ORIGINAL ARTICLE

MOTHER AND CHILD TRACKING IN A PRIMARY HEALTH CENTRE

Jahnavi Rajagopal[1], Veena V[2], Parasuramalu B. G[3], Satish Chandra M. R[4]

HOW TO CITE THIS ARTICLE:
Jahnavi Rajagopal, Veena V, Parasuramalu B. G, Satish Chandra M. R. "Mother and Child Tracking in a Primary Health Centre". Journal of Evidence based Medicine and Healthcare; Volume 1, Issue 13, December 01, 2014; Page: 1697-1702.

ABSTRACT: BACKGROUND: India is among those countries which have a very high maternal and infant mortality rate.Most maternal deaths could be prevented if women had access to appropriate health care during pregnancy, childbirth and immediately afterwards.The present study was conducted to track the pregnant women for antenatal care, Delivery, PNC and child immunization and assess the outcome. **METHODS:** This was a longitudinal study conducted in a primary health center of rural field practice area. The study was conducted among the pregnant women attending the antenatal clinic of the primary health center for duration of 2 years. 116 newly confirmed pregnant women who visited the PHC between April 1st to June 31st2011were enrolled in the study and followed up till completion of primary immunization of the child. **RESULTS:** Majority(62.0%) of study subjects were in the age group of 20-24yrs. 61.2% of the them registered before 12wks of gestation, 27.5% received ≥ 4 ANC visits as per IPHS guidelines 2012,63.1% had mild to moderate anaemia, 100% had institutional deliveries, 28.4% neonates had birth weight less than 2500gms and compliance to primary immunization up to measles was 95%. **INTERPRETATION:** Tracking of mother and child has an important role at the grass root level in delivering services to women and children and has been recognized as a priority area for providing effective healthcare services to this group.

KEYWORDS: Tracking, Mother and child, Primary health Centre.

INTRODUCTION: The health of women and children has been an abiding development concern in India right since Independence. One of the important millennium development goals set in the year 2000 was three-quarters reduction in maternal and infant mortality rates by the year 2015.It is estimated that around 60 thousand women in the country die every year due to complications associated with pregnancy and delivery while many more suffer from pregnancy and birth related ill-health.[1] India is among those countries which have a very high maternal mortality rate. World-wide, 7.6 million children under the age of five die every year. A child's risk of dying is highest in the neonatal period, especially during the first 28 days of life. Each year in India over one million newborns die before they complete their first month of life, accounting for 30% of the world's neonatal deaths.[2]

More than a decade research has shown that small and affordable measures can significantly reduce the risk that women face when they become pregnant. Most maternal death could be prevented if women had access to appropriate health care during pregnancy, childbirth and immediately afterwards. Tracking of Pregnant mothers and children has been recognized as a priority area for providing effective healthcare services to this group. Since there are very few studies based on outcome of mother and child tracking, the present study was conducted to track

the pregnant women for antenatal care, Delivery, PNC and child immunization and assess the outcome.

METHODOLOGY: This was a longitudinal study conducted in a primary health centre of our rural field practice area after obtaining institutional ethics committee approval. The study was conducted among the pregnant women attending the antenatal clinic of the primary health centre for duration of 2 years. 116 newly confirmed pregnant women who visited the PHC between April 1st to June 31st2011 were enrolled in the study by purposive sampling. All the pregnant women were followed during pregnancy till completion of primary immunization of the child.

At the first visit information was collected from the pregnant women regarding socio-demographic characteristics and obstetric details. Further all the pregnant women were tracked subsequently and information was collected regarding ANC details, pregnancy outcome, PNC and Infant details, child immunization using a pre-tested structured questionnaire by interview technique when they come to the primary health centre for ANC check-ups and also through telephonic contacts when they fail to turn up. Data was analysed using SPSS version 18.0.

RESULTS:

Sl. No	Variable		Number of pregnant women (n=116)	Percentage
1	Age in years	≤ 19	18	15.5
		20-24	72	62.0
		25-29	24	20.7
		30-34	02	01.8
2	Education	Illiterate	14	12.0
		Literate	102	88.0
3	Occupation	Labourers	11	09.5
		Housewives	105	90.5
4	Religion	Hindu	81	69.9
		Muslim	35	30.1

Table 1: Distribution of study subjects according to the socio demographic characteristics

Majority i.e., 72(62%) of study subjects were in the age group of 20-24yrs with Mean age ± SD of 22.2± 2.9 years and 18 (15.5%) of study subjects were teenagers. Majority i.e., 102 (88%) of study subjects were literates, 105 (90.5%) were housewives and 81 (69.9%) were Hindu by religion.

