Summer Training at

Quality of Antenatal & Natal Care Services in Goa
APRIL 9th -June 2nd, 2012

By
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Under the guidance of
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Post Graduate Diploma in Hospital and Health Management
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Certificate

This is to certify that Dr Neeraj Mehta has undergone Summer Training in Directorate of Health Services, Goa from 9th April to 2nd June, 2012

The candidate has carried out all the studies related to summer training herself. Her approach to the studies has been sincere, scientific, and analytical. This summer training in partial fulfillment of the course requirement is recommended for the award of Post Graduate Diploma in Hospital & Health Management.

I wish her success in all future endeavors.

Dr .P. R.Sodani

(Dean Academics and Student Affairs)

Dr. Neetu Purohit

(Associate Professor)

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List of abbreviations:

- MOHFW = Ministry of health and family welfare
- DHFW = Department of health and family welfare
- ANM = Auxiliary Nurse Midwife
- IMR = Infant mortality rate
- BCC = Behavior change communication
- MMR = Maternal mortality ratio
- SC = Sub center
- ANC = Antenatal care
- PNC = Postnatal care
- TT = Tetanus Toxoid
- PHC = Primary healthcare center
- CHC= Community healthcare center
- MCP= Maternal and child protection card
- MO= Medical officer
- IFA= Iron folic acid tablet
- SN= Staff nurse
- RMDs = Rural medical dispensaries.
- RMO= Registered Medical officer
- LSCS= Lower segment cesarean section.
- GMC= Goa medical college
- DH= District Hospital
- HIV= Human Immune deficiency
- IUGR= Intra uterine growth retardation
- USG= Ultrasonography

EXECUTIVE SUMMARY

This project deals with the assessment of quality of antenatal care services in Goa. The aim is to understand the shortcomings in the provision and utilization of the services and the gap between intended and achieved levels of benefits. Based on these findings, suggestions are made for improvements.

The study was done through visits and interviews of the women in the Post natal care and the ANMs at the PHC and CHC, with an objective to comprehensively

Doctors and ANMs were interviewed to know about the antenatal care services provided by them at their centre. Also, the recipients of the services, the women in postnatal care were interviewed so as to understand the services being given to them and also the Antenatal care cards were checked to know about the tests done during the antenatal period, which helped in gaining insights as to the current shortcomings in the system and possible improvements to be made.

It has been found that availability of TT vaccine at the sub centre level helped the pregnant women. The medical officer enquires with the pregnant women about the IFA tablets consumption at every ANC visit. Take home food provision for the pregnant women at the balwadi and the antenatal visits not only helps the pregnant women for safe delivery but also help in reducing the risk of Infant deaths, low birth weight babies and other complications during the pregnancy.

Giving colostrum to the newborn and exclusive breastfeeding for first 6 months of a child's life is practiced commonly in the state. Delivery advice, breast feeding advice is given to almost every pregnant women and ANC services are majorly imparted by Gynecologists and MOs in the State. ANC provided by the MOs at SC and by Gynecologists at PHC on fixed day basis. I found that RCH programme in Goa has been successful in reducing the infant mortality and maternal mortality ratio. The

entire system is based on interaction at the grass root level, and is highly decentralized in its functioning, making available quality medical services which is easily accessible for the people when they need it most.

However, the service provisions have some drawbacks too. A major issue is the maintenance of the test records by the pregnant women, secondly, OGCT test which was the state initiative to find out the gestation related pregnancy was done in first trimester which otherwise has to be done between 24- 32 weeks. Thirdly, at the time of discharge women were not counselled for the high risks of the puerperium period and also the risks related to the child. Most of the maternal deaths occur either at the time of the delivery or in the puerperium period.

2) INTRODUCTION

2.1 About Organization: (Directorate of Health Services, GOA)

Goa is considered as one of the best performing states in the matter of health & medical care.

Directorate of Health Services (DHS) has an important role in the provision and administration of health services and in order to raise the quality, extend accountability and deliver the services fairly, effectively and courteously. The Directorate of Health Services has an important role to perform in the Administration as far as health system & services are concerned.

The Directorate of Health Services primarily seeks to provide preventive, promotive, curative and rehabilitative health services to the people through primary health care approach which has been accepted as one of the main instruments of action for development of human resources, accelerating the socio-economic development and attaining improved quality of life. Primary health care is essential health care for all citizens, easily accessible and at a cost which the citizens and community can afford.

In the rural areas services are provided through a network of integrated health and family welfare delivery system. The primary health care infrastructure has been developed as a three tier system - Sub- Centres, Primary Health Centres and Community Health Centres. Sub-Centre is the most peripheral contact point between the Primary Health Care System and the community and is manned generally by Multi-Purpose Health Workers (Male & Female) and a Peon/Attendant. Primary Health Centre is manned by a Medical Officer supported by Para-medical and other staff. Some of the PHCs (13 in number) have attached hospitals ranging with 12 to 30 beds and are headed by a Health Officer.

The PHCs act as referral units for the sub-centres and provide preventive, promotive, curative and family welfare services. The Community Health Centres (5 in number) are headed by a Health Officer generally with four specialist doctors and a minimum of 30 beds. It serves as a referral centre for PHCs. In addition, there are Rural Medical Dispensaries (RMDs 29 in number) in remote and inaccessible areas manned by a R.M.O. and a Pharmacist where regular OPDs are conducted. The Directorate of Health Services with its network of 5 CHCs, 19 PHCs (13 with attached hospitals), 172 Sub-Centres, 29 R.M.Ds, and one Medical Dispensary, provides basic health care services to the people of Goa particularly to those living in rural areas.

The two District Hospitals viz. Hospicio Hospital, Margao in South Goa District and Asilo Hospital, Mapusa in North Goa District, and three other specialized/general hospitals viz. Leprosy Hospital, Macazana; T.B. Hospital, Margao; Cottage Hospital, Chicalim; under the Directorate also serve as referral Hospitals. There are in all 1162 beds in the hospitals under the Directorate of which 352 beds are attached to CHCs / PHCs. There are 18 Dental clinics and other special clinics for implementation of various programmes such as Family Welfare, T.B., NCD, STD, Malaria, Leprosy, Control of Blindness, etc. There are two Homeopathic Dispensaries (one attached to UHC, Panaji and the other attached to CHC, Pernem) and 5 Ayurveda Dispensaries (one each attached to District hospitals Mapusa and Margao, PHC Bicholim, CHC Canacona, CHC Curchorem, PHC Balli and PHC Quepem). There are 4 Urban Health Centres in the four major towns viz. Panaji, Margao, Vasco and Mapusa.

