

**The Impact of a Surveillance and
Monitoring System on the Utilization of
Maternal and Newborn Services in the
Slums of Navi Mumbai Municipal
Corporation Area**

Study Report

Institute of Health Management Pachod

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Glossary of Abbreviations:

Abbreviation	Full form
PATH	Program for Appropriate Technology in Health
IHMP	Institute of Health Management Pachod
NMMC	Navi Mumbai Municipal Corporation – works as a lead partner in the Sure Start Project
SATHI	Social Advancement Through Health Initiative – implementing partner of NMMC for the Sure Start Project
NGO	Non government organization
UHP	Urban Health Post – Twenty UHPs run by NMMC, provides primary level health care in the slums. Covers approximately 25000 to 35000 population
MCH	Maternal and Child Health Clinics- Four clinics run by the NMMC, provides secondary level services for maternal and child health
FRU	First Referral Unit - Hospital run by NMMC, provides tertiary level care
MNH	Maternal and Neonatal Health
RCH II	Reproductive and Child Health Program Phase II – program implemented by the Govt. of India
LW	Link worker – Community Link worker, appointed by NMMC, performing the activities related to MNH in the slums of NMMC
CHW	Community Health Worker– A professional social worker appointed by SATHI under Sure Start Project, doing supervision and monitoring of the intervention at UHP level
ANC	Antenatal Care
EDD	Expected date of delivery
PNC	Post-natal Care
NNC	Neonatal Care
BCC	Behaviour Change Communication
IPC	Inter-Personal Communication
UPT	Urine Pregnancy Test
ANM	Auxiliary Nurse Midwife
TT	Tetanus Toxoid
IFA tablets	Iron and folic acid tablets
Pachod Paise Scale	The Pachod Paise Scale is a continuous scale, unlike the three or five point Likert Scale. The “Pachod Paise Scale” was used to measure perceptions and attitudes.

**The Impact of the Surveillance and Monitoring
System on the Utilization of MNH Services in
the Slums of Navi Mumbai Municipal
Corporation Area**

**Introduction, Research Objectives,
Study Design and Methodology**

Introduction:

‘PATH’ (Program for Appropriate Technology in Health) is an international, non-profit organization that endeavours to improve the health of people around the world by advancing technologies, strengthening systems and encouraging healthy behaviours. PATH has been working in India since 25 years in collaboration with various partners.

‘Sure Start’ is a PATH initiative intended to catalyze sustainable improvements in maternal and newborn health through effective community action in seven urban sites in Maharashtra. It is supported by the Bill & Melinda Gates Foundation as part of its ‘Community Health Solutions’.

Objectives of the Sure Start Project:

Objective 1: To significantly increase individual, household and community action that both directly and indirectly improves maternal and newborn health (MNH).

Objective 2: To build the capacity of existing health systems in order to improve the status of MNH.

Among other city specific modules, the Sure Start project promulgates a ‘Common Minimal Program’ (CMP) which describes five key areas of intervention: Enhancing self care behaviours; increasing demand for MNH services; improving community systems and linkages with MNH service providers; providing services and access to health care resources; and creating a supportive and sustainable environment for the advancement of MNH.

The Institute of Health Management, Pachod (IHMP) is a ‘cross-site’ partner for the Sure Start project. Part of its responsibility was to develop a manual, Management Information System (MIS) & Behaviour Change Communication (BCC) strategy, and to build the capacity of the seven partner-NGOs in the use of these tools. A key component of the MIS system was surveillance and monitoring.

In the Navi Mumbai Municipal Corporation (NMMC) area, the Sure Start project is being implemented by the Municipal Corporation Health Department in 20 Urban Health Posts (UHPs) areas, covering an urban slum population of approximately 5 lakhs. A total of 182 community Link Workers were appointed by NMMC under RCH-II to implement the Sure Start project. ‘SATHI’, is the NGO partner for NMMC for the Sure Start project. The NGO has 24 Community Health Workers working under it.

Link Worker:

The Link Workers are responsible for community mobilization activities: disseminating Behaviour Change Communication (BCC) through Inter Personal Communication (IPC) – for individuals and their families, as well as at the group level. They undertake surveillance to detect maternal and neonatal health (MNH) needs and assist in organizing outreach health delivery clinics in the slums, with

immunization of children, promoting family planning, and referring high risk antenatal and post-natal cases.

The Link Worker works in the slums and covers a population of around 3500. She visits every household in her allotted slum once in two months, during which she performs menstrual surveillance. Once the Link Worker detects a pregnancy, she visits the woman in her home every month right up to her post-natal period (i.e., six weeks after delivery) to conduct surveillance for MNH needs. Data from surveillance is passed onto the Community Health Worker and ANM for service provision.

Community Health Workers:

Community Health Workers are responsible for disseminating BCC at the individual /household level and at the group level along with the Link Worker. Part of the Community Health Worker's responsibility is to assist the ANM in conducting the MNH outreach activities, to mobilize the community, detect MNH needs, and monitor MNH activities at the UHP level.

A Community Health Worker is directed to visit a pregnant woman at home at least 3 times during her pregnancy and twice during the post-natal period (i.e., 6 weeks after delivery). During these visits the Community Health Worker assesses the MNH needs and provides need-specific BCC.

Research Objective:

To determine the impact of the community based, monthly surveillance and monitoring system on early detection of maternal and neonatal health needs, linkage of clients with service providers and health facilities, utilization and effective coverage with MNH services, and timely referral and treatment of complications.

Research Hypothesis:

Surveillance and monitoring will lead to improved utilization and effective coverage of MNH services and reduction in maternal and neonatal morbidity.

Research Questions:

- a. Did the monthly surveillance and monitoring by link workers / CHWs result in a change in health seeking behaviour of beneficiaries residing in NMMC project area?
- b. Did the surveillance and monitoring system have an impact on the early detection of self-reported maternal and neonatal morbidity and utilization of referral services?

Study Design and Methodology:

Study design:

The study was conducted in the slums of the NMMC project area where the Sure Start intervention was implemented. It was a post-intervention study in which the health seeking behaviour of women in their last two pregnancies was studied.

‘Last’ vs. ‘Previous’ Pregnancy: The study determined the exposure of the respondents to monthly surveillance and its influence on health utilization behaviors.

Change in the clients’ health seeking behaviour was assessed by:

- 1) Comparing health behaviour/service utilization in the last pregnancy (i.e., the one occurring in the last one year) with the previous pregnancy; and
- 2) Comparing the level of positive health behaviour/service utilization across levels of exposure to surveillance and monitoring, i.e., dose response.

Exposure Levels: Change in the clients’ health seeking behaviour was assessed by ‘levels of exposure to surveillance visits’. Three levels of exposure were considered:

- 1) High: ≥ 4 surveillance visits during pregnancy by the Link Worker in the last pregnancy;
- 2) Low: ≤ 3 surveillance visits during pregnancy by Link Worker;
- 3) No exposure: It was assumed that there was no exposure to surveillance for the previous pregnancy. It was, therefore, assumed that all ‘previous’ pregnancies would also qualify as having had ‘no exposure’ to surveillance visits by the Link Workers.

Rational Utilization of Health Services: The operational definition of rational utilization of health services that was used in this study was - availing of health services by the respondents at the *appropriate level* of health care facilities. It implies that primary level health issues are resolved at the primary level and not at the secondary or tertiary levels, whose resources may be reserved for more specialized care. Rational utilization of health services entails *decentralization* of services and provision of better quality of care at the primary level. In the Sure Start project the assumption was that there would be a higher uptake of services at the primary level.

Sample size: The sample size for this study was 200 recently delivered mothers. This was calculated in order to detect a 10 percent difference in coverage with minimum standard antenatal care, using an alpha value of 0.05 and a two tailed test to achieve 80 percent power. (Fleiss et al, 2003)

Sampling Unit: The sampling unit was the recently delivered mother with at least two live births.

Sampling Frame: The sampling frame consisted of all mothers who had delivered a live baby during the period May 2009 to April 2010, and also those whose previous pregnancy had resulted in a live birth.

Sampling procedure:

Selection of Urban Health Posts (UHPs): Out of 20 UHPs, 10 UHPs (50 percent) were randomly selected for the study.

Selection of Link Worker: From each UHP area, 3 Link Workers were randomly selected. Out of a total of 51 Link Workers from 10 UHPs, 30 were randomly selected for the study.

Selection of recently delivered mothers: Lists of recently delivered mothers were prepared from all the selected Link Workers' field areas. A systematic random sample of 200 recently delivered mothers with two or more live births from the 30 Link Worker areas was drawn from the sampling frame.

Interview Schedule:

A uniform semi structured interview schedule served as the data collection instrument. The schedule was prepared in Marathi, and pre-tested by the IHMP staff through nine interviews completed in the urban slums of Pune. The guide was modified accordingly and used in the final survey.

The interview schedule included questions on socio-demographic profile, reproductive history, confirmation of pregnancy, registration for antenatal care, utilization of antenatal services, complications experienced during pregnancy and treatment sought for it, place of delivery, intra and post-natal complications, treatment sought for intra and post-natal complications, neonatal care, birth weight of the baby, surveillance visits during pregnancy and during the post-natal period by the Link Worker and the Community Health Worker, and the respondents' experience of health care services and facilities.

Data Collection and Processing:

The investigators responsible for data collection were recruited based on their prior experience in this sort of work. They underwent a five-day training period from the 30th of August to 3rd of September 2010. Field experience included collection of data from nine recently delivered mothers. These data were then crosschecked.

The survey was carried out from 4th September to 9th September 2010. The data collection team included thirteen investigators, four supervisors and one researcher who oversaw quality control. Each evening, the supervisors and researcher checked all questionnaires completed on that day.

IHMP performed a second round of consistency checks, after which the data were entered using a program developed via 'Epi DATA'. While one 'data entry clerk' entered the data from each questionnaire, another checked the entries made. The data were then transferred to the 'Stata' program for analysis. Chi-square test for discrete variables and a student's t-test for continuous variable were used to determine differences in utilization of services in the last and previous pregnancies and to study the dose (different levels of exposure to surveillance) response.

Limitations of the study:

Primi gravida cases were excluded from the study – therefore, their experience is not included. The recall bias for the previous pregnancy needs to be kept in mind while interpreting the results. A small proportion of previous pregnancies occurred during the Sure Start project period and hence the difference in the exposure to surveillance got slightly diluted. The Link Workers were employed before the Sure Start project and hence the respondents were exposed to surveillance visits albeit of a different nature, even during their previous pregnancies.

The Impact of the Surveillance and Monitoring System on the Utilization of MNH Services in the Slums of Navi Mumbai Municipal Corporation Area

Section 1

Socio-demographic Characteristics of the Respondents

Findings:

Section 1: Socio-demographic Characteristics:

1.1a: Respondents' Characteristics:

A total of 206 recently delivered mothers from the field area of 30 Link Workers were interviewed. This section includes information on the socio-demographic characteristics of the respondents, their husbands and their households.

The mean age of the women interviewed was 25.8 years. Almost 82.6 percent of the respondents were below the age of 29 years. More than half (52.5 percent) of the respondents had an education of up to 8th standard and above. The majority of the women (95.2 percent) were housewives. (Refer Table 1.1a)

Table 1.1a: Respondent's Characteristics:

Sr. No.	Characteristics	Category	Percent (n=206)
1.	Current age of the respondent	<=24 years	37.4
		25-29 years	45.2
		30+ years	17.5
		Mean age	25.81
2.	Level of education of the respondent	<=4 std	28.6
		5-7 std	18.9
		8-10 std	41.8
		11+ std	10.7
3.	Whether the respondents were housewives or working outside of the home	Working outside	04.8
		House wife	95.2

1.1b: Husband's Characteristics:

The mean age of the husbands was 31.1 years, and 38.8 percent of the husbands were below the age of 30 years. 15.1 percent were educated up to primary school (< or = 4th Std.) and 67 percent had completed 8th standard or more. The proportion of husbands working as labourers was 14.1 percent, whereas 50.5 percent were employed in some sort of service. Out of the those husbands who were in service, 43.2 percent were employed in private firms, companies, or with the Municipal Corporation, and 07.3 percent were working as senior managers or supervisors in the private sector, or as government officers. 28 percent of the husbands were involved in petty businesses (vegetable vendor, news paper vendor, salesman, plumber, tailor etc.) within the slum itself and 6.3 percent were engaged in such businesses as building contractor, builder, advocate etc. (Refer Table 1.1b)

Table 1.1b: Husband's Characteristics:

Sr.	Characteristics	Category	Percent (n=206)
1.	Current age of the husband	<=29	38.8
		30+	61.2
2.	Husband's level of education	<=4 std	15.1
		5-7 std	17.9
		8-10 std	46.6
		11+ std	20.4
3.	Husband's occupation	Labourer	14.1
		Service- Executives	07.3
		Petty Business	28.6
		Business	06.3
		Service	43.2
		Unemployed	00.5

1.2: Household Characteristics:

Around 63 percent of the respondents' households had fewer than 5 members. 35.4 percent lived in a joint family. 58 percent had homes of one room only, while 41.3 percent had homes of more than 2 rooms. 77.2 percent were Hindus, 8.2 percent Muslims, 13.1 percent Buddhists and 0.5 percent Jain. All the respondents were married at the time of the study. 70 percent reported that only one household member was earning. 53.8 percent of the households had ration cards. (Refer Table 1.2)

65.5 percent of the respondents reported that they were originally from the state of Maharashtra and 34.5 percent reported that they were from other states of India (Uttar Pradesh, Bihar, Madhya Pradesh, West Bengal, Jharkhand, Karnataka, Andhra Pradesh, Gujarat, Delhi, Haryana and Rajasthan). 2 families reported that they had migrated from Nepal.

The proportion of the respondents who reported that their family had lived in the slum for more than 6 years was 58 percent. 52.4 percent reported that they were living in a rented house and 47.6 percent owned their home.

Table 1.2: Characteristics of the Household:

Sr. No.	Characteristics	Category	Percent (n=206)
1.	Total household members	<=5	63.1
		6+	36.9
2.	Type of family – ‘Joint’/’Nuclear’	Nuclear	64.6
		Joint	35.4
3.	Whether living with mothers-in-law	Yes	26.7
4.	Number of rooms in the house	One	58.7
		Two	27.7
		Three	13.6
5.	Total number of earning members in the household	One	69.9
		Two	22.3
		Three +	07.8
6.	Religion	Hindu	77.2
		Muslim	08.2
		Buddhist	13.1
		Jain	00.5
		Missing	00.9
7.	Whether the family has a ration card	Yes	53.8

The majority of the respondents were less than 29 years of age with five years or more of formal education. Over 95 percent were participating in the workforce.

The majority of the husbands **were** over 30 years of age, had 8 years or more of formal education and were either employed in some service or had a small petty trade.

The majority of the households **were** nuclear with less than 5 members, and were living in one room tenements. The majority had one earning member and most households were Hindus.

The Impact of the Surveillance and Monitoring System on the Utilization of MNH Services in the Slums of Navi Mumbai Municipal Corporation Area

Section 2

Surveillance Visits by the Link worker and the Community Health Worker

Section 2: Information on Link Workers and Community Health Workers:

Link Workers are primarily responsible for the detection of MNH needs and Inter Personal Communication (IPC) for 3500 slum population.

One Community Health Worker is appointed per UHP. Community Health Workers are responsible for carrying out BCC activities and organizing primary and secondary health care at the UHP.

Questions were asked to obtain information on home visits by the Link Workers and the Community Health Worker in the last two months and in the last one year prior to the survey, as well as during the last pregnancy.

2.1: Surveillance Visits by the Link Worker:

82 percent of the respondents reported that the Link Worker had visited them at home more than twice in the two months prior to the survey; whereas 9.7 percent reported that they had not been visited at all in the last two months. (Refer Table 2.1)

The average number of surveillance visits in the year prior to the survey was 10. Around 33 percent reported that they had been visited more than 12 times in the last one year prior to the survey. (Refer Table 2.1)

Two out of three respondents reported that they had been visited more than four times during their last pregnancy. The proportion that reported at least two visits in the 60 days after delivery was 69 percent. (Refer Table 2.1)

Table 2.1: Surveillance Visits by the Link Worker:

Variable	Category	Percent (n=206)
How many visits did the Link Worker pay you in the last two months prior to the survey?	No visits	09.7
	One visit	08.3
	More than two visits	82.0
How many visits did the Link Worker pay you in the last one year prior to the survey?	Less or equal to six visits	28.4
	Seven to eleven visits	38.3
	Twelve and more visits	33.3
	Average	10 visits
How many visits did the Link Worker pay you during your last pregnancy?	Less or equal to three visits	33.0
	Four or more visits	67.0
How many visits did the Link Worker pay you in the two months after your delivery?	One visit	30.6
	Two and more visits	69.4

A large majority of the respondents reported that the link workers were making home visits on a regular basis, particularly during pregnancy and after delivery.