Gravida	Number (n=116)	Percentage
Primigravida	44	37.9
Multigravida	70	60.3
Grandmulti	2	1.8

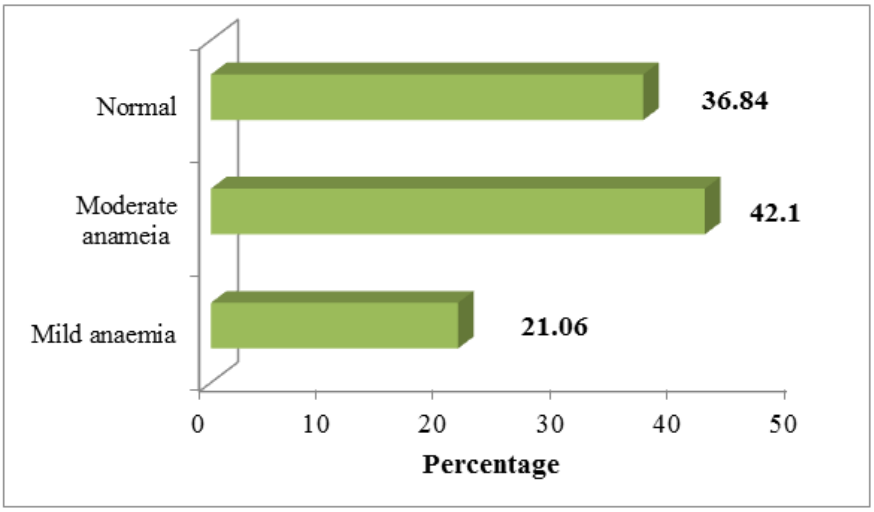
Table 2: Distribution of study subjects according to Gravida

TIME OF REGISTRATION AND ANC VISITS: In the present study the median gestational age of 1st ANC visit i.e., registration of pregnancy was 12 weeks with a range of 6 – 28 weeks.Majority of the study subjects i.e., 71 (61.2%) registered before 12wks of gestation.

Out of 116 pregnant women only 32 (27.5%) received ≥ 4 ANC visits as per IPHS guidelines 2012[3] whereas 50 (43.1%) had received minimum 3 visits.

113(97.4%) of the study subjects have received 1st dose of TT injection between 6 to 24wks of gestation. Among those who registered before 12 weeks, 67(94.4 %) have received 1st dose of TT during their 1st visit. 82 (70.6%) of the study subjects completed their 2nd dose of TT injection between 10-32weeks of gestation.

Iron and Folic acid tablets were given to all pregnant women. Out of 116 study subjects only 38 (32.7%) had estimated Hb%. Out of them 42.1% had moderate anaemia (9-10.99 gm%) and 21.0% had mild anaemia (7-8.9 gm%).



Graph 1: Distribution of study subjects according to anaemia status (n=38) High risk pregnancy

Only one patient had Congenital heart disease who was monitored and referred to higher centre for further management.

PREGNANCY OUTCOME AND POSTNATAL PERIOD: Out of 116 study subjects two patients had abortion during in the first trimester. It was a spontaneous abortion.

Out of 114 study subjects, 12 subjects dropped out of the study because they left the place and not traceable for follow up.

Among 102 study subjects, 100% had institutional deliveries. Majority i.e.,84 (82%)study subjects delivered in private hospitals and only 18 (18%) had their deliveries in government hospital.

Out of 102newborn, mean birth weight was 2.75± 0.39. Out of them 29 ie., 28.4% neonates had birth weight less than 2500gms.

83 ie., 81.37% initiated breast feeding with in 1st one hour after delivery.

Contraceptive method	Number (n=26)	Percentage
Permanent sterilization	12	46.2
Condoms	7	26.9
IUCD	5	19.2
Injectable contraceptive	2	7.7

Table 3: Post partal Contraceptive usage

Out of 102 postnatal mothers 76 i.e., 74.5% did not use any contraceptive. Only 26 i.e., 25.5% used contraceptive measures, among them 12 (46.2%) underwent permanent sterilization, 7 (26.9%) used conventional, 5 (19.2%) underwent IUD insertion and only 2 (7.7%) used injectable hormonal contraceptive measures.

Reasons	Number (n=76)	Percentage
Opposition from family members	47	62.0
Lack of awareness	19	25.0
Fear of side effects	10	13.0

Table 4: Reasons for not adopting Postpartal Contraception

TRACKING OF IMMUNIZATION: Out of the 102 new born, 09 (8.8%) received BCG and Hepatitis B Birth dose within 24hrs. 61(59.8%) received BCG within 15days after birth and 32 (31.4%) received within one month of birth.

Immunization schedule	Compliance (%)	Dropouts (%)
BCG	102 (100.0)	-
OPV-0 dose	78(76.4)	-
Hep-B Birth dose	09 (8.8)	-
1st dose of DPT, Hep-B and OPV	102 (100.0)	-
2nd dose of DPT, Hep-B and OPV	101 (99.0)	1(1.0)
3rd dose of DPT, Hep-B and OPV	98 (96.1)	4 (3.9)
Measles	97 (95.0)	5 (5.0)

Table5: Compliance to routine immunization

Out of the 102 who started with BCG, only 97 (95.0%) completed primary immunization up to measles with dropout of 5 (5%). Maximum dropouts were for the 3rd dose of DPT.

