



Evaluation of Maternal Health Related Government Schemes being provided to the High-Risk Mothers of Bhavnagar District, Gujarat

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ABSTRACT

Background: About 20-30% of all the pregnancies belong to the high-risk category. This study conducted to evaluate maternal health related government schemes being provided to the high-risk mothers of Bhavnagar district, Gujarat.

Methods: It was a cross-sectional study conducted among the high-risk mothers of Bhavnagar district during the period from March 2017 to August 2018. 10 PHCs were selected using PHC score card. From each selected PHCs, 3 sub centres were selected randomly. From each selected sub centre, 3 high-risk mothers were randomly selected and interviewed.

Results: Among the eligible high-risk mothers, 53.3% mothers of the worst performing and 72% mothers of the best performing PHCs received cash assistance under JSY. All the eligible mothers from the worst performing PHCs received benefits under KPSY, while in the best performing PHCs, 87.5% of the eligible mothers received benefit for early registration and 83.3% of the eligible mothers received benefit for institutional delivery under KPSY. Some of the mothers didn't receive the cash assistance under JSY because of issues related to their bank account and few others didn't receive the benefit even after fulfilment of all the requirements of the scheme and they were not aware about the reason.

Keywords: health services, high-risk, pregnancy, program evaluation, risk factors

INTRODUCTION

As per World Health Organization (WHO), about 830 women die from pregnancy or childbirth-related complications around the world every day.¹ An estimated global total of 10.7 million women have died in the 25 years between 1990 and 2015 due to maternal causes.² Deaths among pregnant women, children and adolescents account for more than one-third of the global burden of premature mortality, despite the fact that the vast majority of these deaths are preventable.³

Of all pregnancies, about 20-30% of pregnancies belong to high-risk category. Even with adequate antenatal and intranatal care, this small group is responsible for 70-80% of perinatal mortality and morbidity.⁴

Reducing maternal and child mortality are among the most important goals of the National Rural Health Mission. Huge and strategic investments are being made by Government of India to achieve these goals. The National Health Mission (NHM) includes Health System Strengthening in rural and urban areas and Reproductive-Maternal-Neonatal-Child and Adolescent Health (RMNCH+A).

The central as well as state governments have implemented various schemes for maternal health. Few of the central government schemes for maternal health are Pradhan Mantri Surakshit Matrutava Abhiyan (PMSMA) and Pradhan Mantri Matru Vandana Yojana (PMMVY) both were launched in 2016, Janani Shishu Suraksha Karyakaram (JSSK) launched in 2011, Janani Suraksha Yojana (JSY)

launched in 2005. In Gujarat, the state government has implemented schemes like, Kasturba Poshan Sahay Yojana (KPSY) launched in 2012 and Chiranjeevi Yojana (CY) launched in 2005 in addition to the central government schemes.

Schemes like JSSK and Chiranjeevi Yojana promotes institutional delivery, while cash assistance is given under JSY, KPSY and PMMVY. Early detection of high-risk pregnancy is identified through PMSMA.⁵⁻¹⁰

Since 2005, many schemes have been implemented but there were no such study that evaluated such type of maternal schemes particularly among high-risk mothers. This study was conducted with the objectives to evaluate maternal health related government schemes being provided to high-risk mothers of the worst and best performing PHCs of Bhavnagar district of Gujarat. The study also assessed the factors responsible for non-compliance to/non-receipt of maternal health related schemes among the high-risk mothers.

METHODOLOGY

It was a cross-sectional study conducted in 5 worst performing and 5 best performing PHCs of Bhavnagar district during the period starting from March 2017 to August 2018. Study population consisted of high-risk mothers, who were registered in the PHCs of Bhavnagar district. The study sample consisted of 90 high risk mothers (45 high-risk mothers each from the worst performing PHCs and the best performing PHCs). The high-risk mothers, who were not willing to participate in the study were excluded from the study.

Permission was obtained from Chief District Health Officer (CDHO) of Bhavnagar district to conduct this study. Multi-stage sampling technique was followed in this study. In the first stage, 5 best performing PHCs and 5 worst performing PHCs (out of total 45 PHCs of the district) were selected by using total composite index calculated from PHC score card. Total composite index includes different indices like pregnancy care group index, child birth group index, reproductive age group index, post natal mother and newborn care group index.

