D-COR

IMPACT OF YASHODA VS. ASHA ON RETENTION OF NURSING MOTHERS AND CHILD CARE SERVICES IN ORISSA

(A RAPID ASSESSMENT)

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On behalf of
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Conducted by
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Sarve Bhavantu Sukheenah, Sarve Santu Niramayah,
Sarve Bhadrani Pashyantu, Ma Kashchit Dukh Bhag Bhavet.

Oh Almighty! May everybody be happy!
May all be free from ailments!
May we see what is auspicious!
May no one be subject to miseries!

Kathopanisada 2:6:19 - India - 1400 b.c.e

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Satyanarayan Mohanty
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ABBREVIATIONS

ASHA	Accredited Social Health Activists	IFA	Iron Folic Acid
ANC	Antenatal Care	IMR	Infant Mortality Rate
AWW	Anganawadi Worker	JSY	Janani Surakhya Yojana
CHS	Child Health Supervisor	MDG	Millennium Development Goal
DCHS	Deputy Child Health Supervisor	MMR	Maternal Mortality Rate
DHH	District Headquarter Hospital	NIPI	Norway India Partnership Initiative
DLHS	District Level Health Statistics	NFHS	National Family Health Survey
GC	General Caste	NRHM	National Rural Health Mission
GoI	Government of India	OBC	Other Backward Classes
HDI	Human Development Index	SC	Scheduled Caste
HMIS	Health Management Information System	SRS	Sample Registration Survey
IEC	Information Education & Communication	ST	Scheduled Tribe

EXECUTIVE SUMMARY

The sudden increase of delivery cases in public health institutions due to JSY is seen as an opportunity to improve the RCH services in the facility, which has prompted the NIPI focus states including Orissa to engage 'Yashoda' for facilitating the initial care that the newborn and the mother require during their stay in the health facility. The key responsibilities entrusted on Yashoda are to ensure cleanliness of the ward, motivate mother for 48hr retention, assessment of vital signs, initiation of breastfeeding within 1hr, immunization, counseling, etc.

In Orissa, the Yashoda intervention was first introduced in Sambalpur DHH in June 2008, which has been expanded (by September 2009) to another 11 DHHs (out of the 15 proposed DHHs) of the State. After one year of intervention, the State required to understand the impact of Yashodas on retention of nursing mothers and child care services for which this rapid assessment was carried out. The other important objective behind this study was to assess the scope of engaging ASHAs for delivering the services entrusted on Yashodas in the health facility.

The study was conducted in three Yashoda-intervened districts (viz. Sambalpur, Jharsuguda and Angul) and two Non-Yashoda districts (viz. Nabarangpur & Cuttack), particularly to have a comparative analysis of the impact of newborn and postpartum care services between the two categories of districts. Purposeful effort was made in the study to select the districts from different regions of the State. In order to collect data, an exploratory study design was adopted, for which data from both primary and secondary sources were collected, analyzed and presented in the report. The respondents covered in the study include Yashodas, Doctors, Staff Nurses, CDMO, DPM, CHS, ASHA and Nursing Mothers. In total, the study team interviewed 194 nursing mothers and 116 health service providers in the five districts covered under the study.

Background information of the study respondents

The Yashodas interviewed in the study (100%) have basic educational qualification of 8th standard or above whereas, majority of ASHAs (88%) have qualification of 7th standard or above. While maximum of Yashodas (48.5%) belongs to General Castes, highest percentage (i.e. 42%) of ASHAs is from Other Backward Castes (OBCs).

Among the nursing mothers covered under the study, highest i.e. 34% are from OBC followed by 27.3% belongs to the General Castes. SC and ST constitute 21.1% and 17.5% respectively. 87.6% of nursing mothers are literate. The highest illiterate nursing mothers interviewed in the study are from Nabarangpur district (43.2%). All of them are in their prime reproductive age of 18 to 38 years. More than half i.e. 53.6% of the nursing mothers visited the DHH are from lower economic strata or belong to BPL category having income less than Rs. 30,000/-. A total of 51% travelled the distance ranging from 11 to 50kms and 11.3% travelled even more than 50kms to reach at the DHH for delivery. There are 63.9%, who visited the DHH on emergency condition and 65.5%, who did not arrange their transportation before hand. Only 12.9% of the total nursing mothers availed Janani Express and 85.1% were accompanied by ASHA. In 80% of cases, ASHA stayed with the nursing mothers till she got discharge from the hospital and 72% of them stayed more than 24hrs.

There are 85.1% mothers who had '3+ ANCs' and 96.4% had the required doses of TTs (85.6% had 2TTs and 10.8% had the TT booster dose). On an average, each pregnant woman consumed 84 IFA tablets as against 96 tablets received by them.

Level of Yashoda engagement

At present, one Yashoda on an average has to look after 7 beds in Sambalpur, 7 to 9 beds in Jharsuguda and about 5 to 9 beds in Angul district depending on the case load on the particular day. Due to the increased influx of delivery cases, all the beds in the maternity ward of the hospital always remain occupied and many a time people also have to manage on floor due to lack of beds.

Except few job responsibilities (e.g. putting identification tags, initiate birth registration and keep drugs ready before delivery), the Yashodas (above 80%) have knowledge on most of their jobs. According to the nursing mothers, 85% of them came in contact with Yashoda after reaching the hospital. It was observed in Yashoda districts that the pregnant woman invariably comes in contact with the Yashoda as well as the Staff Nurse after reaching the hospital whereas, in the Non-Yashoda districts they first come in contact with Staff Nurse (100%) & then Doctors (93.8%).

The Yashoda's engagement with regard to providing pre-delivery services like paper work, food and drugs arrangement is almost found negligible as only 6.2%, 14% and 18.7% nursing mothers respectively reported the same. ASHA & Family members of mother were found taking care of the same. In the non-Yashoda districts, the pre-delivery services are provided by Nurse and / or ASHA.

The jobs that require the Yashodas to go outside the maternity ward e.g. arranging foods & drugs, paper work, etc. are normally not done by her, as Yashoda's movement outside the ward gets restricted due to some key responsibilities entrusted on her, like the assessment of the vital signs & complications of the newborn and the nursing mother. In such case, ASHA and the family attendants are of great support to the nursing mothers in undertaking these works.

Cord care, drying & wrapping, breast feeding and assessment of vital signs are the important post-partum and newborn care services provided by Yashoda. ASHA mainly assists in breast feeding. BCG & OPV are administered by the ANM attached to the PPC, so the Yashodas hardly play any role in immunization. But ASHA after discharge of the nursing mother accompanies them to PPC for immunization in Sambalpur and Jharsuguda district. In the non-Yashoda districts, the staff nurse plays a major role in providing the required post-delivery care or services.

Majority of the Doctors and Staff Nurses reported about Yashodas providing services like bed preparation, cord care, breast feeding, assessing vital signs, counseling, ensuring cleanliness and avoid crowding of the ward. Hardly any of them informed about the engagement of Yashodas in gathering ANC information, immunization, weighing, drug arrangements, etc.

As far as the service quality is concerned, both Yashoda and ASHA in the Yashoda-intervened districts were rated as 'Very Good' by the nursing mothers. The quality of the services provided by ASHA is regarded as better than the Yashodas. ASHA was found more acceptable and accessible to the nursing mothers in the DHH as compared to the Yashodas.

Impact of Yashoda on key health indicators

Four key outputs are expected from the Yashoda intervention, viz. increase in the mothers initiating breast feeding within 1hr, newborn weighed after birth, newborn being immunized (BCG & Polio), and mothers staying at least 48hrs in the health facility. In order to assess the impact / changes in each of these indicators, the study compared the current status of the same with the status in the beginning of Yashoda intervention. Thus, the data reported in the first monthly report of Yashodas in July 2008 are compared with the current data reported in the month of August 2009. However, the

data reported by Yashodas in the first monthly report is found to be inadequate as the Yashodas were then totally new to the intervention and reporting requirements.

Nonetheless, from the available data, there appears to be no change with regard to the initiation of breast feeding within 1hr of birth of the baby (i.e. 97.1% in August 2009 as against 98.9% in July 2008). Although, cent percent achievement has been made in the number of babies weighed after birth, the comparative status of the same with the base data does not show a significant improvement (increased from 98.8% in July 08 to 100% in August 09).

A relatively better achievement has been made with regard to the zero dose immunization. Against the base figure (HMIS, October 2008) of 80.8% and 74%, a total of 11.8% and 21.6% increase in BCG and Zero dose polio respectively has been registered (by August 09). Notable increase in the Polio (32.7% increase) and BCG (58.9%) has been recorded in the DHH of Jharsuguda district.

However, a slender improvement of only 7.1% has been registered with regard to the retention of nursing mothers for 48hrs. District wise breakup of data shows that maximum i.e. 68.7% of nursing mothers in Sambalpur were retained above 48hrs whereas, only 11.3% in Jharsuguda and 8.5% in Angul were retained above 48hrs. The average retention time in Sambalpur works out to be around 2 days (44hrs) as compared to only 1 day in Angul (25hrs) and Jharsuguda (33hrs) for the normal deliveries.

The major constraints reported by Yashodas include lack of bed (54.5%) followed by domestic pressure (39.4%) as the main reasons for low retention. Majority (i.e. 77.8%) of the other service providers like CDMO / DPM / Staff Nurse / Doctor also reported lack of bed as the main reason behind low retention. According to 51.6% of mothers, their domestic engagement was reported as the measure cause for leaving the hospital early. Lack of proper staying arrangements for the mother and the new born were reported by 35.8% and 31.6% nursing mothers respectively for the same.

Role duplication between Yashoda and ASHA

The study reveals role duplication between Yashoda and ASHA in delivering key services like motivating mothers for 48hr retention; immediate and exclusive breast feeding; providing follow-up information to the nursing mother; advising on breast feeding; providing information to the family members about basic health care of the mother and child; drying & wrapping; cord care; etc. (reported by the nursing mothers). According to them, ASHA (except weighing of the baby) is actively involved in at least three out of the four key outputs (viz. immunization, breast feeding and 48hrs retention) expected from Yashodas. In contrast to their response, majority of the service providers do not perceive any role duplication between ASHA and Yashoda in providing the newborn and post-partum care services in the DHH.

Scope of ASHA performing the role of Yashoda

Maximum i.e. 58.4% of nursing mothers feel that ASHA would be appropriate in delivering the newborn and post-partum care services in the DHH. 57.5% feel this because she belongs to her own village. 51.3% think that ASHA can do the follow-up care and 50.4% feel that AHSA knows her better, thus she would be more appropriate for delivering the services in the DHH.

Majority of the Doctors (5 out of 6) and half of the Staff Nurses (3 out of 6) prefer Yashoda to be retained in the DHH whereas, maximum of the CDMOs and DPMs (2 out of 3) feel that ASHA would be more appropriate for providing the newborn and post-partum services in the DHH as compared

to Yashoda. Majority of the CDMO, DPM and the Staff Nurse (except the Doctors) agree that ASHA can be provided training to take up the role of Yashoda in the DHH.

According to 83.3% ASHAs, Yashodas are doing similar work in the DHH. Cent percent of ASHAs are confident that they can do the jobs done by Yashoda. 88% feel that they have required educational qualification to do the job.

The cost benefit analysis carried out in the study also suggests that the engagement of ASHA would be cost wise more beneficial as compared to the Yashodas.

Concluding remarks

The responses of nursing mothers and service providers give a more favorable indication towards ASHA as compared to Yashoda for delivering post-partum and newborn care services in the hospital. Thus, it would be appropriate if the existing human resource like ASHAs may be effectively and strategically deployed to ensure 48hr retention of nursing mothers and newborn care in the hospital instead of introducing and replicating the Yashoda intervention in other hospitals of the State and spending huge resources on the same. However, irrespective of the engagement of Yashoda or ASHA, it is essential for the State to strengthen the infrastructural provisions e.g. rooms, beds, etc. in the maternity ward of the hospital for improving the retention of the nursing mothers and newborn care services.

Suggestions

For retaining Yashodas:

- Yashoda must facilitate and ensure Zero dose immunization to the newborn instead of leaving it to ASHA and family attendants.
- Their role should not be confined to the ward only. Yashodas need to go outside the ward to help mother in registration, immunization, JSY, etc.
- Yashoda needs to coordinate with ASHA for checking the overcrowding of ward.
- Role clarity between Yashoda and Staff Nurse should be made to avoid any conflicts. There should be different apron color for the Yashodas to that of the Staff Nurse.
- Adequate stress needs to be given for use of IEC / BCC tools by Yashoda for counseling.

For deploying ASHA in place of Yashoda:

- The construction of ASHA Gruha in the premise of DHH needs to be accelerated.
- Hands on training to ASHA in the DHH should be arranged in order to equip her with the requirements of newborn and postpartum care services in a hospital set-up.
- The Government may think of engaging a person for coordinating the ASHA activities in the DHH.
- ASHA should be allowed to return home after staying 48hr in the hospital (in cesarean delivery).
- When ASHA comes to the hospital accompanying the pregnant woman, the AWW and the ANM should manage her work especially the health events planned by her in the village.
- A token amount should be paid to ASHA to promote the use of Janani Express.

***

Chapter - I

1. Study Overview

1.1 Introduction

While India is striding ahead to achieve the Millennium Development Goals (MDGs) and the goals envisaged under 11th Five Year Plan, the health scenario of the country in particular continues to be difficult and challenging. Some of the age old challenges like IMR and MMR still remain unacceptably high in many states of the country including Orissa.

As compared to 53 infant deaths of the country, the IMR of Orissa stands astoundingly high at 69 deaths per 1000 live births[1]. Although Orissa has made significant achievement by reducing the same from 96 deaths in 1997 to 69 deaths in 2008, still it remains highest in the country. In fact, more than two third i.e. 70% of the total infant deaths takes place within first one month of the birth (neo-natal period)[2] which are mainly attributable to causes like birth asphyxia, sepsis, hypothermia, low birth weight / prematurity, etc. But, importantly, most of the causes of infant deaths are recognizable during and within first 48hrs of delivery; and can be prevented by providing required health care attention to the mother and newborn. Like IMR, the MMR of Orissa is also very high (303 deaths per 1,00,000 live births) as compared to India (254 deaths)[3]. According to a survey conducted by SRS, hemorrhage, sepsis and eclampsia were found as important reasons that cause at least 50% of the maternal deaths[4]. These, again, can be prevented if proper health care attention is given to the women especially during the time of delivery and post-partum period.

Thus, greater emphasis has been laid on the institutional delivery and the retention of the nursing mother for at least 48hrs in the health facility so that required health care to the mother and newborn could be provided. Realizing the importance of this, the Government of India has launched the Janani Surakshya Yozana (JSY) with the provision of financial assistance to the mother (Rs. 1,400/- and Rs. 1,000/- per delivery cases in rural and urban areas respectively) for availing delivery and post-partum services in a health facility. Apart from mother, also a cash provision of Rs. 600/- (per delivery) is kept for ASHA to encourage her for ensuring the antenatal care and motivating and escorting the pregnant women to the health facility for delivery. As a result of this, the number of institutional deliveries particularly in Orissa has gone up as never before. It has been doubled particularly after the introduction of JSY in 2005. From only 35.6%[5] in 2005-06, the number of institutional deliveries in Orissa has gone up to 71%[6] in 2008-09.