2.2) RCH II (Maternal Health, Child Health and Family Planning Activities)

Antenatal care, also known as prenatal care, is the complex of interventions that a pregnant woman receives from organized health care services. The number of different interventions in antenatal care is large. These interventions may be provided in approximately 12-16 antenatal care visits during a pregnancy. The purpose of antenatal care is to prevent or identify and treat conditions that may threaten the health of the fetus/newborn and/or the mother, and to help a woman approach pregnancy and birth as positive experiences. To a large extent antenatal care can contribute greatly to this purpose and can in particular help provide a good start for the newborn child.

ANC services are majorly imparted by Gynaecologists and MOs in the State. ANC provided by the MOs at SC and by Gynaecologists at PHC on fixed day basis. ANC by ANMs and SN is confined to only TT and IFA distribution. MCP card and ANC card in

the facilities are issued at the time of registration and maintained throughout the antenatal period. Also, MCP card is linked with birth registration. In Goa State, 97% of deliveries are being conducted at hospitals out of which 50% are in government facilities, 48 hours stay after delivery is being practiced in the state in some communities the stay is being prolonged up to a week due to cultural reason.

Low infant mortality rate and maternal deaths in the state are result of community awareness matched with availability of services. Significant number of people avail the curative healthcare in the private sector but government sector dominates in providing preventive and promotive healthcare services. Availability of road connectivity and well established referral transport provide opportunity to the population to access the facilities of their choice. As a result health care services utilization is concentrated among district hospitals and Goa Medical College.

Currently 53.9 % of the deliveries take place in the private sector in the State (CES 2009). The government hospitals cater to 45.9 % of the deliveries. However, most complicated cases are handled at the GMC which is a government facility. The distribution of deliveries is as follows:

Diagnostics: USG facilities are available at DH and certain CHCs. All other routine blood investigations are done at the PHCs itself. All diagnostics are free of cost. Antenatal screening for gestational diabetes is also done. HIV testing is available at all PHCs.

Drugs: All drugs are completely free across all levels of facilities. Out of pocket

Expenditure is minimal.

Referral Transport: Assured referral transport through 108 ambulances is available for all pregnant women from home to PHC/CHC interfacility transport is provided by the PHC/CHC ambulances and drop back home facility is also provided .

Diet: All patients admitted in the hospital are provided diet free of cost from the State Government funds.

MCP Cards: Mother and Child Protection cards are provided to all pregnant women. The presence of an MCP card has been made mandatory for availing State government scheme for girl child. This has increased ANC registration and has ensured that almost all mothers carry and preserve their MCP cards.

JANANI SURAKSHA YOJANA

Janani Suraksha Yojana is a scheme implemented by the Government of India in 2002 where in married women above 18 years of age can avail of monetary benefit i.e. Rs.700/- for rural and Rs.600/- for urban area if they belong to the BPL family or any women of the SC/ST community irrespective of their income, for the first two live births. For the year 2008-2009, 688 women in Goa have availed of this benefit.

3) Project Objective:-

The general objective of the study is to assess the quality of antenatal care services being provided in the state with a view to improve ANC services and to explore clients' experience, attitudes and satisfaction vis-a-vis various aspects of reproductive health care.

4) Research Question

Will the improved quality of antenatal care services reduce the Infant mortality rate and maternal mortality ratio?

5) METHODOLOGY

STUDY DESIGN

Type of study: Descriptive cross sectional study and retrospective study.

Study Period: 11th April 2012 to 25th may 2012.

Study Area: Goa state

Study unit: Primary Health care centre.

Sample size - Using the assumption that 85% women would be using antenatal care, the sample size for 95% confidence interval came out to be 195.

6) SAMPLING:

Study unit for determination of quality of ANC is Primary Health centre. District Hospital, CHC and PHC are selected by simple random sampling.

Simple random sampling: In this method a number is given to each DH, CHC and PHC and each centre is selected by random sampling. Thus, we get a list of 1 DH each from north and south Goa, 1 CHC each from north and south Goa and 4 PHC each from north and south Goa.98 samples were collected from the north Goa and 97 samples were collected from the south Goa.49 samples each were collected from both the district hospitals and 49 samples were collected from 4PHC and 1 PHC each from north and south Goa.

7) TOOLS AND TECHNIQUES

The following tools were used for carrying out the study; some of the tools were purely used for exploratory research.

1) **Secondary Research:**

Policy documents and reports offered by the directorate of health and family welfare were studied in great depth for a better understanding of the services in the Goa.

2) Primary research/survey: Primary Research was in the form of interviews with the ANMs to understand services available in the state and the beneficiaries to know about their experience and their recommendations to improve these services.

Data collection Tools & Techniques:

Data Collection Tool: A semi structured questionnaire was designed for women in Post Partum Period to know about the gaps in the quality of antenatal care services being provided in the state.

Data collection Techniques: Face to face interviews with the women in the Post partum period.

Data collection

Semi structured questionnaires were designed to identify the antenatal, delivery and postpartum experiences of women. Answers were predefined with tick boxes or were described under 'other'. The questionnaire and sampling strategy were pre-tested with the women in the post partum period who were not selected for inclusion into the survey. Women were asked to answer questions with regard to last pregnancy experienced within last 6 months. Information sought regarding antenatal care during each pregnancy included the frequency of antenatal visits, the primary place of attendance and the type of services that they received there.

In addition, women were asked about their delivery experience for last pregnancy including the place of delivery, what assistance they received during labour and care of the infant soon after delivery.

