

Impact of ANC checkups on Institutional Deliveries in Delhi

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Abstract

ANC checkups are of utmost importance when it comes to maternal health. On-time obstetric care can save lives of many mothers and new born children. But still it is one of the most ignorant factors even in the metropolitan cities like Delhi. According to HMIS report of 2014-15 only 58.6 percent of the beneficiaries availed 3 ANC checkups out of all the ANC registrations, which is ultimately affecting institutional deliveries. Results show that overall 60.2 percent of the beneficiaries preferred Government hospitals in comparison to CHC/Maternity homes due to lack of resources among CHCs. ASHAs came out to be one of the important catalyst in creating awareness regarding ANC services, about 46.8 percent of beneficiaries got information regarding ANC services through ASHAs. But overall when it comes to Delhi, only 23 percent of ANC checkups cumulated into institutional deliveries in public health facilities.

Key Words: ANC checkups, HMIS, Delhi, ASHAs, Institutional Deliveries

Introduction

Maternal Health has been one of the major agendas when it comes to performance of health indicators. According to W.H.O estimates, around 536,000 maternal deaths occur around the world out of which 136000 happens in India¹. Most of the maternal deaths are due to unattended pregnancies which led to majority of complications at the time of delivery. It is an important to notice that pregnancy can develop complications at any time, for that immediate obstetric care is required. In that scenario ANC check up becomes an important factor in saving lives of so many pregnant women. Further ANC checkups can also lead to increase in the number of institutional deliveries, as most of the people who are visiting for ANCs would like to deliver in the institution itself. But it has been seen that women who are more prone to complication during the pregnancy are less likely to avail the ANC services. In marginalised areas, people are often not aware or they are reluctant towards health checkups during pregnancy. Besides being an indicator of the condition of pregnancy, ANC checkups can also prepare couple in making decision regarding family planning. Further age-old customs and traditions don't allow women to take decisions regarding their health freely which directly impact the notions regarding maternal health. For instance 3ANC checkups are compulsory for any pregnant women to judge the health of mother and to be born child. But often it has been observed that people are not even ready to register themselves for first trimester checkups.

According to NFHS-3, mothers who had 3 ANC checkups all over India were 50.7 percent which was less in rural areas (42.8) and more in urban areas (73.8) which show that less number of people in rural areas were aware about the importance of ANC checkups in rural areas (NFHS-3, India Fact sheet). Further the percentage of mothers who consumed IFA tablets during pregnancy was low all over India, which is 22.3 percent and when it comes to rural areas this proportion was

¹ Vohra Kranti S. et.al. (2009), Maternal Health Situation in India : A Case Study, Journal of Health, Population and Nutrition Vol 27, No.2, pp(184-201)

even lower (18 percent). When it comes to institutional deliveries, over all scenario shows that 40 percent of the pregnant women were opting for institutional deliveries and it was higher in urban areas (69.4) and lower in rural areas (31.1) (NFHS-3, India Fact sheet). When it comes to Delhi, the situation was slightly better, about 74.4 percent of the pregnant women took 3 ANC services and about 60.7 percent of the women opted for institutional deliveries (NFHS-3, Delhi state report). If we see the overall scenario it can be seen that areas where less proportion of women opted for ANC services, those areas recorded less number of institutional deliveries.

Post NRHM Scenario

Under National Rural Health Mission, now National Health Mission (NHM) especial emphasis has been given on ANC services which would also impact the number of institutional deliveries and number of safe deliveries conducted by SBA attendant. To improve ANC checkups, ASHA and ANMs are given responsibility to keep a check on the number of pregnant women in their area and find out whether they went for ANC check up or not. ASHAs have proven to be a catalyst in spreading awareness regarding the importance of ANC checkups and assisting beneficiaries to access the health care facilities. According to HMIS report about 77.4 percent were registered for 3 ANC checkups out of all the registered ANCs².