This sudden influx of delivery cases in the public health institutions is seen as an opportunity to improve the RCH services in the facility, which has prompted the NIPI focus states including Orissa to engage 'Yashoda' at the health facility for facilitating the initial care that the newborn and the mother require during their stay in the facility.

[1] SRS, 2008
[2] NFHS – III (2005-06)
[3] SRS, 2006
[4] Survey by SRS in the eastern region of the State in 2001-03
[5] NFHS – III (2005-06)
[6] Health Management Information System (HMIS), NRHM ,FY 2009)

1.2 Conception of Yashoda intervention

In late 2007, the Yashoda intervention was conceptualized by NIPI keeping into account the sudden influx of beneficiaries in the public health institutions due to the JSY. Initially, it was thought of to term these workers as 'Sishu ASHA' (providing care to the newborn by a worker like ASHA) but later on to avoid any confusion with NRHM introduced ASHA worker and also to give such a name which clearly resembles her work, the term 'Sishu ASHA' was replaced with the term 'Yashoda'. As it is known that the term 'Yashoda' has a mythological background. She is a Hindu mythological character, who provided the best foster care to the son (lord Krishna) of mother Debaki. In short, the term Yashoda resembles to somebody who takes best foster care of other's child.

The idea behind deploying Yashodas in the health facilities is to act as a non-clinical support worker in terms of making the pregnant women feel welcome at the facility, making her feel comfortable after delivery, initiating exclusive and immediate breastfeeding, counseling the mother on basic newborn care and motivating mother to stay at the facility for a longer duration apart from assisting the nurses with initial care for the mother and the newborn soon after the delivery.

The logics placed in favor of Yashoda before ASHA (by NIPI)

It has been observed that in almost 30-40% of the cases, ASHAs do not accompany the pregnant women to the hospital. Even those who accompany do have other responsibilities under NRHM and cannot be away from the community for over 24 hours. If we assume that ASHAs accompany pregnant women to a District hospital where 20-30 deliveries take place a day, in the course of two days, there will be 40-60 ASHAs at the hospital. There is no arrangement for their stay, food, or security. These additional people in an already stretched infrastructure can create chaos[7].

Key outputs expected from Yashoda

- % increase in the mothers initiating breast feeding within one hour.
- % increase in newborn being weighed.
- % increase in newborn being immunized (BCG & polio)
- % mothers staying at least 48 hrs at the facility.

1.3 An overview of the YASHODA vs. ASHA intervention in Orissa

First time during March, 2008 a government order was passed for ***Yashoda*** implementation in three selected District Headquarter Hospitals (DHHs) viz. Sambalpur, Jharsuguda and Angul. Accordingly, in June, 2008 the Yashoda intervention was launched in Sambalpur DHH which was first time in Orissa and in India as well. Later on, the same intervention was also launched in the other two DHHs of Jharsuguda and Angul district. Then in July, 2008 an office order was passed to extend the Yashoda intervention to another six DHHs of Rayagada, Malkangiri, Koraput, Kalahandi, Balasore and Keonjhar districts. Subsequent to this order, a decision was taken to further extend the Yashoda intervention to six more DHHs and to the Capital Hospital of Bhubaneswar which takes the total tally to 15 DHHs (out of the 30 DHHs existing in the State) and to the Capital Hospital.

[7] Operational guidelines for Yashoda, NIPI

By the time this study was carried out, a total of 129 Yashodas have been deployed in 12 out of the 15 proposed DHHs. In rest 3 DHHs and in the Capital Hospital, the recruitment process of Yashodas is yet to be over. The number of Yashodas deployed in DHHs varies from DHH to DHH, which has been provisioned depending upon the number of delivery case load on respective DHH. Apart from Yashoda, one Child Health Supervisor (CHS) and two Deputy Child Health Supervisors (DCHSs) have been also engaged at the DHH for the overall coordination and day to day supervision of the Yashodas.

Table 1 District wise number of Yashodas in place by September '2009

Sl. No.	District Name	Hospital Type	Sanctioned Position	Filled-up Position
1	Angul	DHH	12	12
2	Balasore	DHH	15	--
3	Dhenkanal	DHH	12	12
4	Ganjam	DHH	12	9
5	Jagatsinghpur	DHH	12	--
6	Jajpur	DHH	12	12
7	Jharsuguda	DHH	9	9
8	Keonjhar	DHH	12	12
9	Khurda	DHH	12	--
10	Koraput	DHH	12	12
11	Malkangiri	DHH	9	9
12	Mayurbhanj	DHH	12	12
13	Puri	DHH	12	9
14	Rayagada	DHH	9	9
15	Sambalpur	DHH	12	12
16	State Capital	Capital Hospital	60	--
		Total:	**234**	**129**

On the other side, the ***Accredited Social Health Activists (ASHAs)*** have been engaged at the community level as a volunteer (one ASHA per each Anganwadi Centre) under NRHM. The aim of engaging ASHA is to address the health needs of the vulnerable sections of the society and to see her acting as the bridge between the public health system and the community. So far, 36,395 ASHAs out of the target of 41,102 (88.5%) have been engaged in across 30 districts of the State[8].

Table 2 Job Responsibilities of Yashoda vs. ASHA

Yashoda	ASHA
A. Pre-delivery Services / Tasks ◆ Gather information on ANC check-ups and any complications ◆ Prepare bed, ensure cleanliness, food & other ancillary requirements, assist in registration, Keep basic required drugs ready and check crowd **B. Post-delivery care** ◆ Receive newborn, cord care, assessing vital signs, put identification tags,	**A. Key roles & responsibilities** ◆ **Create Awareness**: On Health, Nutrition, sanitation, health & family welfare services, etc. ◆ **Counseling**: Birth preparedness, safe & institutional delivery, breast-feeding, immunization, contraception, prevention of RTI/STI, etc. ◆ **Mobilization**: Facilitate access of health services in sub center, PHC, CHC and DHH; and Village Health Plan ◆ **Escort/Accompany**: Escort needy patients and the woman in labor to the health institution ◆ Primary medical health care for fever, first-aid for

[8] Health Management Information System (HMIS), NRHM (April to June, 2009)

Table 2 Job Responsibilities of Yashoda vs. ASHA	
Yashoda	**ASHA**
weight measurement, cleaning new born, drying & wrapping, immediate & exclusive breast feeding (within 1hr), BCG and OPV **C. Counseling & follow-up information** ◆ Motivate for 48hr retention and counsel mothers & provide facts on sources & contact persons for health & nutrition care, immunization schedule, family planning, RTI/STI, etc. **D. Other responsibilities** ◆ Assist in JSY payment, filling-up birth registration and record maintenance	minor injuries, diarrhoea, etc. **B. Specific role envisaged under JSY** ◆ Identify pregnant woman, facilitate registration for ANC, assist her in necessary certifications ◆ Help the women in ANC, TT & IFA ◆ Identify a Government or Private health centre and counsel for institutional delivery ◆ Escort the beneficiary to health centre and stay with her till the woman is discharged ◆ Arrange to immunize the newborn till the age of 14 weeks and inform about birth or death of child ◆ Post natal visit within 7 days ◆ Counsel for initiation of breastfeeding within 1hr and continuance till 3-6 months, and ◆ Promote family planning

1.4 Need & relevance of the study

The comparison of the job responsibilities made above between the Yashoda and ASHA raises the following few questions.

a) Can ASHA replace YASHODA in those 48 hours of stay in the institutions? Will they do a better job as it will help them in further follow up?
b) Is there a duplication of roles in terms of motivating and counseling the mother from pregnancy till delivery and counseling only after delivery for maximum 48 hours where retention is very poor?
c) What is the level of engagement of YASHODA/ASHA with the mother in terms of influencing her behavior?
d) In the institutions where YASHODA's are not there who is playing this role.
e) In the institutions where YASHODAs are deployed has the 48 hours retentions increased? Who is doing the follow up after 48 hours of retentions?
f) Do the retention of mother in the institutions and counseling only depend upon YASHODA or any other environmental facility like facilities provided at the institutions?
g) Do the ASHAs have time to play the role of Yashoda?
h) Whether the ASHAs have the skill and capacity to take-up this expansion role? Do the ASHAs have the confidence to take-up the role of Yashoda? Whether they have been trained for the same? Whether the ASHAs training module is sufficient for able to undertake the Yashoda role?
i) Can ASHA be seen as Yashoda in the health facility by the clinical health providers? What are the perceptions of clinical health staff on this?
j) In terms of time and opportunity costs, which one (ASHA/Yashoda) would be effective? Which would be the most cost effective approach?

Thus, keeping into account all these research questions, a rapid assessment of the impact of Yashoda vs. ASHA on retention and child care services in Orissa was undertaken.

1.5 Objectives

a) To assess impact of YASHODAs in achieving its objectivity of 48 hours retention of the mother, child care and counseling in three districts of Orissa and identifying reasons for variance (e.g. Case load, efficiency, motivation, work facilities and environment, rapport with mother)
b) To assess the alternative mechanism like ASHA playing the same role in the institutions and the related issues.
c) Based on the findings, indicate possible changes to the ASHA package (for all or limited) and scope for expansion of ASHA role keeping the sustainability issues in mind.

1.6 Scope of Work

- Review of current impact of YASHODA in the health institutions.
- Prepare a comparative role analysis both Yashoda & ASHA play during institutional delivery.
- Assess the capacity and confidence they exhibit during that period and triangulate with ASHA's overall time, suitability and feasibility of playing that role in the institutions.
- Comparative analysis of ASHA training module with Yashoda training module.
- Mapping the perceptions of the clinical health staff on the impact.
- Develop the methodology, sample design and tools in consultation with NRHM and TMST.
- Conduct a quick field assessment, with both control and treatment institutions and triangulate primary information with secondary data and prepare first draft report.

1.7 Study Methodology

As the study intended to undertake a rapid assessment of the impact of Yashoda vs. ASHA, effort was made to apply appropriate methodology in the study which would bring out the necessary information to attend to the various research questions and objectives set for the study. Details about the methodology adopted in the study are as follows.

1.7.1 Study Design

An 'exploratory' study design was adopted for undertaking the study. This design in particular was helpful to know the various impacts of Yashoda vs. ASHA on retention and child care services in Orissa. In order to explore into the impacts, both primary and secondary data were collected and analyzed in the study.

1.8 Collection of secondary data

The secondary data that were collected and analyzed in the study are as follows:

- Key Informant interviews with NIPI
- Job responsibility chart of Yashoda and ASHA
- Training modules for Yashoda and ASHA
- Case load on Yashoda and ASHA

1.9 Collection of primary data

1.9.1 Sampling

Selection of Districts: Based on the secondary information, the study divided the districts of Orissa into the followings:

a) Yashoda Intervened Districts
b) Non-Yashoda Districts

Among the Yashoda intervened districts, the study only selected those 3 districts for the study (viz. Sambalpur, Jharsuguda and Angul) which have completed more than one year of Yashoda intervention, so that the impact of Yashoda vs. ASHA could be measured and assessed.

Apart from the Yashoda intervened districts, the study also covered 2 Non-Yashoda districts, particularly to make a comparative assessment of the impact of Yashoda vs. Non-Yashoda districts. The main purpose behind covering Non-Yashoda districts was to know, who provides the maternal and child health care services in the absence of Yashodas during those 48hours of stay of mothers and the newborn in the health facility after the delivery. Since the Yashoda districts selected for the study are located in the western and central part of Orissa, it was decided to cover at least one Non-Yashoda district from the southern and coastal region of the State in order to make the sampling of districts more representative of the whole Orissa state. Accordingly, the Nabarangpur district in the Southern part of Orissa and Cuttack district in the Coastal region of Orissa were covered as the Non-Yashoda districts in the study. Districts that were covered in the study as per the sampling criteria discussed above are as presented in Table 3.

Table 3 Sample districts covered in the study

District Stratification	Name of the Sample Districts	Region	No. of districts
Yashoda Intervened (NIPI supported) districts	Sambalpur & Jharsuguda	Western Orissa	2
	Angul	Central Orissa	1
Non Yashoda Districts	Nabarangpur	Southern Orissa	1
	Cuttack	Coastal Orissa	1
		Total districts covered in the study	**5**

Service providers covered in the study:

Table 4 Service providers covered in the study

Respondents / Key Informants	No. of Districts	No. of Respondents	Procedure of selection of respondents	Location of Interview
Yashodas	3	33	►Covered all the Yashodas in the selected districts.	DHH
Child Health Supervisors (CHSs)	3	3	►Covered all the CHSs in the selected Yashoda districts.	DHH
ASHAs				
ASHA present in the DHH at the time of survey	5	25	►Randomly interviewed 5 ASHA workers per DHH	DHH
ASHA who earlier visited the DHH for delivery	5	25	►Randomly interviewed 5 ASHAs per district	Village

Table 4 Service providers covered in the study				
Respondents / Key Informants	**No. of Districts**	**No. of Respondents**	**Procedure of selection of respondents**	**Location of Interview**
Clinical Staff (Doctors / Staff Nurses)				
Doctors	5	10	▸Interviewed 2 Doctors (Gyncl. & Pediat.) per district	DHH
Staff Nurse	5	10	▸Interviewed 2 Nurses of O&G Dept. per district	DHH
Administrative / Management staff				
CDMO	5	5		DHH
DPM	5	5		
Total Service Providers		**116**		

Beneficiaries (Nursing Mothers)

Apart from the service providers, the study interviewed the nursing mothers (along with their attendants) who received maternal and newborn care services during their stay in the DHH.

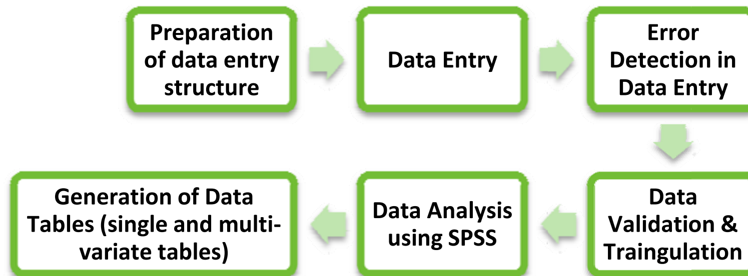
Table 5 Beneficiaries (Nursing mothers) covered in the study				
Respondents / Key Informants	**No. of Districts**	**No. of Respondents**	**Procedure of selection of respondents**	**Location of Interview**
Nursing Mothers & Attendants				
Nursing mothers in the DHH	5	169	▸Interviewed nursing mothers along with their attendants in the DHH of both Yashoda & Non-Yashoda districts	DHH
Mothers who earlier had delivery in DHH	5	25	▸Interviewed 5 nursing mothers along with their attendants per district in both Yashoda & Non-Yashoda districts	Village
Total Service Receivers		**194**		

1.9.2 Tools & techniques of data collection

Table 6 Tools & Techniques used for data collection			
Respondents / Key Informants	**Methods of data collection**	**Techniques**	**Tools**
Service Providers a) Yashoda b) ASHA c) Doctors d) Nurse e) CDMO f) DPM	▸Survey Method	▸Key Informant Interview (KII)	▸Semi-Structured Interview Schedule ▸Interview Guide
Service Receivers a) Mothers & Attendants	▸Survey Method	▸Individual Interview	▸Structured Interview Schedule

1.10 IT enabling of data & reporting

The analysis of field data collected through different tools was analyzed using computer software. Particularly package like MS Excel was used for data computerization and cleaning; and the SPSS package was applied for analysis and generation of data tables. Data outputs for each variable were presented in the report in charts and tabular forms with frequencies, percentages and averages. Besides, multi-vitiate tables were also generated and presented based on the study requirements. Unlike quantitative analysis, the qualitative analysis of information was also carried out and presented in the form of qualitative data tables / matrixes.