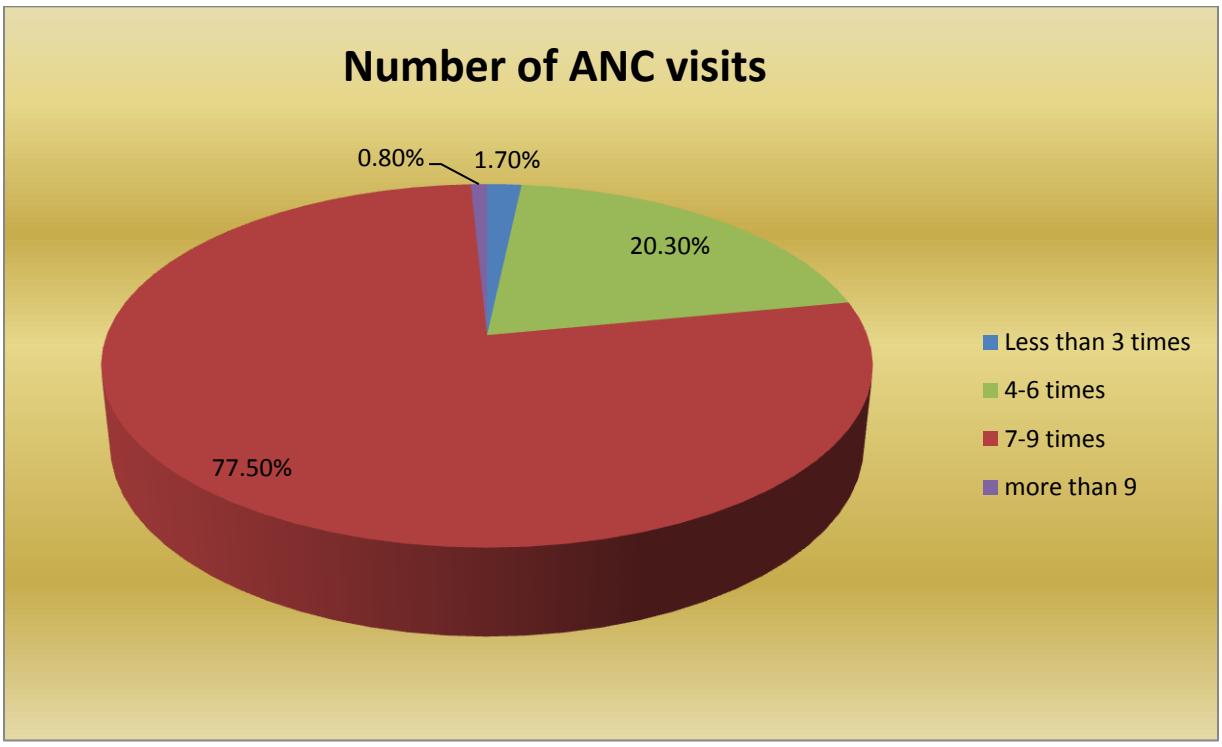
Statistical Methods:-

Data were entered and checked using SPSS (Statistical package for the social sciences) version 16. Analysis relating to pregnancies was restricted to the most recent pregnancy to minimise recall bias and to avoid using a complicated hierarchical analysis to take into account correlation within woman.

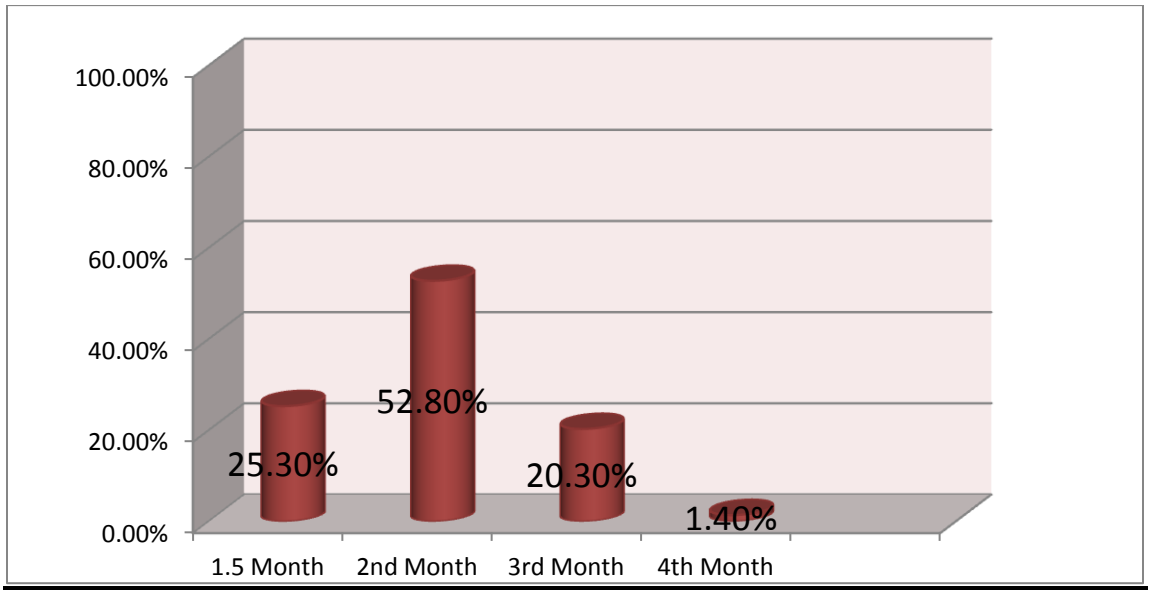
8) RESULTS:-

A total of 195 eligible women were covered in this survey and they were interviewed in detail regarding their knowledge and perceptions about what needs to be done when pregnant, awareness about health problems that could occur during pregnancy, their own initiative in utilization of antenatal care services, and decision about place of delivery. Of these, 79.7% women were from rural areas and 20.3% were from urban area.

Among the 195 women who responded to questions about their most recent pregnancy 91.3% were housewives with no formal occupation; 1.4% had received no formal education, 10% some primary education, 66.6% with secondary and 17.4% with higher secondary education. 81.9% of the respondents said that they had taken the antenatal checkup from the govt. facility and **(98.6%) confirmed that they had visited Government Health Facility more than three times during this pregnancy for antenatal services or problems.** According to DLHS- 3, mothers who had three or more Antenatal visits were 95.8 percent.



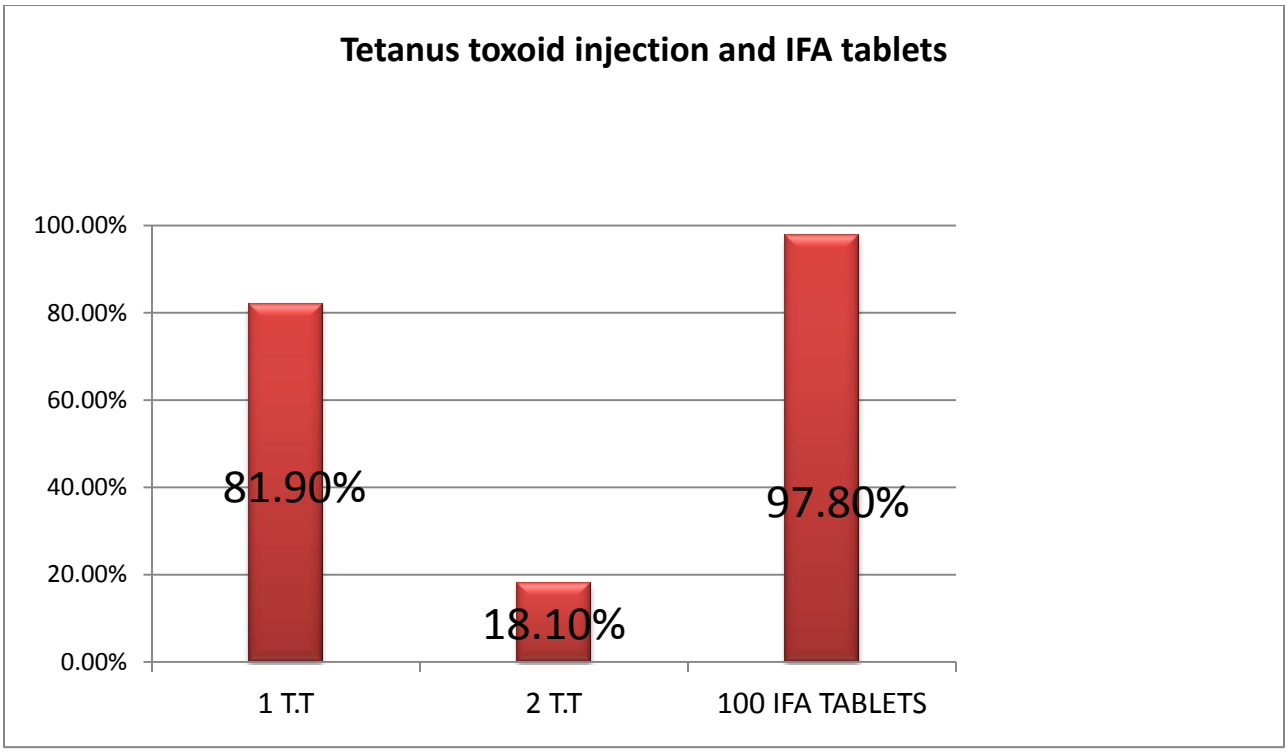
Pregnancy in months at the time of first check up



