scheme is fully sponsored by the Central Government and is implemented in all statesand Union Territories (UTs), with special focus on low-performing states. The Scheme has been operational for more than a decade in the state of Karnataka. The success of the scheme is to be determined by the increase in institutional deliveries among the low-income families as well as the overall number of institutional deliveries. In addition, it is necessary to know the functioning of the processes adopted in its planning and implementation, including arrangements for transportation of pregnant women, receipt of JSY payment, involvement of the private sector, IEC activities to publicise the scheme and its financial management at the implementation level. [3,4]

Karnataka state is one of the high performing states. All pregnant women of age 19 years and above under Below Poverty Line (BPL) households residing in rural as well as urban areas are eligible for JSY scheme. JSY is one of the world's largest cash incentive programmes for health. Evaluating this programme has vital implications in future interventions and policies to improve health on developing countries.

Anekal Taluk of Bengaluru Urban district has a population about 7 lakhs. General Hospital Anekal receives, referred cases from neighbouring 13 PHC'S and 47 Sub Centre across the Taluk. This study intends to evaluate the coverage of Janani Suraksha Yojana scheme in Anekal and the socio demographic determinants of service coverage and to evaluate the quality of service availed by the beneficiaries under Janani Suraksha Yojana.

MATERIALS & METHODS

A community-based cross-sectional study was undertaken between March 1, 2022, and May 30, 2022, in Anekal Taluk, situated within the Bengaluru Urban District of Karnataka, India. Anekal Taluk has an approximate population of 700,000, with public Reproductive and Child health services delivered through a network of 13 Primary Health Centres, 47 Sub-Centres, and 1 Taluk General Hospital acting as the central referral hub.

Study population: The study population comprised two primary categories of respondents:

1. *Beneficiaries*: Mothers residing in Anekal Taluk who experienced live births between April 2020 and January 2022.
2. *Care Providers*: ASHA workers actively operating within the same village for a minimum duration of 3 years.

Individuals who declined to provide informed written consent or were unavailable on the scheduled days of data collection were excluded from the study pool.

Sampling method and sample size: A multi-stage random sampling strategy was implemented tomaintain representativeness. In the first stage, a lottery method was utilized to select 7 out of the 14 functional public health facilities, yielding the following locations: Anekal UPHC, Chandapura PHC, Jigani PHC, Hebbagodi PHC, Guddahatti PHC, Dommasandra PHC, and Attibele PHC. Subsequently, a simple

random sampling method was applied to the institutional line lists to select 15 beneficiaries from each designated PHC catchment zone who had live births post-April 2020. Similarly, 8 ASHA workers attached to each chosen facility were chosen through simple random sampling. This process led to a final sample size of 106 beneficiaries and 56 ASHA workers.

Data collection tools and method: The instruments used for the study were developed keeping in view the objectives of the study and the JSY guidelines. Two different pre-designed and pretested semi-structured questionnaires for beneficiaries and care providers were used to collect data through face-to face interviews. The areas of information focused on were awareness, coverage, quality of maternal care and issues related to payment to beneficiaries and ASHAs/attendants. ASHA worker interviews were conducted in their respective PHCs. For conducting the study, the purpose and the procedure was briefed to the study subjects in local language. Informed written consent was obtained from individual subject.

Statistical Analysis

The collected data were compiled and entered in Microsoft Excel and analyzed using SPSS version 25.0. Categorical variables were expressed as frequencies and percentages to summarize the socio-demographic characteristics, JSY awareness, available facilities and support services, and place of delivery. The Chi-square test was used to assess associations between categorical variables, and a p-value of <0.05 was considered statistically significant

RESULT

A) Program coverage for beneficiary under Janani Suraksha Yojana

Over all 106 beneficiaries who have had live births after April 2020 in Anekal taluka were interviewed for the purpose of this study. Demographic distribution of the mothers is as depicted as mentioned in table below (Table 1).

Majority (80.2%) of the beneficiaries were aware of JSY scheme and had received JSY cards. ASHA worker was the main source of information for 75.29% mothers. However, significantly lower knowledge was noted regarding awareness of 24/7 delivery points (26.3%) and accredited private institutions under the scheme (6.6%). (Table 2) All the 106 (100%) mothers had availed benefits under Janani Suraksha Yojana Scheme.