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Chapter – II

2 Maternal & Child Health Status of Orissa: A Brief Review of the Secondary Data

Orissa is located on the eastern coast of India and is bounded by the states like West Bengal in the northeast, Bihar in the north, Chhatishgarh in the West, Andhra Pradesh in the south and Bay of Bengal in the east. While Orissa is counted as one of the richest states in terms of its natural resource base, it has the largest number of poor people in the country which is a paradox. This can be substantiated from the fact that Orissa ranks 17th among the 17 major states of the country as far as the poverty ratio is concerned, that means Orissa occupies the last position among all the major states of the country with 46.8%[9] people living below the poverty line. The per capita income of the state is only Rs. 6,555/-[10] which positions Orissa just before Bihar, ranks last among all the major states in the country. In fact, 15 out of the 30 districts of Orissa are identified as extremely and severely food insecure[11]. Not only the economic but also the social development of Orissa lags behind to many others States in the country. The Health Index of Orissa particularly stands very low at 0.468 only[12]. A brief review of the secondary data specifically on the maternal and child health status of the State is presented hereunder.

2.1 Status of Infant and Maternal Mortality

Table 7 presents a comparative picture of the Neonatal Mortality, IMR and MMR status of Orissa between NFHS – II and III; and between SRS – 97/98 and 07/06.

Table 7 IMR and MMR status of Orissa

ANC Indicators	NFHS (%)			SRS (%)		
	2006 (III)	1999 (II)	% of Difference during six years	2007	1997	% of Difference during six years
Neonatal Mortality	45.4	48.6	3.2	NA	NA	NA
IMR	64.7	81	16.3	71	96	25
	2006 (III)	1999 (II)	% of Difference during six years	2006	1998	% of Difference during six years
MMR	NA	NA	NA	303	346	43

2.2 Status of maternal health care in Orissa

2.2.1 Antenatal Care

The status of the various antenatal care indicators of Orissa is presented in Table 8. Followed by the same table, Figures 1 and 2 are presented to give the details about the various antenatal check-ups conducted and information received on pregnancy related complications respectively.

[9] NSS, 61st Round, 2004-05
[10] Economic Survey of Orissa, 2004-05
[11] Food Security Atlas of Orissa, 2008
[12] Orissa Human Development Report, 2004

Table 8 Status of Antenatal Care in Orissa

ANC Indicators	NFHS (%)			DLHS (%)		
	2006 (III)	1999 (II)	% of Difference during six years	2008 (III)	2004 (II)	% of Difference during six years
ANC visit in the 1st Trimester	48.3	34.1	14.20	47.5	36.2	11.30
3 or more ANCs	61.8	48	13.80	54.6	41.7	12.90
2TTs (1TT in case of DLHS)	83.3	NA	NA	82.4	70.2	12.20
IFA Consumed for 90days	33.8	NA	NA	37.6	20.8	16.80
Information received on pregnancy complication	37.6	NA	NA	NA	NA	NA

Figure 1 Status of Receiving different antenatal check-ups, NFHS, 05-06

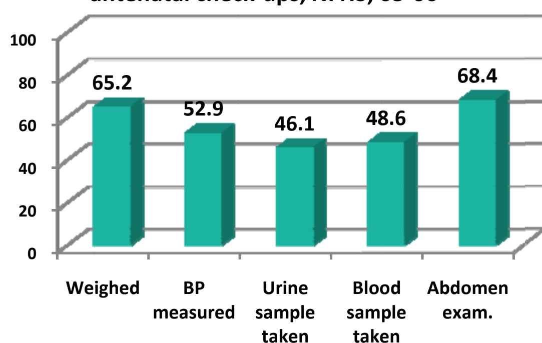
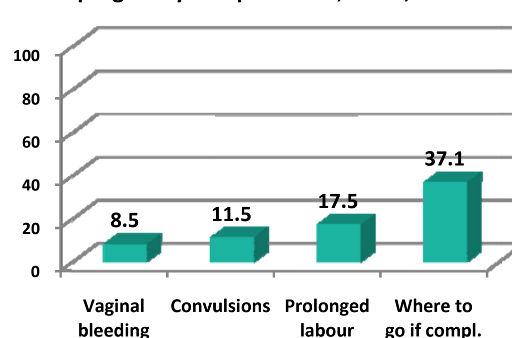


Figure 2 Status of information received on pregnancy complications, NFHS, 05-06



2.2.2 Status of Institutional Deliveries and Postnatal Check-ups

Table 9 Status of institutional deliveries and post-natal check-ups in Orissa

ANC Indicators	HMIS (%)			NFHS (%)			DLHS (%)		
	2008 -09	2006-07	% of Difference during two years	2006 (III)	1999 (II)	% of Difference during two years	2008 (III)	2004 (II)	% of Difference during two years
Institutional Deliveries	71	66.7	4.3	35.6	22.6	13	44.3	30.8	13.5
JSY Institutional Delivery cases	90	100	NA	NA	NA	NA	31.9	NA	NA
ASHA supported cases under JSY	65	46.8	18.2	NA	NA	NA	NA	NA	NA
Postnatal checkups in 2days after delivery (2 weeks in case of DLHS)	NA	NA	NA	33.3	NA	NA	31.9	NA	NA

2.3 Status of child health care in Orissa

The percentage of children breast fed within 1hr, exclusively breastfed and fully immunized in Orissa is presented in Table 10 which would give a fair idea about the child health status in the State.

Table 10 Status of child health care in Orissa

ANC Indicators	HMIS (%)			NFHS (%)			DLHS (%)		
	2008 -09	2005 -06	% of Difference during two years	2006 (III)	1999 (II)	% of Difference during two years	2008 (III)	2004 (II)	% of Difference during two years
Children Breast Fed within 1hr	NA	NA	NA	54.8	24.9	29.9	63.7	43.9	19.8
Children exclusively breast fed for 6months	NA	NA	NA	50.2	NA	NA	54.5	NA	NA
Children Fully immunized	85	52	33	51.8	43.7	8.1	62.4	53.3	9.1

In Table 11, the study has made an attempt to bring out the district wise break-up of different immunization coverage in Orissa by comparing between DLHS 2008 and HMIS 08-09.

Table 11 Status of immunization coverage in Orissa in 2007-08 and 2008-09

District	BCG		3 POLIO		3 DPTs		Measles		Full Immunization	
	DLHS, 2008	HMIS, 08-09	DLHS, 2008	HMIS, 08-09	DLHS, 2008	HMIS, 08-09	DLHS, 2008	HMIS, 08-09	DLHS, 2008	HMIS, 08-09
ANGUL	97.3	106.7	85.6	97.4	74.9	96.5	89.2	77.6	62.0	77.2
BALASORE	98.2	97.2	91.9	88.7	89.3	83.0	86.8	76.5	82.8	64.6
BARAGARH	98.8	103.2	93.4	101.6	86.5	94.1	81.2	89.9	70.4	88.7
BHADRAK	98.4	120.4	90.9	105.6	81.9	95.1	85.3	100.4	72.7	99.0
BOLANGIR	91.9	93.6	78.4	82.1	73.8	75.9	76.6	69.1	40.7	57.0
BOUDH	91.1	81.4	70.9	86.6	65.0	83.1	80.9	74.4	44.5	74.2
CUTTACK	96.4	117.8	84.7	101.5	79.4	101.5	83.2	91.2	68.6	91.2
DEOGARH	91.6	87.2	75.0	87.9	62.9	88.4	85.6	67.6	56.2	53.6
DHENKANAL	95.2	96.1	78.9	93.3	75.1	87.5	83.5	70.7	61.5	61.7
GAJAPATI	72.7	83.2	59.9	78.0	51.8	77.2	60.7	73.4	42.9	73.4
GANJAM	83.2	96.6	60.3	93.3	60.6	88.7	65.9	75.1	44.1	75.0
JAGATSINGHPUR	98.5	94.6	94.4	91.6	85.9	89.1	97.0	86.0	81.8	86.0
JAJPUR	96.4	95.7	91.9	85.7	90.0	78.5	86.6	74.3	82.3	74.3
JHARSUGUDA	97.9	94.4	88.4	87.9	82.1	87.9	93.7	90.4	78.3	90.4
KALAHANDI	82.6	79.3	59.3	77.9	50.7	73.6	68.3	74.7	43.2	73.1
KANDHAMAL	94.2	92.8	69.9	85.9	63.5	81.3	83.4	81.0	51.4	77.9
KENDRAPARA	94.0	98.0	93.8	84.1	89.7	78.1	80.3	77.4	73.5	75.8
KEONJHAR	93.2	97.4	84.7	90.2	75.8	81.1	75.7	77.6	59.5	74.5
KHURDA	97.0	98.2	79.0	81.9	77.4	77.9	83.0	74.6	71.1	74.6
KORAPUT	96.0	93.4	80.6	77.7	78.9	67.1	81.8	65.1	58.9	55.0
MALKANGIRI	96.8	97.7	46.5	87.3	45.8	62.2	81.2	85.6	35.1	61.2
MAYURBHANJA	95.9	83.3	80.4	84.0	73.2	72.1	82.9	68.1	58.2	63.1
NAWARANGPUR	93.7	100.7	62.3	94.8	59.4	80.7	78.7	75.2	38.2	61.1
NAYAGARH	96.9	93.2	72.0	87.3	60.9	85.8	68.0	81.9	49.2	76.2
NUAPARA	89.2	108.5	80.1	99.0	78.6	78.7	67.6	64.1	57.4	59.5
PURI	92.0	94.6	87.1	90.6	78.0	88.3	88.2	79.1	68.0	79.1
RAYAGADA	88.3	87.3	44.5	97.5	42.0	82.1	63.2	79.2	26.8	75.4
SAMBALPUR	98.7	123.7	82.0	103.0	81.8	99.3	86.0	88.8	70.5	87.2
SONEPUR	96.8	105.5	93.7	104.0	87.5	97.9	91.0	103.8	81.4	98.9
SUNDARGARH	97.1	100.3	74.8	89.7	70.7	88.7	88.5	80.3	62.0	79.8
ORISSA	**94.2**	**97.5**	**74.3**	**90.0**	**78.8**	**83.7**	**81.1**	**78.2**	**62.4**	**74.2**

2.4 Summary of the maternal & child health status of Orissa

- More than two third i.e. 70.4% of the total infant deaths take place during one month after birth / neo-natal period (NFHS, 2006).
- Asphyxia, sepsis, hypothermia, low birth weight / prematurity, etc. are the important causes behind neonatal deaths, which necessitate greater health care attention to the newborn during the neonatal stage.
- The MMR status of the state is also very high as compared to India (i.e. 303 maternal deaths in Orissa as against 258 in India) (SRS, 2006).
- Hemorrhage (37%) & sepsis (11%) are the main causes of maternal death, which calls for greater health care attention during delivery and post-partum period.
- Only 37.6% reported receiving of information on pregnancy complications in 2006 (NFHS).
- In 2008, Only 63.7% newborns were breast fed within 1hr of birth as compared to 43.9% during 2004 (DLHS).
- Slightly more than half of the children i.e. 54.5% during 2008 were exclusively breastfed for at least 6months from the time of birth (DLHS).
- Only 12.90% increase in 3+ ANCs and 12.20% increase in TT has been registered from 2004 to 2008 (DLHS).
- IFA consumption is a matter of serious concern with as only 37.6% consumed IFA for 90 days during pregnancy in 2008 (DLHS).

Although Orissa lags behind to India and many other states of the country in some of the key health indicators mentioned above, the State shows signs of improvement and progress in these indicators.

- The IMR of the state has come down to 64.7% in 2006 from 81 in 1999 (NFHS).
- The MMR has also come down to 303 in 2006 from 358 in 2001-03 in Orissa (SRS).
- Significant progress has been also made in the '3+ ANC status' of the state which has now reached to 88.68% of pregnant women who had the same (HMIS FY 2008-09).
- The institutional deliveries have been increased to 75% in 2009-10 (HMIS) from 35.6% in 2006 (NFHS). Majority i.e. 92% of the institutional deliveries conducted in the State were assisted under JSY (April-June, HMIS, 2009).
- The State has also achieved 33% increase (from 52% in 2005-06 to 85% in 2008-09) in the number of children who have been fully immunized (HMIS). Out of the children immunized, 78.2% were given measles, 97.7% BCG, 90% were given three doses of Polio and 83.7% were given three doses of DPT (HMIS, FY 2008-09,).