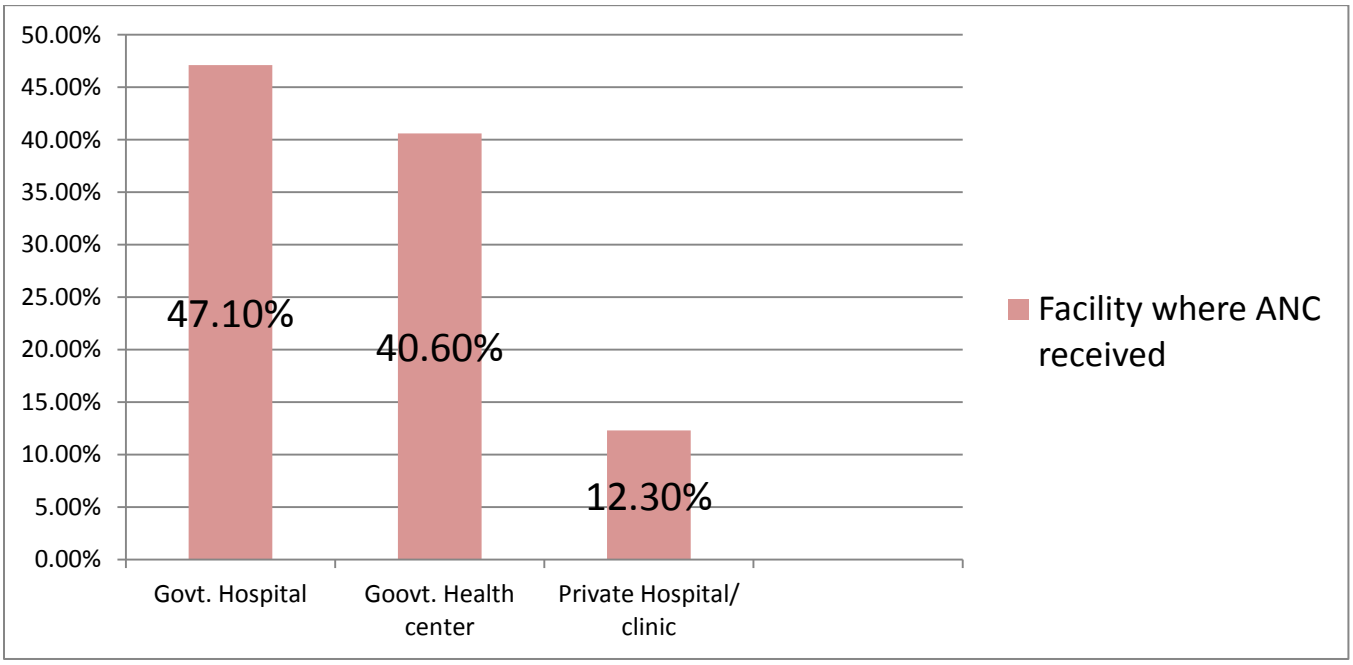
The first visit or registration of pregnant women should take place as soon as the pregnancy is suspected. Ideally the first visit should take place in the first trimester, before or at the 12th week of pregnancy. The analysis shows that women are getting registered in the first trimester of pregnancy, 52.80 percent respondents confirmed that they had the first Antenatal visit in the 2nd month of pregnancy.

Tetanus Toxoid Injection and IFA tablts consumption during pregnancy

In Goa, 81.9% of the women took the TT injection twice and 18.1% had taken it once during the pregnancy. Those who had taken only one TT said that their last delivery was less than three years and 97.8% of the respondent said that they had taken IFA tablets for more than 100 days.



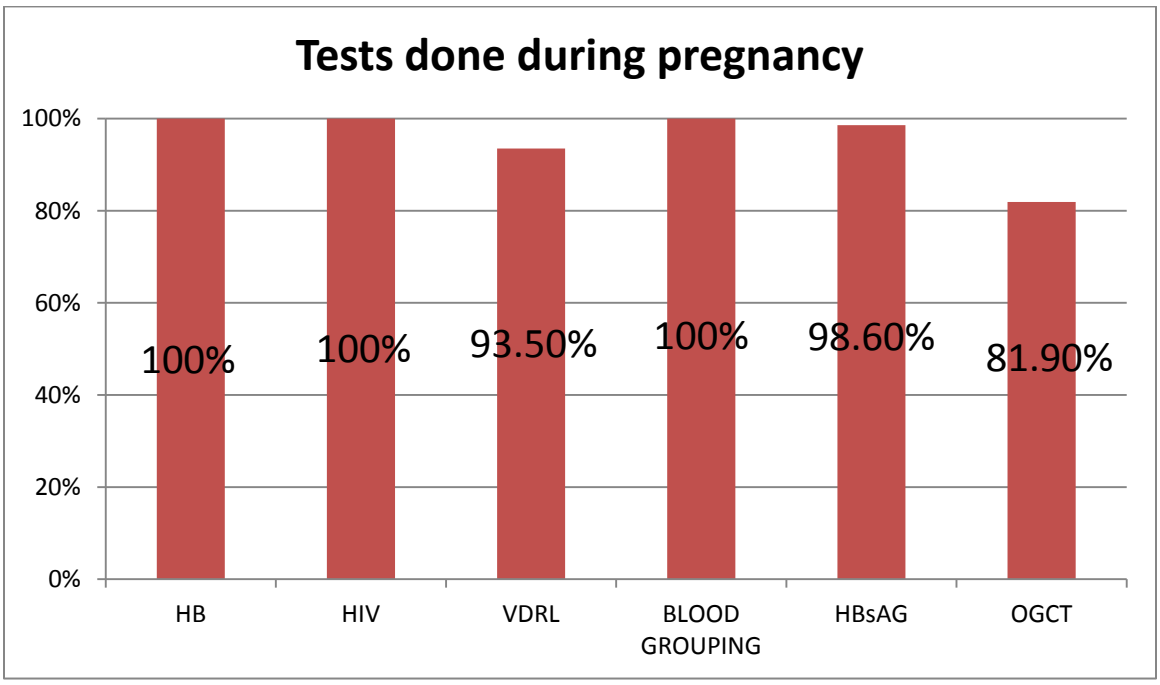
Type of facility attended during pregnancy