2.2: Surveillance Visits by the Community Health Worker:

The proportion of respondents who reported that a Community Health Worker had visited them at home in the last two months prior to the survey was 37.9 percent, whereas 62.1 percent reported that they had not received any home visit by the Community Health Worker in the last two months. (Refer Table 2.2)

Around 54.8 percent of the respondents reported that they had not received any home visits by the Community Health Worker in the last one year prior to the survey. Only 14.6 percent reported that the Community Health Worker had visited them more than 12 times at home in the last one year prior to the survey. (Refer Table 2.2)

Only 38.4 percent of the respondents reported that a Community Health Worker had visited them at home during their last pregnancy and only 29.6 percent reported having received more than one home visit by the Community Health Worker within 60 days of delivery. More than 60 percent reported no visits by the Community Health Worker in the last pregnancy and during the post-natal period. (Refer Table 2.2)

Table 2.2: Surveillance Visits by the Community Health Worker:

Variable	Category	Percent (n=206)
How many visits did the Community Health Worker pay you in the last two months prior to the survey?	No Visits	62.1
	One and more visits	37.9
How many visits did the Community Health Worker pay you in the last one year prior to the survey?	No visit	54.8
	One to eleven visits	30.6
	Twelve and more visits	14.6
How many visits did the Community Health Worker pay you during your last pregnancy?	No visit	61.6
	More than one visit	38.4
How many visits did the Community Health Worker pay you in the two months after your delivery?	No visits	70.4
	More than one visit	29.6

Only a small proportion of respondents reported that the CHWs visited them at home. Similarly, a small proportion of pregnant women reported that they had been visited by a CHW at home, during their pregnancy or after their delivery. Hence, it was deduced that assessment of maternal and neonatal health needs during home visits was done mostly by the link workers.

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Section 3

Maternal Health - Antenatal Care (ANC)

Section 3: Antenatal Care

Information on detection and confirmation of pregnancy, registration for antenatal care services, utilization of antenatal care services, prevalence of self reported complications during pregnancy and treatment sought, and needs-assessment for antenatal care services was collected. These data pertained to the last and previous pregnancies.

3.1: Detection of Pregnancy

Section 3.1 included questions related to the confirmation of pregnancy, the place of confirmation, expense incurred for testing, time interval between referral for testing and the testing itself, follow up visit by the Link Worker/Community Health Worker, and awareness about facilities offering pregnancy testing.

The proportion of respondents who reported that they were alerted to the possibility of being pregnant because they experienced amenorrhoea was 81.7 percent in the last pregnancy. This compared to 78.6 percent for the previous pregnancy. 29.6 percent reported that they were alerted by morning sickness in the last pregnancy. This compared to 28.1 percent for the previous pregnancy. (Refer Table 3.1)

The proportion of respondents who discussed their amenorrhea with family members was 63.6 percent for the last pregnancy; as compared to 72.3 percent for the previous pregnancy. Only 38.7 percent reported having discussed their missed periods with the Link Worker / Community Health Worker in the last pregnancy. (Refer Table 3.1)

To the question, “Who first alerted you to the fact that you might be pregnant?” 72.3 percent reported that it was the doctor in the last pregnancy, whereas 69.9 percent reported the same for the previous pregnancy. 8.7 percent reported that the Link Worker had alerted them in the last pregnancy, while 4.8 percent reported that it was the Community Health Worker. (Refer Table 3.1)

Table 3.1: Detection of Pregnancy:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
How did you suspect that you might have been pregnant?	Morning sickness	29.6	28.1
	Amenorrhea	81.7	78.6
	Self diagnosis due to signs of pregnancy	01.9	00.5
	Examination by ANM/Doctor	02.8	05.3
	Don't know	01.0	01.0
With whom did you discuss the fact that you had missed your periods? (Multiple choice)	Link Worker	27.1	13.6
	Community Health Worker	11.6	06.8
	ANM	10.2	05.3
	Doctor	06.8	03.9
	Family members	63.6	72.3
	Relatives and other family members	08.2	06.3
	Did not confide in anyone	10.7	14.6
Who was the person who first alerted you to the fact that you might be pregnant? (Multiple choice)	Link Worker	08.7	05.3
	Community Health Worker	04.8	03.4
	Nurse	05.8	05.3
	Doctor	72.3	69.9
	Family member	10.2	15.5
	Relatives	3.4	1.4
	Information not received from anyone	7.3	7.8

The study indicates that, respondents first suspected pregnancy due to “amenorrhea”. Most discussed the fact that they had missed their period with their “family members” during both the recent and previous pregnancies. Respondents reported that their pregnancies were confirmed by a “doctor” for both the recent as well as previous pregnancies. None of the respondents reported said that ANMs had done their urine test despite the technology having been made available to the latter. The data suggest that link workers advised one third of the respondents to get their urine tested to confirm their pregnancy.

3.2: Surveillance visits by the Link Worker/Community Health Worker in the last pregnancy to monitor whether pregnancy testing was done:

34.5 percent of the respondents reported that they were visited by the Link Worker/Community Health Worker to ensure that they had got themselves tested to confirm pregnancy. Out of these, 94.4 percent reported that they were visited at home by the Link Worker/Community Health Worker and 75.0 percent reported that they were visited after 8 days of missing their periods in the last pregnancy. In the case of 42.7 percent of the respondents, it was relatives who advised them to get checked up to determine if they were pregnant. (Refer Table 3.2)

Among the respondents who were visited by the Link Worker/Community Health Worker during their last pregnancy, 49.0 percent reported that they were referred to MCH clinics, followed by 28.0 percent to the UHP. Only 2.0 percent were advised by the Link Worker/Community Health Worker to attend the outreach clinics conducted. Also for the last pregnancy, 87.1 percent reported that they had been visited within seven days by the Link Worker/Community Health Worker to check whether they had been tested. (Refer Table 3.2)

A similar proportion of respondents reported that Link Workers visited them at home to ensure that they had got their urine tested. Surprisingly, the link workers continued to refer a majority of the women for urine pregnancy test (UPT) to the MCH clinics even though the service was available at the urban health post and outreach clinics.

Table 3.2: Surveillance visits by the Link Worker/Community Health Worker to ensure that pregnancy testing was done to confirm pregnancy:

Variable	Category	Last pregnancy (percent) (n=206)
Who advised you to get your pregnancy testing done when you missed your periods?	Link Worker/Community Health Worker	34.5
	ANM	10.6
	Doctor	05.3
	Relatives	42.7
Where did the Link Worker/Community Health Worker give you this information?	Home	94.4
	Other place	05.6
	n	71
What was the time interval between you being advised to get yourself tested after missing the periods (In days)?	Less or equal to seven days	25.0
	More than eight days	75.0
	n	71
Where were you referred to by the Link Worker/Community Health Worker to get yourself tested?	Outreach Clinic	02.0
	Urban Health Post (UHP)	28.0
	Maternal & Child Health (MCH) clinics	49.0
	n	71
How many days after being advised to get yourself tested did the Link Worker/Community Health Worker come to check up on you to ensure that you had followed up on her advice?	Less or equal to seven days	87.1
	More than eight days	12.8
	n	70

3.3: Pregnancy Confirmation

For the last pregnancy, 30.6 percent of the respondents reported that they had got themselves tested within 15 days of missing their periods, whereas 34 percent did so for the previous pregnancy. 13.2 percent got themselves tested 3 months after missing their period for the last pregnancy, whereas 15.5 did so for the previous pregnancy. A majority (more than 80 percent) tested themselves within three months of the missed periods in both the pregnancies. (Refer Table 3.3)

For the last pregnancy, 87.4 percent of the respondents reported that they had got their UPT done. This compared to 85.4 percent for the previous pregnancy. A small proportion (3.4 percent) reported that they had got a 'sonography' done to confirm their pregnancy for both pregnancies. (Refer Table 3.3)

The proportion of respondents who reported that they had gone to a private hospital to confirm the pregnancy was 42.7 percent for the last pregnancy and 65.0 percent for the previous pregnancy. The proportion of respondents who reported that they had gone to the UHP was 18.3 percent for the last pregnancy and 10.7 percent for the previous pregnancy. About 33 percent of the respondents reported that they had gone to MCH clinics for the last pregnancy as compared to 22.8 percent who did so for the previous pregnancy. (Refer Table 3.3)

The proportion of women who went to a 'private hospital' came down significantly ($p=0.0001$) from 65.0 percent to 42.7 percent and the proportion of women who went to a public hospital increased, indicating a shift from private to public service providers. There was a slight increase in the proportion going to the UHP. (Refer Table 3.3).

70.0 percent of the respondents reported that they had spent less than an hour getting the procedure done in the last pregnancy, whereas 75.0 percent did so for the previous pregnancy.

69.7 percent of the respondents reported that they found the pregnancy testing service and facility convenient in the last pregnancy; as compared to 67.0 percent for the previous pregnancy. Only 20.9 percent of the respondents reported they had availed of pregnancy testing from a particular place on the advice of the Link Worker/Community Health Worker; as compared to 19.4 percent for the previous pregnancy. 17.9 percent of the respondents who chose to go to a particular service provider did so on the advice of relatives in the last pregnancy, whereas 26.7 percent did so for the previous pregnancy. 17.6 percent reported that affordability was the reason that they went to a particular provider for the last pregnancy, whereas 12.6 percent did so for the previous pregnancy. Only 0.5 percent of the respondents reported "secondary level of referral" as a reason for availing testing from a particular service provider for the last pregnancy, whereas 1.0 percent did so for the previous pregnancy. For both pregnancies, convenience of service provision was the main reason for going to a particular service provider. (Refer Table 3.3)

Rs.85 was the mean expenditure incurred for pregnancy confirmation in the last pregnancy as compared to Rs.129 for the previous pregnancy. (Refer Table 3.3)

Table 3.3: Pregnancy Confirmation:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
How long was it after you had missed your periods that you got yourself tested? (In days)	Within 1 month	30.6	34.0
	1 month to 2 months	37.4	31.6
	2 months to 3 months	18.5	18.9
	More than 3 months	13.2	15.5
What did you do to check whether you were pregnant?	Abdominal check-up	09.2	11.2
	UPT	87.4	85.4
	Sonography	03.4	03.4
Where did you get yourself checked up/tested to determine whether you were pregnant? (Specify the service provider.)	Outreach clinic	03.9	00.9
	Urban Health Post (UHP)	18.3	10.7
	Maternal & Child Health (MCH) clinics	33.0	22.8
	First Referral Unit (FRU)	01.5	00.5
	Private hospital and other	42.7	65.0
How long did you spend in the facility to get a check-up/testing done? (In hours)	Within one hour	70.0	75.0
	More than one hour	30.0	25.0
	n	202	195
What was your criterion for selecting a particular service provider? (Multiple choice)	Referred by Link Worker/Community Health Worker	20.9	19.4
	Referred by relatives	17.9	26.7
	Convenience	69.7	67.0
	Affordability	17.6	12.6
	Secondary level referral	00.5	01.0
Approximately how much money did you spend in order to get yourself checked-up/tested? (In rupees)	Mean(Rs.)	Rs.85.00	Rs.129.00
	Range (Rs.)	Rs.0-1,350	Rs.0-2,000

Data indicate that most respondents went for a pregnancy confirmation test within 3 months after they experienced “amenorrhea” and there was no difference in the proportion of respondents availing of a UPT during the last and previous pregnancies. The proportion of respondents who, went for UPT to the MCH clinic during the last pregnancy increased whereas the proportion going to a private doctor decreased. Data indicate that women preferred to go to a Municipal health facility if the service was made accessible. Respondents reported that they had spent “less than an hour” at the facility for pregnancy confirmation both during recent and previous pregnancies.

3.4: Awareness of service providers for urine pregnancy testing (UPT)

56.3 percent of the respondents in the last pregnancy reported that they knew that MCH clinics performed pregnancy testing as compared to 41.7 for the previous pregnancy. 45.2 percent in the last pregnancy reported that they knew that private hospitals conducted UPT, whereas 46.5 percent in the previous pregnancy did so. 39.1 percent reported that they were aware of the fact that UHPs performed pregnancy testing; this compared to 29.1 percent in the previous pregnancy. (Refer Table 3.4)

Awareness of UHPs as pregnancy testing facilities increased significantly, from 29.1 percent in the previous pregnancy to 39.3 percent in the last pregnancy ($p=0.029$). Awareness that MCH clinics provide pregnancy testing increased significantly, from 41.7 percent in the previous pregnancy to 56.3 percent in the last pregnancy ($p=0.003$).

Table 3.4: Awareness of service providers for urine pregnancy testing (UPT)

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
Where do you think UPT facilities are available?	Outreach Clinic	07.8	02.4
	Urban Health Post (UHP)	39.3	29.1
	Maternal & Child Health (MCH) clinics	56.3	41.7
	First Referral Unit (FRU)	20.9	16.5
	Private hospital and other	45.2	46.5
	Don't know	10.7	20.4

There was a significant increase in the awareness regarding the availability of urine pregnancy test at the urban health post and maternity clinics.

Antenatal Registration

This section describes information on registration for antenatal care service. Information is presented on assessments of service needs by the Link Worker/Community Health Worker for antenatal registration, information/advice given by the Link Worker/Community Health Worker for antenatal registration, follow up visits to pregnant mothers by the Link Worker/Community Health Worker after registration, month of gestation when registration was done, place of registration, and awareness of place of registration.

3.5: Surveillance visits by the Link Worker/Community Health Worker for antenatal registration in last pregnancy:

66.0 percent of the respondents reported that it was the Link Worker/Community Health Worker who informed them about antenatal care after they had tested themselves. Out of those who received information about antenatal care, 93.3 percent reported that the information was given to them at home, whereas 6.7 percent reported that it was told to them “at some other place.” (Refer Table 3.5)

Out of those who received information, 73.5 percent reported that they were referred to the MCH centre for registration, whereas 30.9 percent reported the UHP, 5.9 percent reported the FRU, 5.1 percent reported a private hospital, and 1.4 percent reported the ‘outreach clinic’ conducted by the ANM. (Refer Table 3.5)

Out of those who received information on antenatal care, 91.8 percent reported having received ‘follow-up’ visits by a Link Worker/Community Health Worker in the last pregnancy. Among those who had received follow-up visits, 52.8 percent reported that these visits had taken place within 7 days of receiving the information, whereas 47.2 percent reported they had received the visit after 7 days. (Refer Table 3.5)

Of the respondents who did receive information on antenatal registration, 41.2 percent did so within the 2nd month of pregnancy, 27.2 percent within the third month and 30.8 percent did in the 2nd trimester of pregnancy or beyond. (Refer Table 3.5)

Table 3.5: Surveillance visits by the Link Worker/Community Health Worker for antenatal registration in the last pregnancy:

Variable	Category	Last pregnancy Percent (n=206)
After pregnancy confirmation LW/CHW gave information / advice on antenatal registration?	Yes	66.0
Where did she give you this information – at home or else where?	At home	93.3
	Other place	06.7
	n	136
Where did the Link Worker/Community Health Worker advise you to go to get your antenatal registration done?	Outreach Clinic	01.4
	Urban Health Post (UHP)	30.9
	Maternal & Child Health (MCH) clinics	73.5
	First Referral Unit (FRU)	05.9
	Private Hospital & other	05.1
	n	136
Follow up visit by LW/CHW for antenatal registration?	Yes	91.8
After how many days, did the LW/ CHW visit you for follow up of antenatal registration?	Within 7 days	52.8
	After 7 days	47.2
	n	123
In which month of your pregnancy did you receive information on ANC registration from the Link Worker/CHW?	First and second month	41.2
	Third Month	27.6
	4+ month	30.8
	Can't say	00.7

The majority of the respondents said that following their pregnancy confirmation, the LWs advised them to get registered for ANC services and that this advice was given during home visits. Surprisingly, two thirds of the women were advised to go to the Municipal MCH Clinic and less than one third were advised to go to the UHP. More than two thirds of the respondents were advised by the LWs to get registered for ANC within the first trimester of their pregnancy.

3.6a: Registration for antenatal care services

67.0 percent of the respondents reported that they had registered for antenatal services within 12 weeks of pregnancy in the last pregnancy; this compared to 51.5 percent for the previous pregnancy. 32.0 percent reported that they had registered after three months in the last pregnancy; this compared to 40.8 percent for the previous pregnancy. (Refer Table 3.6a). There was a significant shift towards early (i.e. within 3 months/12 weeks) registration; from 51.5 percent in the previous pregnancy to 67.0 percent in the last pregnancy ($p=0.001$).

Table 3.6a: Registration for antenatal care services:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
When did you get your antenatal registration done?	<=12 weeks	67.0	51.5
	After 12 weeks	32.0	40.8
	Not registered	01.0	07.7
	p value	0.000	

There was a significant increase in the proportion of respondents reporting registration for ANC within 12 weeks of pregnancy during the last pregnancy as compared to the previous pregnancy.