List of PHCs included in this study using total composite index:

Best performing PHCs	Worst performing PHCs
Songadh	Gheti
Mangadh	Billa
Tansa	Pithalpur
Bhumbhali	Borda
Valukal	Sartanpur

The lowest total composite index among the selected best performing PHCs was 0.82 and the highest total composite index among the selected worst performing PHCs was 0.24.

In the second stage, from each selected PHC, 3 sub-centers were selected by simple random sampling using lottery method. In the final stage, from each selected sub-centre, 3 high-risk mothers were selected by simple random sampling using lottery method. If 3 high-risk mothers were not available in the selected sub-centre, another sub-centre of the same PHC was selected similarly by using lottery method. A semi-structured questionnaire was designed, which was corrected by conducting a pilot study among 10 high risk mothers from the nearby PHC.

After the selection of high-risk mothers, they were called to fix their convenient time for their interview. All interviews were conducted in a local language and at a place and time convenient to the participant. The visit was conducted post-delivery, between 42 days to 75 days after the delivery and information regarding receipt of benefit of various maternal health related schemes was collected.

Informed written consent was obtained from pregnant women after explaining the nature and purpose of the study in the local language. The process of data collection did not involve any invasive process and does not pose any potential risk or harm to the participants. Privacy was ensured while taking the interview.

We obtained ethical approval from the IRB, Government Medical College, Bhavnagar for conducting this study. All information collected during the study was kept confidential.

A face validation of the questionnaire was done. The study procedures from recruitment till data entry were piloted for feasibility and for making any changes in the procedures. The 2nd version of the questionnaire was used for the study. Data entry was done in Epi Info software 7.0 with appropriate data checks in order to avoid errors in data entry.

The study was conducted among high risk mothers, registered in the PHCs of Bhavnagar district. The study findings can be generalized to the high-risk mothers registered in the PHCs of the Bhavnagar district of Gujarat.

RESULTS

This study evaluated maternal health related government schemes being provided to the high-risk mothers of Bhavnagar district, Gujarat. The data were collected during the period from May 2017 to April 2018.

Table 1: Socio-Demographic Profile of the Selected High-risk Mothers of Bhavnagar District

Socio demographic factors	High-risk mothers (%)	
	Worst performing PHCs (n=45)	Best performing PHCs (n=45)
Age		
<25 years	8 (17.8)	12 (26.7)
25-35 years	36 (80.0)	31 (68.9)
>35 years	1 (2.2)	2 (4.4)
Religion		
Hindu	43 (95.6)	45 (100)
Muslim	2 (4.4)	0
Caste		
SC	2 (4.4)	5 (11.1)
OBC	38 (84.5)	33(73.3)
General	5 (11.1)	7 (15.6)
Education		
≥High school	3 (6.7)	3 (6.7)
Middle school	4 (8.9)	8 (17.8)
Primary school	21 (46.7)	21 (46.7)
Illiterate	17 (37.7)	13(28.8)
Occupation		
Housewife	32 (71.1)	40 (88.9)
Labour	4 (8.9)	1 (2.2)
Agriculture	9 (20.0)	4 (8.9)
Modified Prasad Socio-economic class		
UM class II	6 (13.3)	2 (4.4)
M class III	12 (26.7)	8 (17.8)
LM class IV	21 (46.7)	24 (53.3)
L class V	6 (13.3)	11 (24.5)

(UM=Upper middle; M=Middle; LM=Lower middle; L=Lower)

There were 90 high-risk mothers selected from 10 PHCs (5 worst performing PHCs + 5 best performing PHCs) of Bhavnagar district.

As observed from the table 1, in the worst performing PHCs, 80% of high-risk mothers were between the age group of 25-35 years, while in the best performing PHCs, 68.9% of the high-risk mothers were between the age group of 25-35 years.

Table 1 presents the socio-demographic profile of the selected high-risk mothers. Information regarding mother's age, religion, cast, education, occupation, per capita income was obtained from the mothers.

Table 2 presents the details of high-risk mothers, who had received various benefits under different programs. The information was obtained from the mothers.

Table 3 presents the reasons for non-receipt of benefit. The information was obtained from the mothers, who didn't receive the benefit under various schemes.

