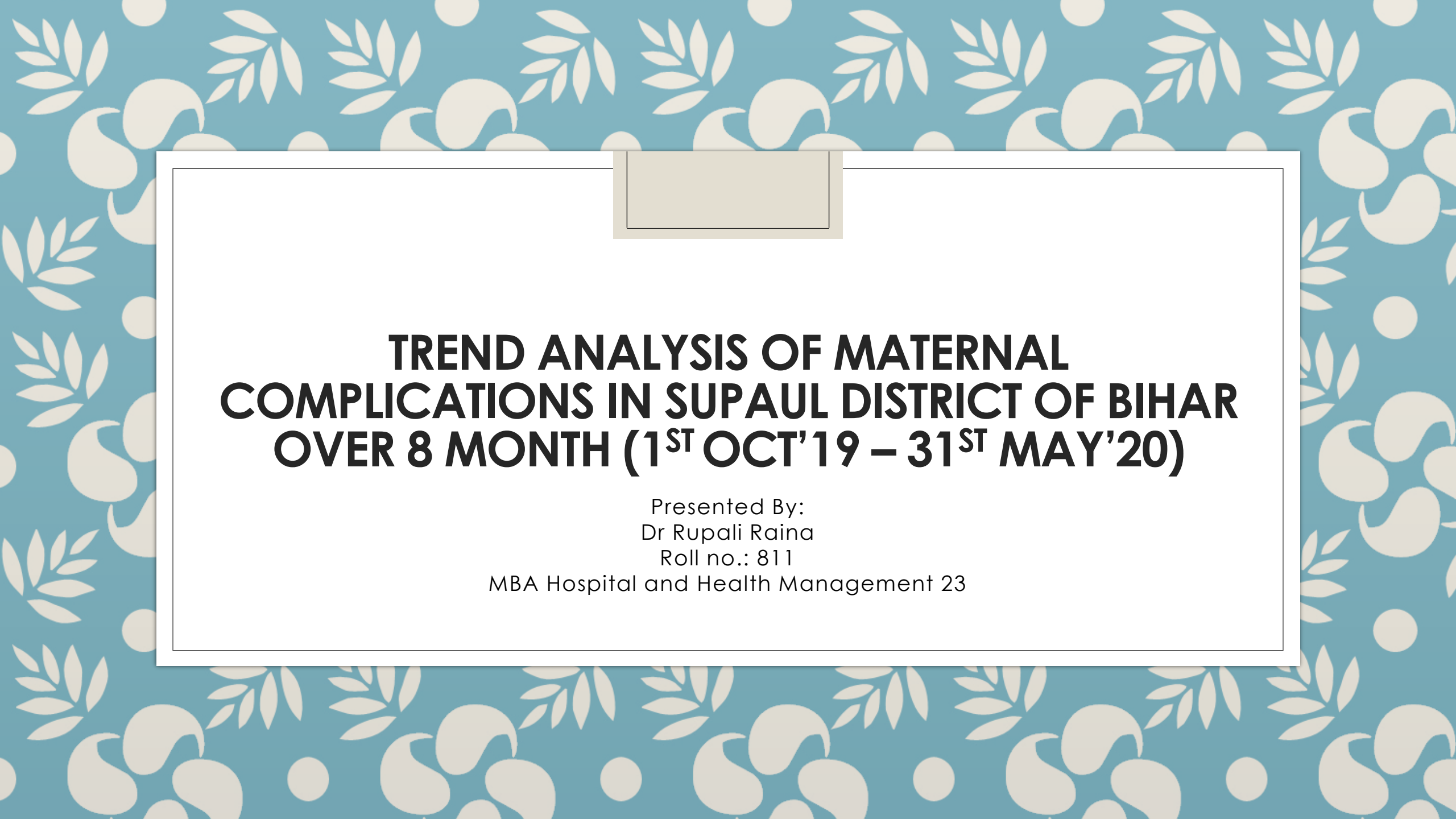




TREND ANALYSIS OF MATERNAL COMPLICATIONS IN SUPAUL DISTRICT OF BIHAR OVER 8 MONTH (1ST OCT'19 – 31ST MAY'20)

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Introduction:

- **Health**: State of social, physical and mental well-being and not merely absence of disease or infirmity (WHO).
- **Maternal health**: Health of women during pregnancy, childbirth and postnatal period (WHO).
- **Maternal death**: A maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes (WHO).