In Delhi, the scenario of ANC checkups and institutional deliveries is little different from other states as there are different health agencies working in Delhi. In Delhi, health care services are being provided by both government and non-government agencies which includes multiple agencies such as MCD, Delhi government dispensaries, NDMC, ESI hospitals, other facilities and programs sponsored by central government. According to NFHS-3, in Delhi ninety percent of the non-slum areas received antenatal care from a health professional for their last birth, compared to seventy-eight of women in slum areas³. Further institutional deliveries are more common among first time mothers, urban women, and women residing in non-slum areas, women having more than ten years of education and belonging to highest quintile group⁴. After the introduction of NRHM, situation seems to improve with the introduction of schemes like JSY and JSSK, where more beneficiaries were encouraged for ANC checkups and institutional deliveries. Overall scenario in Delhi shows that 34.7 percent of pregnant women registered themselves for 1st trimester registration out of all the ANC checkups and 59.7 percent of pregnant women out of total ANC registration received 3 ANC checkups (for the year 2013-14)⁵. But in spite of increase in ANC checkups and institutional deliveries, only 25.9 percent of the pregnant women who registered themselves for ANC checkups turn up for deliveries in public institutions. There can be two major reasons behind this situation, one is variety of options available for beneficiaries for delivery such as private nursing homes, and private hospitals which are accessible for them and the second reason can be that patients are opting for home deliveries due to overloaded hospitals and dispensaries. This paper would try to examine status of ANC checkups in Delhi state and its impact on institutional deliveries and how far situation has improved.

Literature Review

Antenatal checkups are of utmost importance for pregnant women and it further creates awareness about delivery related issues. According to World Bank estimates, the MMR can be brought down by 74 percent just through timely intervention that provide access to skilled delivery and obstetric care (Paruzzalo Silvia & Mehra Rekha et al.). In this study important maternal health

² HMIS standard report, RCH Reports, Indicator Wise , Maternal Health 2014-15 up to March

³ NFHS-3 (2005-06), Delhi February 2009

⁴ Ibid

⁵ Performance of Key HMIS indicators (Up to District Level) 2014-15 up to March

components have been highlighted which includes other factors such as distance from facility to home and other socio-economic factors. Further they have tried to link gender equality with ability to access the health care services, especially in developing countries. Population council of India has published one report on providing maternal and newborn services in which they have analyzed the trends and services which are affecting the above mentioned services. They have highlighted the role of ANMs in providing ANC services and how far they are being able to meet their goals. For instance they have tried to find out in their interviews that how many ANMs have followed the protocols while giving first ANC services to pregnant women (Santhya & Jeejeebhoy, 2011). Another report by IIPS regarding the role of Ante natal checkups in institutional deliveries highlights the importance of ANC checkups in instigating the institutional deliveries. It suggested that it is possible to promote institutional delivery by promoting antenatal checkups and associated counselling. This study has tried to analyze the impact of ANC checkups on the institutional deliveries in rural areas with the help of NFHS data. Further the results indicate that, even after statistically controlling other factors, mother who have received ANC checkups are two to five times higher probability of giving birth in public institutions (Sugathan, Mishra & Retherford 2001). Overall the existing literature highlights the contributing factors in encouraging the institutional deliveries and ANC checkups which includes factors such as gender empowerment, accessibility towards health centre, and role of community health workers in encouraging the beneficiaries for ANC checkups which ultimately promotes institutional deliveries. This study would try to see the performance of ANC checkups among the districts of Delhi and its impact on institutional deliveries.

Material and Methods

This study would focus on ANC checkups and institutional deliveries among districts of Delhi. The main aim of the study would try to locate the impact of ANC checkups on Institutional deliveries. There will be two components of this study, one will lay emphasis on ANC checkups and the other one will see the impact of ANC checkups on institutional deliveries. For this primary data has been collected from five districts across Delhi, sample size of twenty-two beneficiaries who have availed services from government hospital or CHC were taken into account, which constitute a total population of 374 beneficiaries who have delivered a child in the last one year. This was a cross-sectional study which has tried to analyze socio-economic and other major factors influencing the choice of beneficiaries for accessing health facilities. Women were asked questions regarding their number of ANC checkups, place of ANC checkups and delivery. Further reports from NFHS and HMIS were seen to view the prevailing scenario of ANC checkups and institutional deliveries in Delhi. Performance of key HMIS indicators were seen from standard reports which includes ANC checkups, institutional deliveries and the number of beneficiaries who were given IFA tablets during pregnancy.