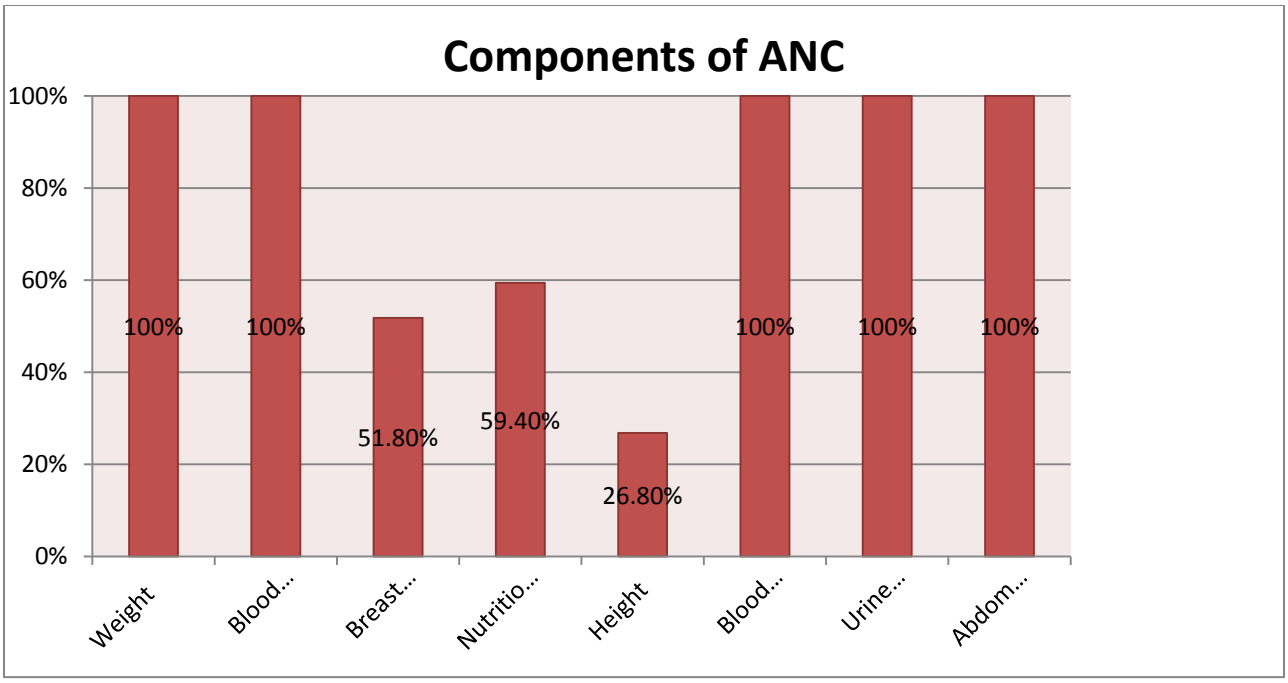


The analysis shows that among the 195 respondents 87.70 percent confirmed that they have taken the Antenatal care service from the govt health facility.

Table 1: Preventive and Promotive services Maternal and child health care	**YES/NO**
Early registration of all pregnancies with a duly filled ANC Card ideally in the first trimester (before 12th week of pregnancy) and provision of antenatal care appropriate to gestation.	**YES**
Minimum 3 antenatal checkups, appropriately timed as per RCH guidelines and provision of complete package of services. Registration as soon as pregnancy is detected, preferably within first trimester, provision of associated services like providing iron and folic acid tablets, injection Tetanus Toxoid etc.	YES
Laboratory investigations -- hemoglobin, urine albumin and sugar.	YES
Nutrition and health counseling	YES

Identification of high-risk pregnancies / appropriate management. Referral to First Referral Units (FRUs) / other linked hospital for high risk pregnancy.	YES
Promotion of institutional deliveries	YES
Appropriate and prompt referral for cases needing specialist care.	YES





Among the services received, height measurement (26.80 percent), breast examination (51.80 percent) and nutrition advice (59.40 percent) during pregnancy were the services rendered less often as compared to other antenatal care services. Records of FBSL are properly maintained in the Hospicio, District Hospital, South Goa but FBSL was not done in most of the pregnant women in Asilo, District Hospital, North Goa. Also, OGCT is sometimes done in the 1st trimester along with other tests in Asilo and in Hospicio records of the test was missing. In Hospicio maintenance of tests records was not proper because tests were written on small prescription papers which according to the respondent were misplaced. Counselling for the nutrition in the pregnancy was not given to the pregnant women in both of the districts; however, most of the patients who got ANC care at the PHC, CHC and at Private Clinics were counselled regarding the diet to be taken during the pregnancy. Similarly, breast examination of pregnant women were not done in both of the district hospitals however; few were examined at PHC, CHC or Private Clinics/Hospitals during the Antenatal Visits.

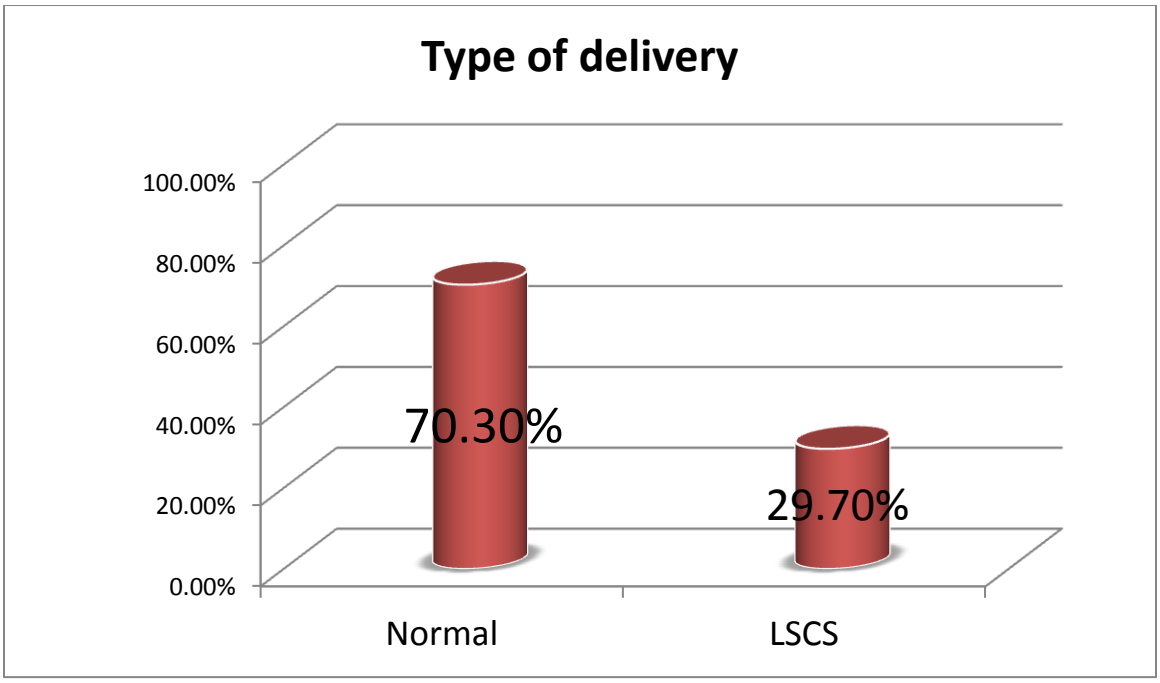
Also, 96.4% of the respondents said that they were counseled for the breast feeding during one of their antenatal care visit and 82.6% of the respondents knew about the birth spacing methods after the delivery and how to take care of breasts to prevent any infection to the baby.