No home deliveries reported among the study subjects. Majority of the deliveries (57%) were referred to Anekal Taluk hospital. 27 (25.4%) mothers safely delivered in 24/7 PHC facilities, and 3 mothers were referred to district hospital for delivery in view of high-risk pregnancy. Around 15 mothers (14.15%) opted for private institutions empanelled under JSY for safe confinement. (Figure 1)

Out of the 81 mothers who who delivered in government health facilities, majority (70.3%) live births were through Normal Vaginal delivery and 24 through Caesarean Section. Majority (56%) of the beneficiaries had availed government ambulance services to travel to place of delivery, while rest of them had used other modes of transport such as own vehicle (23%), private ambulance (14%), Private taxi (6%). Except for the 27 mothers who had live births in the 24/7 PHCs where deliveries were conducted by PHC medical officers, rest of the mothers had presence of Gynaecologist to conduct the deliveries.

All the 81 BPL card holders interviewed had received cash benefit of Rs 5000 rupees, and all of them had received monetary benefit within 60 days of delivery through online cash transfer direct to the account. Majority of the mothers (82.7%) who received monetary benefit were of the opinion that the money received from the JSY scheme was sufficient for covering expenses incurred during hospital stay for delivery. All the beneficiaries who had reached the place of delivery through own vehicle or private vehicles had also received cash

reimbursement to cover for transportation expenses incurred, which was given to mother during the hospital stay.

Apart from the institutional delivery and cash incentives provided for safe confinement, mothers had also provided education regarding benefits of institutional deliveries for safe confinement. Linkage to nearest Anganwadi centres for availing supplementary nutrition and vaccination services for mothers and babies under Universal immunization programme in the nearest PHCs.

B) Evaluation of quality if services provided under JSY by ASHA workers

Over all 56 ASHA workers who have been working in the same village in Anekal taluk for at least 3 years were interviewed for the purpose of this study. Majority of the ASHA workers (37.5%) belong to age group 41-45years, followed by 26.7% of ASHA workers interviewed were in the age group 36-40 years.

Out of 56 ASHA workers interviewed in this study, 24 (42.9%) ASHAs had work experience between 3-5 years, 23.2% of the ASHAs interviewed were in service between 6-10 years and 33.9% of the ASHAs had work experience more than 10 years.

700 pregnant women were registered by 56 ASHA workers for linking them to various services under RMNCHA+A program, out of which, 694 (99.1%) mothers were contacted personally and issued MCTS card, 687(98.1%) mothers were ensured to avail regular ANC services, and 593(84.7%) pregnant women were educated regarding JSY scheme.

All 56 ASHA workers had responded to undertaking regular home visits to educate mother regarding various services, ensuring consumption of 2 doses of TT injections and Iron and Folic Acid tablets, referring the pregnant women and children to PHCs, accompanying the enrolled pregnant women to the place of delivery and assisting eligible pregnant women to avail cash benefits.

Only 50 % of the ASHA workers had awareness regarding categorization of states under JSY scheme as High performing or Low performing states. All the ASHA workers responded that they have received cash incentives under JSY from the government with in 1 month of delivery through direct account transfer. Most of the ASHA workers (85.7%) had received support from PHC Medical officers in registering Eligible pregnant women under JSY scheme. However, majority of the ASHA workers (92.8%) had responded that the incentives provided under JSY scheme to ASHA workers were not sufficient.

Table 1: Demographic distribution of mothers

Variables		Number	Percentage (%)
Age group	< 20 years	21	19.81
	21-25 years	43	40.57
	26-30 years	28	26.42
	>30 years	14	13.31
Religion	Hindu	79	69
	Muslim	20	19
	Christian	13	12
Caste	General category	31	33
	OBC	18	20
	Scheduled tribe	15	15
	Scheduled caste	38	35.8
Occupation	Professional	21	19.8
	Skilled worker	14	13.2
	Unskilled worker	14	13.2
	Housewives	57	53.7
Socio-economic status	APL	20	18.8
	BPL	86	81.2

Table 2: Awareness among Beneficiaries regarding Janani Suraksha Yojana

Sl No.	Particulars	Response	Frequency	Percentage
1.	Aware about JSY	Yes	85	80.2%
		No	21	19.81%
1a.	Among those who are aware, source of information about JSY	ASHA worker	64	75.29%
		ANM	0	0.00
		PHC medical officer	0	0.00
		Other	21	24.71%
2	Aware about facilities available under JSY	Yes	78	73.58%
		No	28	26.42%
3	Received JSY card	Yes	85	80.19
		No	21	19.81
4	Aware of health facility empanelled under JSY	Yes	78	73.5
		No	28	26.5
5	Nearest health facility under JSY	Anekal	9	11.54
		Chandapura	10	12.82
		Jigani	3	3.85
		Hebagodi	8	10.26
		Gudahatti	18	23.08
		Domasandra	3	3.85
		Attibele	27	34.62
6	Aware of 24/7 delivery point	Yes	28	26.42
		No	78	73.58
7	Aware of pvt institution empanelled under JSY	Yes	7	6.60
		No	99	93.40
8	Aware of support provided under JSY	Yes	64	60.38
		No	42	39.62
8.a	Specify support available for postnatal care	Home visit by ASHA	64	100.00