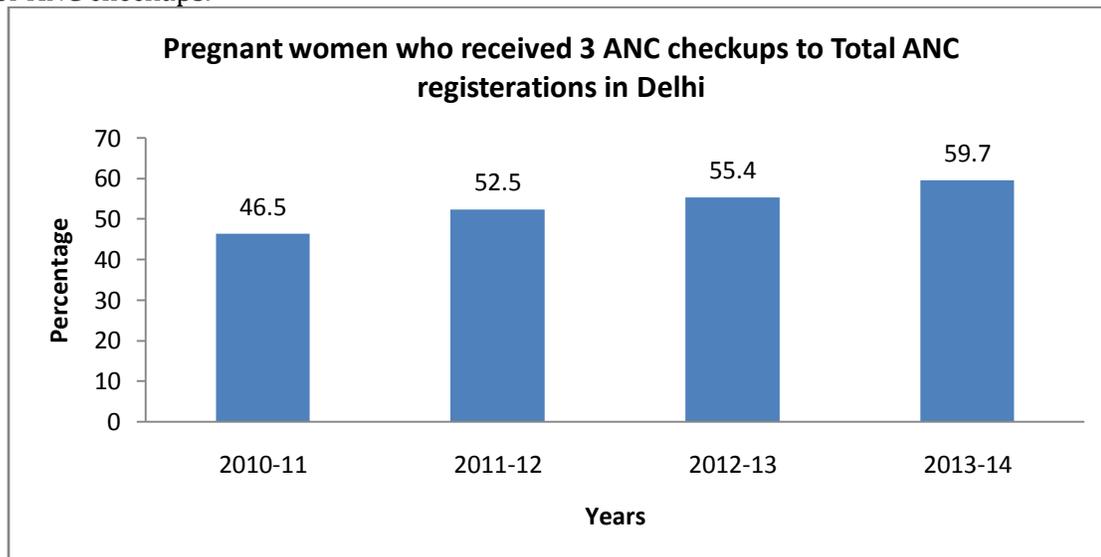
Findings of the Study

After introduction of NRHM a slight increase has been noticed when it comes to ANC checkups and institutional deliveries in Delhi. Almost all the beneficiaries whom we interacted have taken ANC services from government hospital or maternity homes. But one of the major issues which were noticed during the study was heavy load of patients on government hospitals. As maternity homes were equipped for dealing with normal deliveries that too second gravida cases which left most of the patients to go for government hospital.

Table I: Place of ANC registration in different districts

District	Government Hospital	CHC /Maternity Home
North	58	42
South	100	0
East	77.9	22.1
West	11.4	88.6
South-East	84.1	15.9

In our study we have taken five districts of Delhi, in which from each district we have taken a four facilities and a sample size of 22 beneficiaries from each facility. We have tried to see the variance of ANC registration in different districts. In North districts slightly larger number of beneficiaries opted for government hospital in comparison to maternity homes. In south district there was only one public health facility which was capable for obstetric care i.e. district hospital, so all the patients went to government hospital for ANC checkups. In East district most of the patients preferred government hospital over maternity home as district hospital was providing better health facilities than the other facilities when it comes to ante natal checkups and institutional deliveries. In West district the situation was opposite as only 11.4 per cent were utilising government hospitals for ANC checkups and 88.6 percent of the beneficiaries preferred CHC over government hospitals. In West district, most of the district hospitals were overloaded and maternity homes were accessible for the people. This also indicates that if maternity homes are provided more facilities then they can perform better and will share the load of district hospital. In South-East district, most of the beneficiaries were utilising government hospital because of two reasons; first there was only four maternity homes in the district which were not well equipped for complicated cases so most of the patients went for Safdarjung hospital and AIIMS for delivery and second reason was shortage of funds among the facilities of South-East district which led to hindrance in providing facility to the patients. Overall, 59.9 percent of the beneficiaries availed services from government hospitals and 39.6 percent of the beneficiaries went to CHC/Maternity home for ANC checkups.



Source: HMIS Standard Reports

Above mentioned graph shows the yearly comparison of pregnant women who were registered for third ANC checkups. This percentage has increased but on an average only 53.5 percent of beneficiaries have availed the services of third ANC check up which is nearly half of the

population who went for ANC checkups. This scenario clearly indicates that still half of the pregnant women in Delhi are still not going for third ANC check up. It has been observed that lack of support from the facility staff and high out of pocket expenditure are one of the few major factors which are affecting the performance of ANC checkups.