3.6b: Association between early registration (i.e., within 12 weeks of pregnancy) and the number of surveillance visits by the Link Worker in the last pregnancy.

Of 138 respondents who received 4 or more surveillance visits from the Link Worker during the last pregnancy, 70.3 percent were registered within 12 weeks of pregnancy, whereas of those who received 3 or fewer surveillance visits, only 60.3 percent were registered within 12 weeks of pregnancy. (Refer Table 3.6b)

Table 3.6b: Association between early registration (≤ 12 weeks of pregnancy) and the number of surveillance visits by the Link Worker in the last pregnancy.

Variable	Category	Three or less visits (n=68)	Four and more visits (n=138)
When was antenatal registration done?	<=12 weeks	60.3	70.3
	After 12 weeks	38.2	28.9
	Not registered	01.5	00.8
	p value	0.168	

No significant association was found between frequency of surveillance visits (intensity of exposure) from the Link Worker and early registration for antenatal care.

3.6c: Place of registration for antenatal services

Among those who got themselves registered for antenatal care, 57.8 percent in the last pregnancy and 44.0 percent in the previous pregnancy reported the MCH clinic as their place of registration. 11.8 percent in the last pregnancy and 7.1 percent in the previous pregnancy reported the UHP, and a small proportion (3.9 percent) in the last pregnancy and 2.7 percent in the previous pregnancy reported the FRU. The proportion that reported a private hospital decreased from 44.6 percent in the previous pregnancy to 22.6 percent in the last pregnancy. The highest proportion had registered at the MCH clinic in both the pregnancies. (Refer Table 3.6c)

37.2 percent of the respondents in the last pregnancy and 40.5 percent in the previous pregnancy cited 'convenience' as the reason they had registered at a particular place. 22.5 percent in the last pregnancy and 8.9 percent in the previous pregnancy reported that a referral by a Link Worker/Community Health Worker was the reason for their registering at a particular site.

8.8 percent in the last pregnancy reported that they were advised by relatives, compared to 19.5 percent in the previous pregnancy. 1.5 percent in the last pregnancy cited 'secondary referral' compared to 1.0 percent who did so in the previous pregnancy. Overall, the major criterion in both pregnancies for selecting a particular service provider was convenience. (Refer Table 3.6c)

The proportion of respondents citing "Referred by Link Worker/Community Health Worker" as the reason for registering increased significantly, from 08.9 percent in the previous pregnancy to 22.5 percent in the last one. ($p=0.000$)

The average amount of time taken to get registered (at the place of registration) for the last pregnancy was 1.8 hours as compared to 1.6 hours for the previous pregnancy. The average expenditure incurred for registration in the last pregnancy was Rs.106/-, as compared to Rs.125 in the previous pregnancy. (Refer Table 3.6c)

Table 3.6c: Place of registration for antenatal care services:

Variable	Category	Last pregnancy (percent) (n=204)	Previous pregnancy (percent) (n=190)
Where did you get your antenatal registration done?	Outreach clinic	03.9	01.6
	Urban Health Post (UHP)	11.8	07.1
	Maternal & Child Health (MCH) clinic	57.8	44.0
	First Referral Unit (FRU)	03.9	02.7
	Private hospital	22.6	44.6
What was the criterion that made you select that particular service provider for antenatal registration?	Referred by Link Worker/Community Health Worker	22.5	8.9
	Referred by Relatives	08.8	19.5
	Convenience	37.2	40.5
	Affordability	29.9	30.0
	Secondary level referral	01.5	01.0
	Don't know	00.0	0.0
	n	204	190
How long did you spend at the facility while you got your registration done? (In hours)	Average time	01.8	01.6
Approximately how much (money) did you spend while getting your registration done? (In rupees)	Average expenditure	106	125

The proportion of respondents who got registered for antenatal care at the municipal maternity clinic increased significantly during the last pregnancy as compared to the previous pregnancy, but there was no significant increase in the proportion getting registered at the urban health posts. Convenience was cited as the reason for selecting the facility. Respondents stated that if they had to go for delivery to a municipal maternity clinic then they preferred to get registered for ANC care at the same facility. Hence, even though there was an increase in the proportion of women getting registered for ANC, there was no change in accessing the service at the UHP despite the fact that good quality ANC service was made available at the UHP. The amount of time spent on accessing ANC was the same during the last pregnancy as compared to the previous pregnancy, but the mean out of pocket expenditure came down as fewer respondents went to the private sector for this service.

3.6d: The association between number of surveillance visits by the Link Worker and place of registration for antenatal services in the last pregnancy:

Among those who received 4 or more surveillance visits by the Link Worker in the last pregnancy, 62 percent got registered at the MCH clinics as compared to 49.0 percent of those who received 3 or less surveillance visits. (Refer Table 3.6d)

Table 3.6d: The association between number of surveillance visits by the Link Worker and place of registration for antenatal services in the last pregnancy:

Variable	Category	<= 3 surveillance visits by LW in pregnancy (n=67)	>= 4 surveillance visits by LW in pregnancy (n=137)	p value
Where did you get registered for antenatal examinations	Outreach clinics	04.5	03.6	0.92
	Urban Health Post (UHP)	12.0	12.0	0.95
	Maternal & Child Health (MCH) clinics	49.0	62.0	0.08
	First Referral Unit (FRU)	09.0	02.8	0.02
	Private hospital	25.0	21.0	0.49

No significant association was observed between exposure to surveillance (number of visits) and proportion of respondents getting registered for ANC at the UHP. (p=0.95)

3.7: Awareness of place for antenatal care registration

72.3 percent of the respondents in the last pregnancy knew that they could register at the MCH clinics as compared to 51.0 in the previous pregnancy. 32.5 percent in the last pregnancy knew about the UHP as compared to 24.7 percent in the previous pregnancy. Only 24.3 percent knew about the FRU in the last pregnancy as compared to 17.5 percent in the previous pregnancy. (Refer Table 3.7)

Table 3.7: Awareness of place for antenatal care registration:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
Where can you get yourself registered for antenatal care? (options provided)	Outreach Clinic	04.8	02.4
	Urban Health Post (UHP)	32.5	24.7
	Maternal & Child Health (MCH) clinics	72.3	51.0
	First Referral Unit (FRU)	24.3	17.5
	Private Hospital and other	31.5	34.5
	Can't say	06.8	19.4

The number of those who knew that one could register one's self at the MCH clinics increased significantly from 51.0 to 72.3 percent during the last pregnancy as compared to the previous pregnancy (p=0.000). However, there was no change in the proportion that was aware of the availability of these services at the UHP.

Antenatal Examinations:

In this section, questions covered surveillance visits by the Link Worker/Community Health Worker to: ensure that clients had been getting themselves examined, referrals in cases of antenatal complications, number of antenatal examinations done, place of examinations and details of those examinations.

3.8: Surveillance visits by the Link Worker/Community Health Worker to ensure that clients had been getting themselves examined:

When asked if they had been visited by the Link Worker / Community Health Worker to determine if they had been getting themselves examined, 79.1 percent in the last pregnancy said they had been. Out of these, 95.7 percent reported that the visit took place at their homes, and around 70 percent reported that they were visited more than 5 times.

Out of the respondents who in the last pregnancy reported having been visited by the Link Worker/Community Health Worker, 76.6 percent said that they were referred to the MCH clinics for antenatal care. This was followed by the UHP (28 percent) and the outreach clinics (0.6 percent). 76.7 percent reported that the Link Worker/Community Health Worker advised them to receive at least 4 checkups. 67.9 percent of the respondents reported follow up visits by the Link Worker/Community Health Worker for further antenatal examinations. (Refer Table 3.8)

Table 3.8 Surveillance visits by the Link Worker/Community Health Worker to ensure that clients had been getting themselves examined:

Variables	Category	Last Pregnancy (percent) (n=206)
Who visited you to ensure that you had been getting yourself examined?	Link Worker/Community Health Worker	79.1
	ANM	21.4
	Relatives	03.8
	Not asked by anyone	11.2
Where did the LW visit you?	Home	95.7
	Other	04.3
How many times did the Link Worker/Community Health Worker visit you?	Four or fewer times	30.1
	Five or more visits	69.9
In your last pregnancy, where did the Link Worker/Community Health Worker refer you for your examinations? (Multiple choice)	Outreach clinic	00.6
	Urban Health Post (UHP)	28.2
	Maternal and Child Health (MCH) clinic	76.6
	First Referral Unit (FRU)	09.2
	Private hospital	01.2
In your last pregnancy, how many times did the Link Worker/Community Health Worker advise you to get yourself examined?	Less or equal to three	15.3
	Four and more	76.7
	Not advised by anyone	07.9
Did the Link Worker/Community Health Worker do follow up visit for further antenatal examinations?	Yes	67.9

The majority of the respondents were visited during their pregnancies by the LW / CHW for ensuring that the women were undergoing regular ANC examinations. The majority of the women said that they were contacted at home. Surprisingly, a large majority of women were sent for ANC services to MCH hospitals. The majority of the women was visited at least four times during their pregnancy and was examined by the LW / CHW.

3.9a: Utilization of antenatal care services:

53.9 percent of the respondents in the last pregnancy reported that they had at least six antenatal check ups, as compared to 49.7 percent who did so for the previous pregnancy. 38 percent of those receiving antenatal check ups in the last pregnancy reported that their weight was taken 4-6 times; as compared to 43.2 percent who did so in the previous pregnancy. 41 percent in the last pregnancy reported that their weight was taken at least seven times, as compared to 32 percent who did so in the previous pregnancy. (Refer Table 3.9a)

67.2 percent in the last pregnancy reported having received at least 5 abdominal exams as compared to 63.7 percent who did so in the previous pregnancy. The proportion of respondents in the last pregnancy who reported having had their blood pressure monitored at least 5 times was 70.1 percent; as compared to 62.6 percent of those who did so in the previous pregnancy. (Refer Table 3.9a)

The proportion of respondents in the last pregnancy who reported having had a sonography done at least three times was 35.2 percent; as compared to 24.2 percent who did so in the previous pregnancy. (Refer Table 3.9a)

3.9a: Utilization of antenatal care services:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
How many antenatal check ups did you have?	One to two check ups	05.4	10.1
	Three to five check ups	40.7	40.2
	Six and more check ups	53.9	49.7
How many times were you weighed during your pregnancy?	Less or equal to three times	20.1	24.2
	Four to six times	38.2	43.2
	Seven and more times	41.7	32.6
How many times did you have an abdominal examination during your pregnancy?	Less or equal to four times	32.8	36.3
	Five and more times	67.2	63.7
How many times was your BP checked during your pregnancy?	Less or equal to four times	29.9	37.4
	Five and more times	70.1	62.6
How many times did you get a sonography done during your pregnancy?	Not done	3.4	8.9
	Once	22.7	36.8
	Twice	38.6	30.0
	More than three	35.2	24.2

There was a small increase in the proportion of women who reported better coverage with various components of ANC during the last pregnancy as compared to the previous one. Utilization of sonography appears to have increased in the most recent pregnancy.

3.9b: Utilization of ‘minimum standard antenatal care’:

Minimum standard antenatal care includes: registration for antenatal care services within 12 weeks/3 months of pregnancy, 3 antenatal examinations, 2 TT injections, and consumption of at least 90 IFA tablets.

The proportion of respondents in the last pregnancy who reported that they had received ‘minimum standard antenatal care’ was 35.9 percent, whereas only 20.8 percent did so in the previous pregnancy. A significant increase in the utilization of ‘minimum standard antenatal care’ was observed in the last pregnancy over that of the previous pregnancy ($p=0.000$). (Refer Table 3.9b)

Table 3.9b: Utilization of ‘minimum standard antenatal care services’:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
Did you receive minimal standard antenatal care?	Yes	35.9	20.8

(Definition: Registered within 12 weeks of pregnancy for antenatal services, 3 antenatal check ups, 2 TT injections & consumption of 90+ IFA tablets)

There was a significant increase in the proportion of respondents in the last pregnancy, as compared to the previous one, who reported that they had received ‘minimum standard antenatal care’

3.9c: The association between levels of exposure to surveillance (number of surveillance visits) and utilization of ‘minimum standard antenatal care’:

Among those who received 4 or more surveillance visits by a Link Worker during the last pregnancy, 40.9 percent had utilized minimum standard antenatal care services, whereas those who had received 3 or less surveillance visits by a Link Worker during their last pregnancy reported utilization of minimum standard antenatal care services at 26.8 percent. (Refer Table 3.9c)

Table 3.9c: The association between levels of exposure to surveillance (number of surveillance visits) and utilization of ‘minimum standard antenatal care’:

Variable	Category	Three or less surveillance visits by a Link Worker in the last pregnancy (n=67)	Four and more surveillance visits by a Link Worker in the last pregnancy (n=137)
Did you avail of the minimum standard ANC?	Yes	26.8	40.9
	No	73.2	59.1
	p	0.000	

(Definition: registered within 12 weeks of pregnancy for antenatal services, 3 antenatal check ups, 2 TT injections & consumption of 90+ IFA tablets)

A significant increase was observed in the utilization of minimum standard antenatal care services among those who had received 4 or more surveillance visits by the Link Worker during their pregnancy as compared to those who had received 3 or less surveillance visits by Link Worker during their pregnancy. ($p=0.000$)

3.9d: Place of antenatal examinations:

57.4 percent of the respondents in the last pregnancy and 45.2 percent in the previous pregnancy reported that they had received their antenatal exams at the MCH clinics, whereas 10.3 percent in the last pregnancy and 4.8 percent in the previous pregnancy reported that it was at the UHP. (Refer Table 3.9d)

A significantly fewer (26.5 percent) of the respondents in the last pregnancy went to a private hospital for check-ups compared to those in the previous pregnancy (46.2 percent). ($p=0.000$)

The proportion in the last pregnancy that reported going to the FRU to get examined was 3.9 percent as compared to 2.7 percent in the previous pregnancy. (Refer Table 3.9d)

The proportion in the last pregnancy that reported that they had selected a particular place for their antenatal examinations because they were advised to go there by the Link Worker/Community Health Worker was 22 percent as compared to 7.5 percent in the previous pregnancy. 10.8 percent in the last pregnancy reported that they had gone to a particular place because they were advised to do so by relatives; as compared to 23.1 percent in the previous pregnancy. (Refer Table 3.9d)

79.9 percent in the last pregnancy reported that they had selected a particular place because of 'convenience', as compared to 82.8 percent in the previous pregnancy. 30.0 percent in the last pregnancy reported 'affordability' as the criterion, as compared to 21.5 percent for the previous pregnancy. (Refer Table 3.9d)

Convenience of service availability was the major criterion for selecting an antenatal care service provider/facility in the last pregnancy.

Table 3.9d: Place of antenatal examinations

Variable	Category	Last pregnancy (percent) (n=204)	Previous pregnancy (percent) (n=190)
Where did you get yourself examined during your antenatal period? (Multiple choice)	Outreach clinic	01.9	01.1
	Urban Health Post (UHP)	10.3	04.8
	Maternal & Child Health (MCH) clinics	57.4	45.2
	First Referral Unit (FRU)	03.9	02.7
	Private hospital & others	26.5	46.2
Why did you select the place that you went to for your antenatal care examinations? (Multiple choice)	Referred by Link Worker/Community Health Worker	22.0	07.5
	Referred by Relatives	10.8	23.1
	Convenience	79.9	82.8
	Affordability	30.0	21.5
	Availability of diagnostic services	14.7	11.5
	Availability of delivery services	02.9	03.8
	Referral by health provider	00.4	01.6
	Registration for antenatal services	07.1	05.4
	Don't know	00.0	00.5

Utilization of minimal antenatal care was more in the last pregnancy as compared to the previous pregnancy. The respondents reported MCH as the place of choice for antenatal examinations in the last pregnancy as compared to the previous one. A larger proportion of respondents said that they were advised about which facility to go to for antenatal care during the last pregnancy as compared to the previous one. Convenience of service availability was the major reason for choosing the facility for antenatal care services in the last pregnancy. There was no evidence of rational use of health facilities for antenatal care. Most respondents continued to go to the MCH clinic for antenatal care despite decentralization of this service to the level of the UHP and outreach clinics.

3.10: Visits by the Link Worker/Community Health Worker for monitoring IFA consumption during the last pregnancy:

75.7 percent of the respondents reported that the Link Worker/Community Health Worker who visited them enquired whether they had been consuming their IFA supplementation regularly. Out of these, 97.4 percent reported that the Link Worker/Community Health Worker had visited them at home. The proportion that reported more than 5 surveillance visits was 67.3 percent. (Refer Table 3.10)

3.10: Visits by the Link Worker/Community Health Worker for monitoring IFA consumption during the last pregnancy:

Variables	Category	Last Pregnancy (percent) (n=206)
Did the Link Worker/Community Health Worker ask whether you had been consuming your IFA tablets when she came to visit you?	Yes	75.7
Where (which place) did the Link Worker/Community Health Worker question you about the regularity of your IFA consumption – at home or elsewhere?	Home	97.4
	Other place	02.6
How many times did the Link Worker/Community Health Worker question you whether you were consuming your IFA tablets regularly?	=< four times	32.7
	> five times	67.3

Three fourth of the respondents said that the Link Workers/Community Health Workers made surveillance visits to find out about consumption of IFA tablets. Two thirds of the respondent's said that more than five surveillance visits were made by the LW/ CHW to their homes for this purpose.