Awareness about the complications in pregnancy:-

The majority of mothers (65.9%) were unaware of the most of the risk factors. Only 34.1% were being given advice about the risk factors of the pregnancy and which facility to approach if they face any of the symptoms. According to the study, 16.9% of the pregnant women suffered from one or two symptoms of Pre-eclampsia and most of these patients were delivered through LSCS. Fewer women mentioned complications that could impinge on the life of the mother and child, namely bleeding or loss of fetal movements.

Type of delivery:-

Among the 195 respondents 94.9% of the deliveries were full term, only 5.1% were preterm deliveries. The reasons given by the respondents were that they had faced bleeding per vaginum, high blood pressure or foetal movements got diminished. Also, 70.3% patients had normal delivery and 29.3% patients had c- section either at one of the DH or GMC. Out of 195 deliveries 56.5% deliveries were assisted by the doctor and 42.1% deliveries were assisted by the nurses at the facility.

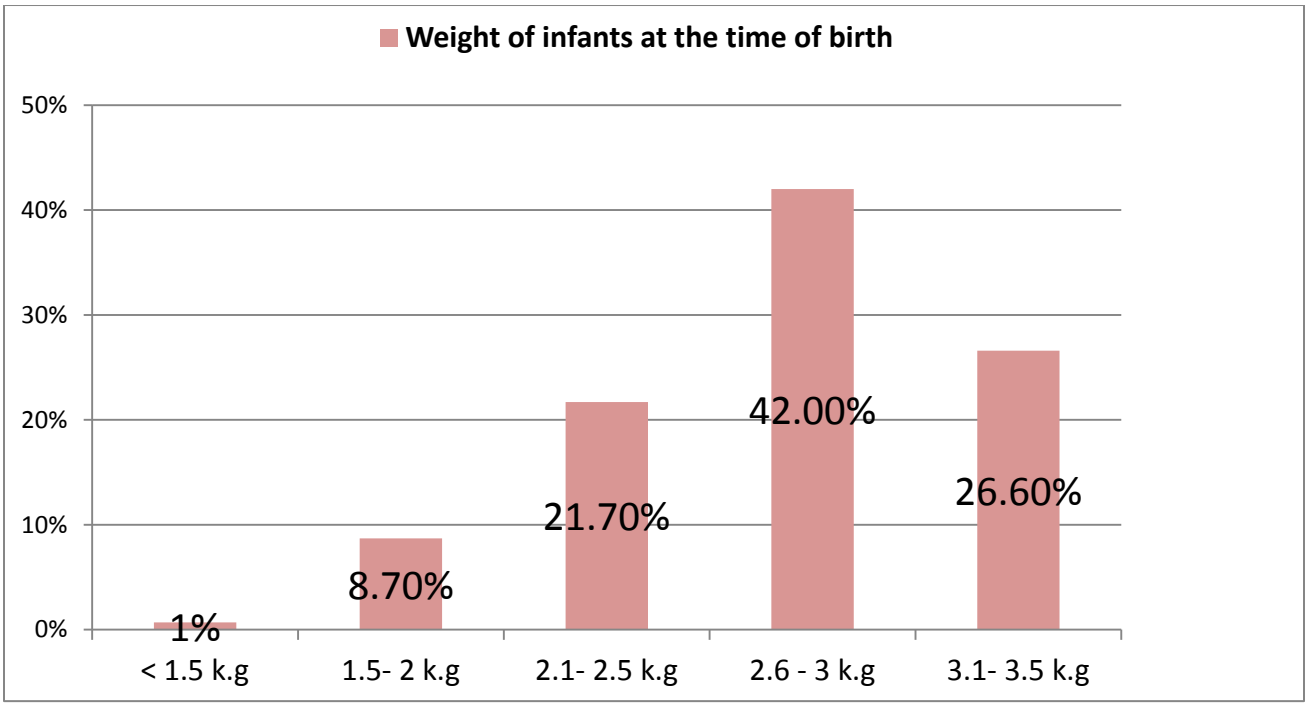


A high proportion of women delivered their infant at a hospital or public clinic but two Primygravida had delivered their infant at home with no trained assistance. The reason they stated that they were unaware of the signs of labour hence, the home delivery.

Hygienic practices and cord care at the time of delivery were generally reported as very good but, but no knowledge regarding the cord care is given to the women at the time of discharge from the hospital.