Table No II: Place of ANC services and No. of Iron Folic Tablets taken by the beneficiaries

Place of ANC Services	No. of Iron Folic tablet taken			
	<100 tablets	100 Tablets	>100	No responds
Government Hospital	4.9	64.3	23.7	7.2
CHC/Maternity Home	6.1	52	37.8	4.1

Table no II shows the place of ANC services and number of Iron Folic Tablets taken by the beneficiaries. Most of the beneficiaries have taken more than 100 tablets irrespective of place of ANC services. But when it comes more than 100 tablets, interestingly 37.8 percent of beneficiaries had taken ANC services from CHC/Maternity home in comparison 23.7 percent of the beneficiaries who were registered with government hospital. This indicates that when it comes to medicines, people who were registered with CHC/Maternity home were taking more IFA tablets in comparison to government dispensaries. Two important factors which effects the distribution of IFA tablets among facilities, is the involvement of ASHAs at facility level and most of the patients who are registered with CHCs are second gravida cases who are already aware about the benefits of IFA tablets. But this indicates that CHCs are performing better when it comes to distribution of medicines.

Socio-Economic Factors and Place of ANC Registration

In the study we have taken socio-economic factors such as age, education, occupation of the husband, income of the family, caste and religion of the beneficiaries. Most of the beneficiaries of lower income group had difficulty in switching from place where they have done their ANC to other place for institutional delivery. Out of our sample size, 99 percent of the beneficiaries availed ANC services which show that there was awareness regarding the importance of ANC checkups.

Table III: Socio-Economic Factors of the Beneficiaries and their place of ANC registration

Socio-Economic Factors	Government Hospitals	CHC/Maternity Homes
Age		
19-24	59.5	40.5
24-29	63.1	36.9
29-34	47.4	52.6
34-39	72.7	27.3
Education		
Illiterate	64.6	35.4
Primary	54.4	45.6
Matriculation	61.9	38.1
Higher Secondary	55.6	44.4
Graduation	63.6	36.7
Occupation of Husband		
Skilled	50.3	49.7
Unskilled	61.2	38.8

Unemployment	50	50
Others	97.4	2.6
Income of the Family		
<2000	66.7	33.3
2000-5000	60	40
5000-10000	59.6	40.4
>10000	61.2	38.8
Caste		
General	61.8	38.2
OBC	63.3	36.7
SC	56.9	43.1
ST	50	50
Religion		
Hindu	60.8	39.2
Muslim	64.1	35.9
Other	33.3	66.7

The table III shows the preference of beneficiaries regarding the place of ANC checkups according to their socio-economic characteristics. When it comes to age groups, beneficiaries coming under the age of 19-24, 24-29, and 34-39 opted for government hospitals more than maternity homes. Only exception was the beneficiaries belonging to the age group of 29-34 where most of the patients went to maternity homes more than government hospitals. This indicates that pregnant women at young age i.e. first gravida and women at older age needed specialised obstetric care which was only available in district hospitals. Therefore more women in those age groups were approaching district hospitals for ANC checkups as maternity homes were not well equipped. When it comes to education almost all the categories were approaching government hospitals more than maternity homes, this shows that education is less correlated with the place of ANC checkups in Delhi. Further among occupation of husband one can see that in the skilled category there was almost equal distribution of patients unlikely in unskilled ones, where more people were taking ANC services from government hospitals. When it comes to income of the family, most of the beneficiaries belonging to all the income classes were taking ANC services from government hospitals, especially lower income group which would find difficulty in bearing expenditure on medicines and diagnostics both. Similar results were seen in the categories of caste and religion which indicated that they less correlated with the choice of the place of ANC checkups.

Table IV: Awareness of ANC checkups according to background characteristics

Socio-Economic Indicators	Newspaper	Doctor	ASHA	Health Workers	Relatives	Other
Age						
19-24	2.5	4.3	44.8	6.7	28.8	12.9
24-29	3.1	10.5	50.6	3.1	13.6	17.9
29-34	0	2.6	47.4	2.6	18.4	28.9
34-39	0	9.1	9.1	18.2	9.1	54.5
Education						
Illiterate	5.5	8.6	50	5.5	16.4	14.1
Primary	1.3	7.6	46.8	6.3	20.3	15.2
Matriculation	0	5.2	46.4	6.2	23.7	18.6
Higher Secondary	0	5.6	50	0	25	19.4