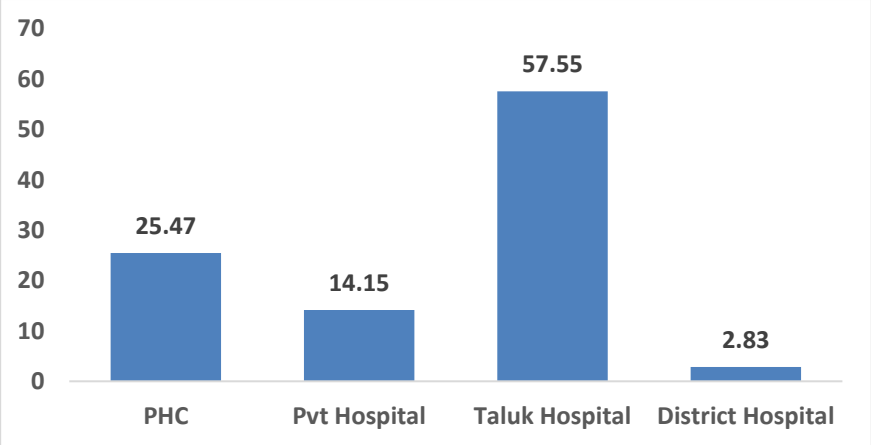


Figure 1: Distribution of beneficiaries according to place of delivery

DISCUSSION

The study was conducted to evaluate the coverage of JSY scheme in Anekal taluk, while assessing the quality of service provided under it. Every mother interviewed (100%) had successfully availed benefits under JSY, which serves as a proxy indicator for penetration of RMNCH+A services among the eligible population. These finding are superior compared to those in other states, where Doke et al in Maharashtra and a study in Prayagraj found only 52.7% and 72.9% respondents received benefits respectively. [3,4] Findings from other states in northern part of the country showed 40% of the eligible population did not receive any benefits under the scheme.[2] This could be due to robust grass root mobilization, better geographic proximity to urban health infrastructure compared to low performing northern states.

In our study, only 14.15% mothers opted for private institutions for delivery. This contrasts program evaluation data of Low performing states, more than 50% of the beneficiaries opted for private institutions. [2, 5,6] This might also reflect on the better quality of services available at government institutions in Anekal taluk.

There were no home deliveries reported among the study subjects in our study. Gupta et al. in Madhya Pradesh, also observed increase in institutional deliveries by 42.6% post-implementation of JSY. [7] Whereas, Doke et al. reported that 11.1% of eligible women in Maharashtra still delivered at home. [3] This could be due to better tracking, reliable ambulance facilities and cultural shift towards institutional deliveries in Anekal Taluk.

This study showed that 100% of BPL beneficiaries received Rs 5,000 rupees incentive through direct online account transfers within 60 days. This contrasts sharply with Maharashtra study, where only 52.57% received payment on time. [3] In Prayagraj study, despite adequate awareness, 72.9% respondants had not received JSY cards required to access the funds. [4] This could be explained by early administrative processing of bank accounts and accountability of ASHA workers in Anekal.

CONCLUSION

The Janani Suraksha Yojana owes much of its success in the Anekal Taluk to the active role of the ASHA. The ASHA has effectively and efficiently promoted institutional delivery. They have also promoted antenatal care and makes post-natal visits more than any other health care worker.

As rightly categorised as High performing district, Anekal taluk of Bangalore urban district has high coverage of various RMNCH+A program including Janani Suraksha Yojana scheme. This scheme has contributed to improved Maternal and Child survival in the taluk.

It is highly commendable that the health care workers have ensured optimal coverage of JSY scheme including cash transfer to the eligible beneficiaries even during the pandemic crisis. Health system needs to make strategies to improve motivation of ASHA workers in terms of incentives to sustain the coverage of JSY scheme.

Declaration by Authors

Ethical Approval: Approved

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Conflict of Interest: The authors declare no conflict of interest.

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