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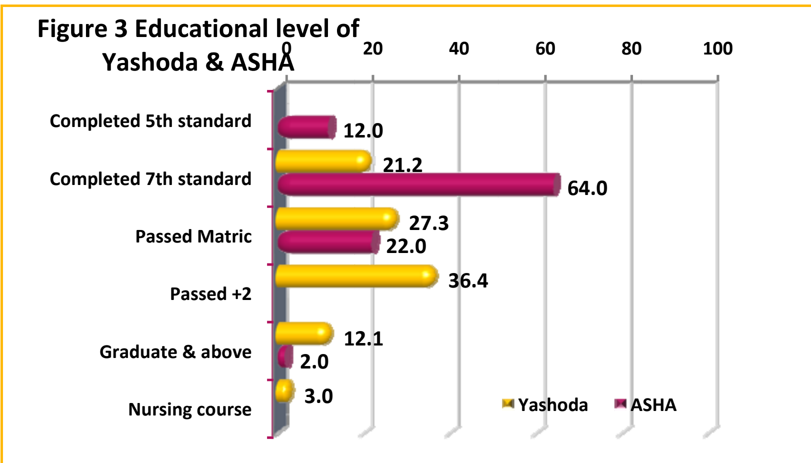
Chapter - III

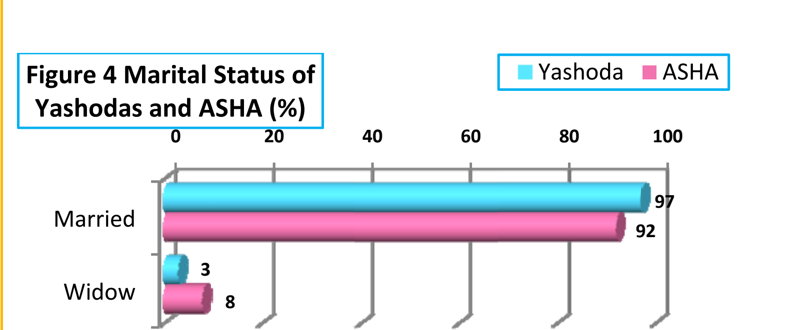
3 Background information of the study respondents

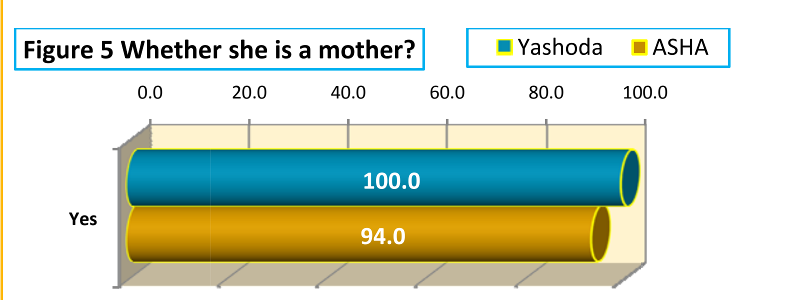
3.1 Yashoda vs. ASHA

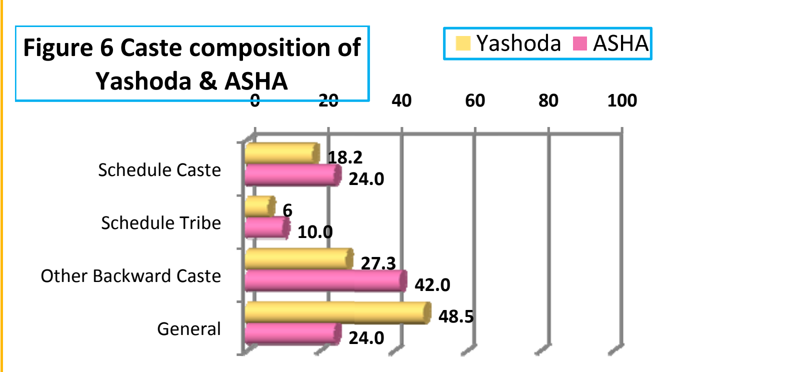
A comparative picture of the background information of the Yashoda vs. ASHA is presented in Figures 3, 4, 5 & 6. According to these figures:

- The Yashodas covered in the study (100%) meet their basic educational qualification of 8th standard.
- Majority i.e. 88% of ASHAs have qualification above 7th standard.
- As far as the marital status is concerned, 97% Yashodas and 92% ASHAs are found to be married. The rest are widows.
- Cent percent Yashodas are found to be mothers where as 94% ASHAs have the same status.
- The caste wise break-up shows that maximum of Yashodas i.e. 48.5% belong to the General castes whereas higher percentage i.e. 42% of ASHAs belong OBC communities.









The study findings also show that majority i.e. 93.9% of Yashodas stay inside the district headquarter for which they have to cover less than 5kms of distance to reach at the DHH. On the other side, maximum i.e. 58% of ASHAs visited the DHH covering a distance of above 11kms.

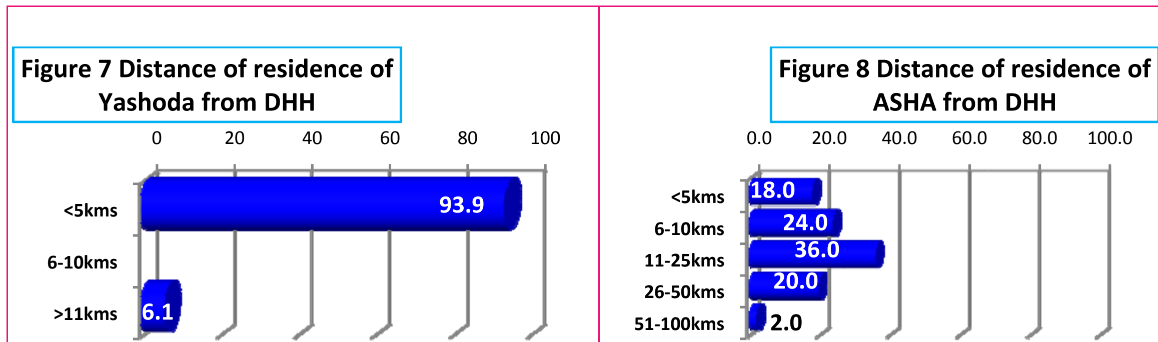


Figure 7 Distance of residence of Yashoda from DHH

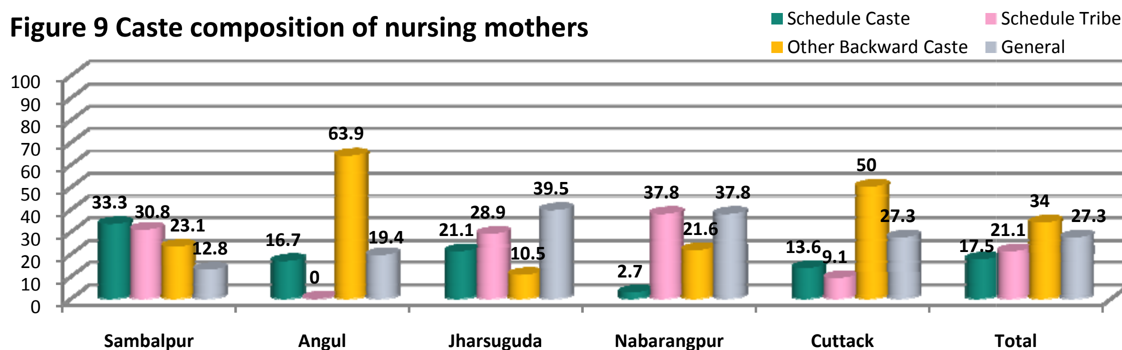
Figure 8 Distance of residence of ASHA from DHH

3.2 Nursing mothers

3.2.1 Caste composition and educational status of nursing mothers

Out of the 194 nursing mothers interviewed in the study, highest i.e. 34% belongs to OBC followed by the next highest i.e. 27.3% belongs to the General Castes, 21.1% ST and 17.5% are from SC community. District wise break-up of caste composition shows that majority of the nursing mothers interviewed in Angul (63.9%) and Cuttack (50%) districts are from the OBC community. In Nabarangpur district, maximum i.e. 37.8% are from the ST community whereas highest i.e. 39.5% interviewed in Jharsuguda are from the General Castes community.

Figure 9 Caste composition of nursing mothers

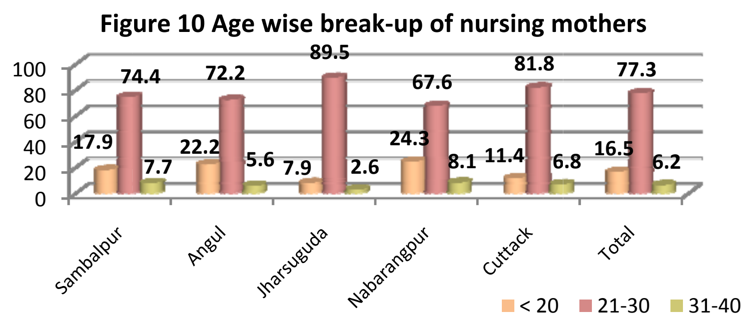


As far as the educational background is concerned, only 12.4% of the total nursing mothers interviewed under the study are found to be illiterate. District wise analysis indicates that the highest percentage (43.2%) of illiterate nursing mothers are from the Nabarangpur district.

3.2.2 Age distribution of nursing mothers

The nursing mothers interviewed under the study are in their prime reproductive age i.e. between the age of 18 to 38 years. However, the district wise age distribution of the nursing mothers shows that

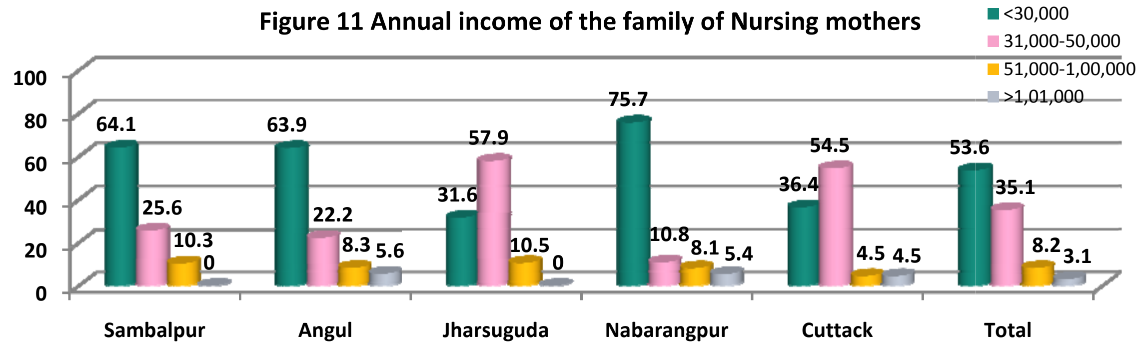
Figure 10 Age wise break-up of nursing mothers



a greater percentage of them in Jharsuguda (24.3%), Angul (22.2%) and Sambalpur (17.9%) districts delivered child at the age below 20 years in comparision to the districts like Jharsuguda (7.9%) and Cuttack (11.4%).

3.2.3 Income / Economic status of the nursing mothers

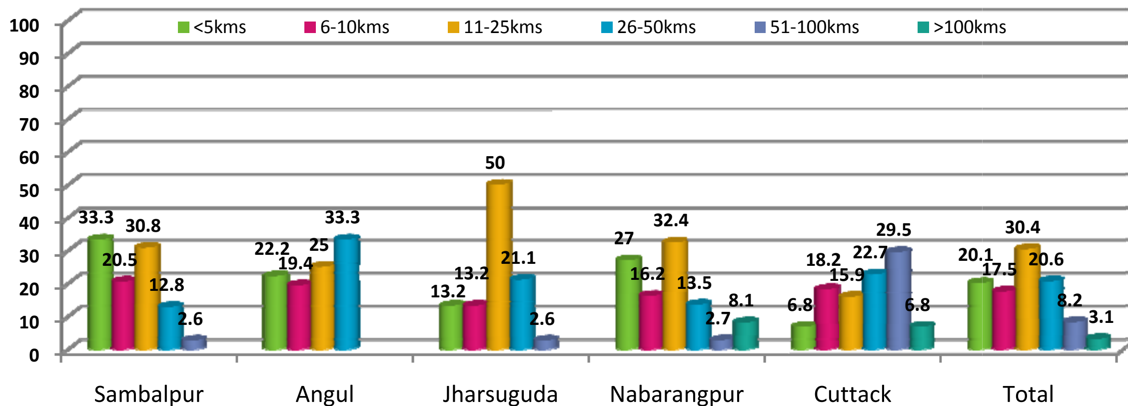
Highest i.e. 53.6% of nursing mothers are from the lower economic strata or belong to the BPL category, having income less than Rs. 30,000/-. Figure 11 also shows that only 11.3% have income above Rs. 50,000/-. In other words, majority of the people those who visit the DHH for delivery belong to the most economically marginalised class of the society.



3.2.4 Distance travelled by the nursing mothers and their mode of transportation

Apart from the economic status, it was also important for the study to know the distance that a preganant woman covers to reach at the DHH for delivery. As evident from the Figure 12, maximum i.e. 51% of nursing mothers travelled the distance ranging from 11 to 50kms to reach at the DHH.

Figure 12 Distance of the residence of nursing mothers from the DHH



Apart from them, there are also 11.3%, who travelled even more than 50kms of distance to visit the DHH for delivery. Better health care facility was found as the main reason for which most of the nursing mothers prefer to visit the DHH, even though they have to travel more distance. Apart from this reason, many of the delivery cases were found to be referred to the DHH by the health providers of the nearby PHCs/CHCs.

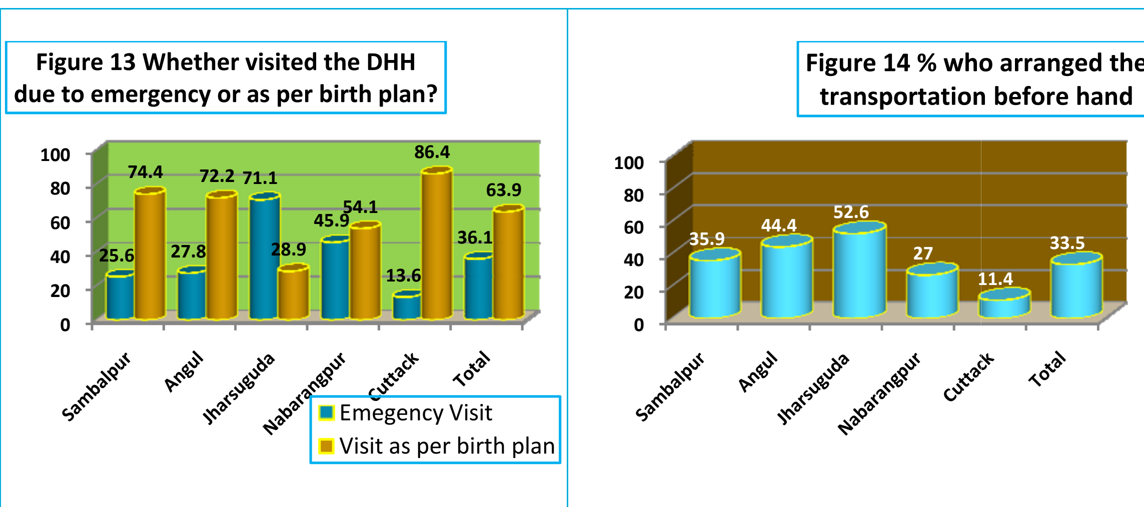


Figure 13 Whether visited the DHH due to emergency or as per birth plan?

Figure 14 % who arranged the transportation before hand

Further it is important to mention here that 63.9% of the nursing mothers had to visit the DHH on an emergency condition (Figure 13). More importantly, 65.5% did not arrange their transportation beforehand to come to the hospital for delivery (Figure 14).

Table 12 Mode of transportation used by nursing mother

	Janani Express	Public Transport	Private Transport	Own vehicle	Total
Sambalpur			97.4	2.6	39
Angul	41.7	2.8	55.6		36
Jharsuguda	18.4	2.6	78.9		38
Nabarangpur	8.1	2.7	83.8	5.4	37
Cuttack		6.8	93.2		44
Total	**12.9**	**3.1**	**82.5**	**1.0**	**194**

The following are some of the reasons for which a very less percentage of people availed the Janani Express. As found during the time of interview that many people are still unaware of the provision of Janani Express and its benefit for which less people availed the same. Although, ASHA is entrusted with the responsibility of making people aware about the Janani Express but she is less interested for the same as the travel allowance meant for her (Rs. 250/- to ASHA under JSY for accompanying the pregnant woman to the hospital) is diverted to meet the fuel expenses of Janani Express.

- *82.5% pregnant women had to bank on private transport to reach at the hospital.*
- *Only 12.9% availed Janani Express.*

Table 13 People arranged the transportation

	Sambalpur	Angul	Jharsuguda	Nabarangpur	Cuttack	Total
ASHA	7.7	50.0	21.1	13.5	6.8	19.1
AWW			2.6			0.5
Family member/friends	92.3	50.0	76.3	83.8	90.9	79.4
Villagers				2.7	2.3	1.0

Table 13 shows that in 79.4% cases, the transportation was arranged by the family members of the pregnant woman. Only in 19.1% cases, ASHA arranged the transportation for bringing the pregnant woman to the DHH.