DISCUSSION: Mother and child tracking is to track all pregnant women and children so that they receive full maternal and child health services and thereby contribute to reduction in maternal, infant, child morbidity and mortality which is one of the goals of National Rural Health Mission.[4]

According to the Indian public health standards 2012,registration of all pregnancies ideally should be done in the first trimester (before 12th week of pregnancy) and advices to have

minimum 4 antenatal checkups.[3]In our study majority of the study subjects i.e., 71 (61.2%) registered before 12wks of gestation. Out of 116 pregnant women only 32 (27.5%) received ≥ 4 ANC visits as per IPHS guidelines whereas 50 (43.1%) received minimum 3 visits.

In the study 63.1% had mild to moderate anaemia as compared to 58% in NFHS - III.[5] National population policy (NPP - 2000) sets a goal of achieving 80% institutional delivery, 100% by trained personnel by 2010.[6] In our study we had100% institutional delivery, majority preferred private hospitals over Government hospitals because of lack of facilities and quality of services.

NPP -2000also sets a goal of achieving universal immunization of children against all vaccine preventable diseases.[6] According to NFHS-III, 44% of children fully vaccinated, whereas 59% of them have completed primary immunization up to measles.[5] In this study the compliance to primary immunization up to measles was 95% with only 5% dropouts. This was because of continuous monitoring and tracking of pregnant women and children to ensure completion of vaccination. According to National immunization schedule OPV-0 dose is made compulsory for institutional deliveries, but according to our findings it has not been given much emphasis. One important observation made was Hepatitis –B 0 dose was received by only around 9% of children rest received only BCG. As we have already discussed majority of deliveries occurred in private hospitals, Hepatitis – B 0 dose component is not yet implemented in them properly.

NFHS – III shows a contraceptive prevalence of 56% and about 12.8 percent of currently married women in India have an unmet need for family planning.[5]Our study showed contraceptive usage of only 25.5% and various reasons were given for not adopting one.

The limitation of the study was purposive sampling was done, so the results cannot be generalized. Further studies need to be done including general population.

CONCLUSIONS AND RECOMMENDATIONS: Tracking of mother and child has an important role at the grass root level in delivering services to women and children according to their specific needs and at the same time it supports health and family welfare managers and policy makers in measuring and monitoring the efficiency of maternal and child health services. There is a need to improve awareness regarding importance of minimum antenatal visits during antenatal period, educate the study population about consumption of minimum of hundred iron tablets during antenatal period and education of study population regarding utilization of antenatal and postnatal care services which are available.

As a major initiative in this regard, Government of India, Mo HFW has launched an innovative application of information technology called Maternal and child tracking system (MCTS)in December 2009,a name-based tracking system whereby pregnant women and children can be tracked for their ANCs and immunization along with a feedback system for the ANM, ASHA etc., to ensure that all pregnant women receive their Ante-Natal Care Check-ups (ANCs) and post-natal care (PNCs); and further children receive their full immunization. There is a need to evaluate this system for its implementation in order to strengthen it.

REFERENCES:

1. WHO, UNICEF, World Bank (2012), Trends in Maternal Mortality: 1999-2008.
2. Children: reducing mortality [online] 2011 [cited on 24thAugust 2014] Available from URL; http://www.who.int/mediacentre/factsheets/fs178/en/.
3. Govt. of India (2012), Indian Public Health Standards for PHCs, Mo HFW, New Delhi.
4. NATIONAL RURAL HEALTH MISSION: Meeting people's health needs in rural areas. Framework for Implementation 2005-2012: Ministry of Health and Family Welfare. Government of India.
5. Govt of India. National family Health Survey III (2005-2006). IIPS, Ministry of Health and Family welfare, Mumbai 2007.
6. Govt of India. National population policy-2000. Department of Family welfare, Ministry of Health and Family welfare, GOI, New Delhi.

AUTHORS:

1. Jahnavi Rajagopal
2. Veena V.
3. Parasuramalu B. G.
4. Satish Chandra M. R.

PARTICULARS OF CONTRIBUTORS:

1. Assistant Professor, Department of Community Medicine, MIMS, Mandya.
2. Assistant Professor, Department of Community Medicine, BGS Global Institute of Medical Sciences.
3. Professor, Department of Community Medicine, Rajarajeshwari Medical College and Hospital.
4. Assistant Professor, Department of Community Medicine, BGS Global Institute of Medical Sciences.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Veena V,
Assistant Professor,
Department of Community Medicine,
BGS Global Institute of Medical Sciences.
E-mail: vveena67@yahoo.com

Date of Submission: 02/09/2014.
Date of Peer Review: 03/09/2014.
Date of Acceptance: 28/11/2014.
Date of Publishing: 01/12/2014.