

Original Research Article

Utilization of maternal health care and child immunization services at an urban health training center of a medical college in North IndiaSangeeta¹, Rajesh Garg¹, Nitika Sharma¹, Sonali², Himani Dureja³, Anupam Berwal^{4*}¹Department of Community Medicine, Kalpana Chawla GMC, Karnal, Haryana, India²Department of Pathology, Kalpana Chawla GMC, Karnal, Haryana, India³Department of Ophthalmology, Kalpana Chawla GMC, Karnal, Haryana, India⁴Dept. of Microbiology, Kalpana Chawla GMC, Karnal, Haryana, India

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Abstract

Introduction: Reproductive span and childhood are vulnerable phases of life. Ineffective utilization of MCH services leads to mortality among mothers and children. Present study was undertaken with the aim to assess utilization of MCH services at the urban health training center of a medical college in Karnal. **Material and Methods:** A retrospective record based study was undertaken at the UHTC of Kalpana Chawla Government Medical College, Karnal, Haryana from April 2020 to December 2020. Data was analyzed using MS Excel. **Results:** Various parameters like early registration of pregnancy, ANC registration and immunization services were assessed and numbers were illustrated using charts. **Conclusion:** Increase in awareness activities should be carried out for effective MCH services utilization.

Keywords: MCH, early registration, immunization, utilization.

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Introduction

Reproductive age group and childhood are vulnerable population requiring special care and protection[1]. Many women in reproductive age-span die due to complications during and following pregnancy and childbirth or abortion. There were an estimated 26437 maternal deaths in India in 2018 and Maternal Mortality Ratio of India stands at 113 per lakh live births[2,3]. Maternal mortality may be multifactorial, ineffective utilization of Maternal and Child Healthcare (MCH) services is one of them[4]. As per National Family Health Survey-4 (NFHS-4), proportion of children fully immunized in the age group 12-23 months is 62%[5]. Immunization is an important intervention to prevent deaths among children. The current study was undertaken to estimate the utilization of MCH and immunization services of an urban PHC area catered by a medical college in North India.

Material and Methods

A retrospective record based study was undertaken at the urban health training center (UHTC) of Kalpana Chawla Government Medical College, Karnal, Haryana from April 2020 to December 2020. There were 33 colonies in this area and total population of under this UHTC was 48615 in 2019-2020. Birth rate of this area was 20 per thousand live births. Monthly record of beneficiaries utilizing services are maintained at the UHTC. These are updated at the end of every month. MCH services provided are ante natal care (ANC) services, immunization and family planning.

Data for analysis included April 2020 to November 2020 data. The data were entered in MS excel and descriptive analysis was performed.

Results

Record analysis from UHTC for the year 2020 from April to November was done for MCH services.

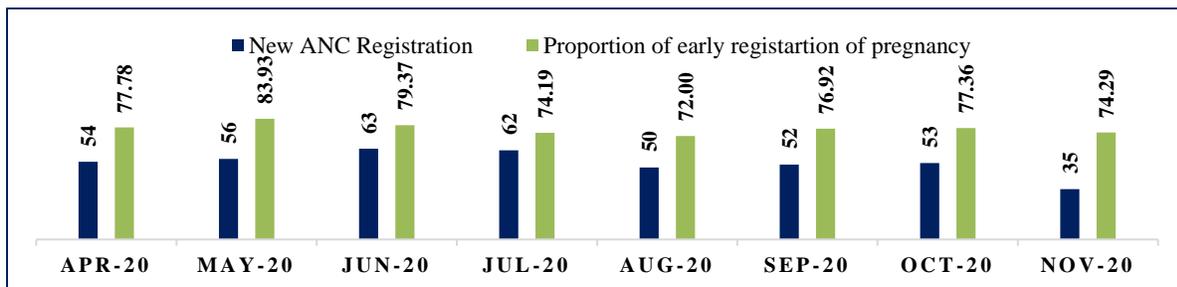


Fig 1: Month-wise new ANC registration and proportion of early registration of ANC

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Figure 1 shows that 425 new pregnant females registered during the study period and proportion of early registration (at <12 weeks) among them. The range of ANC registration during study period varies between 35-63.

Number of TT/Td vaccinations to pregnant women, IFA and calcium supplementation given every month is illustrated in Figure 2 and 3.