However, ASHA plays a key role in motivating the pregnant women and their family members for institutional delivery, as 89.7% mothers informed that they were motivated by ASHA for conducting the delivery in a health facility.

Table 14 People motivated for institutional delivery

	Sambalpur	Angul	Jharsuguda	Nabarangpur	Cuttack	Total
ASHA	94.9	100.0	92.1	89.2	75.0	89.7
AWW	7.7	50.0	10.5	10.8	15.9	18.6
ANM	17.9	50.0	5.3	13.5	6.8	18.0
Doctors	12.8	5.6	23.7	10.8	13.6	13.4
Family Member	71.8	41.7	78.9	75.7	61.4	66.0

The study findings also reveal that in 85.1% cases, ASHA accompanied the pregnant woman to the DHH. Including ASHA, an average of 4 persons accompanied the pregnant women which is the main reason behind crowding of the maternity ward, as reported by majority of the service providers in the hospital. Particularly in the Nabarangpur district, the pregnant woman on an average was accompanied by as high as 6 persons to the DHH. In 80% cases, ASHA stayed with the nursing mothers till she leaves the hospital and 72% of them stayed more than 24hrs.

Table 15 Average number of people accompanied

District	Mean	Maximum
Sambalpur	4	7
Angul	4	7
Jharsuguda	4	6
Nabarangpur	6	12
Cuttack	4	11
Group Total	**4**	**12**

3.2.5 Antenatal Care of the nursing mothers

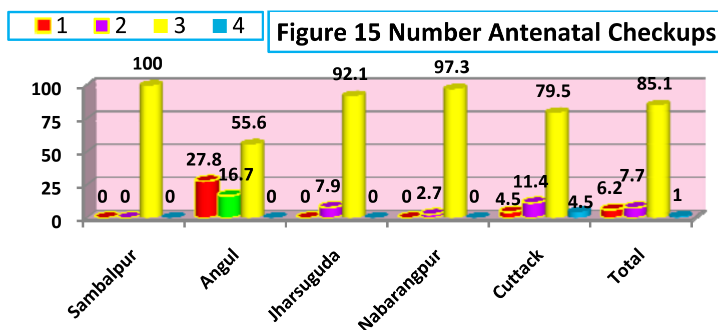
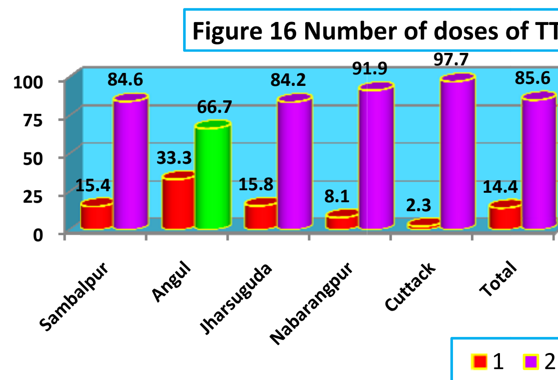


Figure 15 Number Antenatal Checkups

Cent percent of the nursing mothers interviewed in the study were provided with the MCH card at the time of registration of their pregnancy. 99.1% of them were given the JSY card.

Figure 16 Number of doses of TT



Also evident from the figure 15 and 16, a total of 85.1% mothers had '3+ ANCs' and 96.4% had the required doses of TTs (85.6% had 2TTs and 10.8% had the TT booster dose). A total of 83.5% received IFA of 75 to 100 tablets whereas only 67% consumed the same. On an average, each pregnant woman consumed 84 IFA tablets as against 96 tablets received by them.

Table 16 Status of IFA received and consumed

	Sambalpur		Angul		Jharsuguda		Nabarangpur		Cuttack		Total	
	Rec.	Con.	Rec.	Con.	Rec.	Con.	Rec.	Con.	Rec.	Con.	Rec.	Con.
<25	2.6	2.6		5.6	2.6	5.3	5.4	8.1		4.5	2.1	5.2
26-50	12.8	12.8	11.1	27.8		7.9	10.8	13.5	4.5	9.1	7.7	13.9
51-75		7.7	11.1	27.8		2.6		2.7		13.6	2.1	10.8
76-100	74.4	69.2	72.2	38.9	97.4	84.2	75.7	67.6	95.5	72.7	83.5	67.0
>101	10.3	7.7	5.6				8.1	8.1			4.6	3.1

Summary of the Background Information

- All the Yashodas covered in the study meets the basic educational qualification of 8th standard.
- 88% ASHAs have the minimum educational qualification of 7th standard.
- 58% ASHAs came to the DHH by covering more than 11kms of distance.
- Maximum of the people those who visit the DHH for delivery belong to the BPL category (53.6% have less than Rs. 30,000/- income per annum).
- 77.3% of the delivery cases were in the age group of 21 to 30 years.
- 34% of nursing mothers belong to OBC followed by 27.3% GC, 21.1% ST and 17.5% SC community.
- 64% visited the DHH on an emergency condition & 66.5% did not arrange their transportation beforehand.
- Hardly 13% availed the Janani Express.
- 85.1% were accompanied by the pregnant woman to the DHH.
- Including ASHA, an average of 4 persons accompanied the pregnant women to the DHH for delivery.
- Around 86% had 3+ ANCs and 96.4% had required doses of TTs (85.6% had 2TTs and 10.8% had the TT booster dose).
- A total of 83.5% received IFA of 75 to 100 tablets whereas only 67% consumed the same.
- On an average, each pregnant woman received 96 IFA tablets however, only 84 tablets were consumed.

***

4 Impact of Yashoda Intervention

The study findings presented in this chapter have been structured into the following sections:

- Level of engagement of Yashoda and a comparison with the Non-Yashoda district
- Impact of Yashoda

4.1 Level of engagement of Yashoda

Before actually getting into the impact made due to the Yashoda intervention, an attempt has been made here to assess the level of engagement of the Yashodas in the DHH. The perspectives given by Yashodas and other key stakeholders on this are analyzed and presented in this section of the report.

4.1.1 Shift timing of Yashoda

In order to provide 24hrs of service and care to the mother and the newborn, the Yashodas are divided and deployed in three different shifts viz. morning, day and night shift. The time period fixed for each shift differs from shift to shift which is done in taking into account the work load in the respective shift. As reported by the Yashodas, the workload especially in the morning shift i.e. between 8am to 2pm increases two fold in comparison to the day and night shift.

Shift Timings

- **Morning**: 8am to 2pm (6hrs)
- **Day**: 2pm to 10pm (8hrs)
- **Night**: 10pm to 8am (10hrs)

4.1.2 Beds per Yashoda

Beds Per Yashoda

- **Sambalpur**: 7 beds
- **Jharsuguda**: 7 to 9 beds
- **Angul**: 5 to 9 beds

At present, the DHH of Sambalpur has provision of 27 beds, Jharsuguda has 21 beds and Angul has 20 beds in the maternity ward of the DHH. But due to the increased influx of delivery cases, these beds always remain occupied. Many a time, due to the insufficient beds the nursing mother and the newborn have to manage on the floor of the maternity ward. Although the number of beds has been increased as against the sanctioned beds for the maternity ward (e.g. 27 beds have been put against 14 sanctioned beds in Sambalpur DHH), still it is insufficient to accommodate all the delivery cases.

Currently, one Yashoda on an average have to look after 7 beds in Sambalpur, 7 to 9 beds in Jharsuguda and about 5 to 9 beds in Angul district depending on the case load on that particular day.

4.1.3 Caseload on Yashodas

The study has made an attempt here to calculate the average daily case load by taking into account the total number of delivery cases managed by respective DHH in a month (presented in the box).

According to the same, the average number of cases managed per day by the Yashodas is 15, 9 and 10 in Angul, Sambalpur and Jharsuguda DHH respectively. However, the same cannot be considered to know the actual case load on Yashodas, as the cesarean and other difficult delivery cases stay more number of days (as high as 8 to 9 days) in the hospital than the normal delivery cases. Thus, the number of beds managed by each Yashoda presented in the earlier section would give better clarity to know the actual case load on the Yashodas.

Average Daily Case Load

- **Sambalpur**: 10 mothers per day (282-310 per month)
- **Jharsuguda**: 9 mothers per day (240 - 282 per month)
- **Angul**: 15 mothers per day (416 - 456 per month)

4.1.4 Knowledge of Yashodas on their roles & responsibilities

Except few job responsibilities (e.g. putting identification tags, initiate birth registration and keep drugs ready before delivery), the Yashodas (above 80%) have knowledge on most of their jobs. During the interaction with other stakeholders like the nursing mothers, Staff Nurse and Doctors across all the three districts, it clearly came out that the jobs like 'birth registration' and 'keeping drugs ready prior to the delivery' are hardly undertaken by the Yashodas (details are given in the following sections).

90% to 100% Yashodas have knowledge on:

- Collect information on ANC
- Assess vital signs
- Provide follow-up information
- Inform family members on health care
- Preparation of Bed
- Drying & wrapping baby
- Assist in registration
- Breast feeding (within 1hr)
- Ensure BCG
- Ensure OPV
- Counsel mothers
- Motivate mother for 48hr retention

80% to 90% Yashodas have knowledge on:

- Food arrangements
- Ensure cleanliness
- Take weight of baby
- Clean newborn
- Assist mothers in JSY
- Cord care
- Check crowd in the ward
- Receive newborn

50% to 60% Yashodas have knowledge on:

- Put identification tags
- Initiate / Fill-up birth registration form
- Keep drugs ready

4.1.5 Response of nursing mothers on the contact with Yashoda and other providers after reaching the DHH and services received from them

In order to know the actual jobs undertaken or services provided by the Yashodas, the study interviewed the nursing mothers along with their attendants. The response of the nursing mothers

Figure 17 Contact with Yashoda after reaching the DHH

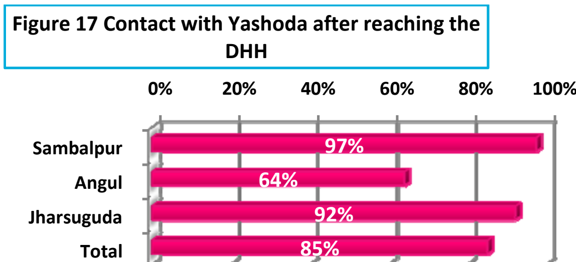


Table 17 Contacts with the health providers after the pregnant women reached at the DHH in the Non-Yashoda intervened districts

District	Nurse	Doctor
Nabarangpur	100.0%	100.0%
Cuttack	100.0%	88.6%
Total	**100.0%**	**93.80%**

on the various services received (particularly which are supposed to be delivered by the Yashodas as per their job responsibilities) are presented in this section.

Figure 17 shows, 85% of nursing mothers met Yashoda after reaching the hospital. The study team during the data collection in Yashoda districts observed that the pregnant woman invariably comes in contact with the Yashoda as well as the Staff Nurse after reaching the hospital whereas, in the Non-Yashoda districts they first come in contact with the Staff Nurse (100%) and then Doctors (93.8%) after reaching the hospital.

In the first contact with the service providers, the various information that were asked to the pregnant women are presented in Table 18. As clear from the same that the information relating to ANC, TT, etc. were mainly gathered by the Staff Nurse and the Doctors in both Yashoda & Non-Yashoda districts. However, relatively less percentage of Staff Nurse and Doctors were engaged in collecting the same information in the Yashoda district as there is provision of additional manpower like Yashodas in the DHH.

Table 18 Information asked to the Pregnant women after reaching DHH

	Yashoda	Staff Nurse		Doctors	
	Yashoda District	Yashoda District	Non-Yashoda District	Yashoda District	Non-Yashoda District
ANC Check-ups	38.5%	72.1%	91.4%	53.6%	71.8%
TT	29.2%	70.3%	90.1%	48.5%	69.2%
Pregnancy Complications	30.2%	55.0%	33.3%	77.3%	44.9%
JSY Card	54.2%	7.2%	8.6%	1.0%	
MCH Card	54.2%	13.5%	3.7%	6.2%	

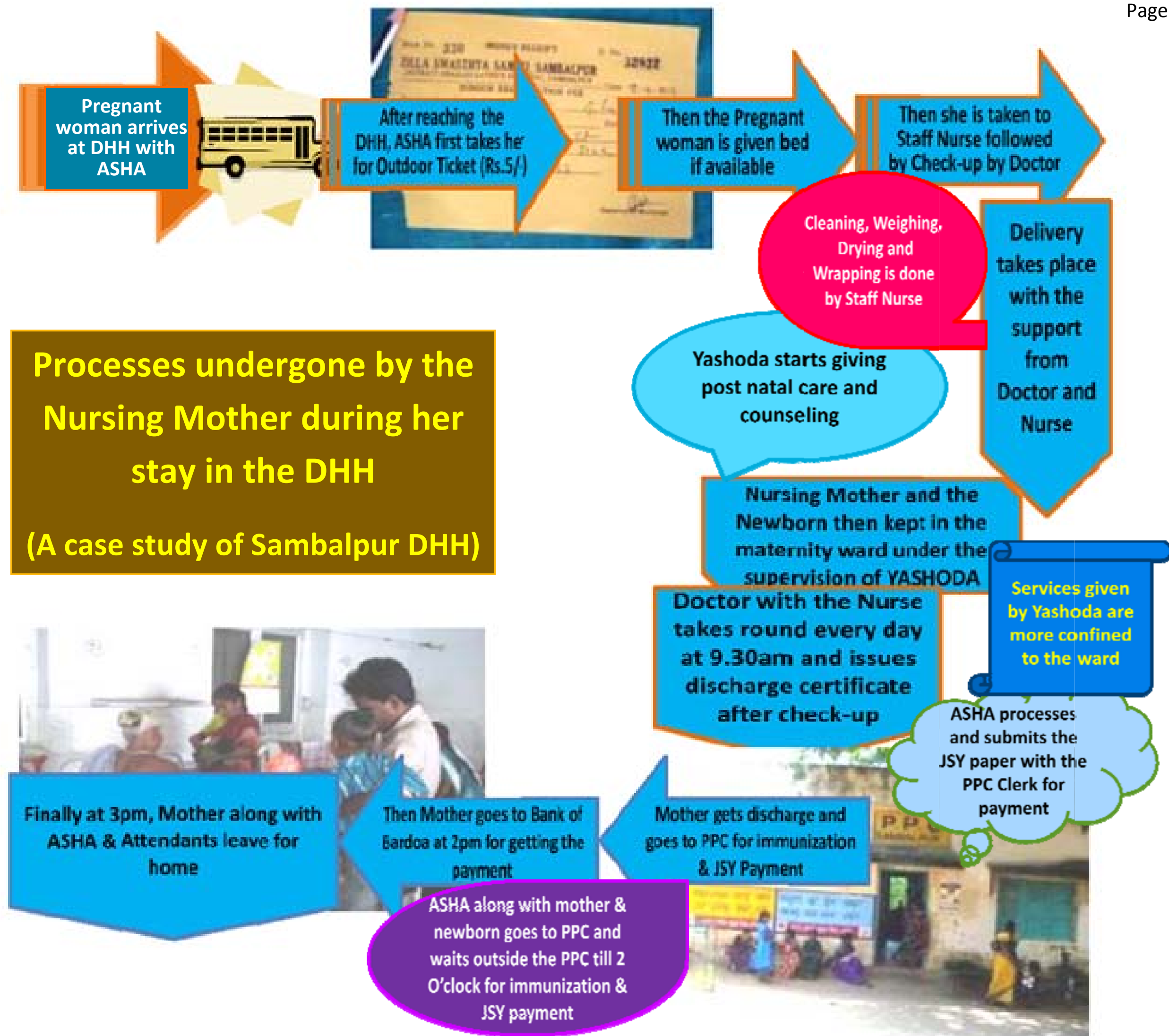
After initial contacts with the providers, the various check-ups that were carried out by the different providers in the Yashoda and Non-Yashoda districts are given in the Table 19. It shows that the Yashodas have no role in health check-up since they are non-clinical staffs. Further, it is also evident from the same table that there is no significant difference found between the Yashoda and Non-Yashoda districts with regard to the Staff Nurse and Doctors undertaking the various check-ups of pregnant woman.