Graduation	3.2	6.5	32.3	0	22.6	35.5
Occupation of Husband						
Skilled	2.6	9.2	47.4	2.6	22.4	15.1
Unskilled	2.8	6.1	47.5	7.8	19	16.8
Unemployment	0	0	25	0	50	25
Income of the Family						
<2000	33.3	0	33.3	0	0	0
2000-5000	2	8	42	10	26	12
5000-10000	3	6.5	52.3	3.5	19.6	14.6
>10000	0.8	7.4	40.2	4.9	20.5	26.2
Caste						
General	3.5	6.9	36.8	6.3	22.2	23.6
OBC	2.5	3.7	61.7	4.9	14.8	12.3
SC	1.5	8	51.1	3.6	19	16.1
ST	0	25	25	0	50	0
Religion						
Hindu	1.7	7.6	45.8	4.2	20.5	19.4
Muslim	6.3	6.3	54.7	6.3	15.6	10.9
Other	0	0	33	11.1	38.9	16.7

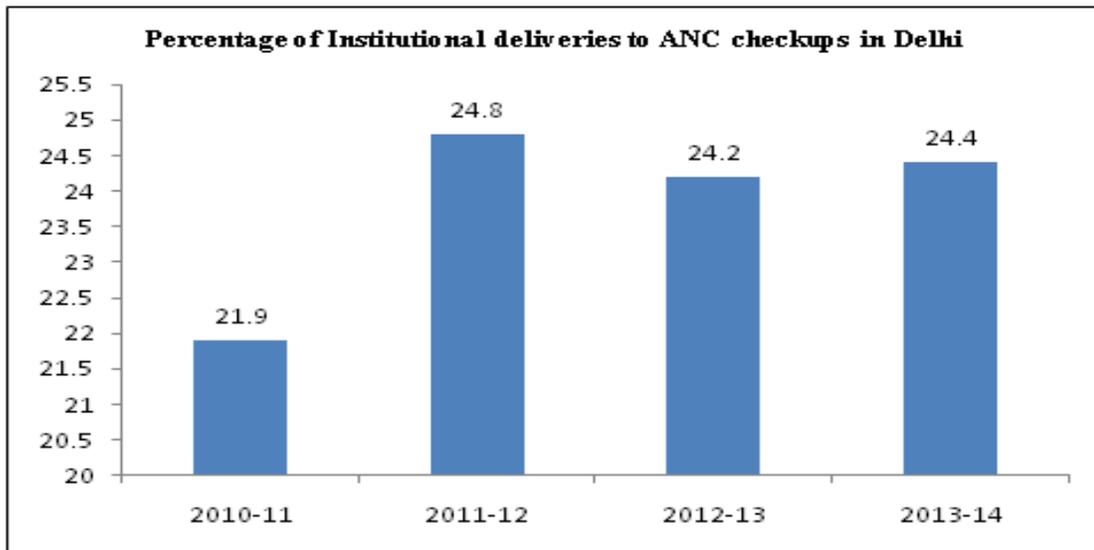
Table IV shows the awareness regarding ANC checkups according to background characteristics. If we see the overall scenario of awareness regarding ANC checkups, we can see that ASHA was the foremost source of information regarding ANC checkups among beneficiaries. The beneficiaries who were coming under the age group of 24-29, got information regarding ANC checkups from ASHA and age group of 34-39 got information from other sources which also indicate that they already knew about the importance of ANC checkups. When it comes to education, except beneficiaries who were graduates, all the categories got information from ASHA worker. This also indicates that in case of information regarding ANC checkups, education plays an important role, as beneficiaries who were graduate were more aware in comparison to other categories. Interestingly among both skilled and unskilled categories major source of information was ASHA, but among beneficiaries whose husband was unemployed major source of information were relatives instead of ASHA. When it comes to income groups, beneficiaries belonging to income group between 2000-5000, and 5000-10000 were availing services from ASHA more than other categories. When it comes to caste more number of OBCs and SCs got information regarding ANC checkups from ASHA. Among the religious category, more number of Muslim got information regarding ANC checkups from ASHA in comparison of Hindus and other categories. In overall scenario once can notice that ASHA workers come up to be major source of information regarding health checkups, especially in the areas where health facilities are not easily accessible. In the field itself many beneficiaries told that they were assisted by ASHAs regarding their checkups and even to the delivery point as well.