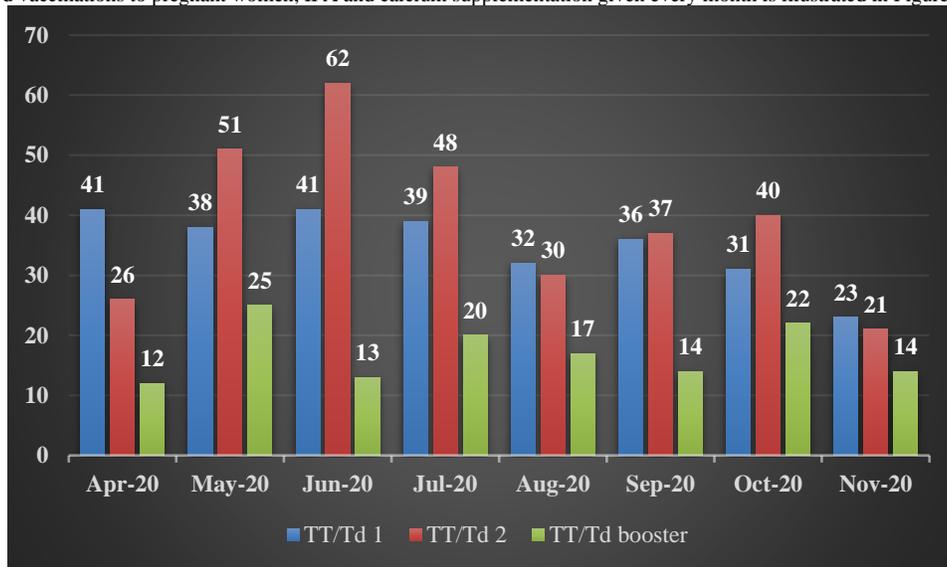


Fig 2:Month-wise number of TT/Td immunization

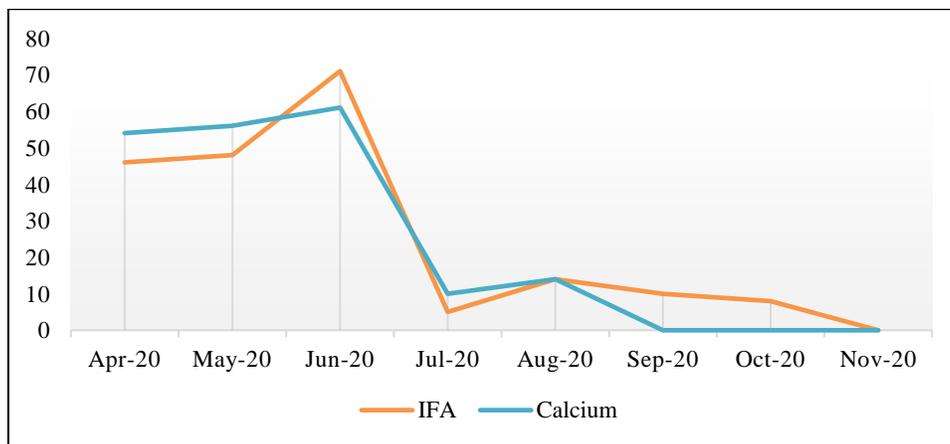


Fig 3:Month-wise IFA and calcium supplementation

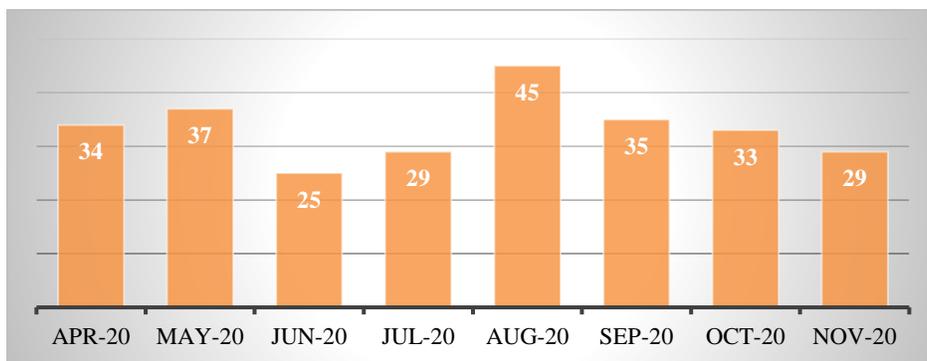


Fig 4:Number of ANC who had 4 or more ANC checkups

Figure 4 represents the number of women availing 4 or more ANC check ups which varies between 25-45. A total of 267 pregnant women had four or more ANC checkups during the study period.