- **Maternal mortality** is calculated in terms of **Maternal mortality ratio** which means number of maternal deaths by number of live births in a year per 1lakh population.
- **MMR= Number of maternal deaths * 100000**
- **Number of live births**
- **MMR of India:** 124 per 1lakh live births
- **SDG Goal:** To reduce MMR to 70 per 1lakh live births.

Types of maternal complications:

- **Direct causes:**

It includes haemorrhage (PPH), hypertensive diseases (Pre-eclampsia & eclampsia), abortion, sepsis or infections, obstructed labour, ectopic pregnancy, embolism, and anaesthesia-related death (WHO)

- **Indirect causes:**

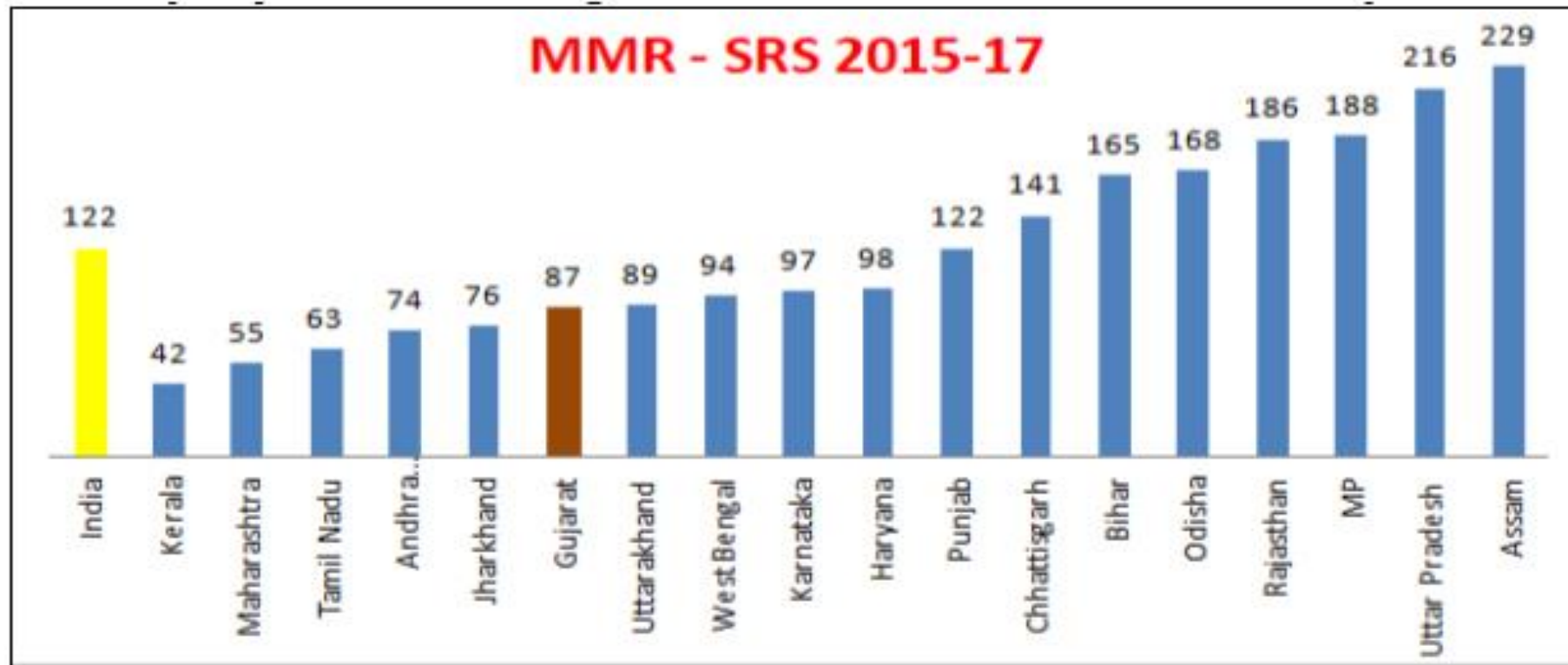
It include malaria, HIV, Anaemia etc

The major complications that account for nearly 75% of all maternal deaths are:

- severe bleeding (mostly bleeding after childbirth)
- infections (usually after childbirth)
- high blood pressure during pregnancy (pre-eclampsia and eclampsia)
- complications from delivery
- unsafe abortion

Rest of the maternal complications are caused by or associated with infections such as malaria or related to chronic conditions like cardiac diseases or diabetes.

Status of India (SRS 2015-2017)



Literature Review:

- Nutritional status, health status, reproductive health history of women such as levels of anemia, parity etc impacts growth of child and maternal complications leading to indirect causes of maternal deaths (Suparji, Sulikah2 (2019)).
- Post-Partum Hemorrhage has been identified as one of the leading causes of maternal death in low and middle-income countries and atonic uterus being one of the major cause of PPH. (Salome Maswime, Eckhart Buchmann (2016)).
- Maternal mortality and access to healthcare are more predominantly higher in poor states of India that too in rural sections (Ann L. Montgomery et al (2014)).

Contd:

- Antenatal checkup is an important part for early identification of possible maternal health risk factors such as anemia or hypertension. Overall, there's an improvement in ANC checkup between NFHS-3 and NFHS-4 in both states but much needs to be still done so as to limit down indirect causes of maternal complications and mortality (Ranjit Kumar Dehury, Janmejaya Samal (2016)).
- Bihar and Jharkhand have lowest rank in terms of safe delivery and lesser complications, delivering and enhancing safe motherhood and delivery becomes essential. Literacy becomes another variable in determining maternal morbidity and mortality. Literacy has direct correlation with maternal morbidity (Ranjana Kesarwani (2011)).

- **Research Question:**

What is the trend of maternal complications in Supaul district of Bihar over past 8 months (1st Oct'2019 – 31st May'2020)

- **Aim:**

To study the trend of maternal complications for past 8 months of Supaul district, Bihar.

