



ANALYSIS OF CRITICALLY ILL OBSTETRIC REFERRALS IN A TERTIARY CARE HOSPITAL IN NORTHERN INDIA

Dr Vandana Solanki*, Dr. Seema Mehrotra, Dr. Majulata Verma, Dr. Armeen Ahmad

*Presenting Author, Associate Professor, Department of Obstetrics and Gynaecology, King George's Medical University Lucknow

INTRODUCTION

- Ending Preventable Maternal Mortality [EPMM] remains an unresolved issue for developing countries.
- World Health Organisation [WHO] in 2015 estimated that 830 women die every day due to preventable causes related to pregnancy and childbirth.
- Around 99% of these deaths took place in developing countries.¹
- Post 2015, WHO set the new global target of Maternal Mortality Ratio [MMR] as **70/100,000 live births by 2030**.²
- Maternal mortality.

- Along with this, the supplementary national target includes that no country should have MMR > 140 / 100,000 live births (i.e., double the global average) by 2030.
- In the Indian subcontinent, there is significant regional inequity in MMR, with **Kerala having the lowest (43)** and **Assam having the highest MMR (215)**. The state of **Uttar Pradesh has an MMR of 197** (year 2016-2018), which is much higher than **the national average of 113** (year 2016-2018).³

OBJECTIVES

- The purpose of this analysis is to **highlight potential strategies that can help bring down the MMR** in the state of Uttar Pradesh.

Methods

- Case files of the obstetrics patients referred to **Department of Obstetrics and Gynaecology, KGMU** in a critical condition were retrieved from **October 2019 to February 2021**.
- A total **112 patient** data were collected and analysed by obstetric critical care experts.
- Following data was collected-name,
- Name
- Age
- Diagnosis
- Referring centre
- Obstetric intervention done or not done at the primary or secondary healthcare centre
- Analysis of the referral and probable reason for mortality and near misses
- Duration of mechanical ventilation
- Duration of vasopressor support