Table 1: Month-wise data on primary immunization provided

	April 20	May 20	June 20	July 20	Aug 20	Sep 20	Oct 20	Nov 20
BCG	0	0	6	9	8	10	10	10
Pentavalent 1	52	50	42	44	50	57	71	46
Pentavalent 2	59	62	67	70	50	46	65	66
Pentavalent 3	38	64	78	5	57	49	48	68
OPV 1	52	50	42	46	50	57	71	46
OPV 2	59	62	67	70	50	46	65	66
OPV 3	38	64	78	0	57	49	48	68
IPV 1	53	50	42	44	50	57	71	46
IPV 2	39	67	79	70	57	49	48	68
RVV 1	52	50	42	44	50	57	71	46
RVV 2	59	62	67	46	50	46	65	66
RVV 3	38	64	78	70	57	49	48	68
Measles Rubella 1	28	67	59	50	49	64	72	66

Table 1 reports the number of immunization provided to children (upto1 year of age) during the study period.

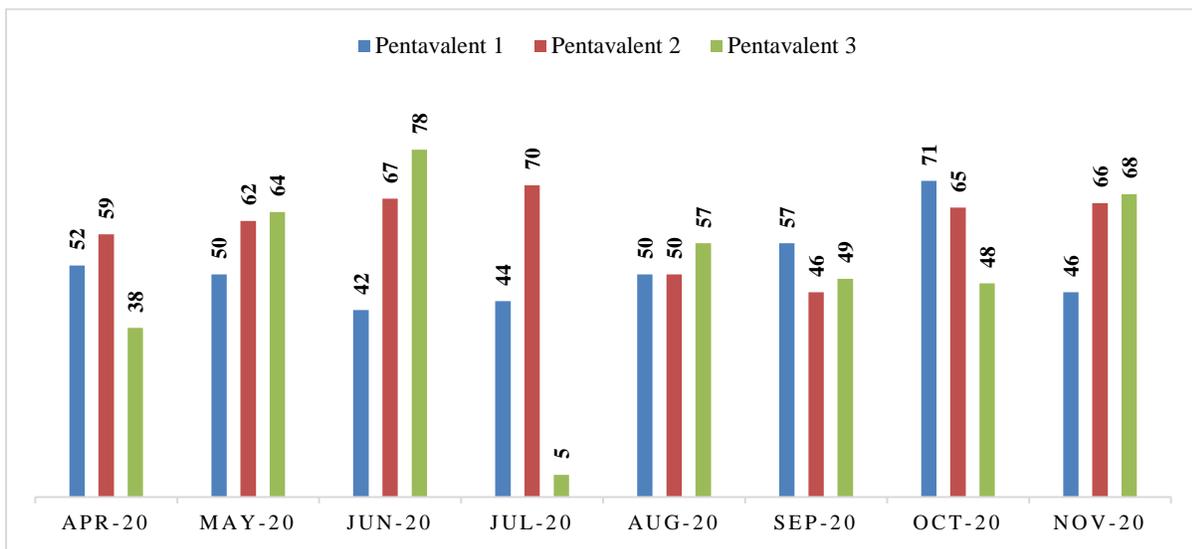


Fig 5:Utilisation of pentavalent vaccination amongst infants

Figure 5 shows the number of children given pentavalent vaccine.

Figure 6 illustrates the dropout rate for Pentavalent and MR1 vaccination.