Table 19 Check-ups / Tests Done by the different providers

	Staff Nurse		Doctors	
	Yashoda District	Non-Yashoda District	Yashoda District	Non-Yashoda District
BP Check-up	73.9%	74.1%	83.5%	85.0%
Abdomen Check-up	82.9%	88.9%	87.6%	91.7%
Routine Blood Test	9.9%	21.0%	13.4%	20.0%
Ultrasound	5.4%	8.6%	26.8%	41.7%
No Check-up	13.5%	7.4%	5.2%	8.3%

Before knowing the services provided by the Yashodas in the DHH, it would be appropriate to understand the sequence of key processes that the nursing mothers normally undergo since the time

she reaches at the DHH and till she leaves the hospital. A case study on Sambalpur DHH is presented hereunder.



The case study gives a clear picture of the roles played by various service providers including the Yashodas and ASHAs in the DHH of Sambalpur. That also remains more or less same in other Yashoda districts covered in the study. Table 20 briefly indicates that,

- ***Yashoda's engagement with regard to pre-delivery services like paper work, food and drugs arrangement is found almost negligible as only 6.2%, 14% and 18.7% nursing mothers reported the same (ASHA & Family members of mother were found taking care of the same)***
- ***There is no staying arrangements for the attendants, thus Yashoda has no role in this.***

Table 20 Pre-delivery Services received by mothers (%) after reaching the DHH

Services	Whether received the services?	Who Provided the Service?				
		Yashoda	Staff Nurse	ASHA	Family Members	Sweeper
Preparation of bed	99.1	**98.2**	0.9	17.7	0.9	
Cleanliness of the ward	100.0	**78.8**		1.8		80.5
Arrangement of foods for mother	93.8	**14.0**		48.6	85.0	
Paper work done for you	100.0	**6.2**	37.2	73.5	2.7	
Arrangement of drugs before delivery	94.7	**18.7**	11.2	53.3	72.0	
Staying arrangements for attendants	0.0					

The jobs that require the Yashodas to go outside the maternity ward e.g. arranging foods & drugs, paper work, etc. are normally not done by her, as Yashoda's movement outside the ward gets restricted due to some key responsibilities entrusted on her like, the assessment of the vital signs & complications of the newborn and the nursing mother. In such case, ASHA and the family attendants are of great support to the nursing mothers in undertaking these works.

Table 21 Pre-delivery services received from different providers in the DHH

	Yashoda District	Non-Yashoda District
Bed preparation	Yashoda (98.2%) ASHA (17.7%)	Staff Nurse (54.7%) ASHA (46.9%) Family Member (28.1%)
Cleanliness	Sweeper (80.3%) Yashoda (78.8%)	Sweeper (100%)
Paper Work	ASHA (73.5%) Staff Nurse (37.2%)	Staff Nurse (66.7%) ASHA (65.3%)
Arrangement of drugs	Family Member (72%) ASHA (53.3%)	Family Member (72.6%) ASHA (43.8%) Staff Nurse (37%)
Staying arrangements of attendants	No one	No one

In the non-Yashoda districts, the pre-delivery services are provided by the Staff Nurse and / or ASHA whereas, in the Yashoda districts the same are mainly delivered by the Yashodas and / or ASHAs (Table 21).

The status of the post-partum care services presented in Table 22 indicates the following:

- ***Cord care, drying & wrapping, breast feeding and assessment of vital signs are the important services provided by Yashoda (ASHA assists in breast feeding).***
- ***Identification tags given to the baby is hardly practiced.***
- ***BCG & OPV are given by the ANM attached to the PPC, so the Yashodas hardly play any role (ASHA accompanies the nursing mother to PPC for immunization in Sambalpur & Jharsuguda district).***

Table 22 Services received by nursing mothers with regard to post-partum and newborn care in the DHH

Services	Whether received the services?	Who provided the service?		
		Yashoda	Staff Nurse / ANM	ASHA
Cord care of the newborn	99.1	**98.2**	0.9	31.9
Assessment of the vital signs	74.3	**96.4**	6.0	23.8
Identification tags given to the baby	25.7	**93.5**	3.2	9.7
Measurement of weight	100.0	**72.6**	39.8	1.8
Cleaning of the newborn	100.0	**80.5**	5.3	2.7
Drying & wrapping of the baby	99.1	**100**	5.4	32.1
Breast feeding (within 1hr)	100.0	**98.2**	0.9	53.1
BCG dose given to the baby	90.3	**2.0**	70.6	28.4
OPV dose given to the baby	94.7	**0.9**	70.1	32.7

The constraints that are faced by the nursing mothers with regard to the Zero dose immunization in both Yashoda and Non-Yashoda districts are as follows:

- The Zero dose immunization is not administered in the maternity ward of the DHH (Sambalpur & Jharsuguda).
- BCG is only given on Wednesday and Friday.
- Polio is administered on every day except Sundays and other Government holidays.
- So, those mothers given discharge from the DHH on other than the scheduled day have to return to their village without immunizing the newborn.
- For immunization, the nursing mothers with the newborn have to wait long hours outside the PPC (Sambalpur).

Table 23 Post-delivery services received from different providers in the DHH

	Yashoda District	Non-Yashoda District
Cord care	Yashoda (98.2%) ASHA (31.9%)	Staff Nurse (68.8%) ASHA (31.3%), Family Member (30%)
Assessment of vital signs	Yashoda (96.4%) ASHA (23.8%)	Staff Nurse (100%)
Measurement of weight	Yashoda (72.6%) Staff Nurse (39.8%)	Staff Nurse (100%)
Drying & wrapping of baby	Yashoda (100%)	Staff Nurse (87.2%) ASHA (46.2%)
Immediate & exclusive breast feeding	Yashoda (98.2%) ASHA (53.1%)	Staff Nurse (76.3%) ASHA (36.3%)
BCG & OPV	PPC ANM (70.6%)	PPC ANM (100%)

The study findings also show that the staff nurse plays a major role in providing the required post-delivery care or services in the non-Yashoda districts whereas, the same services are mainly provided by the Yashodas in the Yashoda-intervened districts. The role of ASHA and their degree of involvement with regard to the post-delivery care in both Yashoda & Non-Yashoda districts remains more or less same.

Table 24 Counselling / Advise received by the nursing mothers in the DHH

Services	Whether received the services?	Who provided the service?			
		Yashoda	Staff Nurse / ANM	ASHA	Doctors
24-48hr retention	95.6	**96.3**	1.8	69.7	12.8
Advise on breast feeding	100.0	**91.2**	54.9		
Advise on nutrition of mother	98.2	**89.2**	1.8	13.5	3.6
Information on immunization	98.2	**73.2**	16.1	61.6	
Steps to take during illness of baby	94.7	**84.3**	0.9	59.3	0.9
Advise on prevention of RTI/STI	0.9				
Advise on family planning	57.5	**84.8**		18.2	
Advise to access health institutions	96.5	**79.3**	0.9	64.0	

Other key responsibilities entrusted on Yashodas are to counsel the nursing mothers to stay 48hrs in the hospital and advise her on various postnatal and newborn-care needs. Table 24 brings out the following key findings with regard to the counseling and advice received by the nursing mothers.

- **More emphasis by Yashoda to breast feeding, 48hr retention, nutrition of mother and immunization**
- **ASHA also emphasizes on retention and immunization**
- **Comparatively, less emphasis is given to family planning advise**
- **Hardly any body advised on RTI/STI**

Apart from knowing the status of various pre-delivery, post-natal and counseling services received by the nursing mothers, the study also made an attempt to know the availability, acceptability, accessibility, adequacy and quality of the services rendered by various service providers in Yashoda and Non-Yashoda districts (Table 25). The table brings out the following key findings:

- Both Yashoda and ASHA in the Yashoda-intervened districts were rated as 'Very Good' (five points) by the nursing mothers.
- The services provided by Doctors in both the category of districts were rated as 'Average'.
- The Staff nurses in the non-Yashoda districts were regarded as 'Good' whereas, in the Yashoda districts they were rated as 'Average'.
- ASHA was found to be more acceptable and accessible to the nursing mothers in the DHH as compared to the Yashodas.
- The quality of the services provided by ASHA is regarded as better than the Yashodas.
- Both in the Yashoda and Non-Yashoda districts, the Doctors and the Staff Nurses are less accessible and the services rendered by them were regarded by the nursing mothers as inadequate.

Table 25 Rating of services providers by nursing mother in Yashoda and Non-Yashoda districts

Rating	Yashoda	ASHA		Staff Nurse		Doctor		Administrative Staff	
		Yashoda	Non-Yashoda	Yashoda	Non-Yashoda	Yashoda	Non-Yashoda	Yashoda	Non-Yashoda
Availability	100.0%	87.6%	77.8%	99.1%	98.8%	81.4%	88.9%	72.6%	85.2%
Acceptability	90.3%	98.2%	85.2%	70.8%	85.2%	77.0%	80.2%	50.4%	77.8%
Accessibility	86.7%	92.9%	81.5%	44.2%	49.4%	25.7%	27.2%	12.4%	35.8%
Adequacy	93.8%	79.6%	79.0%	52.2%	45.7%	38.1%	37.0%	16.8%	38.3%
Quality	87.6%	92.9%	82.7%	83.2%	80.2%	85.8%	87.7%	69.9%	76.5%
Average Rating	5.0	5.0	4.0	3.0	4.0	3.0	3.0	2.0	3.0
		5.0 – Very Good, 4.0 – Good, 3.0-Average, 2.0 – Poor, 1.0 – Very Poor							

4.1.6 Response of the other providers on the services extended by Yashoda

Response of Staff Nurse

- **Cent percent agreed on the services rendered by Yashodas like:**
  - **Preparing bed**
  - **Ensuring cleanliness**
  - **Avoid ward crowding**
  - **Cord care**
  - **Assessing vital signs**
  - **Breast feeding**
  - **Counseling**
- **They see negligible/no role of Yashodas in:**
  - **Gathering ANC information (0%)**
  - **Registration (33.3%)**
  - **Drug arrangements (16.7%)**
  - **Identification tags to baby (33.3%)**
  - **BCG and OPV (50% & 33.3%)**

The responses of the Staff nurse and Doctors on the services provided by the Yashodas are presented in the box given here. According to more than 90% of the service providers, the work pressure on them has been greatly reduced after the deployment of the Yashodas in the DHH.

Response of Doctors

- **Majority of the doctors agreed Yashodas rendering services like:**
  - **Preparing bed (83.3%)**
  - **Ensuring cleanliness (100%)**
  - **Avoid ward crowding (83.3%)**
  - **Assessing vital signs (83.3%)**
  - **Breast feeding (100%)**
  - **Counseling (83.3%)**
- **They see negligible/no role of Yashodas in:**
  - **Gathering ANC information (33.3%)**
  - **Identification tags to baby (0%)**
  - **Taking weight of baby (33.3%)**

Table 26 Service providers' rating of the quality of services provided by Yashodas

Indicators	Rating	Sambalpur	Angul	Jharsuguda	Total
Pre-delivery service	Average	50.0%		75.0%	41.7%
	Good	50.0%	100.0%	25.0%	58.3%
Postnatal & newborn care	Average	50.0%		25.0%	25.0%
	Good	50.0%	100.0%	75.0%	75.0%
Counseling	Average	100.0%			27.3%
	Good		100.0%	100.0%	72.7%
Motivating mother on 48hrs retention	Average	50.0%		50.0%	42.9%
	Good	50.0%	100.0%	50.0%	57.1%

The services provided by the Yashodas with regard to counseling (72.7%) and post-natal care (75%) were rated by majority of the providers as 'Good'. The role played by the Yashodas with regard to motivating mothers for 48hr retention (57.1%) and providing pre-delivery services (58.3%) were rated as 'Good' by relatively less percentage of the providers.

4.2 Impact of Yashoda on key health indicators

As already mentioned in the first chapter of the report, the Yashoda intervention has been launched with the following four key health outputs in mind.

a) % increase in the mothers initiating breast feeding within one hour
b) % increase in newborn being weighed
c) % increase in newborn being immunized (BCG & polio)
d) % mothers staying at least 48 hrs at the facility.

In order to assess the impact / changes in each of these indicators, the study compared the current status of the same with the status in the beginning of Yashoda intervention. Thus, the data reported in the first monthly report of Yashodas in July 2008 are compared with the current data reported in the month of August 2009. However, the data reported by Yashodas in the first monthly report is found to be inadequate as the Yashodas were then totally new to the intervention and reporting requirements. Nonetheless, the study has compiled all the relevant data which are available and tried to analyze the changes made against each of the above indicators. But, it is important to mention here that the changes taken place in the said health indicators cannot be exclusively depicted as the contribution of Yashodas. As already presented in the previous section of this chapter, various other service providers also contribute and influence the outcomes or the results of the newborn and postpartum care services rendered in the DHH.

4.2.1 Initiation of breast feeding within 1hr

According to Table 27, there appears to be no change in the percentage of nursing mothers initiated breast feeding within one hour (from July'08 to August'09). While cent percent achievement in Angul has been made in the initiation of the breast feeding within 1hr, the same has been declined by 4% in the DHH of Sambalpur and Jharsuguda districts.

Table 27 Impact on initiation of breast feeding within 1hr in the DHH

	Base Status			Current Status		
	July' 08			August' 09		
	Live Birth	Breast feeding within 1hr	%	Live Birth	Breast feeding within 1hr	%
Sambalpur	190	188	98.9	310	295	95.2
Jharsuguda	169	167	98.8	255	241	94.5
Angul	402			446	446	100
Total	**761**	**355**	**98.9**	**1011**	**982**	97.1

Source: Yashoda Monthly Report

4.2.2 Weighing of the newborn

Although, cent percent achievement has been made in the number of babies weighed after birth, the comparative status of the same with the base data (98.8% in July 08) does not show a significant improvement.