Table V: Place of ANC services and place of delivery

Place of ANC Services	Same Place where ANC was taken	Government Hospital /dispensary	CHC or Maternity home
Government Hospital	53.6	46	0.4
CHC/Maternity Home	60.1	39.9	0
Private Hospital	0	1	0

Table V shows that place of ANC services and its impact on place of delivery among the beneficiaries. The beneficiaries who have taken ANC services from government hospitals were more likely to opt for their delivery in government hospital than another government facility and same was seen with the case of beneficiaries who have taken ANC services from Maternity home or CHC. It shows that larger population preferred the same place of ANC checkups and delivery. Further it also indicates that almost all the complicated deliveries are detected at an earlier stage so their ANC was conducted at the same place where their delivery was scheduled. However, transferring complicated case to higher referral centres might cater to large number of c-section deliveries but on the other hand it is increasing load on district hospitals.

In Delhi, it was observed that there was lack of coordination among different authorities which led to complex problem for the patient itself. Most of the CHCs are underutilised and are only meant for ANC checkups and second normal deliveries, which is adding the delivery load on government hospitals. Some of the patients also complained that many times pregnant woman is sent back from the hospital and on the way back they deliver. In such conditions patients come for ANC checkups at public institutions but at the time of delivery they prefer private nursing home over public institutions. According to HMIS report, for the financial year 2014-15, out of all the total ANC registration only 28.4 per cent of the beneficiaries went for institutional deliveries in public institution. This shows that in Delhi, there is urgent need for dividing the delivery load between different public institutions so that more people can afford public institutions and get quality services.



Source: HMIS Reports

We can see from the above mentioned graph the percentage of institutional deliveries to ANC checkups in Delhi. There is slight increase in number of people who took ANC services and went for public institutions for delivery but if we see the overall scenario the situation is not at all favourable. Most of the district hospitals were facing crunch of manpower and infrastructure that

was reflecting on their performance. During a visit to a well known district hospital, long que was observed for ANC checkups. Similar conditions were seen at most of the higher referral centres, especially district hospitals, which was creating a negative impression on patients about the quality services provided in public facilities. Proper coordination is required between different authorities providing health services.

Table VI: Showing place of delivery according to the facilities in different district.

Name of the Facility	Place of Delivery		
	Same place where ANC took place	Government Hospital/Dispensary	CHC or Maternity Home
Bhai parmanand (MH)	86.4	13.6	0
Daultapur (MH)	59.1	40.9	0
Maharishi Valmiki (DH)	81.8	18.2	0
Babu Jagjivan Ram (DH)	86.4	13.6	0
Malviya Hospital (DH)	54.5	45.4	0
Geeta Colony (MH)	31.8	68.2	0
Patparganj (MH)	59.1	40.9	0
Lal Bahadur Shashtri (DH)	45.5	54.5	0
Kichripur (MH)	22.7	72.7	4.5
Vishnu Garden (MH)	50	50	0
Gurugobind Hospital (DH)	45.5	54.5	0
Madipur (MH)	81.8	18.2	0
Jawalapuri (MH)	40.9	59.1	0
Defence Colony (MH)	45.5	54.5	0
Shrinivaspuri (MH)	63.6	36.4	0
Badarpur (MH)	31.8	68.2	0
Jungpura (MH)	63.6	36.4	0

*MH- Maternity Home, *DH- District Hospital

Table VI shows the pattern of different facilities when it comes to place of delivery in different districts of Delhi. When it comes to North district, In Bhai paramanad maternity home, 86.4 percent of the patients who delivered in the facility also took ANC services, but 13.6 percent of them were referred to other government hospital for delivery. This percentage share increase when it comes to Maternity home Daultapur, where 40.9 percent of the people whose ANCs were done in maternity homes but were referred to government hospital for delivery. In Maharishi Valmiki and Babu Jagjivan hospital referred cases were 18.2 and 13.6 percent respectively which was higher for a district hospital. In South district there was only one district hospital from which 45.4 percent of the beneficiaries were referred to other government hospital as there was shortage of human resource in the facility. As far as complicated cases are concerned Malviya hospital was not able to cater most of them due to lack of human resource. In Geeta colony maternity more than 60 percent of the beneficiaries were sent to government hospital. In Patparganj Maternity home reverse trend was noticed, less number of cases were referred to district hospital which shows that either maternity home was handling cases efficiently or they were referred to district hospital at an initial case. Among the maternity home in West district, Madipur maternity home recorded lowest number of case referral to district hospitals. In South-East district, maternity home of Badarpur had highest case referral to district hospital which indicates that the facility was able to cater only 30 percent of the ANC cases for delivery. Further Badarpur maternity homes was also suffering from shortage of funds which was obstructing the performance of the facility. Such issues were

need of the hour for successful implementation of NRHM but were often ignored due to lack of clarity and coordination among district and state.