- **Objectives:**

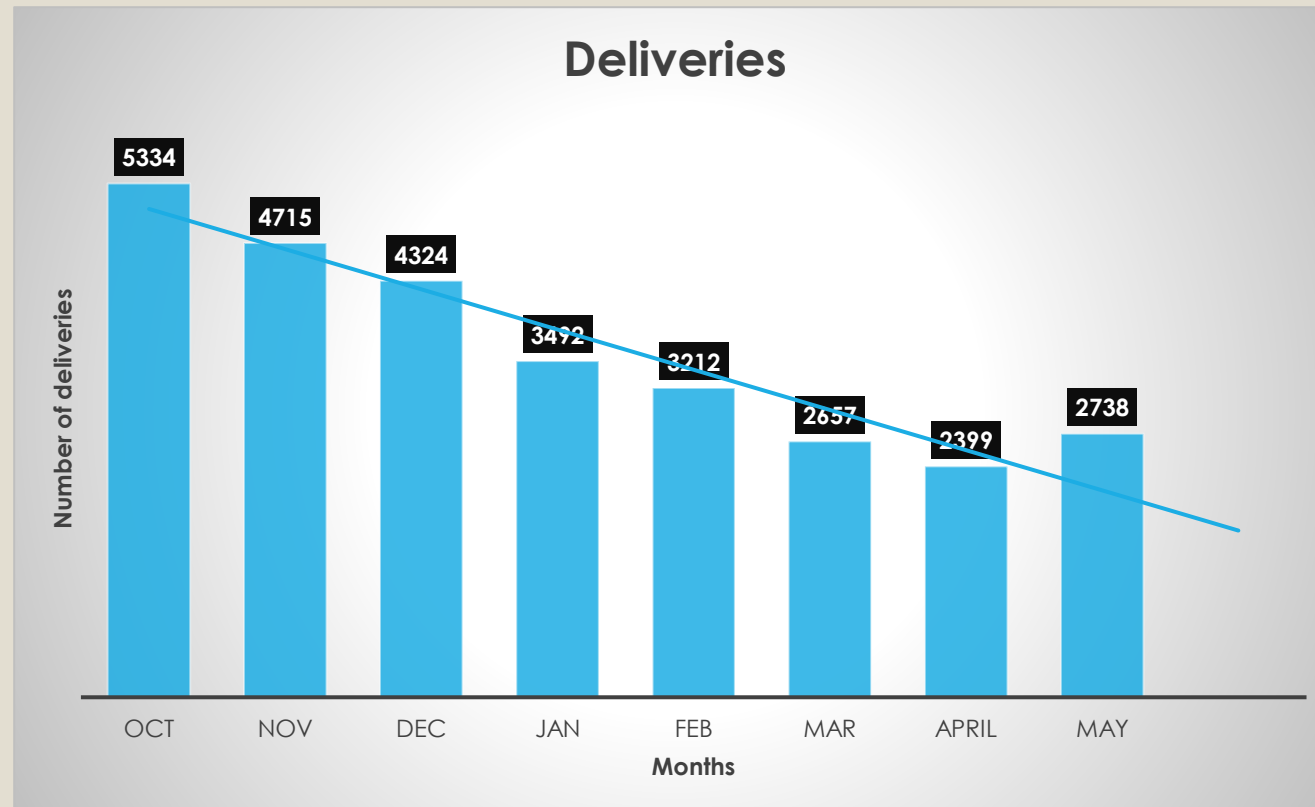
- ❖ To study, interpret and synthesize the data collected for maternal complications in Women in Supaul district in last 8 months.
- ❖ To identify linkages between opportunities and challenges identified and thus addressing them in best possible way.
- ❖ To give suggestions to reduce maternal complications among women in Supaul district.

Research Methodology

- **Type of study:** Secondary
- **Study design:** Descriptive
- **Source of data:** Data taken for this thesis for analysis and interpretation is taken from the data collected by block managers in their respective blocks of Supaul over a period of 8 months
- **Duration of Data available:** 1st Oct'2019 till 31st May'2020.

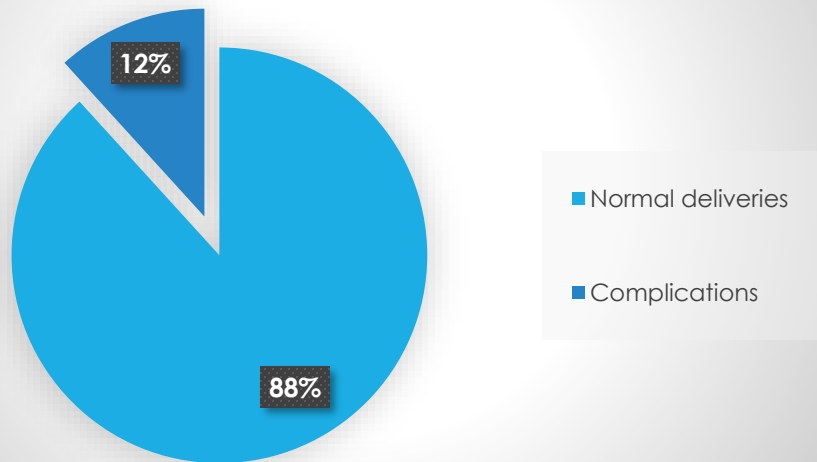
Data Analysis:

- Total deliveries occurred in 11 facilities over period of 8 months (oct'2019 – May'2020), District profile.