Table 28 Impact on weighing of the newborn

	Base Status			Current Status		
	July' 08			August' 09		
	Live Birth	Weighed	%	Live Birth	Weighed	%
Sambalpur	190	190	100.0	310	310	100.0
Jharsuguda	169	169	100.0	255	255	100.0
Angul	402	393	97.8	446	446	100.0
Total	**761**	**752**	**98.8**	**1011**	**1011**	**100.0**

Source: Yashoda Monthly Report

4.2.3 '0' Dose immunization

Table 29 Impact on '0' dose immunization

	Base Status						Current Status					
	Live Birth	BCG	%	"0" Polio	%		Live Birth	BCG	%	"0" Polio	%	
Sambalpur	290	269	92.8	250	86.2	Mar'09	310	252	81.3	266	85.8	Aug'09
Jharsuguda	236	144	61.0	97	41.1	Oct'08	255	239	93.7	255	100.0	Aug'09
Angul	456	380	83.3	380	83.3	Oct'08	446	442	99.1	446	100.0	Aug'09
Total	**982**	**793**	**80.8**	**727**	**74.0**		**1011**	**933**	**92.3**	**967**	**95.6**	**Aug'09**

Source: HMIS and Monthly report of Yashoda

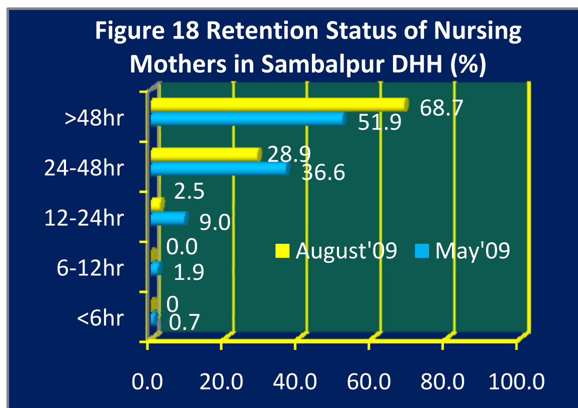
Against the base status, at least 11.8% increase in BCG and 21.6% increase in Zero dose polio has been registered. Notable increase in the Zero dose Polio (32.7% increase) and BCG (58.9%) has been recorded in the DHH of Jharsuguda district. However, it is important to note here that the same has been declined (11.5% in BCG and 0.4% in Polio) in the DHH of Sambalpur district.

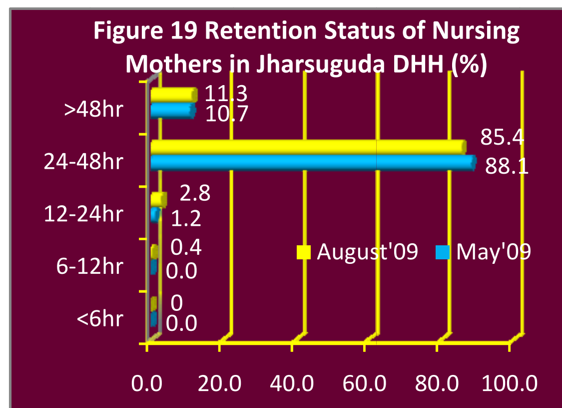
4.2.4 48hr retentions of nursing mothers

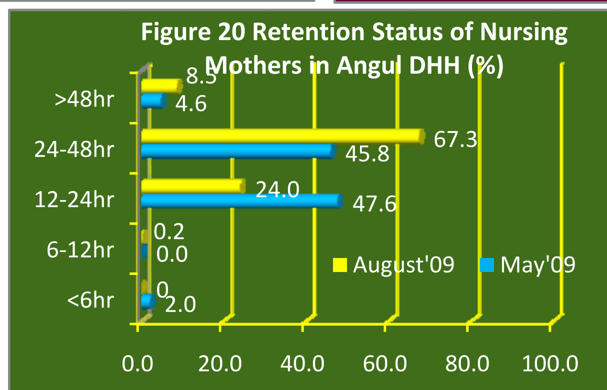
The 48hr retention status of the nursing mothers in Sambalpur, Jharsuguda and Angul DHH is presented in Figures 18, 19 and 20 respectively which depict the following key findings:

- Highest i.e. 68.7% of nursing mothers in Sambalpur were retained above 48hrs. In contrary to Sambalpur, only 11.3% in Jharsuguda and 8.5% in Angul were retained above 48hrs.
- From May to August 2009, a total increase of 16.8% in Sambalpur, 8.5% in Angul and only 1% in Jharsuguda has been achieved.

- The average retention time in Sambalpur works out to be around 2 days (44hrs) as compared to only 1 day in Angul (25hrs) and Jharsuguda (33hrs) for the normal deliveries.







The primary data collected on this brings out the following key findings for normal deliveries in the Yashoda and Non-Yashoda districts.

- **In Sambalpur, the average retention time is almost 2days**
- **Angul & Jharsuguda could only retain mothers for 1 day**
- **Average retention time in a Non-Yashoda district like Nabarangpur is below 24hrs (1 day)**
- **However in Cuttack, most of them are referral cases hence retention time is much above 48hr**

More details on the average retention time of nursing mothers (for normal and cesarean delivery cases) in the Yashoda and Non-Yashoda district are presented in Table 30 and 31 respectively.

Table 30 Average Retention time of the nursing mothers in Yashoda district

Districts	Normal Delivery (in hrs)			Cesarean Delivery (in hrs and days)		
	Mean	Maximum	Maximum	Mean	Maximum	Maximum
Sambalpur	44	84	18	209 (9days)	245	192
Angul	25	34	2	221 (9days)	274	176
Jharsuguda	33	82	16	167 (7days)	211	122

Table 31	Average Retention time of the nursing mothers in Non-Yashoda district					
Districts	Normal Delivery (in hrs)			Cesarean Delivery (in hrs and days)		
	Mean	Maximum	Maximum	Mean	Maximum	Maximum
Nabarangpur	22	92	2	182 (8days)	216	28
Cuttack	55	120	8	142 (6days)	312	8

Figure 21 shows the various providers who motivated the nursing mothers for retention. Highest i.e. 85% of nursing mothers were motivated by the Yashodas followed by ASHA (55.8%) and Doctors (53.1%) to stay more than 48hours in the DHH. That means there has been purposeful effort made by the different providers to retain the nursing mothers for more than 48hrs in the DHH. However various constraints were reported by them which pose as the major barriers to achieve the same. The major constraints reported by the Yashodas include lack of bed (54.5%) followed by domestic pressure (39.4%) as the main reasons for low retention.

Figure 21 Mothers who were motivated by Health Providers for 48hr retention

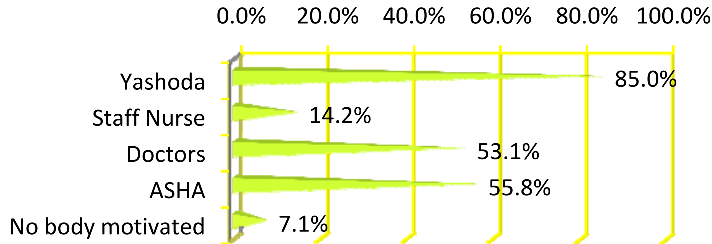
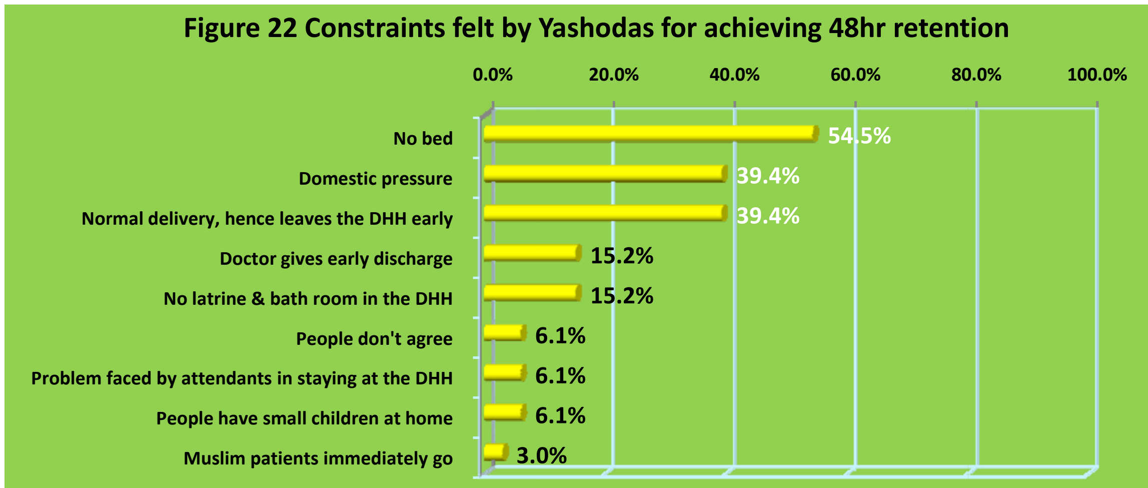


Figure 22 Constraints felt by Yashodas for achieving 48hr retention



Like the Yashodas, majority (i.e. 77.8%) of the other service providers like CDMO / DPM / Staff Nurse / Doctor also reported lack of bed as the main reason behind low retention.

Key barriers for 48hr retention perceived by CDMO/DPM/Nurse/Doctor

- No bed (77.8%)
- Lack of proper staying arrangements for mother (55.6%)
- Lack of proper staying arrangements for attendants (44.4%)

Table 32	Reasons given by mothers for leaving the DHH before 48hrs
Domestic pressure	51.60%
Lack of staying arrangements for mother	35.80%
As decided by the attendant	34.70%
Lack of staying arrangements for attendant	31.60%
Discharge given by the doctor	24.20%
High expenses	8.40%
Lack of proper care & service	2.10%
Un-cleanliness of the environment	2.10%
Normal delivery hence given early discharge	2.10%
More patient	1.10%

The study also made an attempt to know from the nursing mothers about the reason for leaving the hospital before 48hrs (Table 32). Highest i.e. 51.6% said domestic engagement as the measure reason for leaving the hospital. Lack of proper staying arrangements for the mother and the new born were reported by 35.8% and 31.6% nursing mothers respectively. Only 8.4% reported high expenses as the reason for leaving the DHH before 48hrs, which could be because of the cash assistance provided by the Government for institutional delivery under JSY scheme (Table 33 gives details about the average expenses incurred by the nursing mothers for institutional delivery).

Table 33 Average expenses for institutional

	Normal Delivery			Cesarean Delivery		
	Mean	Maximum	Minimum	Mean	Maximum	Minimum
Transportation	374	900	100	500	500	500
Food	430	1,500	50	700	1,000	400
Medicine	783	3,000	170	3,000	5,000	1,000
Pathological	493	2,000	40	2,600	5,000	200
Total	1,752	5,850	400	6,550	11,500	1,600

In brief, while effort has been made by the Yashodas, ASHA, Doctors, etc. to motivate the nursing mothers for retention, various 'push' factors like lack of bed, staying arrangements for mother & attendants, early discharge by doctors, etc. and 'pull' factors like domestic pressure, etc. pose as major challenges in retaining the nursing mothers for more than 48hrs in the hospital.

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Chapter - V

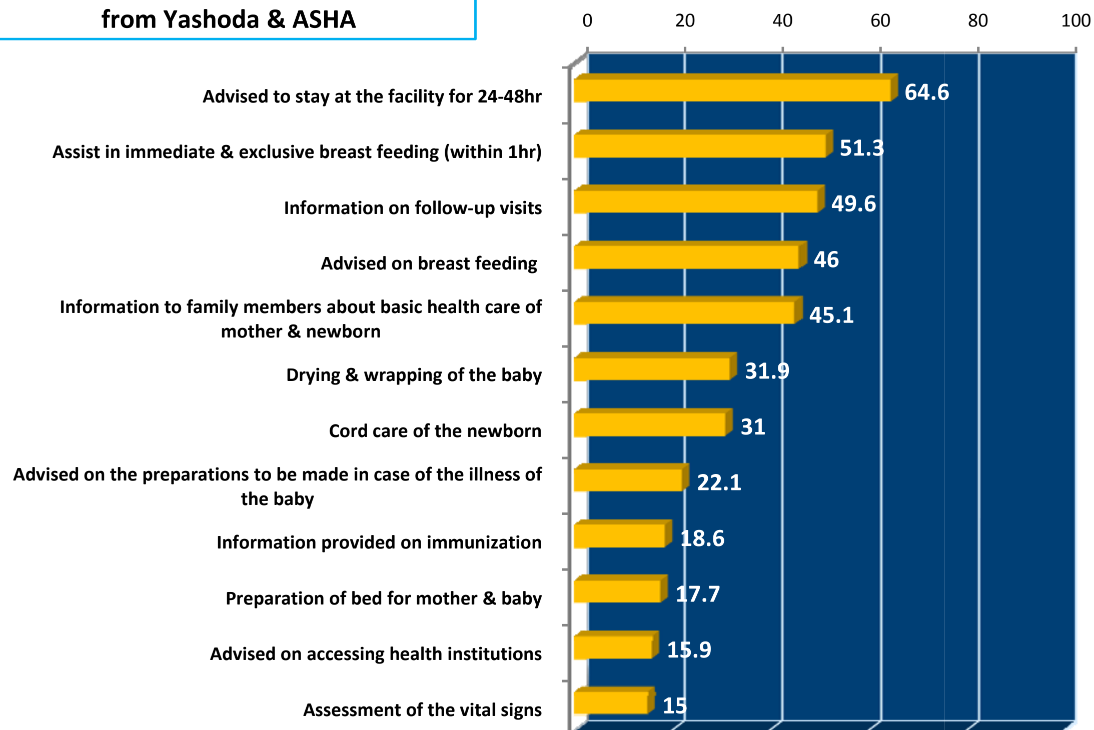
5 Scope of ASHA performing the role of Yashoda

The other important task before the study was to assess the scope of ASHA performing the role of Yashoda. Thus, the response and opinion of the nursing mothers and service providers covered in the study was taken to assess the same. But before presenting it, an attempt has been made here to analyze the role duplication between ASHA and Yashoda in providing the newborn and post-partum care services in the DHH.

5.1 Role duplication between Yashoda and ASHA

The services that were received by the nursing mothers from the Yashoda as well as ASHA are presented in Figure 23. According to them, services such as motivating mothers for 48hr retention; immediate and exclusive breast feeding; providing follow-up information to the nursing mother;

Figure 23 Mothers received same services from Yashoda & ASHA



advising on breast feeding; providing information to the family members about basic health care of the mother and child; drying & wrapping; cord care; etc. were received from the Yashoda as well as ASHA in the DHH. That clearly indicates the role duplication between Yashoda and ASHA in providing key newborn and post-partum care services in the DHH.

Figure 26 also indicates that ASHA apart from Yashoda is extending services in two (viz. motivate nursing mothers for 48hr retention and initiation of breast feeding within 1hr after birth) out of the four key outputs expected from the Yashoda. In rest of the two outputs (viz. Zero dose immunization and weighing of the baby), no role duplication was found between Yashoda and ASHA. While

weighing was mainly done by the Staff Nurse and / or Yashoda, a greater percentage of ASHA was engaged in ensuring zero dose immunization to the newborn in the DHH. In other words, the responses of the nursing mothers indicate that ASHA (except weighing of the baby) is actively involved in three out of the four key outputs expected from Yashodas in the DHH.

In contrast to the responses given by nursing mothers, majority of the service providers do not perceive any role duplication between ASHA and Yashoda in providing the newborn and post-partum care services in the DHH.