3.11: Consumption of IFA tablets during pregnancy:

53.4 percent of the respondents in the last pregnancy reported that they had consumed at least 90 IFA tablets, as compared to 36.4 percent in the previous pregnancy. (Refer Table 3.11)

Table 3.11: Consumption of IFA tablets during pregnancy:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
How many IFA tablets did you consume during your pregnancy?	Less than 90 IFA tablets	46.6	63.6
	90 or more than IFA tablets	53.4	36.4

A significantly higher proportion of respondents (around 53.4 percent) reported that they had consumed at least 90 IFA tablets during the last pregnancy as compared to the previous pregnancy (around 36.4 percent). (p=0.000)

3.12: Visits by the Link Worker/Community Health Worker during the last pregnancy to monitor TT immunization:

83.5 percent of the respondents reported that the Link Worker/Community Health Worker had enquired as to whether they had received their Tetanus Toxoid (TT). 95.9 percent of these respondents reported that they were questioned about their TT immunization at home. (Refer Table 3.12)

Table 3.12: Visits by the Link Worker/Community Health Worker during the last pregnancy to monitor TT immunization:

Variables	Category	Last Pregnancy (percent) (n=206)
Did the LW / CHW talk to you about TT injections?	Yes	83.5
	No	16.5
Where did she question you about this - at home or else where?	Home	95.9
	Others	04.1

3.13: TT immunization in pregnancy:

88.4 percent of the respondents in the last pregnancy reported that they had received 2 TT injections, as compared to 87.9 percent who did so in the previous pregnancy. (Refer Table 3.13)

A large majority of the respondents reported that the LW /CHW monitored coverage with TT immunization during their home visits.

Table 3.13: TT immunization in pregnancy:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
How many TT injections did you receive during your pregnancy?	One	11.6	12.1
	Two	88.4	87.9

The coverage with TT vaccination was substantially high in both the last and previous pregnancies. Surveillance did not have any influence on increasing vaccination coverage.

3.14: Awareness of service providers for antenatal examination:

72.8 percent of the respondents in the last pregnancy were aware of the fact that antenatal examinations are conducted at MCH clinics, as compared to 49.0 percent who did so in the previous pregnancy. The proportion of the respondents in the last pregnancy who knew that the UHP provided antenatal examinations was 35.4 percent, as compared to 26.2 percent in the previous pregnancy. 23.3 percent in the last pregnancy were aware of the fact that one could get one's antenatal examinations done at the FRU, as compared to 16.5 percent in the previous pregnancy. The proportion of respondents in the last pregnancy who were aware of 'outreach clinics' was 7.8 percent as compared to 2.9 percent in the previous pregnancy. (Refer Table 3.14)

A significantly higher proportion of respondents in the last pregnancy knew about MCH clinics for availing of antenatal examinations, as compared to those who did so in the previous pregnancy. ($p=0.000$)

Table 3.14: Awareness of service providers for antenatal examinations:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
Where can you get your self-examined during your pregnancy?	Outreach clinic	07.8	02.9
	Urban Heath Post (UHP)	35.4	26.2
	Maternal & Child Health (MCH) clinic	72.8	49.0
	First Referral Unit (FRU)	23.3	16.5
	Private hospital	33.5	32.5
	Don't know	06.8	15.5

Self-reported symptoms indicative of antenatal complications and treatment:

3.15: Visits by the Link Worker/Community Health Worker in the last pregnancy to monitor antenatal complications:

74.7 percent of the respondents in the last pregnancy reported that they were visited by the Link Worker/Community Health Worker and questioned about whether they had developed any antenatal complication. From among these, 98.1 percent reported that these enquiries took place at home.

13 percent reported that they were visited at least twice, 37 percent reported 3-5 such visits and 50 percent reported more than six. (Refer Table 3.15)

Table 3.15: Visits by the Link Worker/Community Health Worker in the last pregnancy to monitor antenatal complications:

Variables	Category	Last Pregnancy (percent) (n=206)
Were you visited by the LW / CHW and asked whether you had developed complications during your pregnancy?	Yes	74.7
Where did she ask you these questions?	Home	98.1
	Other	01.9
	n	154
How many times did she visit you to enquire about this?	<= two times	13.0
	Three to five times	37.0
	> six times	50.0
	n	154

3 out of 4 respondents had received surveillance visits by the LW/CHW for detection of symptoms of antenatal complications. Around half of them were visited more than 6 times during the last pregnancy for this purpose.

3.16: Self reported symptoms of antenatal complications:

0.5 percent of the respondents reported decreased fetal movements in the last pregnancy as compared to 1.5 percent who did so in the previous pregnancy. (Refer Fig 3.16)

5.3 percent of the respondents in the last pregnancy reported watery discharge as compared to 2.4 percent in the previous pregnancy. The proportion of respondents in the last pregnancy that reported continuous pain in the lower abdomen was 7.3 percent as compared to 4.8 percent in the previous pregnancy. (Refer Fig 3.16)

The proportion of respondents who reported bleeding in the last pregnancy was 4.8 percent, as compared to 3.9 percent who did so in the previous pregnancy. The proportion of respondents who reported painful urination in the last pregnancy was 7.3 percent, as compared to 2.3 percent in the previous pregnancy. (Refer Fig 3.16)

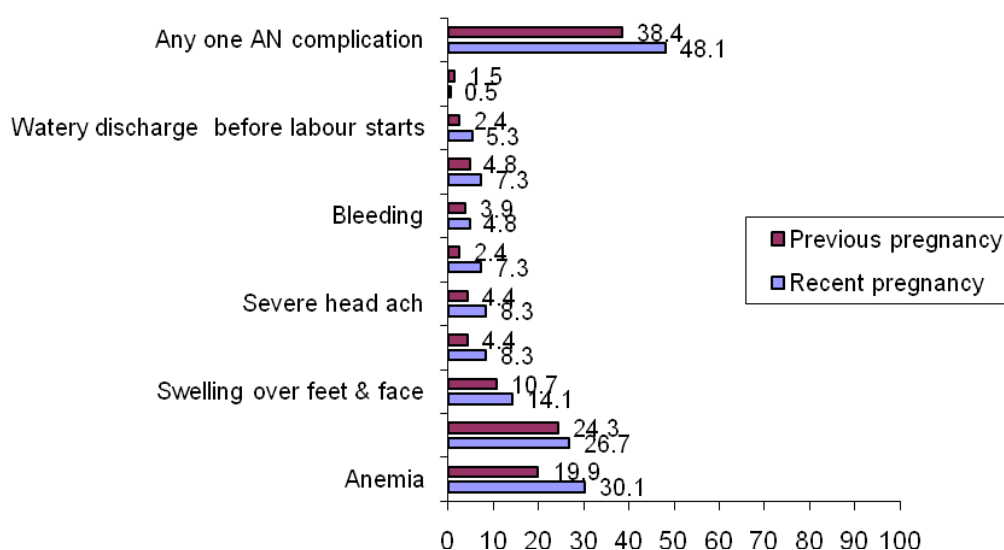
8.3 percent of the respondents reported headaches in the last pregnancy as compared to 4.4 percent in the previous pregnancy. The proportion that reported elevated blood pressure in the last pregnancy was 8.3 percent as compared to 4.4 percent in the previous pregnancy. (Refer Fig 3.16)

14.1 percent of the respondents reported swelling in their feet and face in the last pregnancy as compared to 10.7 percent in the previous pregnancy. 6.7 percent reported severe nausea and vomiting in the last pregnancy as compared to 24.3 percent in the previous pregnancy. The proportion of respondents that reported symptoms of anemia (tiredness, shortness of breath, malaise, inability to concentrate

etc.) was 30 percent in the last pregnancy as compared to 19 percent in the previous pregnancy. (Refer figure 3.16)

48.1 percent of the respondents reported at least one symptom indicative of an antenatal complication in the last pregnancy as compared to 38.4 percent who did so in the previous pregnancy.

Figure 3.16. Self reported symptoms of antenatal complications



A significant increase in the number of respondents reporting at least one symptom indicative of an antenatal complication was observed in the last pregnancy as compared to the previous one. ($p = 0.000$)

3.16a: The association between self-reported symptoms of antenatal complication and level of exposure to surveillance in the last pregnancy:

Among those who received 4 or more surveillance visits by the Link Worker during the last pregnancy, 52.9 percent reported at least one symptom indicative of an antenatal complication, whereas among those who had received 3 or less surveillance visits, only 38.2 percent reported at least one symptom. (Refer Table 3.16a)

Table 3.16a: The association between self-reported symptoms of antenatal complication and level of exposure to surveillance in the last pregnancy:

Variable	Category	≤ 3 surveillance visits by LW in the last pregnancy (n=68)	> 4 surveillance visits by LW in the last pregnancy (n=138)
Did you suffer from at least one symptom indicative of an antenatal complication?	Yes	38.2	52.9
	No	61.8	47.1
p		0.048	

A significant increase was observed in the early detection of antenatal complications (52.9 percent) among the respondents who had a 'high' level of exposure to surveillance as compared to those who received a 'low' level of exposure (38.2 percent). (p=0.048).

3.17: Visits by the Link Worker/Community Health Worker to monitor treatment for antenatal complications in the last pregnancy:

Questions in this section were reserved for those who had reported at least one symptom indicative of an antenatal complication. Of these, 59.6 percent reported surveillance visits by the Link Worker/Community Health Worker who reportedly questioned them on what treatment they were receiving for their antenatal complications.

Among those respondents who reported having been visited by the Link Worker/Community Health Worker to enquire about whether they had sought help for their symptoms, 39.4 percent reported that the Link Worker/Community Health Worker referred them to MCH clinics for treatment, 25.3 percent reported that they were referred to the UHP and 7.1 percent reported that they had been advised to go to the FRU. 16.2 percent of the respondents reported that they were not referred anywhere. (Refer Table 3.17)

Table 3.17: Visits by the Link Worker/Community Health Worker to monitor treatment for antenatal complications in the last pregnancy

Variables	Category	Last Pregnancy (percent)
Did the LW / CHW visit you to find out if you were suffering from any complication during your pregnancy?	Yes	59.6
	n	99
Where (what service provider) did she advise you to go to for treatment?	Urban Heath Post (UHP)	25.3
	Maternal & Child Health (MCH) clinics	39.4
	First Referral Unit (FRU)	07.1
	Private hospital	08.1
	Not referred	16.2
	n	99

The LW/CHW refereed the majority of the pregnant mothers to MCH clinics and a smaller proportion to UHPs for treatment of antenatal complications.

3.18: Treatment for antenatal complications:

Out of the respondents who reported at least one symptom indicative of an antenatal complication, 91.9 percent reported that they had sought treatment in the last pregnancy as compared to 83.5 percent who did so in the previous pregnancy.

The proportion that reported having sought treatment at MCH clinics was 47.5 percent in the last pregnancy. This was significantly more than those who did so in the previous pregnancy. ($p=0.0075$) (Refer Table 3.18)

The proportion of the respondents that reportedly sought treatment at the UHP was 14.1 percent in the last pregnancy as compared to 06.3 percent in the previous pregnancy. Only 03.0 percent reported that they had gone to the FRU in the last pregnancy as compared to 2.5 percent in the previous pregnancy. (Refer Table 3.18)

Data were sought on the proportion of women who reported that they preferred to be treated at the same place they registered at. 16.5 percent reported that they did so for the last pregnancy, whereas only 6.1 percent did so for the previous pregnancy. Respondents were questioned on their criteria for going to a particular provider for treatment. 57.1 percent in the last pregnancy cited 'convenience' as compared to 77.3 who did so in the previous pregnancy. (Refer Table 3.18)

15.4 percent cited the fact that they were advised to go to a particular service provider by the Link Worker/Community Health Worker, as compared to 1.5 percent who did so in the previous pregnancy.

There was a substantial increase from the previous pregnancy to the last pregnancy in the proportion of respondents who reported that they had gone to a particular provider because they were so advised. (Refer Table 3.18)

The respondents were asked about how long (in days) their treatment had lasted. The average duration in the last pregnancy was 20 days as compared to 18 days in the previous pregnancy. The average expenditure incurred for the treatment was Rs. 548.35 in the last pregnancy as compared to Rs. 503.71 in the previous one. When asked about whether their symptoms were cured after treatment, 89.0 percent reported in the affirmative for the last pregnancy as compared to 93.9 in the previous one. (Refer Table 3.18)

Among those who had a 'high' level of exposure to surveillance and developed antenatal complications, 15.1 percent sought treatment at the Urban Health Posts (UHPs) as compared to those who had a 'low' level of exposure (7.8 percent) or no exposure, i.e., respondents from the previous pregnancy (6.3 percent). No significant increase in rational utilization of UHPs was observed for treatment of antenatal complications.

A significant association ($p=0.006$) was observed in the utilization of MCH clinics for the treatment of antenatal complications in the last pregnancy, i.e. those with a high level of exposure to surveillance (49.3 percent), as compared to those who had low exposure (42.3 percent) and those who had no exposure at all, i.e. respondents from the previous pregnancy (27.8 percent).

Table 3.18: Treatment for antenatal complications:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
Did you seek treatment for the complication?	Yes	91.9	83.5
	No	08.1	16.5
	n	99	79
Where (service provider) did you seek treatment?	Urban Heath Post (UHP)	14.1	06.3
	Maternal & Child Health clinics	47.5	27.8
	First Referral Unit (FRU)	03.0	02.5
	Private hospital	28.3	46.8
	Not taken treatment	08.1	16.5
	n	99	79
What was your criterion for seeking treatment at that particular service provider? (Multiple choice)	Registration for antenatal services	16.5	06.1
	Convenience of service availability	57.1	77.3
	Referred by Link worker/ Community health worker	15.4	01.5
	Affordability	15.4	15.2
	Availability of delivery services	02.2	03.0
	Referred by Relatives	05.5	13.6
	Availability of diagnostic services	04.4	00.0
	n	91	66
How long did the treatment last (in days)?	Mean	20 days	18.0 days
	n	91	66
Were you admitted to a hospital for treatment?	Yes	25.0	25.0
	n	91	66
Approximately how much (money) did the treatment cost?	Mean	Rs. 548.35	Rs. 503.71
	Range	Rs. 0-8000	Rs. 0-5000
	n	91	66
Were your symptoms cured after treatment?	Yes	89.0	93.9
	n	91	66

A significantly higher proportion of pregnant women took treatment from MCH clinics during the last pregnancy as compared to the previous pregnancy. No rational utilization of UHP services for treatment of antenatal complications was observed for the recent pregnancy or the previous one. Convenience of service availability was the major reason for the choice of facility in the last pregnancy as compared to the previous pregnancy.

3.19: Awareness of service provider for treating antenatal complications:

Questions were asked to determine the respondents' awareness of the various service providers where they could get treatment for antenatal complications. 69.4 percent of the respondents in the last pregnancy knew that they could receive treatment at MCH clinics, as compared to 51.5 percent in the previous pregnancy. 31.6 percent of the respondents in the last pregnancy were aware that the UHP provided treatment as compared to 22.8 percent in the previous pregnancy. 23.8 percent in the last pregnancy knew the FRUs provided treatment as compared to 17.5 percent in the previous pregnancy. (Refer Table 3.19)

A significantly higher proportion of respondents in the last pregnancy, as compared to the previous, one knew about the MCH clinics ($p=0.000$) and the UHPs ($p=0.046$) as possible service providers.

Table 3.19: Awareness of service provider for treating antenatal complications:

Variable	Category	Last pregnancy (percent) (n=206)	Previous pregnancy (percent) (n=206)
Which service provider can you go to for treatment of any antenatal complications? (Multiple choice)	Outreach clinic	07.8	03.4
	Urban Health Post (UHP)	31.6	22.8
	Maternal & Child Health (MCH) clinics	69.4	51.5
	First Referral Unit (FRU)	23.8	17.5
	Private hospital	34.5	37.9
	Don't know	09.2	20.9

There was a significant increase in awareness that treatment for antenatal complications is available at the MCH clinics and a slight increase in the awareness that this service is available at the UHP as well.

**The Impact of the Surveillance and Monitoring
System on the Utilization of MNH Services in
the Slums of Navi Mumbai Municipal
Corporation Area**

Section 4

Maternal Health - Intra-natal Care (INC)

Section 4: Intra-natal care

This section includes information on surveillance visits paid by the Link Worker/Community Health Worker in the last trimester to provide information about the expected date of delivery (EDD), where to deliver, possible complications that might arise during delivery and where to seek treatment for it. The respondents were also questioned on their actual delivery experience for the last and previous pregnancies: place of delivery, type of delivery, complications that occurred if any, and treatment sought.

