



## “RETROLECTIVE AND PROLECTIVE MEDICAL AUDIT TO COMPARE QUALITATIVE AND QUANTITATIVE ADEQUACY OF MCH CARE RECORDS: A HOSPITAL BASED, HEALTH SYSTEMS RESEARCH STUDY”

### Community Medicine

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### ABSTRACT

**Introduction:** Pregnancy and childbirth complications cause the death of more than half a million women every year. Malnutrition, particularly anaemia, renders women prone to haemorrhage and infections. Apart from poor nutritional status, the risk of maternal and child death is increased by lack of access to good quality health care, lack of education of mothers, and unhealthy living conditions. **Objective:** To study the impact of antenatal care in pregnant women on intranatal and postnatal period. **Materials And Methods:** It is duration-based sample size. All eligible admitted cases who satisfy inclusion criteria and who give willingness admitted to the ward of designated Tertiary Care Hospital. All such cases (Number=380) starting from morning of 1 Jan 2020 to midnight of 31 Dec 2020 were included in the present study after obtaining consent or assent as the case may be. Record based sample for 1 Jan 2017 to 31 Dec 2019 is 1800. Data was entered into Microsoft excel data sheet and was analyzed using SPSS 22 version software. Categorical data was represented in the form of Frequencies and Proportions. Fisher Exact test was used as test of significance for qualitative data. **Results:** In 2020, 355 pregnant women have received antenatal care from them none of pregnant women have developed complications during intranatal and postnatal period, while 25 pregnant women have not received antenatal care from them all pregnant women have developed complications. In 2017-19, 1668 pregnant women have received antenatal care from them none of pregnant women have developed complications during intranatal and postnatal period, while 132 pregnant women have not received antenatal care from them all pregnant women have developed complications. **Conclusion:** From present study it was concluded that pregnant women who have received antenatal care did not have any complications during intranatal and postnatal period.

### KEYWORDS

MCH, Antenatal period, Postnatal period

#### INTRODUCTION:

“Women are not dying because of a disease we cannot treat. They are dying because societies have yet to make the decision that their lives are worth saving”- **Mahmoud Fathalla.**

MCH care is most important priority care in our country. If we want to ensure that MCH care is provided properly there are two ramifications which include qualitative and quantitative adequacy and the basic step to judge this is whether the records have been maintained properly. Proper maintenance of records means correctness, completeness and up-to-dateness of all the records. The analysis of medical records related to MCH care in hospitalized pregnant women in tertiary care hospital serve as a good indicator to detect qualitative and quantitative adequacy. This statement is made on the assumptions that the tertiary care hospitals are catered to only tertiary care (i.e. high risk care). However in most of the tertiary care hospitals the number of pregnant women requiring primary and secondary care exceeds to far as compared to those who require tertiary care. Whether all of this care is provided in cohesion with the qualitative and quantitative balances needs to be analyzed and that can be reflected from the records. Another reason for such an approach and study is time constraint of one year. Within the given time constraint of one year it will not be possible to enter into the depth of all aspects. So the main focus is on records in the past and during study period. Thorough observation of records, which aims at facts finding and not fault finding this gives us totality in relation to correctness, completeness and up-to-dateness. All this is required because MCH program is ongoing.

If significant difference is seen in past years we need to peep into the records for their completeness, correctness and up-to-dateness of records. And completeness, correctness and up-to-dateness is achieved only when real qualitative care is offered to all pregnant women and their newborns. This needs to be highlighted.

Pregnancy and childbirth complications cause the death of more than half a million women every year. Malnutrition, particularly anaemia, renders women prone to haemorrhage and infections. Apart from poor nutritional status, the risk of maternal and child death is increased by lack of access to good quality health care, lack of education of mothers, and unhealthy living conditions. Women who survive the complications of pregnancy and childbirth may suffer painful and/or

embarrassing disabilities. Around 10 million infants and children die each year, mostly from the combined effects of infectious diseases and malnutrition. Pneumonia and diarrhoea account for half of the deaths. Other causes include neonatal tetanus, measles, pertussis, poliomyelitis and diphtheria. A large number of children who escape death from these diseases suffer blindness, crippling, or mental retardation<sup>(1)</sup>. To overcome these, health services need to be improved. India has experienced considerable improvement in maternal and child health care since the millennium declaration 2000.