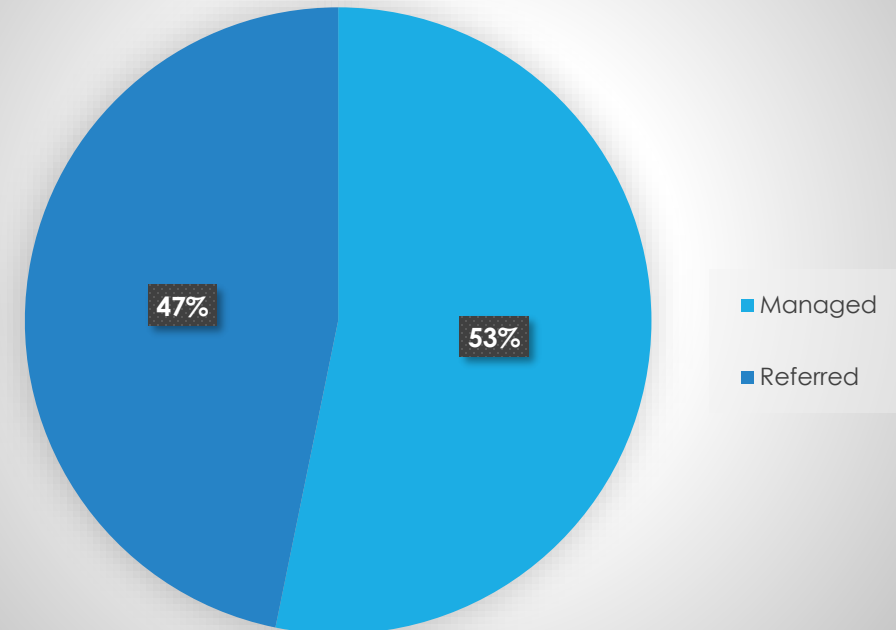


- Total number of complications against total deliveries over period of 8 months (oct'2019 – May'2020)

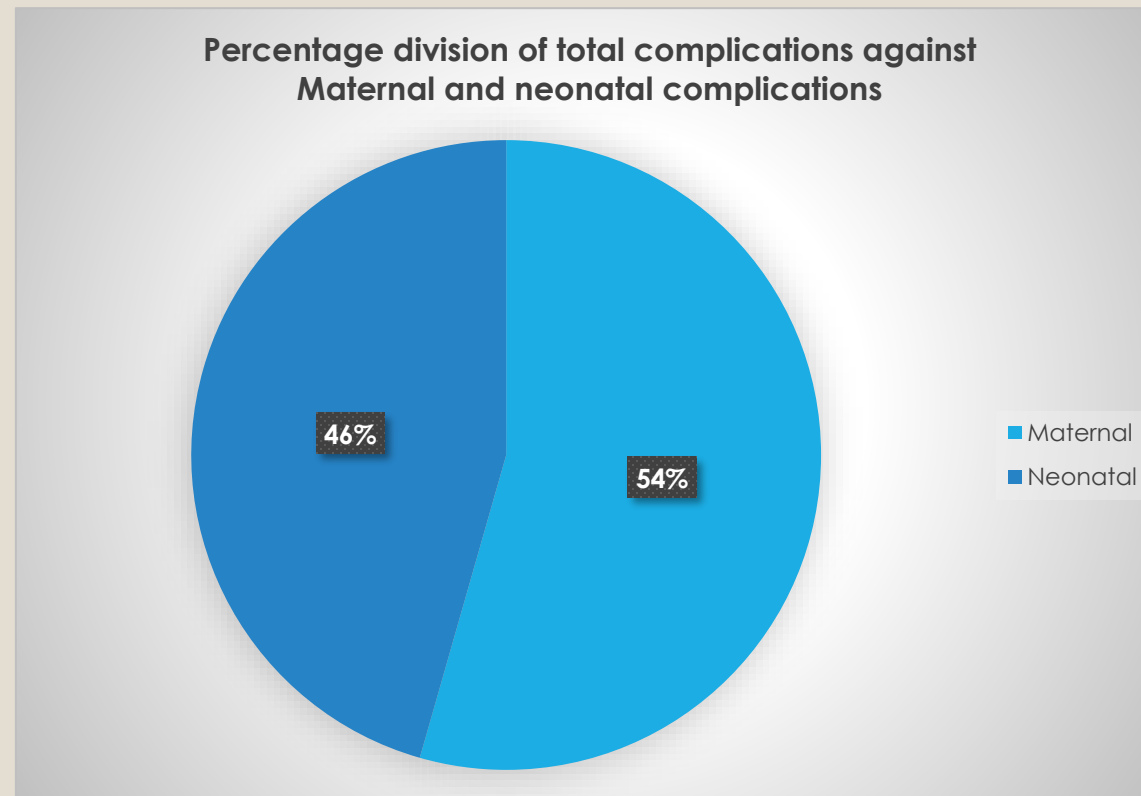
Percentage distribution of normal deliveries and complications against total deliveries