Almost all the selected mothers were Hindus in both types of PHCs. In the worst performing PHCs, 37.7% of the high-risk mothers were illiterate, while in the best performing PHCs, 28.8% of the high-risk mothers were illiterate.

Table 2: Avail Benefits of Various Schemes under RMNCH+A by Eligible High-risk Mothers

Programmes	Number of high-risk mothers (%)			
	Worst performing PHCs		Best performing PHCs	
	Eligible (n)	Benefited (%)	Eligible (n)	Benefited (%)
Chiranjeevi Yojana	6	0	11	0
JSY	15	8 (53.3)	25	18 (72.0)
JSSK- Diagnosis	45	44 (97.8)	45	45 (100)
JSSK- Drug	45	44 (97.8)	45	45 (100)
JSSK- Diet	45	13 (28.9)	45	24 (53.3)
JSSK- Transport	13	10 (76.9)	24	23 (95.8)
KPSY- Early registration	2	2 (100)	8	7 (87.5)
KPSY- Govt. institutional Delivery	1	1 (100)	6	5 (83.3)
PMSMA	45	9 (20.0)	45	18 (40.0)

Table 3: Frequency of Reasons for Non-receipt of Benefits of Various Schemes under RMNCH+A by Eligible High-risk Mothers

Programmes	Reasons for non-receipt	Number of the high-risk mothers (%)	
		Worst performing PHCs *	Best performing PHCs
Chiranjeevi Yojana	Not offered	6/6 (100)	11/11 (100)
JSY	Issue with bank account	3/7 (42.9)	2/7 (28.6)
	Didn't know the reason	4/7 (57.1)	5/7 (71.4)
JSSK- Diet	Home delivery	3/31 (9.7)	0/21
	Delivery in private hospital	28/31 (90.3)	21/21 (100)
JSSK- Transport	Not available	3/3 (100)	1/1 (100)
KPSY- Early registration	Didn't know the reason	0/0	1/1 (100)
KPSY- Govt. Institutional Delivery	Didn't know the reason	0/0	1/1 (100)
PMSMA	Not offered	36/36 (100)	27/27 (100)

(*One high-risk mother was excluded from analysis as she consulted private clinic and didn't want to avail any benefit of Govt. Health facility)

According to the Modified Prasad classification, among the high-risk mothers, in the worst performing PHCs, 46.7% of the mothers were from the lower middle class and 26.7% of the mothers were from the middle class, while in the best performing PHCs, 53.3% of the mothers were from the lower middle class and 24.5% mothers were from the lower class.

As observed from the table 2, none of the eligible high-risk mothers from the study participants was benefited under Chiranjeevi Yojana because no private practitioner was registered under this scheme in the Bhavnagar district.

In the worst performing PHCs, 53.3% of the eligible mothers, while in the best performing PHCs, 72.0% of the eligible mothers received cash assistance under JSY.

All the high-risk mothers of the both the groups of PHCs benefited under JSSK for free diagnosis and free drugs. In the worst performing PHCs, only 28.9% of the high risk mothers were delivered in the government institution and all of them received dietary benefit under JSSK. Among them, 76.9% of the mothers received benefit of free transport under the scheme. In the best performing PHCs, 53.3% of the mothers were delivered in the government institution and all of them received the dietary benefit under the scheme. Among them, 95.8% of the mothers, received the benefit of free transport.

In the worst performing PHCs, cash assistance for early registration and also for government institutional delivery was received by all the eligible mothers under KPSY. In the best performing PHCs, 87.5% of the eligible mothers received cash assistance for early registration and 83.3% of the eligible mothers received cash assistance for government institutional delivery under KPSY.

In the worst performing PHCs, 20% of the eligible mothers, while in the best performing PHCs, 40% of the eligible mothers received the benefit under PMSMA.

As observed from table 3, none of the eligible mothers received the benefit under Chiranjeevi Yojana.

Among the high risk mothers, who didn't receive the benefit under JSY, 42.9% and 28.6% of the mothers from the worst and best performing PHCs respectively did not receive it because of the issues related with their bank accounts. Remaining mothers, who didn't receive the benefit from both the groups of PHCs, were not aware about why they didn't receive the benefit yet.