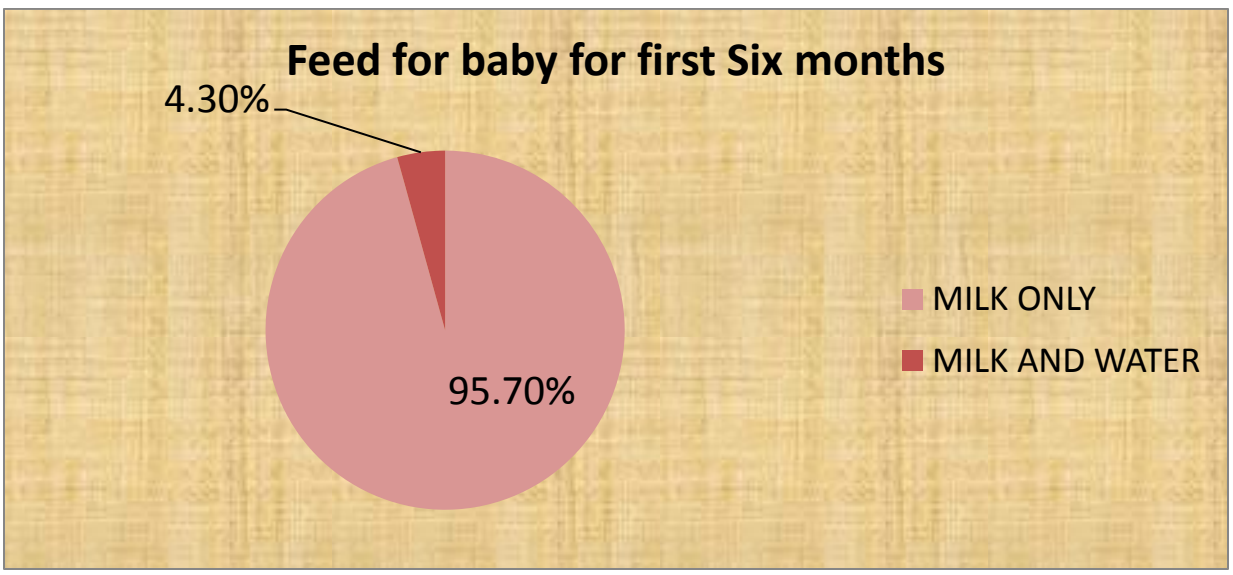
Weight of Infants at the time of birth

The analysis shows weight of every infant was measured after the delivery and **nearly 31% of the newborns were low birth weight** which makes infants more vulnerable to infection and puts them at higher risk of developmental problems. Thus, nutrition advice is essential for the pregnant women during the pregnancy.



Breastfeeding at birth and knowledge of exclusive breastfeeding

According to The World Health Organization and UNICEF, mothers should be helped to initiate breastfeeding within half an hour of birth. However, in Goa breast feeding was often delayed beyond one hour, **80.2% of infants had been put to the breast within 2 hours of delivery** and 94.3% had been put within 4 hours of delivery.95.7% of the women said that only milk should be given to the Infant for first six months and 4.30% said that milk and water can be given to the Infant.



Number of days stay at the center

In normal deliveries, the 48 hours-recommended length of stay and at least 96 hours for cesarean section is an ample time to observe for any possible complication that may arise such as bleeding of the mother, and any problem that the infant may face. Complicated cases will take a bit longer, 3-5 days or so depending on the situation of the mother as per doctor's evaluation.

48 hours stay after delivery is being practiced in the Goa state and in some communities the stay is being prolonged up to a week due to cultural reasons.

33.3% of the respondent with normal and uncomplicated delivery stayed in the center for 3 days and those with cesarean section stayed in the center for more than 6 days. If the mother or the baby faced any complication they stayed at the center even for more than 8 days. Those women who delivered at the GMC, Goa stayed there for 24 hours and after that they were being sent to the PHC of their native place for post natal care.

Home visits:

The ANM deals with all aspects of health and family welfare. Such monitoring includes early and universal registration of pregnant women, provision of ante natal care (ANC), care at the time of delivery (NC), post natal care (PNC), advice on breast feeding and family welfare. Only **56.5 percent** women were visited by ANM in their homes during their last pregnancy for ANC check-up.Among women who were visited almost every woman was satisfied with the services provided by the ANMs.

Recommendations:

1) **Information about the complications during pregnancy :-**

All pregnant women should be made aware of the need to seek immediate advice from a healthcare professional if they experience symptoms of pre-eclampsia.

Hence, training should be given to the ANM at the PHC, CHC and at the subcenter level regarding the various signs of pre eclampsia so, that proper care can be taken of those who are suffering from it and thus, pre term labour can be prevented.

2) **Diet and supplementation**

Balanced energy/protein supplementation improves foetal growth and may reduce the risk of foetal and neonatal death in nutritionally vulnerable women or those at risk for low birth weight children. As almost 32% of the infants were low weight hence, all women should be informed about the importance for their own and their baby's health of maintaining adequate vitamin D stores during pregnancy and whilst breastfeeding.

3) **Tests Done During ANC**

OGCT a very important test to find out the gestational diabetes should be done in 24- 32 weeks rather than doing it in the first trimester, as the number of diabetes patients are already high in the state. Maternal diabetes can lead to a

number of problems, including increased weight of the newborn (macrosomia), urinary tract infections, hypertension, pre-term labor, respiratory distress syndrome in the newborn, an increased Caesarean birth rate and high perinatal mortality. Effective treatment of diabetes during pregnancy can largely prevent these problems.

4) **Record Maintenance**

Records of the tests done during the pregnancy should be mentioned in the OPD card because most of the time patients could not maintain the small slips of the tests being done and at the time of delivery again doctor has to recommend those tests again.

5) **Breast Examination**

Breast Examination during antenatal period is essential so that problems with breastfeeding could be anticipated; typically Identification of the presence of flat or inverted nipples so that breast shells or nipple exercises (for example, Hoffman's exercises) could be prescribed to remedy the situation. Hence, ANM staff must be trained to examine the breasts during the antenatal care visit along with the blood pressure and weight measurement.

6) **Height Measurement**

Low weight and height were associated with increased risk of perinatal death and prematurity. After adjusting for confounders, maternal weight remained significantly associated with poor pregnancy outcomes, whereas height was only

weakly associated. Attributable risk estimates show that low weight is a much more important contributor to poor outcome so, it is very important to find out the weight according to the height to prevent the IUGR or pre term deliveries.

7) **Out of pocket spending**

As USG facility is not available at the PHC or CHC so the pregnant women were advised to go to either GMC or DH. It takes a lot of time to travel to the GMC or DHS thus; women prefer to go to private labs for the tests where they were being charged.

8) **Counselling at the time of discharge**

As the number of institutional deliveries is very good in Goa so it reduces the risk of maternal death at the time of delivery however, counselling should be done at the time of discharge regarding the risks during the puerperium period and also regarding the complications of a newborn child that need immediate medical care.

Thus, Health education would play a very important role in this matter.