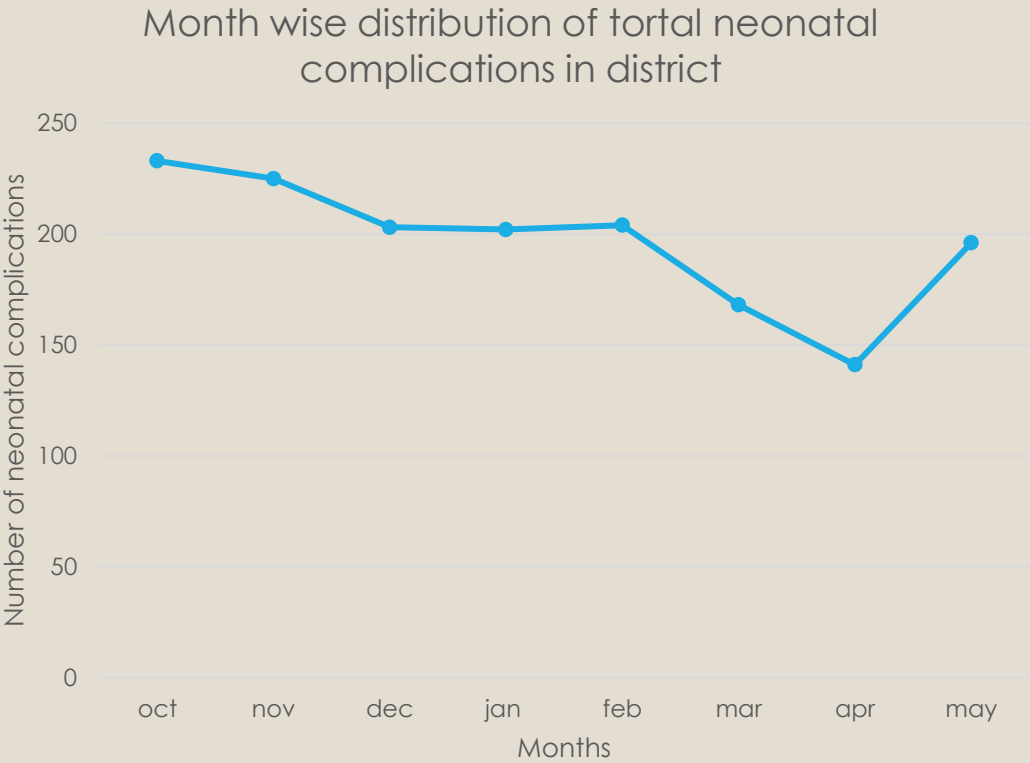
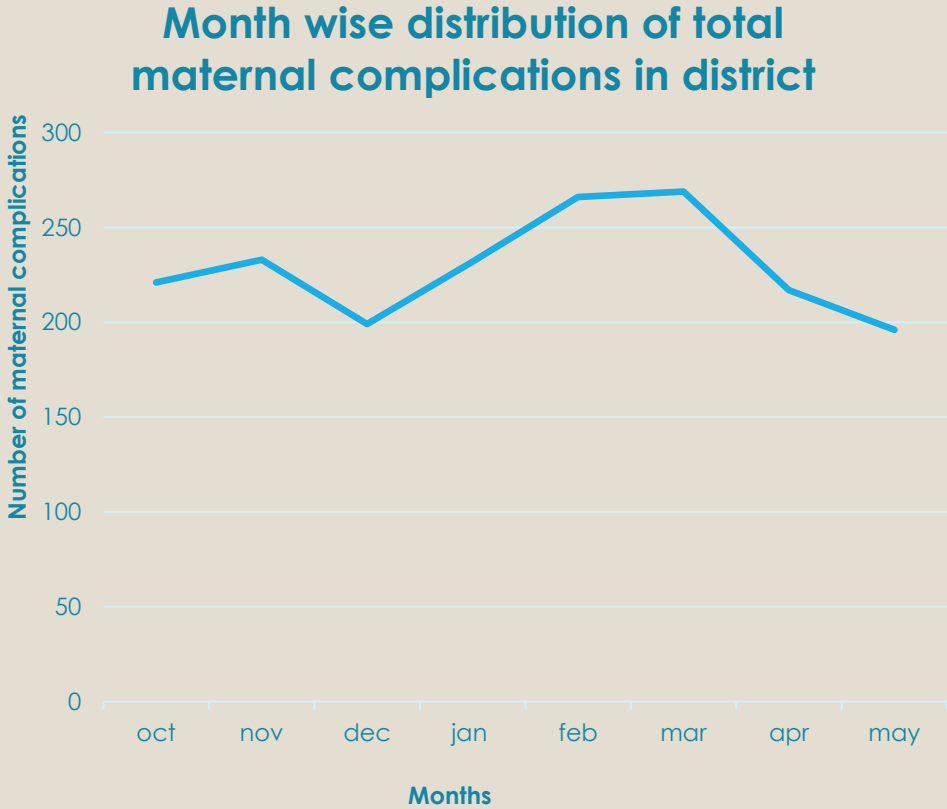
Percentage distribution of total complications against Managed and referred cases