4.1: Information provided by the Link Worker/Community Health Worker in the last trimester of pregnancy – expected date of delivery (EDD)

Respondents were questioned about the kind of information given to them when the Link Worker/Community Health Worker visited them in the third trimester of their last pregnancy.

26.7 percent of the respondents reported that they were informed about their EDD. 92.6 percent of these reported that they had received this information at their home, whereas 7.4 reported that they had received it elsewhere (e.g. in the *vasti*). Out of those who had been informed about their EDD, 45.4 percent reported having received this information at least twice, whereas 47.3 percent reported having received it at least three times. (Refer Table 4.1)

Table: 4.1: Information provided by the Link Worker/Community Health Worker in the last trimester of pregnancy – expected date of delivery (EDD)

Variable	Category	Last delivery (percent) (n=206)
Did the Link Worker/Community Health Worker give you information about your date of delivery when she visited you in the third trimester?	Yes	26.7
Where did the Link Worker/Community Health Worker give you this information – at home or else where? Specify.	Home	92.6
	Other place	07.4
	n	55
How many times was this information given to you?	Less or equal to 2 times	45.4
	Three & more times	47.3
	Don't remember	07.3
	n	55

About one fourth of the respondents said that they were given information about their expected date of delivery by the LW/CHW during surveillance home visits.

4.2: Information provided by the Link Worker/Community Health Worker in the last trimester of the last pregnancy – place of delivery:

It was reported by 63.6 percent of the respondent that they had received information regarding place of delivery from the Link Worker/Community Health Worker in the last pregnancy. Out of these 96.9 percent of the respondents had received this information at home. Out of the respondents who had received information regarding place of delivery, 83.2 percent reported MCH clinics, 6.1 percent reported UHP, 6.8 percent reported private hospitals and 3.8 percent reported FRU as the place of delivery advised/referred to by the Link Worker/Community Health Worker in the last trimester of the last pregnancy. (Refer Table 4.2)

Table 4.2: Information provided by the Link Worker/Community Health Worker in the last trimester of the last pregnancy – place of delivery:

Variable	Category	Last delivery (percent) n = 206
Did the Link Worker/Community Health Worker give you information on where to deliver when she visited you in the third trimester of your pregnancy	Yes	63.6
Where did she give you this information – at home or elsewhere? Specify	Home	96.9
	Other place	03.1
Where did the Link Worker/Community Health Worker advise you to deliver; i.e., where did she refer you to for your delivery?	Maternal & Child Health (MCH) clinics	83.2
	First Referral Unit (FRU)	03.8
	Urban Health Post (UHP)	06.1
	Private Hospital	06.8
	n	131

A majority of the pregnant women were advised about preferred facility for delivery and a large majority of respondents who received this information were advised to go to the MCH clinic. There is evidence of rational utilization of facility for the conduction of delivery.

4.3: Details of delivery: Full term/preterm, place of delivery, normal/caesarean section:

9.2 percent of the respondents reported that they had had preterm deliveries in their last pregnancy, as compared to 11.6 percent who did so in the previous pregnancy. 91.2 percent of the respondents reported that they had delivered in a hospital for the last pregnancy, as compared to 83.0 percent who did so in the previous pregnancy. A significant reduction in the proportion of home deliveries was observed in the last delivery as compared to the previous delivery. ($p=0.01$). (Refer Table 4.3)

About 53.9 percent of the respondents reported that they had delivered at the MCH clinics in the last pregnancy, as compared to 32.0 percent who did so in the previous pregnancy. 32.0 percent reported that they had delivered in a private hospital in the last pregnancy as compared to 48.5 percent who did so in the previous pregnancy. 5.3 percent of the respondents reported having delivered at the 'FRU' in the last pregnancy as compared to 2.4 percent who did so in the previous pregnancy. (Refer Table 4.3)

82.5 percent of the respondents reported that they had a normal delivery in the last pregnancy, as compared to 81.6 percent who did so in the previous pregnancy. 17.9 percent reported having delivered by Caesarean section for the previous pregnancy as compared to 17.0 percent who did so in the last pregnancy. (Refer Table 4.3)

Table 4.3: Details of delivery: Full term/preterm, place of delivery, normal/caesarean section:

Variables	Category	Last delivery (percent) (n=206)	Previous delivery (percent) (n=206)
Was your baby a full term baby?	Pre term delivery	09.2	11.6
Where did you deliver? (Multiple choice)	Home	08.7	17.0
	Maternal & Child Health (MCH) clinic	53.9	32.0
	First Referral Units (FRU)	05.3	02.4
	Private hospital	32.0	48.5
What sort of delivery did you have – normal, caesarian or forceps? (specify)	Normal	82.5	81.6
	Caesarean	17.0	17.9
	Forceps	00.5	00.5
	n	206	206

A significantly higher proportion of the respondents reported having delivered at MCH clinics in the last pregnancy as compared to the previous pregnancy. ($p=0.000$). However, there was no difference in the proportion of women reporting a normal delivery or caesarean section during the last delivery as compared to the previous one.

4.4: Details of home delivery: Person assisting delivery & expenditure incurred:

Out of the respondents who reported having delivered at home, 16.7 percent reported that in the last pregnancy a nurse or doctor assisted them; this compared to 8.6 percent in the previous pregnancy. 83.3 percent in the last pregnancy and 91.4 percent in the previous pregnancy reported that dais, relatives or others assisted in the delivery. (Refer Table 4.4)

The average reported expenditure incurred in the last delivery was Rs.783.44 as compared to Rs.247.22 for the previous delivery. The range of expenditure for the last delivery was Rs.0-4000 as compared to Rs.0-1000 for the previous delivery. (Refer Table 4.4)

Table 4.4: Details of home delivery: Person assisting delivery & expenditure incurred:

Variables	Category	Last delivery (percent) (n=206)	Previous delivery (percent) (n=206)
Who assisted you in your delivery? Specify.	Nurse/Doctor	16.7	08.6
	Other	83.3	91.4
	n	18	35
How much money did you have to spend for the delivery?	Average expenditure incurred	Rs. 783.44	Rs. 247.22
	Range	Rs. 0 to 4,000	Rs. 0 – 1,000
	n	18	35

There was no significant change in the health professional that conducted the last delivery as compared to the previous one, but the respondents reported a four-fold increase in the out of pocket expenditure on the last delivery.

4.5: Hospital delivery

4.5a: Timing of admission:

Respondents were asked if they were admitted to the hospital: before or after the onset of labour. 78.5 percent in the last pregnancy and 84.6 percent in the previous pregnancy reported that they were admitted *after* labour began. A mere 1.6 percent in the last pregnancy and 1.8 percent in the previous pregnancy reported having been admitted without experiencing labour (Refer Table 4.5a)

Respondents were asked about who advised them to go to the hospital *before* the onset of labour. 32.4 percent in the last pregnancy and 33.3 percent in the previous pregnancy reported that a family member or a relative advised them. 32.4 percent in the last pregnancy and 30.4 percent in the previous pregnancy reported that they were advised to do so by a doctor. Those advised by a Link Worker/Community Health Worker was 27.0 percent in the last pregnancy and 4.3 in the previous pregnancy. 13.5 percent in the last pregnancy and 8.7 percent in the previous pregnancy were advised by the ANM. The proportion of those who reported that they were not advised by anyone to get admitted decreased in the last pregnancy. (Refer Table 4.5a)

66.7 percent in the last pregnancy and 75.9 percent in the previous pregnancy reported that they were advised by a family member or a relative to get admitted *after* the onset of labour. Those reporting that a Link Worker/Community Health Worker advised them were 49.3 percent in the last pregnancy and 29.2 percent in the previous pregnancy. 4.8 percent in the last pregnancy and to 2.9 percent in the previous pregnancy reported that they were advised by the ANM. A doctor reportedly advised 8.3 percent of the respondents in the last pregnancy and 12.4 percent in the previous pregnancy. (Refer Table 4.5a)

Table 4.5a: Timing of admission

Variables	Category	Last delivery (percent) (n=206)	Previous delivery (percent) (n=206)
When did you get yourself admitted to a hospital – before the onset of labour or after?	Before onset of labour	19.9	13.6
	After onset of labour	78.5	84.6
	Without experiencing labour pains	01.6	01.8
	n	186	169
For those who were admitted <i>before</i> the onset of labour -- Who advised you to go to the hospital and get yourself admitted? (Multiple choice)	Link Worker	21.6	04.3
	Community Health Worker	05.4	00.0
	Nurse	13.5	08.7
	Doctor	32.4	30.4
	Family Member or relative	32.4	33.3
	Not advised by anyone	13.5	26.1
	n	37	23
For those who got admitted <i>after</i> the onset of labour -- Who advised you to go to the hospital and get yourself admitted? (Multiple choice)	Link worker	34.7	19.7
	Community Health Worker	14.6	09.5
	Nurse	04.8	02.9
	Doctor	08.3	12.4
	Family Member	55.6	62.8
	Relatives and other	11.1	13.1
	n	144	137

More than two-thirds of the respondents in both pregnancies were advised to go to the hospital *after* the onset of labour. The proportion of respondents who reported that they were advised by the Link Worker/Community Health Worker increased substantially during the last pregnancy as compared to the previous pregnancy.

4.5b: Details of hospital delivery: Person assisting delivery, duration of stay and expenditure incurred:

Respondents were asked about the person who assisted them in their delivery. A doctor reportedly assisted 52.1 percent of the respondents in the last pregnancy and 53.8 percent in the previous pregnancy. 34.0 percent and 31.6 percent were the proportions of those reportedly assisted by a nurse in the last and previous pregnancies respectively. 11.2 percent and 12.4 percent of the respondents reported having been assisted by someone other than a nurse or doctor in the last and previous pregnancies respectively. 2.6 percent and 2.3 percent of the respondents in the last and previous pregnancies respectively were not able to recall who assisted them. Persons other than a doctor or nurse in both the last and previous pregnancies conducted about one tenth of the deliveries in the hospital. (Refer Table 4.5b)

Respondents were asked about the duration of their stay in hospital. 54.8 percent in the last pregnancy and 50.9 percent in the previous pregnancy reported a stay of three to five days. 23.4 percent and 26.3 percent reported a stay of fewer than three days for the last and previous pregnancies respectively. 21.3 percent of the respondents

reported a stay of more than six days for the last pregnancy as compared to 21.1 percent who did so in the previous pregnancy. (Refer Table 4.5b)

Respondents were questioned about the criteria they used for selecting a particular service provider. 53.2 percent in the last pregnancy and 54.4 percent in the previous pregnancy cited ‘convenience’ as a factor that prompted them to seek out a particular provider. The proportion of women who said that they selected the same facility or provider for delivery where they had got registered for antenatal care increased to 28.2 percent in the last delivery, as compared to 15.2 percent in the previous delivery. 22.8 percent and 20.5 percent cited ‘affordability’ as a factor in the last and previous pregnancies respectively. A small proportion in both pregnancies reported that relatives, the Link Worker/Community Health Worker or others had advised them. (Refer Table 4.5b)

The average expenditure incurred in the last delivery was Rs.3600.00 as compared to Rs. 4544.00 in the previous delivery. The range in both cases was Rs. 0.00 to Rs. 10,000.00 (Refer Table 4.4b)

Table 4.5b: Details of hospital delivery: Person assisting delivery, duration of stay and expenditure incurred:

Variables	Category	Last delivery (percent) (n=206)	Previous delivery (percent) (n=206)
Who assisted you in your delivery? (Multiple choice)	Nurse	34.0	31.6
	Doctor	52.1	53.8
	Other	11.2	12.4
	Can't say	02.6	02.3
	n	188	171
How long did you stay in the hospital? (In days)	Less or equal to two days	23.4	26.3
	Three to five days	54.8	50.9
	More than six days	21.3	21.1
	Missing	00.5	01.7
	n	188	171
What were the reasons/criteria that prompted you to select that particular service provider? (Multiple choice)	Registered with that service provider	28.2	15.2
	Convenience	53.2	54.4
	Referred by relatives	14.4	23.9
	Referred by the LW /CHW	06.9	01.2
	Affordability	22.8	20.5
	Availability of service	02.6	02.3
	Referral by UHP, MCH, FRU	00.5	00.5
	n	188	171
How much did you spend for your delivery? (In rupees).	Average expenditure	Rs. 3600	Rs. 4544
	Range	Rs. 0 to 10,000	Rs. 0 to 10,000
	n	188	171

A “doctor” in both the last and the previous delivery conducted a majority of hospital deliveries. The major criterion cited in both pregnancies for seeking out a particular

provider was ‘convenience. The second most cited criterion in both pregnancies was the fact that the respondent had been registered in that facility. The reduction in the average expenditure during the last delivery as compared to the previous delivery may be because of the shift from the private sector to public health facilities for the last delivery.

4.6: Information provided by the Link Worker/Community Health Worker on complications during delivery for the last pregnancy:

Only 23.7 percent of the respondents reported that the Link Worker/Community Health Worker gave them information in the last pregnancy on danger signs/complications during delivery. (Refer Table 4.6)

Out of the respondents who had received this information, 53.1 percent reported that they were informed about ‘transverse/breech presentation’ and about ‘umbilical cord around the neck’. 18.4 percent reported that they were informed about white discharge & bleeding, while another 16.3 percent reported that they were told about ‘other’ danger signs. (Refer Table 4.6)

95.7 percent reported that the Link Worker/Community Health Worker had given them this information in their homes. 48.9 percent reported that the Link Worker/Community Health Worker informed them about this in the third trimester, 32.6 percent in the second trimester and 14.3 percent in the first trimester. (Refer Table 4.6)

79.6 percent of the respondents reported that the Link Worker/Community Health Worker referred them to the MCH clinics for treatment. The remaining were referred to the UHP, FRU or private hospitals. (Refer Table 4.6)

Table 4.6: Information provided by the Link Worker/Community Health Worker on complications during delivery for the last pregnancy:

Variable	Category	Last Pregnancy (percent) (n=206)
Were you provided information by the LW/CHW about complications that can arise during delivery	Yes	23.7
On what complications did you receive information? (Multiple choice)	Transverse or breech presentation, cord around the neck of the foetus	53.1
	White discharge/ Bleeding	18.4
	Respiratory complications	
	Other	16.3
	Don't know	12.2
	n	49
Where were you given this information – at home or elsewhere?	Home	95.7
	Other	04.3
In which month of your pregnancy were you given this information? (Month to be converted into trimester)	First Trimester	14.3
	Second Trimester	32.6
	Third Trimester	48.9
	Missing	04.1
	n	49
Where did the Link Worker/Community Health Worker advise you to seek treatment (which service provider) in the event that you develop complications during your pregnancy? (Multiple choice)	Urban Health Post (UHP)	16.3
	Maternal Child Health (MCH) clinics	79.6
	First Referral Unit (FRU)	12.2
	Private Hospital	12.2
	n	49

Less than one fourth of the respondents reported that the LWs/ CHWs provided them with information on danger signs/complications during delivery when they visited them, despite this being one of the key roles of the LW/CHW. The majority of the respondents were advised to go to the MCH clinic for treatment.

4.7. Self reported complications during delivery:

Respondents were asked if they had developed complications during their delivery. 11.2 percent reported complications during delivery in the last pregnancy as compared to 10.7 percent who did so in the previous pregnancy. The complications reported were: lack of strong contractions, abrupt cessation of contractions, obstructed labour, and decreased fetal heart sounds. (Refer Table 4.7)

The proportion of respondents who reported seeking treatment at the MCH clinic for complications during delivery increased from 36.4 percent in the previous pregnancy to 39.1 percent in the last pregnancy. Likewise, the proportion reportedly going to the FRU for treatment increased from 4.6 percent in the previous pregnancy to 13.0

percent in the last one. The proportion seeking treatment at private hospitals reduced from 50.0 percent in the previous pregnancy to 30.4 percent in the last one. The proportion that did not seek treatment increased from 9.1 percent in the previous pregnancy to 17.4 percent in the last pregnancy. (Refer Table 4.7)

Table 4.7: Self reported complications during delivery:

Variable	Category	Last Pregnancy (percent) (n=206)	Previous Pregnancy (percent) (n=206)
Did you develop any kind of complication during your delivery?	Yes	11.2	10.7
What sort of complication(s) did you develop?	Contractions stopped prematurely	03.4	02.4
	Did not get good contractions	02.4	02.4
	Obstructed/prolonged labour	00.9	01.4
	Hand/cord prolapse	00.0	00.0
	Meconium discharge	00.5	01.5
	Decreased foetal movements	02.4	00.5
	Severe headache	00.9	00.9
	Excessive bleeding	04.5	01.9
	Large Perineal tear	01.5	01.9
	Premature rupture of membrane	00.0	00.0
Where did you seek treatment for these complication(s)? (Multiple choice)	Maternal Child Health (MCH) clinic	39.1	36.4
	First Referral Unit (FRU)	13.0	04.6
	Private hospital	30.4	50.0
	Did not go for treatment	17.4	09.1
	n	23	22
What were the reasons/criteria that made you seek out a particular service provider for treatment of these complications? (Multiple choice)	Convenience of service availability	50.0	42.1
	Referred by Relatives	05.6	00.0
	Referred by LW / CHW / ANM	05.6	05.2
	Affordability	00.0	05.2
	Availability of delivery services	44.4	42.1
	Referral by UHP, MCH clinic, FRU	00.0	05.2
	Can't say	05.6	05.2
	n	18	19

The prevalence of self reported complications during delivery did not change between the last delivery and the previous one. Treatment seeking behaviours indicated a significant shift from the private sector to the municipal public health sector. Surprisingly, the proportion not seeking any treatment increased for the last delivery as compared to the previous one. The key determinant for choice of facility was convenience and availability.