However, inequities in these services are still persistent across different states, and also in different districts within the state. Maharashtra, as a state has reported progress in all the outcome indicators of health, some of its achievements even better than the national average. It has made significant reduction in the infant mortality rate (IMR) (a drop of 20 points over last decade), a steady drop in the under-five mortality rate (U-5MR), and maternal mortality ratio (MMR). However, this progress has been uneven across the rural and urban districts<sup>(2)</sup>. Utilization of health services is a complex behavioural phenomenon. The maternal complications and poor peri-natal outcome are highly associated with non-utilization of antenatal & delivery care services & poor socioeconomic condition of the patients<sup>(3)</sup>.

The Government of India has been providing limited maternal and child health services through its Family Welfare Programme, but this system is characterized by weaknesses that include insufficient work schedules; non-availability of functioning equipment; poor contraceptive and drug supplies; poor skills and knowledge of health workers; and poor access to services in villages without health centres. For the new Reproductive and Child Health programme to deliver an even wider range of services, the health system will need to be strengthened and the quality of service delivery improved<sup>(4)</sup>. We need to check whether there is any improvement in mother and child health due to improved MCH services by comparing past and current data.

#### AIM

To study the current status of MCH services in a tertiary care hospital in the hospitalized patients to observe and appraise about the qualitative and quantitative adequacy of MCH care being provided on the basis of examination, observation and analysis of the available records.

**OBJECTIVE**

To study the impact of antenatal care in pregnant women on intranatal and postnatal period.

**MATERIALS AND METHODS**

**Study Design:** It is a hospital based; duration bound (one complete calendar year) Health Systems Research.

**Place Of Study:** A Tertiary care hospital in Western Maharashtra Region.

**Duration Of Study:** It is two years study.

I. From 1<sup>st</sup> January 2020 to 31<sup>st</sup> December 2020

II. Of this, one complete calendar year (1<sup>st</sup> Jan 2020 to 31<sup>st</sup> Dec 2020) is required for data collection.

III. After completing the data collection, remaining time was used for further activity like compilation, analysis, organization of data and preparation of thesis.

**Sampling Method:**

Time duration-based sampling method. All delivered patients and their newborns fulfilling the Eligibility & Inclusion Criteria during the specified one calendar year (1 Jan 2020 to 31 Dec 2020 duration) and record based for 1 Jan 2017 to 31 Dec 2019 was considered for the study.

**Sample size:**

It is duration-based sample size. All eligible pregnant women who satisfy inclusion criteria and who give willingness admitted to the ward of designated Tertiary Care Hospital. All such cases (Number=380) starting from morning of 1 Jan 2020 to midnight of 31 Dec 2020 were included in the present study after obtaining consent or assent as the case may be. Record based sample for 1 Jan 2017 to 31 Dec 2019 is 1800.

**Study Sample:**

All delivered patients and their newborns at Tertiary Care Hospital for the Period of one calendar year i.e. 1 Jan 2020 to 31 Dec 2020.

**Inclusion Criteria:**

All delivered patients and their new-borns to the specified designated tertiary care Hospital.

**Exclusion Criteria:**

- I. Patients who are not willing to participate.
- II. Patients on ventilator and in ICU/Patients admitted in NICU.

**Detailed Procedure Of Study Conduct:**

It was done under following headings:

- I. Thorough history taking (Year-2020)
- II. Observing the case history sheets of the admitted cases (Year 2017-2019)

After getting approval from Ethical committee, data was collected. Thorough history taking was done based on case record proforma for 1 Jan 2020 to 31 Dec 2020. Case history sheets of the admitted cases were observed for 1 Jan 2017 to 31 Dec 2019.

Intranatal and postnatal period were looked for complications (Qualitative indicator) which include pre-eclampsia, eclampsia, intrauterine growth retardation, obstructed labour and postpartum haemorrhage or sepsis and their number corresponds to quantitative indicator.

**Data Collection:**

After getting the permission, data collection was started. The patients were informed about the study. After informing the patients, they were motivated to participate in the study.

Informed written consent was taken in local language from the patients before participation in the study. Separate proforma for each patient was filled.

Pilot study was done before starting data collection. Total 31 patients were included in pilot testing within three weeks for validation of proforma.

History was obtained from the patient and her reliable relatives. The predesigned pretested proforma was used to collect information for

year 2020. Through proper channel record based data from 1 Jan 2017 to 31 Dec 2019 was collected from the tertiary care hospital for comparing it with 2020 data. Identity of patients was not revealed.