Result

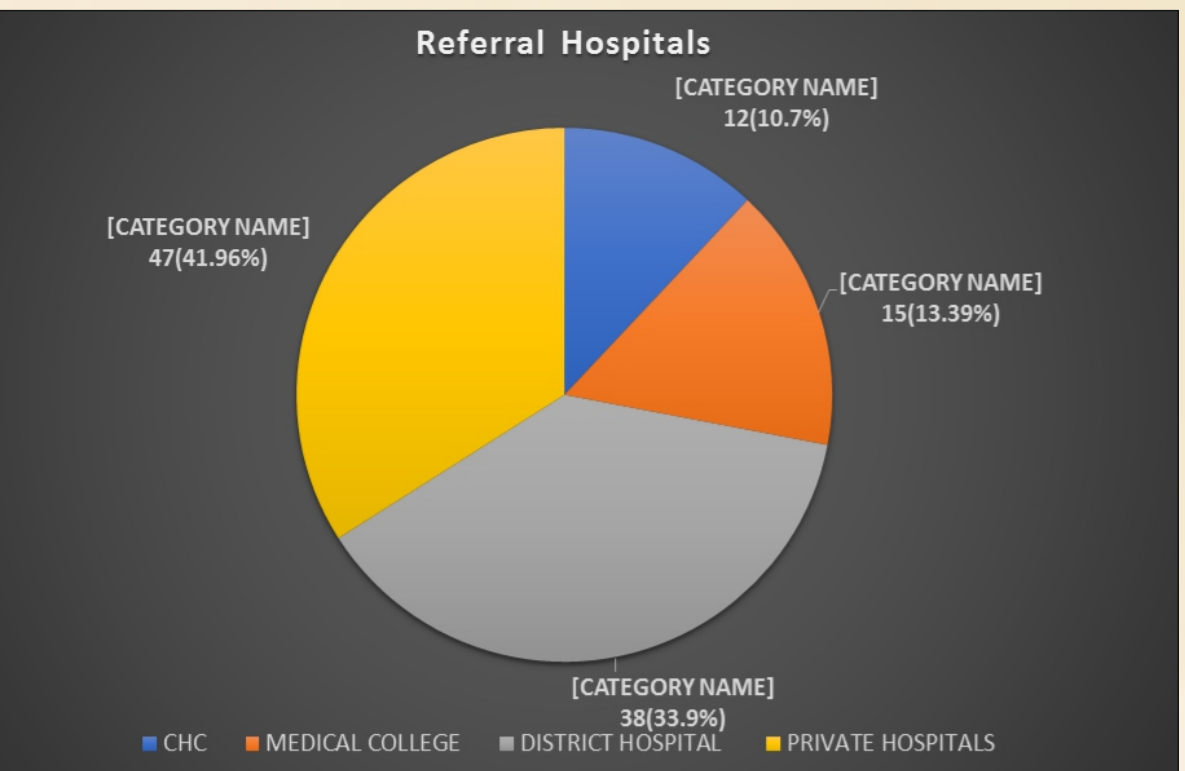
Demographic profile of patients

	n=112
AGE	
<20yrs	1
20-25yrs	44
26-30yrs	39
>30yrs	28
GESTATIONAL AGE	
First trimester	1
Second trimester	5
Third trimester	44
Postpartum	24
Post op	29
Post abortion	5
Ruptured ectopic	4

Distribution of patients according to reason of referral

Diagnosis	n=112
Haemorrhage	
Placenta previa	12
Abruptio placenta	9
Rupture uterus	17
PPH	24
Rupture ectopic	6
Hypertensive disorder of pregnancy	
SPE	6
APE	6
PPE	10
Sepsis	
Labour related	6
Septic abortion	5
Others	
Heart disease	3
Severe anaemia	8

Distribution of cases according to place of referral



Distribution of pts according to number of previous referrals

	0	<2	2-4
112	0	48 (42.85%)	64 (57.15%)

Detailed referral analysis of obstetric hemorrhage

	n=68	%
Blood transfusion done	10	14.7%
Balloon tamponade	4	5.88
NASG	2	2.94%
Vasopressor	3	7.89%
Referral slip	53	77.94%
Oxygen support	4	5.88%
Surgical management	7	10.29%

Detailed referral analysis of Hypertensive disorder of pregnancy

	n=22	%
Mgso4 given	6	27.27
Antihypertensive given	10	45.45
Referral slip	19	86.36
Pulmonary Edema	6	27.27

- Majority(60.7%) of the pt were referred for obstetric haemorrhage.
- 57.15% pts visited 2 or more hospitals before reaching our hospital
- Majority of rupture uterus pts were not given blood and life saving surgery was not done.
- In HDP only 27.12 % pts received MGSO4 and 45.5% received antihypertensive drugs.

Discussion

We suggest following **strategies** to combat the above analysed problem-

- Accountability**
- All maternal deaths should be traced back with appropriate classification of **the type of delay**.
- Those referring **should follow their patients** to know what happened after their referral
- e.g. -Did the patient reach safely or not?
- What all they could have done or not done to make it easier and safe referral?

2. Checklist for patient referral

- TIME-DIRECTED referral targets (e.g. a PPH patient should reach a center equipped in handling the complication **within a specified time-frame**)
- BASIC RESUSCITATION targets should be well-defined and met before referral to tertiary care centre.
- Online help desk (Using COVID ECCS model);
 - Continuous phone call facility and helpdesk to guide the obstetrician/physician dealing pregnant mothers in the periphery.
 - Guidance to the transportation team during the transport via phone calls.

4. Centralised system for bed allotment (Using COVID model)

- for complicated obstetric patients
- so that no facility is overwhelmed beyond its capacity to deal patients

5. Obstetric rapid response ambulances/buses

Conclusion

- This study provides an insight into the characteristics of obstetric patients needing intensive care services in North India.
- However, given the limited sample size and period of study, we conclude that further research may help in achieving a more meaningful data of predictors to reduce maternal mortality and improve health care in this section of patients
- There are many challenges face by resource-limited countries in taking care of critically obstetric patients.
- The need of hour is early recognition of red signals by healthcare workers and quick referrals with requisite life saving medical aid so that a precious life can be saved.

- There is a need to **upgrade** the primary and secondary healthcare units in terms of equipment and trained staff to pick up early signs of deterioration and provide early treatment.
- If there is a need of referral, an **early transportation** to tertiary care center should be arranged.
- Therefore, there is also a need to **improve the referral system and transportation**.
- In addition, most of the people rely on government funding for treatment; therefore, the government hospital should have **enough funding** and capacity to cater to the need of masses

References

- <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>.
- https://apps.who.int/iris/bitstream/handle/10665/153540/who_rhr_15.03_eng.pdf
- <https://niti.gov.in/content/maternal-mortality-ratio-mmr-100000-live-births>