4.8. Awareness about service providers for treatment of complications during delivery:

67.9 percent in the last delivery and 50.9 percent in the previous delivery knew that one could go to the MCH clinic for treatment. 27.3 percent in the last pregnancy and 17.5 percent in the previous pregnancy knew about the UHP as a service provider. The proportion of respondents who knew that one could go to the FRUs was 26.7 percent in the last pregnancy and 19.9 percent in the previous pregnancy. (Refer Table 4.8)

A significantly higher proportion of respondents in the last pregnancy as compared to the previous one, knew that they could go to MCH clinics and FRUs for treatment.

Table 4.8: Awareness of place for treatment of intra-natal complications

Variable	Category	Last Pregnancy (percent) (n=206)	Previous Pregnancy (percent) (n=206)
Where do you think one could go for treatment in the event of complications arising during delivery? (Multiple answers)	Urban Health Post (UHP)	27.3	17.5
	Maternal and Child Health (MCH) clinics	67.9	50.9
	First Referral Unit (FRU)	26.7	19.9
	Private Hospital	32.5	35.4
	Can't say	13.6	25.2

Awareness about availability of services at the relevant Municipal health facilities for addressing complications during delivery increased significantly during the last delivery as compared to the previous one.

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Section 5

Maternal Health – Post-natal Care (PNC)

Section V: Post-natal care

This section includes information on surveillance visits by the Link Worker/Community Health Worker, the place of dissemination of information on post-natal care and signs of post-natal complications, occurrence of complications after delivery within the post-natal period (42 days after delivery), treatment for post-natal complications, awareness of service providers, where referred to for treatment, and follow up visits made by the Link Worker/Community Health Worker to monitor treatment.

5.1: Post-natal visits by the Government ANM

38.8 percent of the respondents in the last pregnancy reported that they were visited during the post-natal period by the government ANM, as compared to 24.3 percent who did so in the previous pregnancy.

Among those in the last pregnancy who were visited, 44.4 percent reported having received at least two visits, whereas 38.1 percent reported only one visit. The proportion not visited at all was 17.5 percent.

Among those in the previous pregnancy who were reportedly visited, 47.5 percent reported that they were visited at least twice and 37.3 percent once. The proportion reportedly not visited at all was 15.2 percent. (Refer Table 5.1)

Table 5.1: Post-natal visits by the Government ANM:

Variables	Category	Last pregnancy percent (n=206)	Previous pregnancy percent (n=206)
Did the government ANM visit you at least once after you delivered?	Yes	38.8	24.3
How many times did she visit you? (Specify number)	Not examined	17.5	15.2
	Once	38.1	37.3
	Two and more times	44.4	47.5
	n	97	59

A significant increase was observed in the last pregnancy, as compared to the previous pregnancy, in the proportion of women who reported that they had been visited at least once by the government ANM. ($p=0.001$).

5.2: Surveillance visits by the Link Worker/Community Health Worker during the last pregnancy to detect post-natal complications:

44.6 percent of the respondents reported that during the last pregnancy the Link Worker/Community Health Worker visited them at least once, during the six-week period after delivery, to monitor possible complications. The majority, i.e., 97.8 percent was reportedly visited at home. 31.5 percent reported they were visited within

6 days of delivery, whereas 58.7 percent reported that the first visit took place at least seven days later. (Refer Table 5.2)

Table 5.2: Surveillance visits by the Link Worker/Community Health Worker during the last pregnancy to detect post-natal complications:

Variables	Category	Last pregnancy percent (n=206)
Did the Link Worker/Community Health Worker visit you during the six-week period after your delivery?	Yes	44.6
Where did she enquire of you regarding possible post-natal complications – at home or elsewhere?	Home	97.8
	Other	02.2
	n	92
How many days after your delivery did the Link Worker/Community Health Worker come to visit you?	<=6 days	31.5
	7+ days	58.7
	Can't say	09.8
	n	92

Less than half the respondents said that the link worker or CHW visited them during the six-week period after the last delivery. Most of them were visited at home and a majority was visited after 7 days following their delivery.

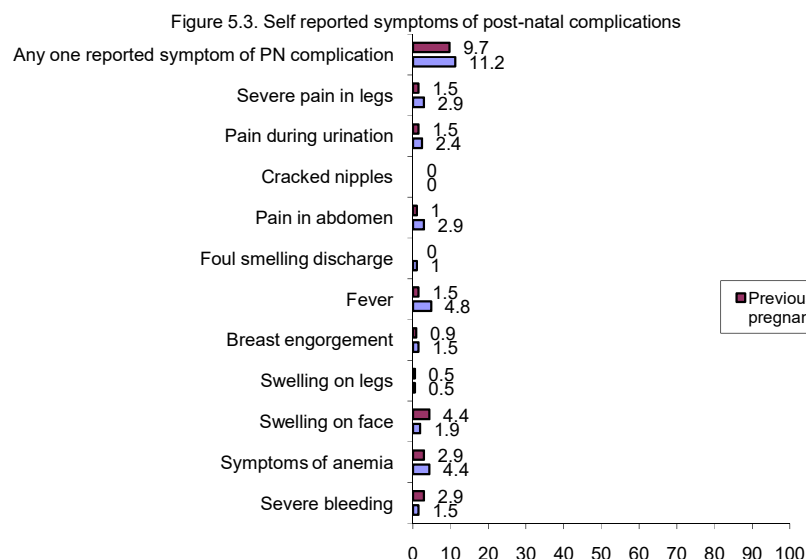
5.3. Self reported symptoms indicative of post-natal complications:

Only 9.7 percent of the respondents in the last pregnancy reported any symptom(s) indicative of post-natal complication(s), compared to 11.2 percent in the previous delivery.

The various post-natal complications reported in both pregnancies were severe pain in the legs, painful urination, pain in the lower abdomen, foul smelling discharge, fever, breast engorgement, swelling of the face and feet, symptoms of anemia (weakness, shortness of breath, dizzy spells, blackouts, etc.) and severe bleeding. The prevalence of each of these symptoms showed an increase in the last pregnancy over that in the previous one. The possible reason for this is better reporting in the last pregnancy. (Refer figure 5.3)

There was no significant difference in the prevalence of self-reported symptoms of post-natal complications between the last and the previous pregnancies. The type of symptoms indicative of post-natal complications that were reported was more or less the same for the last pregnancy as for the previous one.

Self Reported Symptoms of Post-natal Complications



5.4: Referral for treatment of post-natal complications

Data on referral for post-natal complications were collected from only those who reported at least one symptom indicative of post-natal complication(s). From among these respondents, 43.5 percent reported that in the last pregnancy they were advised to seek treatment by the Link Worker as compared to 20.0 percent who did so in the previous pregnancy. Another 13 percent reported that the Community Health Worker referred them for treatment of post-natal complications in the last pregnancy, as compared to 5 percent who received such referral in the previous pregnancy. (Refer Table 5.4)

The proportion in the last pregnancy that was advised by the nurse or doctor to seek treatment was 21.7 percent, as compared to 25 percent in the previous pregnancy. The proportion advised by relatives was 39.1 percent and 25 percent in the last and previous pregnancies respectively. The proportion that received no advice whatsoever was 39.1 percent in the last pregnancy and 45.0 percent in the previous pregnancy. (Refer Table 5.4)

35.7 percent in the last pregnancy and 36.4 percent in the previous pregnancy reported that they were referred to MCH clinics. The figures were identical for both the last and previous pregnancies of those who were advised to go to the UHP. (Refer Table 5.4)

Table 5.4: Referral for treatment of post-natal complications

Variables	Category	Last pregnancy percent (n=206)	Previous pregnancy percent (n=206)
Who advised you to seek treatment for your condition? (Multiple choice)	Link Worker	43.5	20.0
	Community Health Worker	13.0	05.0
	Nurse	13.0	10.0
	Doctor	08.7	15.0
	Family members	39.1	25.0
	Not received any advice/referral	39.1	45.0
	n	23	20
Which service provider were you referred to for treatment? (Multiple choice)	Outreach clinics	00.0	00.0
	Urban Health Post (UHP)	35.7	36.4
	Maternal Child Health (MCH) clinics	35.7	36.4
	First Referral Unit (FRU)	00.0	09.1
	Private hospital	00.0	00.0
	Can't say/don't remember	35.7	27.3
	n	14	11

There was a significant increase in the proportion of respondents who were advised to seek treatment for post-natal complications by the link worker or community health worker during the last pregnancy as compared to the previous one. There was no difference between the two pregnancies in the health facility where women were referred to for post-natal complications.

5.5: Treatment for post-natal complications:

Information on this section was sought only from those respondents who gave a history of post-natal complications.

The proportion that reportedly sought treatment within two days was 34.7 percent in the last pregnancy and 35.0 percent in the previous pregnancy. The proportion that sought treatment within three to six days was 21.7 percent in the last pregnancy and 25.0 percent in the previous pregnancy. The proportion that sought treatment seven or more days was 17.2 percent in the last pregnancy and 10 percent for the previous pregnancy. (Refer Table.5.5)

The proportion that reportedly did not seek treatment at all was 26.1 percent in the last delivery as compared to 30 percent in the previous delivery. (Refer Table.5.5)

Data were sought on the proportion of respondents seeking treatment at the MCH clinics, UHPs, FRUs and at private hospitals for the last and previous pregnancies. 26.1 percent in the last pregnancy and 20 percent in the previous pregnancy sought treatment at the MCH clinics. 4.4 percent and 5 percent were treated at the UHPs for the last and previous pregnancies respectively. The same figures were reported for those who were treated at the FRUs in the last and previous pregnancies respectively.

39.1 percent in the last pregnancy and 40.0 percent in the previous pregnancy were treated at a private hospital. (Refer Table.5.5)

Criteria for seeking treatment from a particular provider were ‘convenience’, ‘affordability’, ‘availability of services’, ‘had received antenatal services at the same provider’, ‘self referral’ and ‘referred by relatives’. The major criteria for seeking treatment from a particular provider were:

- 1) Convenience: 52.9 percent in the last pregnancy vs. 57.1 percent in the previous pregnancy; and
- 2) Affordability: 29.4 percent in the last pregnancy vs. 14.3 percent in the previous pregnancy. (Refer Table.5.5)

Data were collected on the duration of treatment under two categories: 1) Up to six days; and 2) Seven day or more. The proportion of those reportedly under treatment for up to six days was 56.4 percent in the last pregnancy and 70 percent in the previous pregnancy. The proportion of those under treatment for more than seven days was 41.2 percent in the last pregnancy and 28.6 percent in the previous pregnancy. (Refer Table.5.5)

Information was sought on the proportion of those who needed to be hospitalized. 23.5 percent in the last pregnancy and 28.6 in the previous pregnancy required domiciliary care. (Refer Table.5.5)

Information was sought on the proportion of those who had been cured completely of their complaint. 100 percent of those interviewed in both pregnancies experienced complete cure.

Only 5.8 percent of the respondents with a ‘high’ level of exposure to surveillance and who had developed at least one post-natal complication went to the UHP for treatment, as compared to 5.0 percent who developed at least one post-natal complication and were not exposed to surveillance. None of the respondents who developed at least one post-natal complication and who had a low level of exposure to surveillance went to the UHP for treatment. No significant increase in the rational utilization of UHPs was observed for treatment of post-natal complications.

Table 5.5: Treatment for post-natal complications:

Variables	Category	Last pregnancy percent (n=206)	Previous pregnancy percent (n=206)
How long did it take you to seek treatment after you became symptomatic?	Within 2 days	34.7	35.0
	3-6 days	21.7	25.0
	After 7 days	17.2	10.0
	Did not seek treatment	26.1	30.0
	n	23	20
Where did you seek treatment for your condition? (Multiple choice)	Urban Health Post (UHP)	04.4	05.0
	Maternal Child Health (MCH) clinics	26.1	20.0
	First Referral Unit (FRU)	04.4	05.0
	Private hospital	39.1	40.0
	Did not seek treatment	26.1	30.0
	n	23	20
What were your reasons/criteria for selecting a particular service provider? (Multiple choice)	Convenience	52.9	57.1
	Affordability	29.4	14.3
	Self referral	05.8	00.0
	Availability of service	23.5	14.3
	Antenatal care received at the same provider	05.8	14.3
	Advised to go by relatives/ family members	00	21.4
	n	17	14
For how long were you under treatment? (Number of days)	Less than 6 days	58.8	71.4
	More than 7 days	41.2	28.6
	n	17	14
Were you hospitalized?	Yes	23.5	28.6
	n	17	14
Did you consider yourself cured of your complaint?	Yes	100.0	100.0
	n	17	14

When the treatment utilization experience was compared between the last and the previous pregnancies, it was found that there was no significant difference in the interval between appearance of symptoms and seeking treatment, in the choice of health facility or provider, and in the reasons for seeking treatment. There was a significant increase in the duration of treatment in the last pregnancy as compared to the previous one. The level of exposure to surveillance did not result in a significant difference in the choice of facility for post-natal complications.

5.6: Awareness of various service providers for treatment of post-natal complications:

The proportion of those reporting an awareness of each of the various service providers for treatment of post-natal complications was calculated. The proportion of those reportedly aware of MCH clinics was 69.9 percent in the last pregnancy and 52.4 percent in the previous pregnancy. The proportion of those aware of the UHP was 27.7 percent for the last pregnancy and 20.8 percent in the previous pregnancy. Those who knew about the FRU were 24.3 percent in the last pregnancy, as compared to 19.4 percent in the previous pregnancy. (Refer Table 5.6)

Table.5.6: Awareness of various service providers for treatment of post-natal complications:

Variables	Category	Last pregnancy percent (n=206)	Previous pregnancy percent (n=206)
Where could one go if one had to seek treatment for post-natal complications? (Multiple choice)	Outreach clinic	07.3	03.4
	Urban Health Post (UHP)	27.7	20.8
	Maternal and Child Health (MCH) clinics	69.9	52.4
	First Referral Unit (FRU)	24.3	19.4
	Private hospital	34.9	37.4
	Don't know	13.1	23.3

A significantly higher proportion of women were aware of MCH clinics as providers of treatment for post-natal complications in the last pregnancy as compared to the previous one ($p=0.000$).

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Section 6

Neonatal Care

Section 6: Neonatal care

This section provides information on surveillance visits by the Link Worker/Community Health Worker to monitor weighing of the baby at birth, neonatal complications, place of treatment of neonatal complications, referral for the treatment of neonatal complications, and awareness of available service providers.

6.1: Information on the importance of obtaining the weight of the baby at birth provided by the Link Worker/Community Health Worker in the last pregnancy:

49 percent of the respondents in the last pregnancy reported having received information on the importance of obtaining the weight of the baby at birth from the Link Worker/Community Health Worker. Out of these, 94.1 reported that they had received this information at home. (Refer Table 6.1)

Table 6.1: Information on the importance of obtaining the weight of the baby at birth provided by the Link Worker/Community Health Worker in the last pregnancy:

Variable	Category	Last pregnancy percent (n=206)
Did the Link Worker/Community Health Worker tell you why it is important to weigh your baby soon after it was born?	Yes	49.0
Where did she tell you about this? Specify place.	Home	94.1
	Other	05.9
	n	101

Almost half of the respondents said that the Link Worker/Community Health Worker told them about the importance of birth weight during their last pregnancy.