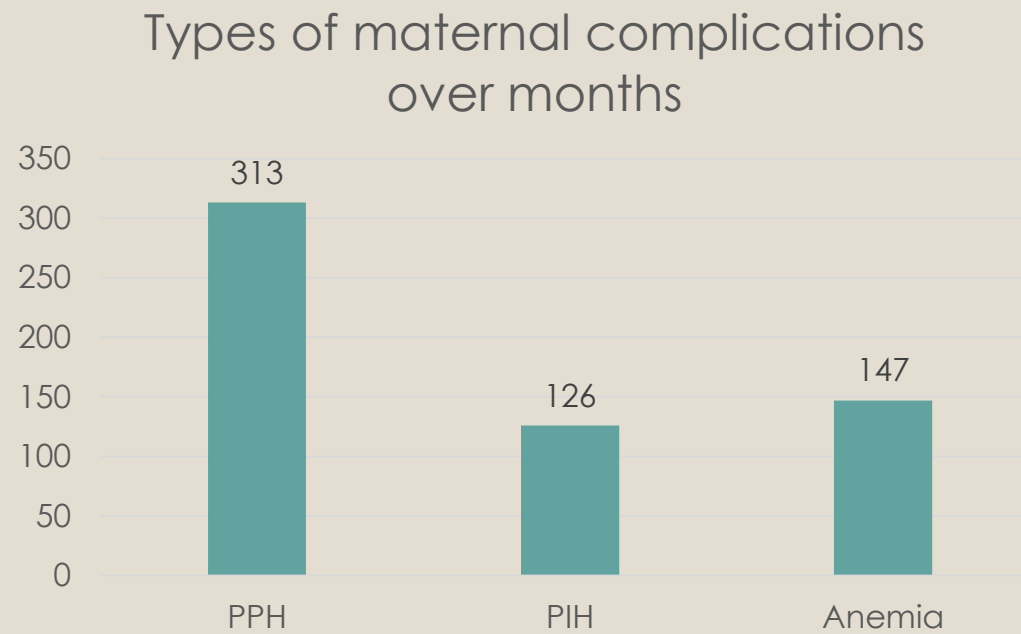
- Distribution of total complications against Maternal and neonatal complications over period of 8 months (oct'2019 – May'2020)