ANNEXURE (1)

1) Questionnaire for women in postpartum period

Q. 1 Age of the respondent	_____ Yrs
Q.2 Area	(a) Urban _____ (b) Rural _____ Address _____ _____
Q.3 Education Qualification	a. Illiterate b. Formally Literate c. Literate d. Specify _____
Q.4 Occupation	(a) Housewife (b) Working (C) Specify_____
Q.5 What was your pregnancy in months at the time of first check up	Months _____
Q.6 Whom did you see first for the antenatal checkup?	(a)Govt. Doctor (b)Private Doctor (c)Village/ community health worker

Q.7 Where did you receive ANC for this pregnancy?	a) Govt. Hospital b) Govt. Health center c) Private Hospital/ Clinic d) Others _____
Q.8 How many times did you receive antenatal care during this pregnancy so far?	Number of Times 1= 1-3 times 2= 4-6 times 3= 7-9 times 4= more than 9 5= none
Q.9 As part of your antenatal care during this pregnancy, were any of the following done at least once? a) Were you weighed? b) Was your height measured? c) Was your blood pressure measured? d) Did you give a urine sample? e) Did you give a blood sample? f) Was your abdomen examined? g) Was your sonography done?	YES NO 1 2 1 2 1 2 1 2

h) Were your breasts examined?	1 2
i) Were you given the nutrition advice?	1 2
j) Was expected date of delivery told to you?	1 2
k) Was any delivery advice given to you?	1 2
	1 2
	1 2
	1 2
Q.10 During any of your prenatal care visits you had undergone these tests:-	YES NO Don't know
(a) Hb	1 2 99
(b) HIV	1 2 99
(c) VDRL	1 2 99
(d) Blood Group	1 2 99
(e) Hepatitis B	1 2 99
(f) OGCT (24- 30 wks)	1 2 99
(g) FBSL	1 2 99

Q.11 During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about any of the things listed below :-		
a. How smoking during pregnancy could affect your baby	1	2
b. Breast feeding your baby	1	2
c. How drinking alcohol during pregnancy could affect your baby	1	2
d. Birth control methods to use after your pregnancy.	1	2
e. Medicines those are safe to take during your pregnancy.	1	2
f. Doing tests to screen for birth defects or diseases that run in your family	1	2
g. What to do if your labor starts early		

Q.12 During (any of) your antenatal care visit(s), were you told about the signs of pregnancy complications?	Yes ……. 1 No…….. 2 (Skip to 14) Don't Know….. 99
Q.13 Were you told where to go if you had any of these complications?	YES…… 1 NO……. 2 Don't Know… 99
Q.14 During this pregnancy, were you given an injection of tetanus?	Yes……. 1 No…….. 2 (skip to Q.No 16)
Q.15 During this pregnancy, how many times did you get this tetanus injection?	Times …… ☐ Don't Know ……99
Q.16 During this pregnancy, were you given any Iron tablets?	Yes ……. 1 No ……. 2 Don't know ……99
Q.17 During the whole pregnancy, for how many days/months did you take the tablets?	Days…….. ☐☐☐ Months….. ☐☐ Don't know…….99

Q.18 During this pregnancy, did you take any drug for intestinal worms?	YES……1 NO……2 Don't know…99
Q.19 Where did you give the birth to the child?	(a) your home (b) other's home (c) Govt. Hospital (d) Govt. Health center (e) Private Hospital/ Clinic (f) Others _____ (g) Specify _____
Q.20 a) Was the delivery Pre term or Full term? b) Was the delivery Normal or LSCS?	1) Preterm 2) Full term 1) Normal 2) LSCS
Q.21 Did you face any complication during pregnancy or after the delivery?	1) Yes (If yes specify) 2) No 3) Specify _____
Q.22 Who assisted with the delivery?	1) Doctor 2) Nurse

	3) Others 4) Specify
Q.23 How long after the delivery did you stay in the center?	Hours ……. Days …… Weeks ……
Q.24When the child was born, was he weighed at the time of birth?	YES……1(If yes specify) NO……2 Don't know…99 Specify _____
Q.25 Did you breastfeed or pump breast milk to feed your new baby after delivery?	YES……1 NO……2(Skip to Q. No 27)
Q.26 How long after birth did you first put the baby to the breast?	Hours…… ☐☐ Days…….
Q.27 What do you think should be given to the baby for first Six Months?	a) Breast Milk Only b) Milk and Water c) Others…….. d) Specify……..
Q.28 During your pregnancy, did any health care provider visit you?	YES……1 NO……

Q.29 Are you satisfied with the services given by:-	Yes No
Doctor	1 2
Healthcare worker	1 2
Pathology lab	1 2
Q.30 Any suggestion how the services can further be improved	_____
Q.31 Are you aware of any schemes given by the Govt.?	_____

ANNEXURE 2

QUESTIONNAIRE FOR ANM'S

Q.1 (a)Name of the Sub center (b) Name of the PHC	_____ _____
Q.2 In which month of pregnancy should a woman start receiving antenatal check-ups?	_____
Q.3 How many antenatal check-ups should a pregnant woman receive?	a) < 2 b) 2-3 c) Atleast 3 d) >3
Q.4 How many TT injections should a woman receive during pregnancy?	a) 1 b) 2 c) >2
Q.5How many large IFA tablets should a pregnant woman take before delivery?	**a) <90** **b) 90- 120** **c) 120-200** **d) >200**
Q.6 Do you perform any of these activities? If yes then how often do you perform :- a) Blood pressure measurement b) Blood analysis c) Urine sample analysis d) Weight measurement is performed	

e) Foetal heart beats	
Q.7 Do you inform them about the extra diet taken during the pregnancy?	1. Yes **2.** No
Q.8 Do you perform gynecologic examination (internal examination) during these visits?	3. Yes 4. No
Q.9 Do you perform the external examination during these visits (measurement of the Fundus uteri)?	1. Yes **2.** No
Q.10 Do you distribute education materials in relation to birth?	1. Yes **2.** No
Q.11 Do you share with pregnant woman any oral advice or educational material related to Complications of pregnancy?	1. Yes **2.** No
Q.12 What are the complications during pregnancy that need referral for medical treatment?	a)Severe headache b)Blurred vision c)Diminished or absent foetal movement d)High blood pressure e)High fever f)Unconsciousness g)Convulsions h)Vaginal bleeding i)Lower abdominal pain
Q.13 Do you know what is the symptoms of eclampsia?	a) Blurred vision b) Convulsions c) Vomiting

	d) Severe headache e) Stomach burning f) Others
Q.13 Are the pregnant woman advised on where to go in case of complications?	1. Yes **2.** No
Q.14 What is the first feed a mother should give her newborn baby?	a) Honey b) First milk/colostrums c) Water d) Others **e)** Specify _____
Q.15 For how many months should a mother give ONLY breast milk to her child?	a) <1months b) 1-3 months c) 3-6 d) Up to 6 months
Q.16What advice regarding immediate newborn care should a mother or family receives?	a)Immediate breastfeeding b)Keep the baby warm c)Minimum handling by others d)Delay bathing for at least for 3 days e)Apply nothing on cord f)Exclusive breast feeding
Q.17What are the complications/conditions of a newborn child that need medical care?	a) Baby won't cry b)Difficult/fast breathing c)Chest in-drawing d)Unable to pass urine e)Diarrhoea f)High fever Discharge from the cord
Q.18What are the complications that may develop in a woman after	a) Massive vaginal bleeding b) Foul-smelling discharge c) High fever

delivery (post-partum period) needing medical treatment?	d) Severe abdominal pain e) Convulsions f) Jaundice
Q.19 How many times after the delivery of the patient does you visits the patient?	a) 1 time b) 2-3 times c) 4-5 times d) 5-6 times
Q.20 Do you tell them about the immunization schedule and its importance?	1. Yes 2. No

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