- All the 3 DPMs, 2 out of 3 CDMOs and 5 out of 6 Doctors disagree to role duplication between ASHA & YASHODA
- Majority Staff Nurse (4 out of 6) agree to the same

5.2 Scope of ASHA performing the role of Yashoda

As against 41.6% of nursing mothers prefer Yashoda, highest i.e. 58.4% feel that ASHA would be appropriate in delivering the newborn and post-partum care services in the DHH. As far as the reasons are concerned, 57.5% of nursing mothers feel that ASHA would be appropriate since she belongs to her own village. 51.3% think that ASHA can do the follow-up care and 50.4% feel that AHSA knows her better, thus she would be more appropriate for delivering the services in the DHH. The only major reason given in favor of Yashoda was regarding her 24hr availability in the hospital and her proximity with the medical staff.

Table 34 Preference of the nursing mothers between YASHODA & ASHA for health care in the DHH

	ASHA	YASHODA
Response of Mothers	**58.4%**	41.6%

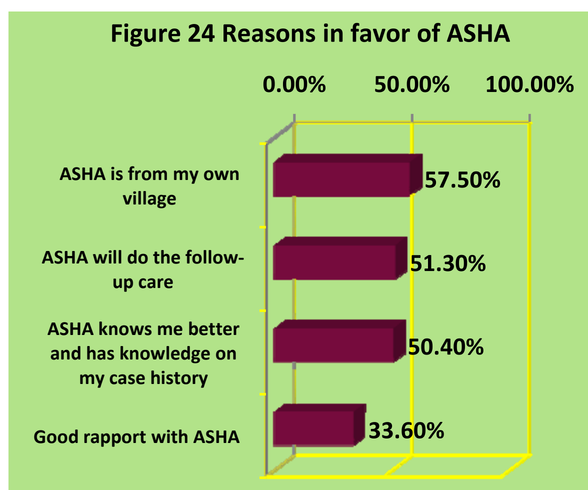


Figure 24 Reasons in favor of ASHA

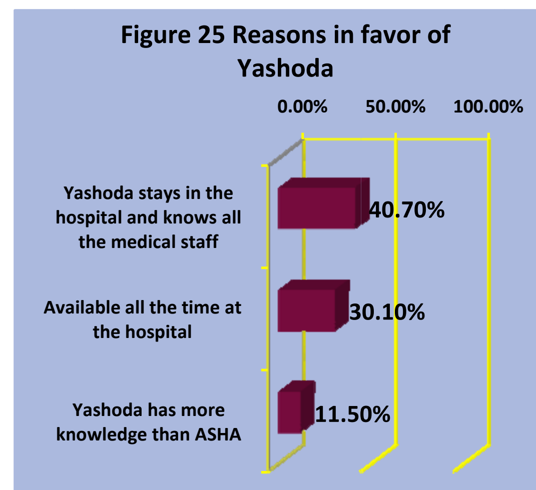


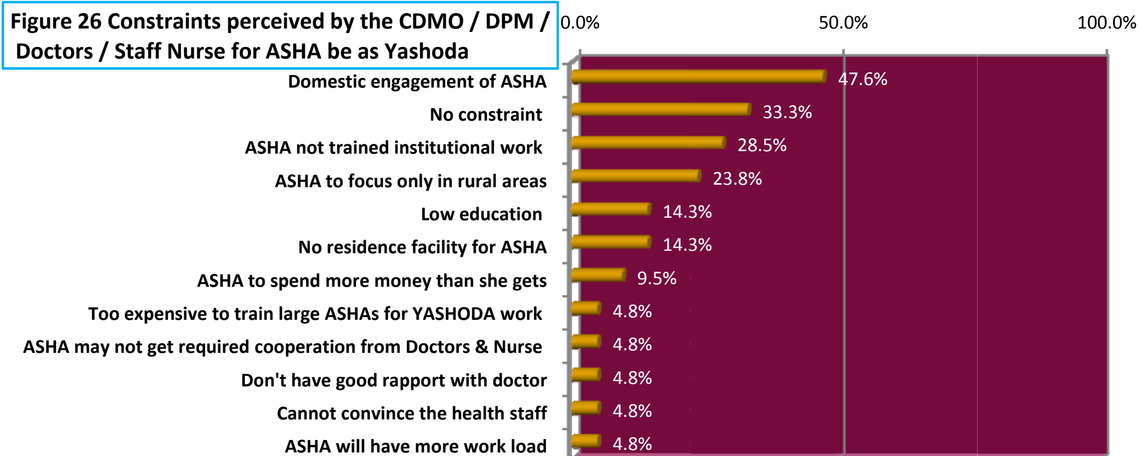
Figure 25 Reasons in favor of Yashoda

When the service providers were asked on this, a mixed kind of response was received from them. Majority of the Doctors (5 out of 6) and half of the Staff Nurse (3 out of 6) interviewed in the study prefer Yashoda to be retained in the DHH whereas, maximum of the CDMOs and DPMs (2 out of 3) feel that ASHA would be more appropriate for providing the newborn and post-partum services in the DHH as compared to Yashoda.

While Yashoda is preferred by majority of Doctors, highest percentage of nursing mother, CDMO and DPM; and half of the staff nurse feel that ASHA would be more appropriate in providing the newborn and postpartum care services in the DHH.

The service providers who did not prefer ASHA perceive constraints like domestic engagement, lack of knowledge to work in the health facility, low education, etc. of ASHA to play the role of Yashoda in the DHH (Figure 26).

Figure 26 Constraints perceived by the CDMO / DPM / Doctors / Staff Nurse for ASHA be as Yashoda



However, despite of the above constraints shared by the service providers, majority of the CDMO, DPM and the Staff Nurse (except the Doctors) agree that ASHA can be provided training to take up the role of Yashoda in the DHH.

The responses that were given by ASHA on taking up the role of Yashoda in the DHH are as follows:

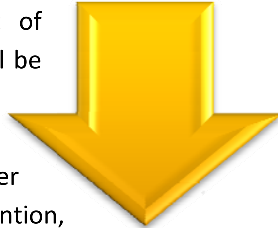
Response of ASHA in taking up the role of Yashoda

- ***83.3% ASHAs said that YASHODAS are doing similar to their work in the DHH.***
- ***100% ASHAs are confident that they can do the jobs done by Yashoda.***
- ***88% feel that that they have the required qualification for the job.***

5.3 Need of capacity building of ASHA in taking up the role of Yashoda

Both Yashodas and ASHAs have been given induction and thematic training. The thematic contents of the training module of both ASHA and Yashoda particularly with regard to providing newborn and post-partum care services remain more or less same. Only difference between them is that, the Yashodas have been provided hands on training in the health facility whereas ASHAs (considering her operational area) have been given on job training in a village set-up. Thus, as rightly mentioned by the providers, ASHA would require hands on training in a health facility to equip her to play the role of Yashodas.

5.4 Cost Benefit Analysis of introducing ASHA in place of the Yashoda



Current Cost (Per DHH Per Month)

Salary of 12 YASHODA:	36,000/-
Salary of 2 DCHS:	12,000/-
Salary of 1 CHS:	12,000/-
Total:	**60,000/-**

Cost wise, the engagement of ASHA in place of Yashoda will be also effective and beneficial to the State. As against Rs. 60,000/- spent per month for Yashoda intervention, only Rs. 18,000/- will be required to manage the delivery of services by ASHA in the DHH. If an additional amount of Rs. 50/- per day is decided to pay ASHA for her food expenses, then the cost will maximum go up to Rs. 53,000/- as against Rs. 60,000/- currently spent on Yashodas in every month.

Proposed Cost (Per DHH Per Month)

Remuneration to 3 DCHC:	**18,000/-**
Extra payment to ASHA (Optional):	35,000/-
(Avg. 350 deliveries per month means x 2 ASHA days per delivery x 50/- per day)	
Total :	**53, 000/-**

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Chapter - VI

6 Summary & Conclusion

The study brings out some relevant findings which would enable the health officials of the State for taking right policy decisions. Out of the four key outputs expected from Yashoda intervention, the study findings show that there have been slender improvements in weighing of the newborn and 48hr retention of the nursing mothers; good improvement in immunization; and no improvement in the breastfeeding status of the newborn. However, the study results do not show that the above changes have been registered exclusively due to the introduction of Yashodas in the DHH. It reveals the significant role of other providers as well.

For example, the weighing of the newborn (according to the study findings) was done by both Yashodas and / or Staff Nurse. Similarly a significant percentage of ASHAs and other providers apart from Yashodas have contributed towards improving the initiation of the breast feeding within 1hr of birth and motivating mothers for 48hr retention. With regard to ensuring zero dose immunization, the role of Yashodas was found almost negligible whereas the MPHWs of the PPC and ASHAs have majorly contributed towards the same. The various responses of the nursing mothers presented in the report clearly indicate about the greater involvement of ASHA in at least three (initiation of breast feeding, 48hr retention and immunization except weighing of the baby) out of the four key outputs expected from Yashodas. In brief, there are also other players apart from Yashodas involved in bringing the impact level outputs expected under Yashoda intervention.

The major constraint that was found with the Yashodas is with regard to their limited engagement / movement outside the maternity ward because of some of the key responsibilities entrusted on her like cord care, drying & wrapping, assessing of vital signs & complications, etc. As a result, some of her other responsibilities e.g. ensure outdoor ticket, check-up by doctor, arrange drugs, assist in pathological tests, receiving baby from the labor room, etc. are done by ASHA and / or family attendants. Similarly, the support required with regard to the immunization, paper works for JSY, etc. are provided by ASHA. So that could be the reasons for which majority of the nursing mothers feel that ASHA would be suitable in rendering the newborn and postpartum care services in the DHH.

ASHA is also preferred by majority of the managerial staffs like CDMO and DPM and half of the Staff Nurses, whereas, only maximum of Doctors are in favor of Yashoda. Nevertheless, majority perceive that ASHA could be provided training to take up the role of Yashoda in the DHH. More importantly, ASHAs themselves feel confident that they can take up the role of Yashoda.

The cost benefit analysis carried out in the study also suggests that ASHA's engagement in comparison to Yashoda would be cost wise more beneficial to the State.

Thus, it would be appropriate if the existing human resource like ASHAs may be effectively and strategically deployed to ensure 48hr retention of nursing mothers and newborn care in the hospital instead of replicating the Yashoda intervention in other hospitals of the State and spending huge resources on the same. However, irrespective of the engagement of Yashoda or ASHA, it is essential for the State to strengthen the infrastructural provisions e.g. rooms, beds, etc. in the maternity ward of the hospital for improving the retention of the nursing mothers and newborn care services.

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Chapter - VII

7 Suggestions

7.1 Suggestions by nursing mothers and service providers

- Infrastructural provision in the DHH:
  - Sufficient bed (65.5%) and staying arrangements (36.1%) for the attendants were suggested by maximum of the nursing mothers.
  - The key suggestions given by the service providers also include adequate provision of beds and rooms for the maternity ward. Majority of them also suggested for additional clinical manpower like doctors, staff nurses, etc. in the DHH.
  - 61.9% health providers suggested for construction of an ASHA Gruha in the premise of the DHH. Majority of ASHAs (72%) also suggested for construction of ASHA Gruha.
  - 33.3% of them suggested for water facility and toilet in the maternity ward of the hospital.
- Particularly for improving the service delivery by Yashodas, 76.2% of the providers suggested for the clinical training of the Yashodas and 23.8% suggested for making sitting arrangements for the Yashodas in the ward.
- Increasing the remuneration of the Yashodas was suggested by about 19% of the providers.
- Similar to this, maximum of the providers i.e. 61.9% each suggested for providing training to ASHA
- 36.4% of Yashodas also suggested for increasing their remuneration and 32% suggested for giving them training to deliver services in the health facility.
- Further, a total of 34% ASHAs suggested for enhancement in their incentives.
- For delivering the services at the village level, 68% ASHAs suggested to provide them Mobile phone and 64% asked for a cycle for moving inside the village.

7.2 Study Recommendations / Suggestions

The study recommendations have been structured into the following two parts:

- Recommendations for retaining Yashodas
- Recommendations for deploying ASHA

7.2.1 Recommendations for retaining Yashodas

- Yashoda must facilitate and ensure Zero dose immunization to the newborn instead of leaving it to ASHA and family attendants for carrying the newborn to PPC for immunization.

- Yashoda's role should not be confined to the ward only. They also need to provide services outside the ward like registration / outdoor tickets for nursing mother, accompanying pregnant woman to the labor room, processing paper works, JSY payments, etc.

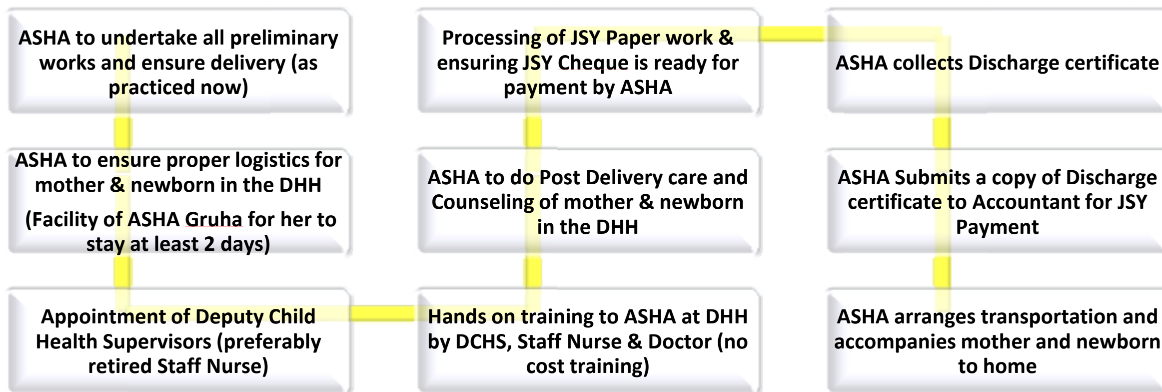
- Yashoda needs to coordinate with ASHA for checking the overcrowding of ward. While coming from the village, ASHA can motivate for less number of attendants accompanying the pregnant woman to the hospital.

- Sitting arrangement for Yashodas should be made inside the maternity ward.
- Role clarity between Yashodas and Staff Nurses need to be made so that the conflicts between the two could be resolved. It is suggested to change the color of the apron worn by the Yashodas in order to help the nursing mothers to distinguish between the Staff Nurse (clinical) and Yashoda (non-clinical).

7.2.2 Recommendations for deploying ASHA in place of Yashoda

- The construction of ASHA Gruha in the DHH needs to be accelerated.
- The ASHAs need to be provided on job training in the health facility. The same can be arranged when they come to the hospital accompanying the pregnant woman.
- DCHS rank provider could be engaged to monitor and guide the ASHA in the DHH.

- In case of cesarean delivery, ASHA should be allowed to return home after staying 48hr in the hospital. Before the discharge of the nursing mother, she again needs to come back to the DHH for accompanying the nursing mother to the village.
- When ASHA comes to the hospital accompanying the pregnant woman, the AWW and the ANM should manage the health activities or events planned by in the village.
- A token money should be paid to ASHA for promoting the use of Janani Express.



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