Table VII: Performance of Maternal Indicators of Facilities (2013-14)

District	Facilities	Normal Deliveries	C-section	Women who received 3 ANC checkups	Women who received PNC checkups	No. Of Maternal Death	No. of Infant Deaths	No. of women benefitted from JSSK
North	Maternity Home Dakkha	414	-	397	736	-	-	350
	M.H Daulatpur	425	-	621	-	-	-	415
	Babu Jagjivan	1882	348	17325	-	02	6	1882
West	Marishi	3623	6	9186	2069	02	4	4
	Valmiki		4				2	
	GuruGobind Singh	2851	9	11243	3791	02	0	5800
	M.H Vishnu Garden	262	-	392	257	-	-	251
	M.H. Jawalपुरi	621	-	1131	1333	-	-	833
East	M.H Madipur	260	-	582	260	-	-	260
	Lal Bahadur Shahstri	3824	907	2219	-	-	-	3824
	M.H Geeta Colony	178	-	239	178	-	-	178
South	M.H Patparganj	474	-	603	474	-	0	474
	M.H Kichripur	523	-	1463	523	-	-	2
	Malviya Hospital	3445	3	4186	3566	-	1	523
	M.H Srinivasपुरi	1158	-	3761	1158	-	-	6
South-East	M.H Defence Colony	354	-	665	354	-	-	1158
	MH Jangपुरa	198	-	483	852	-	-	504
	MH Badarpur	466	-	200	752	-	-	198

Source: Data collected from Facility level survey (2013-14)

Table No. VI shows the performance of maternal health indicators in different facilities of the district. If we see the overall scenario of ANC checkups and institutional deliveries, in district hospitals more people were registering for ANC checkups and in comparison of that less number of deliveries were done. Ratio of institutional deliveries and ANC checkups were almost double among facilities. There might be various reasons behind the less number of people opting for public institutions for deliveries such as ; a) less number of public facilities are equipped with infrastructure and resources to deal with all type of complicated cases, b) heavy load of patients on

district hospitals which is effecting their performance adversely, c) underutilisation of CHC/Maternity homes in terms of human resources and infrastructure, d) Many times patients are sent back to their home and after coming back they deliver with the help of ASHAs or local dias in their respective areas. The question arises that how far the purpose of NRHM has been achieved when it comes to maternal health. As till dat in metropolitan city like Delhi, people prefer private nursing homes more than public health facilities for institutional deliveries. There should be a mechanism which can tract that how far ANC's are able to convert into institutional deliveries, specifically for Delhi state due to number government agencies working in the health sector.

Table VII: Place of ANC check up and place of delivery whether referred or direct case

Place of ANC checkups	Referred Case of Delivery	
	Yes	No
Government Hospital/Dispensary	31.7	68.3
CHC/Maternity Home	37.2	62.8

Table VII shows the place of ANC checkups with the case of delivery, whether the case was referred or direct case. We can see that, those beneficiaries whose place of ANC checkups was government hospital/ dispensary were less likely to get referred in comparison with those beneficiaries whose ANC was done in CHC/Maternity Home. Overall, thirty-seven percent of the beneficiaries were referred to other health facility and out of that larger portion of beneficiaries who have taken ANC services from CHC/Maternity homes came into referred cases. As it is mentioned earlier that all the CHCs/Maternity homes were not able to deal with complicated and first gravida cases, so this could be possibly one of the important reasons behind referred cases. Further, other cases such as lack of manpower, blood bank facility and complicated cases were referred to higher delivery point.

Table VIII: Provision of free medicines and diagnostic according to Place of ANC services

Place of ANC service	Free Medicine			Free Diagnostics		
	Yes	No	Partly	Yes	No	Partly
Government Hospital	66.5	5.4	27.7	31.3	42.9	23.7
CHC/Maternity Home	73.6	2.7	23	33.8	12.8	52

Table number VIII shows the provision of free medicines and diagnostics according to the place of ANC services. When it comes to provision of free medicines, CHC or maternity homes were performing better than the government hospital, one of the reasons behind this can be less of load on CHCs which can cater more people in terms of quality. When it comes to free diagnostics, the result was quite opposite; more people who availed ANC services in CHC/Maternity home got partial diagnostic services in comparison to people who availed diagnostic services from government hospitals. There was major flaw which was noticed was non availability of diagnostic services especially at the CHC level which made patients to either go to government hospitals or private institutions. This has become one of the contributing factors in increasing the out of pocket expenditure in health sector.