6.2: Birth weight:

Data were sought on the proportion of respondents whose babies were weighed within 24 hours and those whose babies were weighed after 24 hours of birth. The proportion of respondents in the last pregnancy whose babies were reportedly weighed within 24 hours of birth was 88.4 as compared to 81.6 percent in the previous pregnancy. The proportion of those reporting that the baby was weighed after 24 hours of birth was 8.2 percent in the last pregnancy as compared to 6.8 percent in the previous pregnancy. The proportion reporting that their babies were not weighed at all decreased from 11.6 percent in the previous pregnancy to 3.4 percent in the last pregnancy. (Refer Table 6.2)

Since most of the respondents had delivered in a hospital, a majority (above 90 percent) in both pregnancies reported that either a nurse or a doctor took the birth weight. Likewise, a small proportion in both pregnancies reported that the Link Worker or the Anganwadi worker took the birth weight. (Refer Table 6.2)

The proportion of respondents in the last pregnancy who reported a low birth weight baby (weight <2.5 kg.) was 16.5 percent as compared to 20.2 percent of those who did so in the previous pregnancy. (Refer Table 6.2)

Table 6.2: Birth weight:

Variable	Category	Last pregnancy percent (n=206)	Previous pregnancy percent (n=206)
How soon after birth was the baby weighed? (In hours)	Within 24 hours after birth	88.4	81.6
	After 24 hours	08.2	06.8
	Not weighed	03.4	11.6
Who weighed the baby? (Multiple choice)	Link worker	02.2	00.6
	Nurse	65.9	63.7
	Doctor	26.4	26.8
	Aanganwadi tai	02.2	01.8
	Others	00.0	07.1
	n	182	168
How much did the baby weigh? (In kg)	Low birth weight - <2.5 kg	16.5	20.2
	Normal birth weight - >= 2.5 kg	83.5	79.8
	n	182	168

More than 80 percent of the respondents reported that their newborn was weighed within 24 hours of birth after the last as well as the previous delivery. The majority of the respondents said that the nurses weighed the baby, and about 80 percent said that the baby weighed more than 2.5 Kg.

6.3: Surveillance visits by the Link Worker/Community Health Worker to detect neonatal complications:

In the last delivery, the percent of respondents who reported that the Link Worker/Community Health Worker visited them within one month of delivery to check up on the health of their babies was 47.6 percent. 96 percent of these reported that the visit had taken place at their homes. (Refer table 6.3)

The proportion of those reportedly visited within six days after birth was 30.6 percent, and that of those reportedly visited after six days of birth was 69.4 percent. (Refer Table 6.3)

Table 6.3: Surveillance visits by the Link Worker/Community Health Worker to detect neonatal complications:

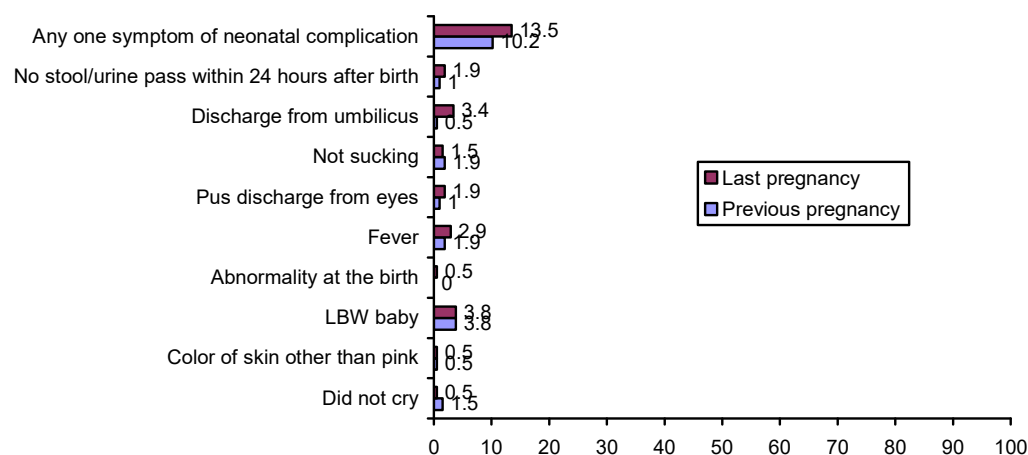
Variable	Category	Last pregnancy percent (n=206)
Did the Link Worker/Community Health Worker visit you within one month of birth, to check up on the health of your baby? (Yes/No)	Yes	47.6
Where did she visit you –at home or elsewhere?	Home	96.0
	Other place	04.0
	n	98
How soon after delivery did she visit you? (Number of days)	<=6 days	30.6
	After 6 days	69.4
	n	98

Slightly less than half the respondents said that the Link Worker / Community Health Worker visited them at home to check the health of the newborn within 28 days after birth.

6.4: Neonatal complications (complications within the first 28 days of life):

The prevalence of various neonatal complications for both pregnancies is presented in Figure 6.4. Of the 206 respondents, 13.5 percent in the last pregnancy reported a positive history of neonatal complications as compared to 10.2 percent who did so in the previous pregnancy. The list of complications included not passed stool/urine within 24 hrs of birth, discharge from the umbilicus, inability to feed, fever, did not cry immediately / listless and low birth weight.

Fig 6.4: Any one symptom of neonatal complication



About 14 percent of the mothers reported symptoms of a neonatal complication during the last delivery. There was no significant difference in the prevalence of self-reported neonatal complications between the last and the previous delivery.

6.5. Referral for the treatment of neonatal complications:

Information was sought on who had advised the respondent to seek treatment at the onset of symptoms in the baby, for both pregnancies. The Link Worker reportedly advised 32.1 percent in the last pregnancy compared to 4.7 percent in the previous pregnancy. 7.1 percent in the last pregnancy reported that the Community Health Worker had advised them. A nurse or doctor had reportedly advised 21.4 percent in the last pregnancy and 19.0 percent in the previous pregnancy. Family members and relatives advised 14.3 percent in the last pregnancy and 33.3 percent in the previous pregnancy. 32.1 percent in the last pregnancy and 42.8 percent in the previous pregnancy reported that they were not advised by anyone. (Refer Table 6.5)

Information was sought on how soon after the baby became symptomatic was the mother advised to seek treatment. 63.2 percent in the last pregnancy reported that they were advised to seek treatment within six days of the baby becoming symptomatic, as compared to 41.6 percent in the previous pregnancy. (Refer Table 6.5).

Information was gathered on which service providers the mother was referred to for treatment. The proportion reporting the MCH clinics, UHP, or FRU increased from the last pregnancy to the previous pregnancy, whereas those reporting private hospitals/doctors decreased. (Refer Table 6.5)

Table 6.5: Referral for the treatment of neonatal complications:

Variable	Category	Last pregnancy percent (n=206)	Previous pregnancy percent (n=206)
Who advised you to seek treatment when your baby became symptomatic? (Multiple choice)	Link Worker	32.1	04.7
	Community Health Worker	07.1	00.0
	Nurse	07.1	14.3
	Doctor	14.3	04.7
	Family members & relatives	14.3	33.3
	Was not advised by anyone	32.1	42.8
	n	28	21
How soon after your baby became symptomatic did you receive this advice? (In days)	Within 6 days	63.2	41.6
	After 6 days	36.8	25.0
	Don't remember	00.0	33.4
	n	19	12
Where were you advised to seek treatment for your baby? (Multiple choice)	Urban Health Post (UHP)	26.3	25.0
	Maternal Child Health (MCH) clinic	42.1	33.3
	First Referral Unit (FRU)	10.5	08.3
	Private hospital	15.8	25.0
	n	19	12

There was a highly significant increase in the proportion of women who reported that they were advised by the link workers to seek treatment for the newborn after the onset of symptoms of a complication.

6.6: Treatment for neonatal complications:

Information was gathered on how soon after the baby became symptomatic the mother sought treatment. 39.3 percent in the last pregnancy reportedly started treatment within 24 hours after the baby became symptomatic, whereas 23.8 percent did so in the previous pregnancy. The proportion of those who did not seek treatment at all fell from 28.6 percent in the previous pregnancy to 14.3 percent in the last pregnancy. (Refer Table 6.6)

Data were gathered on place of treatment. The proportion of respondents who sought treatment at the UHP, MCH or FRU for neonatal complications in the last birth increased as compared to those who did so in the previous birth. The proportion that got their babies treated at a private hospital decreased from the previous pregnancy to the last pregnancy. (Refer Table 6.6)

The proportion of respondents who reported that the baby's treatment lasted up to six days was 66.7 percent in the last pregnancy as compared to 86.7 percent in the previous pregnancy (Refer Table 6.6)

The proportion of respondents who reported that their baby had to be admitted to hospital for treatment was 16.7 percent in the last pregnancy compared to 66.7 percent in the previous pregnancy. Out of those who sought treatment, 91.7 percent reported that their babies were completely cured in the last pregnancy as compared to 86.7 percent in the previous pregnancy. (Refer Table 6.6)

Table 6.6: Treatment for neonatal complications:

Variable	Category	Last pregnancy percent (n=206)	Previous pregnancy percent (n=206)
How soon after the baby became symptomatic did you seek treatment?	Within 24 hours	39.3	23.8
	Two to five days	28.6	23.8
	After six days	17.8	23.8
	Was not treated	14.3	28.6
	n	28	21
Where did you take the baby to be treated?	Urban Health Post (UHP)	14.3	04.7
	Maternal Child Health (MCH) clinic	28.6	14.3
	First Referral Unit (FRU)	10.7	00.0
	Private hospital	32.1	52.4
	Was not treated	14.3	28.6
	n	28	21
How long did the treatment last?	6 days	66.7	86.7
	More than 6 days	33.3	13.3
	n	24	15
Did the baby have to be hospitalized?	Yes	16.7	66.7
	n	24	15
Did you feel that the baby was cured completely?	Yes	91.7	86.7
	n	24	15

There was a significant increase in the proportion of women who sought treatment for neonatal complications with 24 hours of their onset. The largest proportion of women reporting symptoms of neonatal complications took the newborn to the MCH clinic followed by the urban health post and first referral unit. The proportion that went to the MCH clinic doubled, the proportion that went to the UHP went up threefold, and those who went to the FRU increased from 0 to 10 percent. There was a significant shift of treatment seeking from the private to the public sector. However, there was a sharp and significant reduction in the proportion of women reporting hospitalization for neonatal complications.

6.7: Awareness of service providers for treatment of neonatal complications:

Information was sought on awareness of the various service providers to whom a newborn could be taken for treatment in case of complications. 66.0 percent in the last pregnancy and 50.5 percent in the previous pregnancy knew about the MCH clinic as a treatment facility for neonatal complications. 33.5 percent in the last pregnancy and 26.7 percent in the previous pregnancy were aware of the UHP as a treatment facility, whereas 27.7 percent in the last pregnancy and 21.4 percent in the previous pregnancy knew about the FRU. (Refer Table 6.7)

A significantly higher proportion of respondents in the last pregnancy knew about the MCH clinic as a treatment facility as compared to those who did so in the previous pregnancy. (p=0.000)

Table 6.7: Awareness of facilities for treatment of neonatal complications:

Variable	Category	Last Delivery percent (n=206)	Previous pregnancy percent (n=206)
Where could one take a neonate to be treated if it developed complications? (Multiple choice)	Outreach clinic	07.3	03.9
	Urban Health Post (UHP)	33.5	26.7
	Maternal Child Health (MCH) clinic	66.0	50.5
	First Referral Unit (FRU)	27.7	21.4
	Private hospital	36.9	39.8
	Don't know	10.7	22.3

Awareness regarding appropriate facilities for the referral of neonatal complications increased significantly during the last pregnancy as compared to the previous pregnancy. About two thirds of the respondents felt that MCH clinics were most appropriate for the treatment of neonatal morbidity.

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Section 7

Health Care Providers and Health Care Facilities

Section VII: Perceptions about health care providers and health care facilities:

In this section, data regarding perceptions of people regarding services provided by the Link Worker, Community Health Worker, nurse and doctor were gathered.

7.1: Perceptions about services provided by the Link Worker:

Respondents were asked to recall some of the services provided by the Link Worker. 77.2 percent of them cited 'follow-up visits to ensure utilization of services', 61.2 percent cited 'dissemination of information about MNH issues', 9.7 percent cited 'MNH-needs assessment' and 4.8 percent cited 'referral for utilization of MNH services'. (Refer Table 7.1)

Data were gathered on how much the respondents felt they had benefited from the Link Worker. The respondents were asked to rate perceived benefits on the "Pachod Paise Scale"; i.e., "How many paise in a rupee do you feel you have benefited from the services provided to you by the Link Worker?" 61.6 percent reported '67-100 paise', 19.4 percent reported '34-66 paise' and 13.1 percent reported '0-33 paise'. The average extent to which the responded felt they had benefited was 72.7 paise. (Refer Table 7.1).

Information was gathered on the respondents' perceptions regarding the extent to which coverage was provided to the community by the Link Worker, as also the extent to which the community had benefited from services provided by the Link Worker. 74.5 percent of the respondents felt that 'five out of five' women were provided with services, 5.4 percent felt that 'between 1 and 4' women were provided with services, where as 1 percent felt that 'no one' received services (Refer Table 7.1).

With regard to the extent to which the community had benefited from the Link Worker's services, 62.1 percent of the respondents felt that 'five out of five' women had benefited, 17.5 percent felt that 'between 1 and 4' women had benefited, and 1.0 percent felt that 'no one' had benefited. (Refer Table 7.1)

Table 7.1: Perceptions about services provided by the Link Worker:

Variable	Category	Percent (n=206)
What were some of the services provided by the Link Worker to you? (Multiple choice)	Needs assessment for Maternal and Neonatal Health	09.7
	Follow up visits for utilization of Maternal and Neonatal Health services	77.2
	Referral services	04.8
	Information on Maternal and Neonatal Health and other health issues	61.2
“How many paise in a rupee” do you feel you have benefited from the services provided by the Link Worker?	0-33 Paise	13.1
	34-66 Paise	19.4
	67-100 Paise	61.6
	Can’t say	05.8
	Mean	72.7
	Median	80.0
Out of 5 pregnant women, how many do you feel must have been provided services by the Link Worker?	Nil	01.0
	One to four	05.3
	All five	74.5
	Can’t say	18.9
Out of 5 pregnant women, how many do you feel benefited from services provided by the Link Worker?	Nil	01.0
	One to four	17.5
	All five	62.1
	Can’t say	19.4

A large majority of the respondents expressed a strong perception that the surveillance visits of the Link Worker were very beneficial for them. The majority of the respondents also perceived that most women in their community were provided services by the link worker and benefited from those services.

7.2: Perceptions about services provided by the Community Health Worker:

The respondents were asked to recall some of the services provided by the Community Health Worker. 25.7 percent of them cited ‘follow-up visits to ensure utilization of services’, 45.1 percent cited ‘dissemination of information about MNH issues’, 2.4 percent cited ‘MNH-needs assessment’ and 5.8 percent cited ‘referral for utilization of MNH services’. (Refer Table 7.2)

Data were gathered on how much the respondents felt they had benefited from the Community Health Worker. The respondents were asked to rate their perceived benefits on the “Pachod Paise Scale”; i.e., “How many paise in a rupee do you feel you have benefited from the services provided to you by the Community Health Worker?” 32.0 percent reported ‘67-100 paise’, 13.6 percent reported ‘34-66 paise’ and 19.4 percent reported ‘0-33 paise’. The average extent to which the respondent felt they had benefited was 57.9 paise. (Refer Table 7.2).

Information was gathered on the respondents' perception of the extent of the Community Health Worker's coverage of the community, as also the extent to which the community had benefited from services provided by the Community Health Worker. 42.7 percent of the respondents felt that 'five out of five' women were provided with services, 4.8 percent felt that 'between 1 and 4' women were provided with services, where as 6.8 percent felt that 'no one' received services (Refer Table 7.2).

With regard to the extent to which the community had benefited from the Community Health Worker's services, 31.1 percent of the respondents felt that 'five out of five' women had benefited, 16.5 percent felt that 'between 1 and 4' women had benefited, and 6.8 percent felt that 'no one' had benefited. (Refer Table 7.2)

Table 7.2: Perceptions about services provided by the Community Health Worker:

Variable	Category	Percent (n=206)
What were some of the services provided by the Community Health Worker to you? (Multiple choice)	Needs assessment for MNH	02.4
	Follow up visits for utilization of Maternal and Neonatal Health services	25.7
	Referral services	05.8
	Information on Maternal and Neonatal Health and other health issues	45.1
“How many paise in a rupee” do you feel you have benefited from the services provided by the Community Health Worker?	0-33 Paise	19.4
	34-66 Paise	13.6
	67-100 Paise	32.0
	Can't say	34.9
	Mean	57.8
	Median	55.0
Out of 5 pregnant mothers, how many do you feel must have been provided services by the Community Health Worker?	Nil	06.8
	One to four	04.8
	All five	42.7
	Can't say	45.6
Out of 5 pregnant mothers, how many do you feel benefited from services provided by the Community Health Worker?	Nil	06.8
	One to four	16.5
	All five	31.1
	Can't say	45.6

Only a quarter to one third of the respondents felt that moderate benefits accrued from the home visits of the Community Health Workers and that a few women in the community benefited from their work.