In the worst performing PHCs, the mothers, who did not receive dietary benefit of JSSK, either delivered in private hospital or at home. So they were

not eligible to receive the benefit under JSSK. Similarly, the mothers from best performing PHCs, who didn't receive the benefit, delivered in the private hospitals and thus not eligible for the benefit. 'Vehicle (Khilkhilat) not available at the service centre' was the only reason given by the mothers for non-receipt of the benefit of the free transportation in both the groups of PHCs.

Among the mothers, who did not receive benefit under PMSMA, in many of the PHCs because they were not offered the scheme in Bhavnagar district, which might be the reason for non-receipt of the benefit to the mothers under PMSMA.

DISCUSSION

There was no study found, which evaluated maternal health related schemes among the high-risk mothers. So the results of this study were compared with the similar studies conducted among normal mothers in different areas of the country.

Under JSY Rs.500/- is being paid to the mothers of BPL, SC & ST category before 8 to 12 weeks of the delivery. Additional benefit (of Rs.200/- for rural area and Rs.100/- for an urban area) is also being paid to the beneficiaries before discharge from the health facility.⁷

In the present study, 53.3% and 70.0% of the eligible high-risk mothers from the worst and the best performing PHCs got benefit under JSY respectively. H. Kaur et al (2015) in their study in Punjab found that 48.2% of the eligible mothers were benefited under JSY.¹¹ V. Kumar et al (2015) in their study in Uttar Pradesh found that all the eligible mothers were benefited under JSY.¹² M. Rathwa et al (2014) in their cross-sectional study in the Bhavnagar district found that 60.8% of the eligible mothers had received cash assistance under JSY.¹³

Under the JSSK, benefit of absolutely free or no expense delivery in the government hospital (which includes caesarean section, drugs, diagnostics, diet, blood transfusion and transport) is being provided to the mothers.⁶

In this study, in the worst performing PHCs, 28.9% of the high-risk mothers were delivered in the government institution and among them 76.9% of the mothers received free transport under JSSK. In the best performing PHCs, 53.3% of the high-risk mothers delivered in the government institution and out of them, 95.8% of the mothers received free transport under this scheme. V. Chellaiyan et al (2018) in their study in Tamil Nadu found that free diagnosis, free drug and free delivery were received under JSSK by all the eligible mothers, while transport facility was received only by 1.2% of the mothers.¹⁴ U. Tyagi et al (2016) in their study in Sirmour

district of Himachal Pradesh found that 19% of the eligible mothers had received free transport benefit under JSSK.¹⁵

Under the KPSY, cash support of Rs.6000/- is being given in three installments to all the BPL mothers. Installment of Rs.2000/- is paid at each stage i.e. early registration, institutional delivery and after full immunization of her infant.⁸

In this study all eligible high-risk mothers from the worst performing PHCs were received cash assistance of early registration and institutional delivery under KPSY, while in the best performing PHCs, 87.5% of the eligible high-risk mothers were received cash assistance for early registration and 83.3% of the eligible mothers were received cash assistance for institutional delivery under this scheme. V. Ramanuj (2016) in their cross-sectional study in Ahmadabad among the BPL mothers found that 77.6% mothers were benefited under KPSY.¹⁶ M. Rathwa et al (2014) in their cross-sectional study in the Bhavnagar district found that 27.8% of the eligible mothers had received benefits under KPSY.¹³

During the informal talk with the health personnel it was found that in the rural area of Bhavnagar district, no private practitioner was registered for the Chiranjeevi Yojana and in some of the PHCs, no private practitioner was registered for the PMSMA, which might be the reason for non-receipt of the benefit of both the schemes by the eligible high-risk mothers.

In the present study, the high-risk mothers who did not receive the benefit of JSY because of some of the mothers did not have their own bank account and some of the mothers were not aware about the reason why they did not receive the benefit even after the fulfilment of all the necessary requirement of the scheme. D. Sahu et al (2012) in their cross-sectional study in Chhattisgarh found that the most common cause for the non-receipt of the benefit of JSY was the lack of awareness about the scheme (43.9%) among the mothers.¹⁷

Limitation: This being a cross-sectional study, causal associations between the receipt of the service and factors responsible for non-receipt could not be established.

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