**Statistical Analysis:**

Data was entered into Microsoft excel data sheet and was analyzed using SPSS 22 version software. Categorical data was represented in the form of Frequencies and Proportions. Fisher Exact test was used as test of significance for qualitative data.

**Graphical Representation Of Data:**

MS Excel and MS word were used to obtain various types of graphs such as bar diagram.

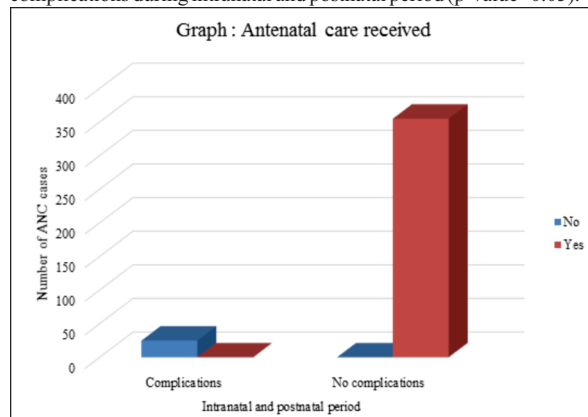
**p-value** (Probability that the result is true) of 0.05 was considered as statistically significant after assuming all the rules of statistical tests.

Statistical software: MS Excel, SPSS version 22 (IBM SPSS Statistics, Somers NY, USA) was used to analyze data.

**RESULTS:****A) Antenatal Care Received For Year 2020**

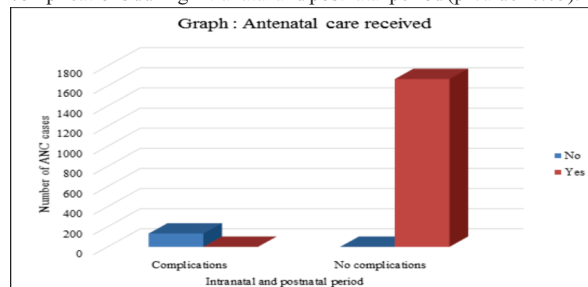
| Antenatal Care Received | Intranatal and postnatal period |                  | Total | p-value |
|-------------------------|---------------------------------|------------------|-------|---------|
|                         | Complications                   | No complications |       |         |
| No                      | 25                              | 0                | 25    | <0.001  |
| Yes                     | 0                               | 355              | 355   |         |
| Total                   | 25                              | 355              | 380   |         |

Out of 380 cases, 355 (93.42%) ANC cases had received antenatal care and none of them had complications during intranatal and postnatal period whereas 25 (6.58%) ANC cases had not received antenatal care and all of them had complications during intranatal and postnatal period. Antenatal care in ANC period significantly reduces complications during intranatal and postnatal period (p-value<0.05).

**B) Antenatal Care Received For Year 2017-19**

| Antenatal Care Received | Intranatal and postnatal period |                  | Total | p-value |
|-------------------------|---------------------------------|------------------|-------|---------|
|                         | Complications                   | No complications |       |         |
| No                      | 132                             | 00               | 132   | <0.001  |
| Yes                     | 00                              | 1668             | 1668  |         |
| Total                   | 132                             | 1668             | 1800  |         |

Out of 1800 cases, 1668 (92.66%) ANC cases had received antenatal care and none of them had complications during intranatal and postnatal period whereas 132 (7.33%) ANC cases had not received antenatal care and all of them had complications during intranatal and postnatal period. Antenatal care in ANC period significantly reduces complications during intranatal and postnatal period (p-value<0.05).



**DISCUSSION:****Distribution According To Antenatal Care Received(Year-2020)**

In present study, out of 380 cases, 355 (93.42%) ANC cases had received antenatal care and 25 (6.58%) ANC cases not received ANC care. It was observed that ANC cases received antenatal care had no complications during intranatal and postnatal period compared to ANC cases not received antenatal care. Antenatal care in ANC period significantly reduces complications during intranatal and postnatal period (p-value<0.05). Ruchir Rustagi et al., Paras Agarwal et al., Parimal Patel et al.studies<sup>(5, 6, 7)</sup> having similar findings with present study.

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**CONCLUSION**

From present study it was concluded that pregnant women who have received antenatal care did not have any complications during intranatal and postnatal period.

**LIMITATIONS**

1. Because of Covid-19 pandemic, the sample size was a limitation as the admission rate was low during year 2020.
2. In 2020 the opinions, responses and observations are factually recorded. However we can't keep aside the component of recall bias or memory bias.

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