7.3: Perceptions about services provided by the Auxiliary Nurse Midwife (ANM):

The respondents were asked to recall some of the services provided by the ANM. 23.0 percent cited antenatal registration and checkups, 10.2 percent cited post-natal care, 9.7 percent reported immunization of children, 38.2 percent reported BCC, and 3.9 percent reported treatment for minor ailments. As regards BCC, the respondents reported that information was given on diet, general health concerns, maternal health and neonatal care. (Refer Table 7.3)

Data were gathered on how much the respondents felt they had benefited from the ANM. They were asked to rate their perceived benefits on the “Pachod Paise Scale”; i.e., “How many paise in a rupee do you feel you have benefited from the services provided to you by the ANM?” 34.5 percent reported ‘67-100 paise’, 17.0 percent reported ‘34-66 paise’ and 9.7 percent reported ‘0-33 paise’ (Refer Table 7.3).

Information was gathered on the respondents’ perception of the extent of ANM coverage of the community, as also the extent to which the community had benefited from services provided by the ANM. 47.6 percent of the respondents felt that ‘five out of five’ women were provided with services, whereas 5.3 percent felt that ‘between 1 and 4’ women were provided with services. (Refer Table 7.3).

As regards the extent to which the community had benefited from the ANM’s services, 36.9 percent of the respondents felt that ‘five out of five’ women had benefited, whereas 15.0 percent felt that ‘between 1 and 4’ women had benefited. (Refer Table 7.3)

Table 7.3: Perceptions about services provided by the Auxiliary Nurse Midwife (ANM):

Variable	Category	Percent (n=206)
What were some of the services provided by the ANM to you? (Multiple choice)	Antenatal registration and check ups	23.0
	Post-natal check ups	10.2
	Immunization for children	09.7
	Information on general health concerns	13.1
	BCC on diet	14.5
	BCC on neonatal care	02.9
	BCC on maternal health	07.7
	Treatment for minor ailments	03.9
“How many paise in a rupee” do you feel you have benefited from the services provided by the ANM?	0-33 Paise	09.7
	34-66 Paise	17.0
	67-100 Paise	34.5
	Can’t say	38.8
	Mean	64.1
	Median	75.0
Out of 5 pregnant mothers, how many do you feel must have been provided services by the ANM?	Nil	01.5
	One to four	05.3
	All five	47.6
	Can’t say	45.6
Out of 5 pregnant mothers, how many do you feel benefited from services provided by the ANM?	Nil	01.9
	One to four	15.0
	All five	36.9
	Can’t say	46.1

One out of every four respondents felt that ANMs provided antenatal care services. A much smaller percentage felt that they provided postnatal, immunization and referral services as well. About one third of the respondents felt they had benefited from the services of the ANM and a similar proportion felt that other women in the community had also benefited from her services.

Perceptions about Health Facilities:

In this section questions on the respondents’ experience of services provided at outreach clinics, the UHPs, the MCH clinics and the FRUs were asked.

7.4: Perceptions about services provided at outreach clinics:

71.4 percent of the respondents were aware of the outreach clinics conducted at the slum and 63.1 percent reported that they had attended the outreach clinic at least once. As regards the type of service(s) that they had received at the clinic, 71.5 percent reported ‘immunization for children’, 19.2 percent reported ‘antenatal check ups’, 20

percent reported ‘information on general health issues’ and 11 percent cited ‘BCC on diet’. (Refer Table 7.4)

42.7 percent of the respondents said “67-100 paise in a rupee they had benefited” from the outreach clinics. About 48.1 percent perceived that ‘five out of five’ pregnant women benefited from the services provided there. (Refer Table 7.4).

Table 7.4: Perceptions about services provided at ‘Outreach Clinics’

Variable	Category	Percent (n=206)
Have you heard of the ‘Outreach Clinics’?	Yes	71.4
Have you ever attended these clinics?	Yes	63.1
What are the services that you have availed of at these clinics?	Antenatal check ups	19.2
	Immunization of children	71.5
	BCC on diet	11.5
	Information on general health concerns	20.0
	Provision of postnatal & neonatal services	01.5
	Treatment for minor ailments	02.3
	Information on MNH	02.3
	Received benefits of JSY	00.7
	n	130
How many “paise in a rupee” do you feel you have benefited from these clinics?	0-33 Paise	10.2
	34-66 Paise	11.6
	67-100 Paise	42.7
	Can’t say	06.8
	Not aware of this	28.6
Out of 5 pregnant mothers, how many do you feel have benefited from services provided at these clinics?	Nil	05.3
	One to four	10.7
	All five	48.1
	Can’t say	07.3
	Not aware of this	28.6

Every third respondent had heard of outreach clinics and two of every three women had attended these clinics. Most respondents said that the outreach clinics were for immunization of children. Very few said that MCH services were also used. Almost half the respondents felt that most other women in the community had used and benefited from services provided at the outreach clinics.

7.5: Perception about the Urban Health Post (UHP)

66 percent of the respondents were aware of the UHP and 54.8 percent reported that they had attended it at least once. When asked about what sort of services they had

availed of at the UHP, 55.7 percent reported that they had received treatment for minor ailments and 26.5 percent reported antenatal examinations. (Refer Table 7.5)

28.6 percent reported that “67-100 paise in a rupee” they had benefited from services provided at the UHP. As regards the extent of perceived benefit to the community, 28.2 percent of the respondents reported that ‘five out of five’ pregnant women had benefited from the services. (Refer Table 7.5)

Table 7.5: Perception about services provided at the UHP:

Variable	Category	Percent (n=206)
Have you heard of the UHP?	Yes	66.0
Have you ever visited the UHP?	Yes	54.8
What were some of the services that you availed of at the UHP? (Multiple answers)	Antenatal check ups	26.5
	Immunization of children	07.1
	BCC on diet	04.4
	Information on general health concerns	08.8
	Provision of post-natal and neonatal care services	01.7
	Treatment for minor ailments	55.7
	Information on Maternal and Neonatal Health	01.7
	n	113
How many “paise in a rupee” did you benefit from those services?	0-33 Paise	21.4
	34-66 Paise	07.8
	67-100 Paise	28.6
	Can’t say	08.3
	Not aware of UHP	33.9
Out of 5 pregnant mothers, how many pregnant mothers do you think benefited from these services?	Nil	16.0
	One to four	13.6
	All five	28.2
	Can’t say	08.3
	Not aware of UHP	33.9

Two out of three respondents had heard of the UHP and about half had accessed services at the facility. However, only one fourth of the respondents felt that all other women in the community had accessed and benefited from services at the UHP.

7.6: Perceptions about Maternal and Child Health (MCH) clinics

78.6 percent of the respondents were aware of MCH clinics and 72.3 percent reported that they had attended an MCH clinic at least once. When asked about what sort of services they had availed of at the MCH clinics, 55.7 percent cited antenatal examinations, 30.8 percent cited delivery and 14.7 percent reported testing for HIV &

sonography. A small proportion reported post-natal care and family planning services. (Refer Table 7.6)

When asked to quantify the extent to which they had benefited from the services, 43.7 percent of the respondents reported that “67-100 paise” in a rupee they had benefited from the services provided at MCH clinics. When asked to quantify the extent to which they perceived that the community had benefited from the services, 44.7 percent reported that ‘five out of five’ pregnant women had benefited from these services. (Refer Table 7.6)

Table 7.6: Perceptions about services provided at MCH clinics:

Variable	Category	Percent (n=206)
Are you aware of the MCH clinics?	Yes	78.6
Have you ever attended an MCH clinic?	Yes	72.3
What were some of the services that you availed of at the MCH clinic? (Multiple answers)	Delivery services	30.8
	HIV test and sonography	14.7
	Antenatal check ups	55.7
	BCC on diet	01.3
	Information on general health concerns	01.3
	Provision of post-natal and neonatal care services	00.7
	Family planning operation	00.7
	n	149
How many “paise in a rupee” did you benefit from these services?	0-33 Paise	16.5
	34-66 Paise	12.6
	67-100 Paise	43.7
	Can't say	05.8
	Not aware of MCH centres	21.4
Out of 5 pregnant mothers, how many do you feel benefited from the services provided at MCH clinics?	Nil	13.1
	One to four	13.5
	All five	44.7
	Can't say	07.3
	Not aware of MCH centres	21.4

A large majority (three fourths) of the respondents had heard of the MCH clinic and a similar proportion had used the services of the facility. Almost half the respondents felt that all other women in the community had accessed and benefited from services at the MCH clinics.

7.7: Perception about the First Referral Unit (FRU)

A total of 44.2 percent of the respondents were aware of the FRU, but only 22.3 percent reported that they had ever attended an FRU. When asked what services they

had availed of at the FRU, 30.3 percent reported delivery services and 69 percent reported good quality services within reasonable limits of expenditure. (Refer Table 7.7)

When asked how much they had benefited from services at the FRU. 13.6 percent reported that “67-100 paise in a rupee” they benefited from these services However, only 8.7 percent of the respondents perceived that five out of five pregnant women had benefited from the FRU. (Refer Table 7.7)

Table 7.7: Perception about services provided at FRU:

Variable	Category	Percent (n=206)
Are you aware of the FRU?	Yes	44.2
Have you ever attended an FRU?	Yes	22.3
What were some of the services that you availed of at the FRU? (Multiple choice)	UPT test	02.1
	Delivery services	30.4
	JSY	08.6
	Blood test & sonography	08.6
	Immunization	06.2
	Percent reporting good quality of services	69.5
	Family planning services	10.8
	n	46
How many “paise in a rupee” do you feel you have benefited from these services?	0-33 Paise	09.2
	34-66 Paise	02.4
	67-100 Paise	13.6
	Can't say	18.9
	Not aware of FRU	55.8
Out of 5 pregnant mothers, how many do you feel have benefited from these services?	Nil	08.3
	One to four	08.3
	All five	08.7
	Can't say	18.9
	Not aware of FRU	55.8

Less than half the respondents had heard of the First Referral Unit and less than one fourth had used the services of the facility. The respondents felt that a very small proportion of women in their community had used and benefited from the services at the FRU.

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Section 8

Conclusions and Implications

Conclusions:

Surveillance has resulted in a demonstrable increase in utilization of MNH services. A substantive increase from the previous to the last pregnancy was observed in the utilization of government health care services over that of private services. This being said, the level of rational utilization of government primary health care facilities (Outreach Clinics and UHP) continues to be low, which implies that pregnant women still prefer to go to the MCH clinic for most services in spite of the fact that these are available at a more decentralized level such as UHPs and outreach clinics.

Pregnancy confirmation and registration for antenatal care services:

As a consequence of surveillance, there was a rapid response to an event of amenorrhea (i.e., a missed period) in the form of urine pregnancy testing and an equally robust increase in early (within 12 weeks) antenatal care registration. What is significant is the fact that the service providers for both these processes were increasingly government rather than private.

There is a significant association between exposure to surveillance and early registration for antenatal care services.

The largest proportion of women got registered for antenatal care at the MCH clinics. The UHPs and the 'Outreach Clinics' accounted for a very small proportion of the registration. The reason for this is the fact that the Link Worker/ Community Health Worker advised the respondents to get registered at the MCH clinics rather than at the Outreach Clinics or at the UHPs.

Utilization of antenatal care:

Increase in utilization of 'minimum standard antenatal care' was associated with the level of exposure to surveillance. Respondents availing of minimum care were typically those who were exposed to 'high' levels (four and more visits) of surveillance.

Here too, there was a shift from private to government facilities as far as antenatal service providers were concerned. The MCH clinics were the most sought out for antenatal care, rather than the UHP. Again, the reason for this was referral by the Link Worker and the Community Health Worker.

Antenatal complications and treatment:

A significant increase was observed in the early detection of antenatal complications among those who had a 'high' level of exposure to surveillance as compared to those who did not.

In both pregnancies, more than eighty percent of the mothers who experienced at least one antenatal complication had sought treatment for it.

Significant increase in the utilization of MCH clinics for the treatment of antenatal complications was observed in the last pregnancy as compared to the previous

pregnancy. However, no significant increase was observed in the utilization of UHPs for the treatment of antenatal complications. Here too the reason for this was referral by the Link Worker/Community Health Worker.

There was a shift in the place of treatment for symptoms of antenatal complications from private institutions to government facilities in the last pregnancy as compared to the previous one.

Intra-natal care:

A significant reduction in home deliveries was observed in the last pregnancy as compared to the previous one. Also, a significantly higher proportion of hospital deliveries were conducted at MCH clinics in the last pregnancy as compared to the previous one. There was also a shift in the place of delivery from private institutions to government hospitals in the last pregnancy.

Post-natal care:

A significant increase was observed in the proportion of those in the last pregnancy who reported that they were visited at least once by the government ANM, as compared to those in the previous pregnancy who did so.

No significant change was observed in the early detection of symptoms of at least one post-natal complication in the last pregnancy as compared to the previous one. The various post-natal complications reported in both pregnancies were severe pain in the legs, painful urination, pain in the lower abdomen, foul smelling discharge, fever, breast engorgement, swelling on face and feet, symptoms of anemia (weakness, shortness of breath, dizzy spells, blackouts etc.) and severe bleeding.

No significant increase was observed in the utilization of UHP and MCH centers for the treatment of post-natal complications with 'high' level of exposure to surveillance (such as in the last delivery) as compared to a low level of exposure (such as in the last delivery) and no exposure to the surveillance (such as in the previous delivery).

The two reasons for respondents seeking treatment at the MCH clinics were 'convenience' and 'affordability'.

Neonatal care:

The majority of mothers reported that their newborns were weighed within 24 hours after birth. Two out of four respondents received surveillance visits within 28 days after the delivery, by the Link Worker/Community Health Worker, for detection of neonatal complications and referral for treatment.

No significant difference was observed in the early detection of any one symptom indicative of a neonatal complication between the last and previous pregnancy. Also, the reported prevalence of any one symptom indicative of a neonatal complication was low.

Among those who gave a positive history of neonatal complications, an increase in early treatment was observed in the last pregnancy as compared to the previous one. The majority of respondents reported the MCH as the service provider of choice for the treatment of neonatal complications. Interestingly, there was no significant association between the utilization of MCH clinics for the treatment of neonatal complications and the level of exposure to surveillance (dose response).

A shift was observed in the utilization of facilities from private to government ones for the treatment and management of neonatal complications, from the previous pregnancy to the last one.

Health Care Providers

Perceptions about coverage of services provided by the Link Worker and perceived benefits of those services:

The majority of the respondents reported that the Link Worker provided follow up visits to ensure utilization of the MNH services. The Link Worker disseminated information on the MNH and health issues. The majority of the respondents reported that they strongly perceived benefit from the services provided by the Link Worker.

Perceptions about coverage of services provided by the Community Health Worker and perceived benefits of those services:

A substantially low proportion of respondents reported being visited by the CHW during pregnancy and the post-natal period. The CHW disseminated information on the MNH and health issues and provided BCC on MNH. There was a mixed response in terms of the relevance of the CHW's visits and services.

Health Facilities

Perception of respondents regarding health facilities provided by outreach clinics:

Those respondents, who attended 'Outreach Clinics', reported that services received at these clinics were immunization of children, information on general health, antenatal check ups and BCC on diet etc. They strongly felt (67-100 paise) that they had benefited from services provided at these clinics.

Perception of respondents regarding health services provided by the UHP:

The majority of respondents were aware of the UHP. They reported that services they received at the UHP were treatment for minor ailments, antenatal check ups, immunization of children, information on general health and BCC on diet.

Perception of respondents regarding health services provided by the MCH clinics:

The majority of the respondents were aware of the MCH clinics. Those who had attended an MCH clinic reported that the services that they had received were

antenatal check ups, delivery services, HIV testing, sonography etc. They strongly felt (67 -100 paise) that they had benefited from services provided at these clinics.

Perception of respondents regarding health facilities provided by first referral units:

A very low proportion of the respondents were aware of the FRU. Among those who were, a majority reported that the services they had received were delivery services and family planning services (tubal ligation and vasectomy).

Implications:

- By documenting the mechanisms through which the program attained success, it is hoped that the study will help to replicate the program in other urban areas of Maharashtra.
- The study explicates the importance of surveillance in the success of the MNH program. In general, surveillance serves the purpose of 1) Needs-assessment, and 2) Follow up on service utilization.
- Since the ANMs have to serve a large slum population, surveillance becomes an important program management tool.
- Community based women undertaking monthly surveillance results in a significant increase in the utilization of MNH services, effective coverage of pregnant women with standard MNH services and effective and timely referral for those who need specialist care.
- Referral services for MNH are more effective if there is a regular surveillance for maternal morbidity, improved primary level care and timely advice for utilizing referral services.
- The Anganwadi Workers collect a lot of information on MNH. However, this information is not being used by the health sector for micro-planning, provision of MNH services or for monitoring utilization and coverage with MNH services.
- In the urban slum scenario, there is a lack of service utilization at the primary level and an inordinate utilization of secondary and tertiary level services. Women continue to utilize secondary and tertiary level institutions for primary level MNH care because delivery services are available only at the secondary and tertiary levels of care. Pregnant women prefer to go for ANC to the facility where they will finally have to go for delivery.