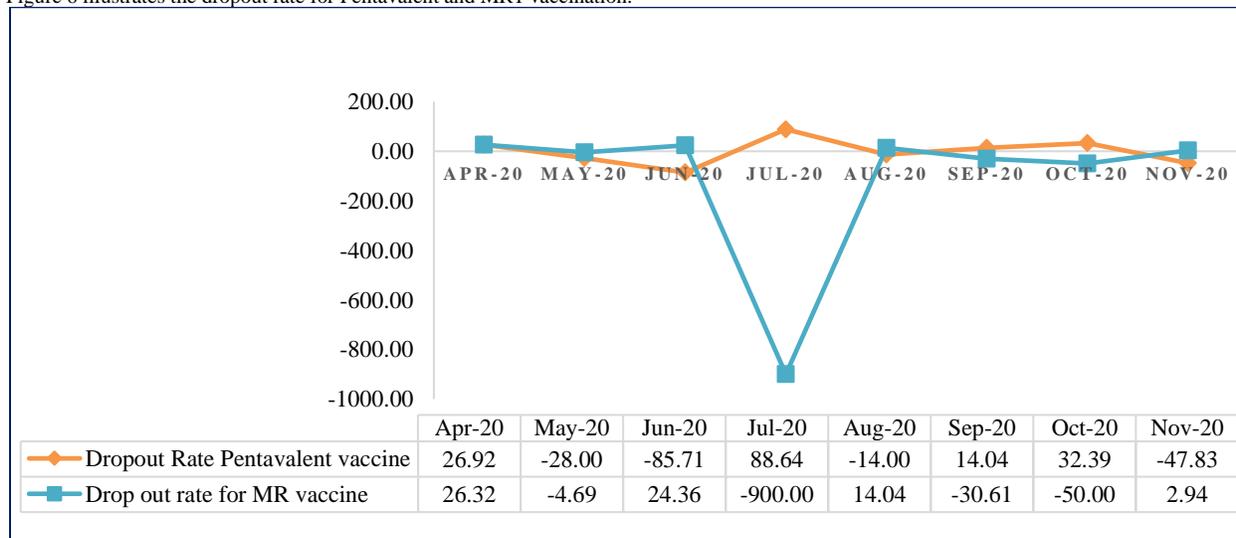


Fig 6:Dropout rate of pentavalent and MR vaccine

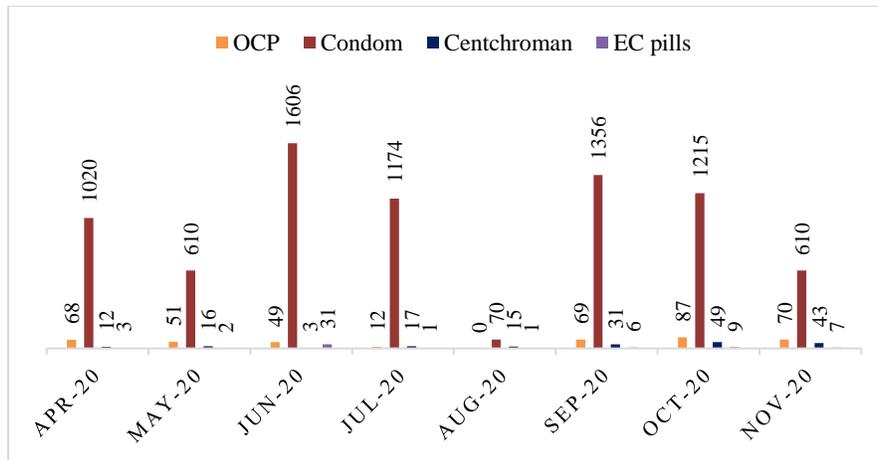


Fig 7: Contraceptive usage in the study area

Figure 7 shows the various contraceptive usage in the study area during April to November 2020. Maximum contraceptive usage was seen for condoms followed by Oral Contraceptive pills (OCPs).

Discussion

Under Reproductive, Maternal, Newborn, Child and Adolescent Health program (RMNCHA), there is emphasis on utilization and accessibility of MCH services. This study reports the utilization of MCH services like ANC services, immunization and family planning. As per RMNCHA program, ANC registration should be done within twelve weeks of pregnancy. Every pregnant female should receive at least four ANC checkups. In our study, it was found that every month on an average, 34 pregnant females received 4 or more ANC checkup services. Mukesh S et al (2015) in their study done in Lucknow reported that about 30% women had four or more ANC checkups. Rate of early registration of pregnancy ranged from 72%-83% in the present study. The rate of early pregnancy registration observed in our study is much higher from studies conducted by Mukesh S et al (2015)[6] and Mahajan H et al (2014)[7]. The reason for this could be better awareness among the study population as a cumulative result of information, education and communication services and literacy among subjects. Also, COVID 19 pandemic was on peak in 2020, there was lockdown and scaling down of OPD services. This could also be an important factor that pregnant women might have reported late for registration of ANC. In our study, 1115 doses of TT/Td vaccine were provided to expectant females during the span from April 2020 to November 2020. Studies conducted by Sharma S et al (2020)⁴ and Mukesh S et al (2015)[6] have also reported 70.9% TT immunization service utilization by ANC. The present study also reports number of Tt/Td vaccination and iron, calcium supplementation given to pregnant females every month. These are important preventive measures for positive maternal and fetal outcome. Routine immunization services were also assessed during this study and dropout rate for pentavalent vaccine varied from 85% to 88%. This shows that in some months, vaccination services were also provided to children who were not registered in the study area. The dropout rate reported for pentavalent vaccine was in concurrence to study conducted by Singh J et al (2018)[8]. Drop out could happen because of vaccination of beneficiary at different health center or due to non-vaccination of the beneficiary or because of movement restrictions due to COVID 19 leading non-accessibility of services. Efforts like increasing awareness, adequate maintenance of supply chain etc. should be undertaken to reduce the dropout rate to prevent child mortality from vaccine preventable diseases.

Conflict of Interest: Nil Source of support: Nil

Conclusion

ANC registration and child immunization services have been utilized fairly by the beneficiaries. However, effective utilization of all services could not be assessed due to lack of overall number of pregnancy registration. More efforts should be directed to improve dropout rates.

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