Discussion

In our study we have seen that when it comes to ANC checkups, there is sixty forty ratio between government hospitals and maternity homes is there in different districts of Delhi. One exception was West district where larger number of beneficiaries opted for CHC/Maternity home in

comparison to government hospital. But overall if we see, government hospital were first choice of beneficiaries when it comes to ANC checkups as CHC/Maternity home were not able to cater the complicated and first gravida cases. In Delhi state it has been observed that the performance of ANC checkups is highly affected by the administration issues with maternity homes. Unlike other states, in Delhi there was urgent need for well quipped CHCs which can cater complicated cases as well. Our study shows that about forty percent of the cases from maternity homes were referred to higher referral centres. It has been observed in the study that most of the beneficiaries didn't like different place of ANC checkups and place of delivery. It can be seen that most of the beneficiaries delivered at the same place where they availed ANC services. Further all the complicated cases are detected at the early stage and are referred to the government hospital. This process is leading to excessive load on government hospital which is ultimately affecting their quality of services. It is also becoming problematic for patients as they have to wait for long hours for their turn in general OPDs. The major problem in different district of Delhi is that numbers of ANC checkups are not being cumulate into institutional deliveries in public health facilities. On an average if we see only 23 percent of the people who took ANC services went to public facility for delivery. Even from the secondary information we can see that there are more people who are availing ANC services in the facilities than for institutional deliveries.

Further disparity can be seen when it comes to providing facility such as free diagnostics and medicines. The CHCs or maternity homes were providing the facility of free medicines more effectively than government hospital and on the contrary when it comes to diagnostics government hospitals were in much better position than maternity homes. Over all due to multiple agencies working in the health sector the problem of communication was visible among facilities and the districts. Most of the patients who were first gravida went for maternity homes for ANC checkups and were sent to government hospitals for delivery. This system will run smoothly if number of CHCs can be increased which can deal with first gravida and complicated cases so that load on government hospitals can be lessen which would ultimately improve the quality of services. Further there should be clarity when it comes to administration as most of MCD maternity homes were facing crisis of dual work which is burdening their performing capabilities. ASHA has come out to be an important component in creating awareness regarding ANC checkups and motivating patients for institutional deliveries, they should be encouraged through more incentive based performance. Monthly meeting should be done among the district level officials regarding how many ANCs converted into institutional deliveries and if the delivery has been done in home or other private facility then reasons should be discussed and rectify. Most important of all health is a state subject and if it has be to given to all then it should be duty of state that those people who belong to marginalised community can access such services.

Conclusion

If one sees the overall performance of ANC checkups in Delhi, it has improved post NRHM but it can be improved if there is proper coordination among different health agencies. During our course of study it was observed that most of the women went for ANC checkups. But incapability of facilities at CHC level to deal with first gravida and complicated cases had to lead to negative impact on quality of services provided by public health facilities. There were issues such as lack of manpower, and infrastructure which were a major source of worry at CHC level and its impact can be seen at the district hospitals as well. In our study it was observed that out of all the patients 60.2 percent were availing ANC services from government hospitals and rest from CHCs which itself shows the disparity between government agencies. Further out of all the districts West was performing better than the other district due coordination between district and at the facility level. ANC checkups had an impact on institutional deliveries, but in the case of Delhi state that impact was more of negative, as load of patients were more and delivery points were less. This

was resulting in bifurcation of patients to different health facilities which include private hospitals and private nursing homes. If we see the number of informal payments, there was 55.6 percent reported informal payment from the field survey which shows the loopholes in the present system. Those who can afford are opting other options for deliveries but lower income group is still depends on government facilities. The only solution to the problem of health structure of Delhi state is to strengthen the facilities, so that the load of higher referral centres can become less which would not only increase the ANC checkups but also the number of institutional deliveries in public health facilities. There should be more focus in catering to the existing ANCs and converting them into institutional deliveries which can only be accomplishing by improving the quality of services and improving the existing infrastructure of facilities which can cater to larger number of population.

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