- Month wise trend of total maternal and neonatal complications in District (oct'2019 – May'2020)



- Total PPH, PIH and anemia identified in district (oct'2019 – May'2020)



Discussion

1. Regarding continuous decline in overall delivery load of health facilities in Supaul, this can be attributed to certain factors which are as follows:

- a. Usually peak in delivery load is observed in the months of November and December (as population of Bihar is majorly migrant and people travel from different places to their home towns in March and April) but November'20 and December'20 witnessed less delivery because of lower mobilization of field workers in creating awareness among masses about institutional delivery.
- b. Majority of 102 (dedicated ambulance for delivery) were off road because of payment issues or technical issues.
- c. Month March'20 till May'20 mid witnessed nationwide lockdown because of global pandemic Coronavirus because of which more difficulties were faced by expecting mother in reaching the specific institutions for institutional delivery thereby resulting in more home deliveries.

- ❖ Out of total deliveries conducted, around 88% were normal deliveries and 12% deliveries landed up in complications. Such features can be attributed to lesser skill of nurses in Identification of possible complications. In order to bridge the gap between current knowledge and required technical expertise, continuous technical sessions and hands-on sessions are being conducted in the district and state as well.
- ❖ Total number of managed and referred cases against total complications have almost same predisposition of around 50%. This can be attributed to less technical expertise over management of complications of manpower involved in labor room.
- ❖ Identification and occurrence of maternal complications has increased over the past 8 months, possible reasons for that could be Covid-19. Because of covid-19 nurses want to conduct delivery as early as possible in order to reduce contact time with patient to minimum so as to protect herself from contracting possible disease.

Example: Pulling of placenta forcefully post-delivery will lead to retained placenta or non-checking of vitals in ANC will lead to eclampsia on labor table.

Conclusion:

- District is facing more issues in improving institutional delivery as a whole. Even if an expecting mother comes for institutional delivery, chances of getting complications are higher because of phobia associated with covid-19. In case of any possible complication occurring, staff of one facility is willing to send the patient to other facility for treatment thereby contributing to higher referral rates than management.

Recommendations:

- I. Major focus over strengthening of skill needs to be done in order to decrease complication rate at the time of delivery and increase management at earliest.
- II. Covid has created an emergency type situation across the globe but much focus is to be given appropriate IEC dissemination thereby reducing havoc and perceptions amongst people and healthcare workers.
- III. Although there has been increase in institutional deliveries across state and districts, but more streamlined approach is required for promoting institutional deliveries thereby threat of maternal complications and death at home.
- IV. One of major reason in reduction of institutional delivery can be attributed to absence of ambulance services. Streamlining them along with other services in hospital will increase institutional deliveries.
- V. Skill gap is to be addressed so as to increase identification rate of complications within district as early identification will lead to reduced number of indirect maternal complications thereby improving indicators of maternal health.

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Thank you!!!!