DESCRIPTIVE ANALYSIS OF REPORTED CASES OF MATERNAL DEATHS IN UTTAR PRADESH

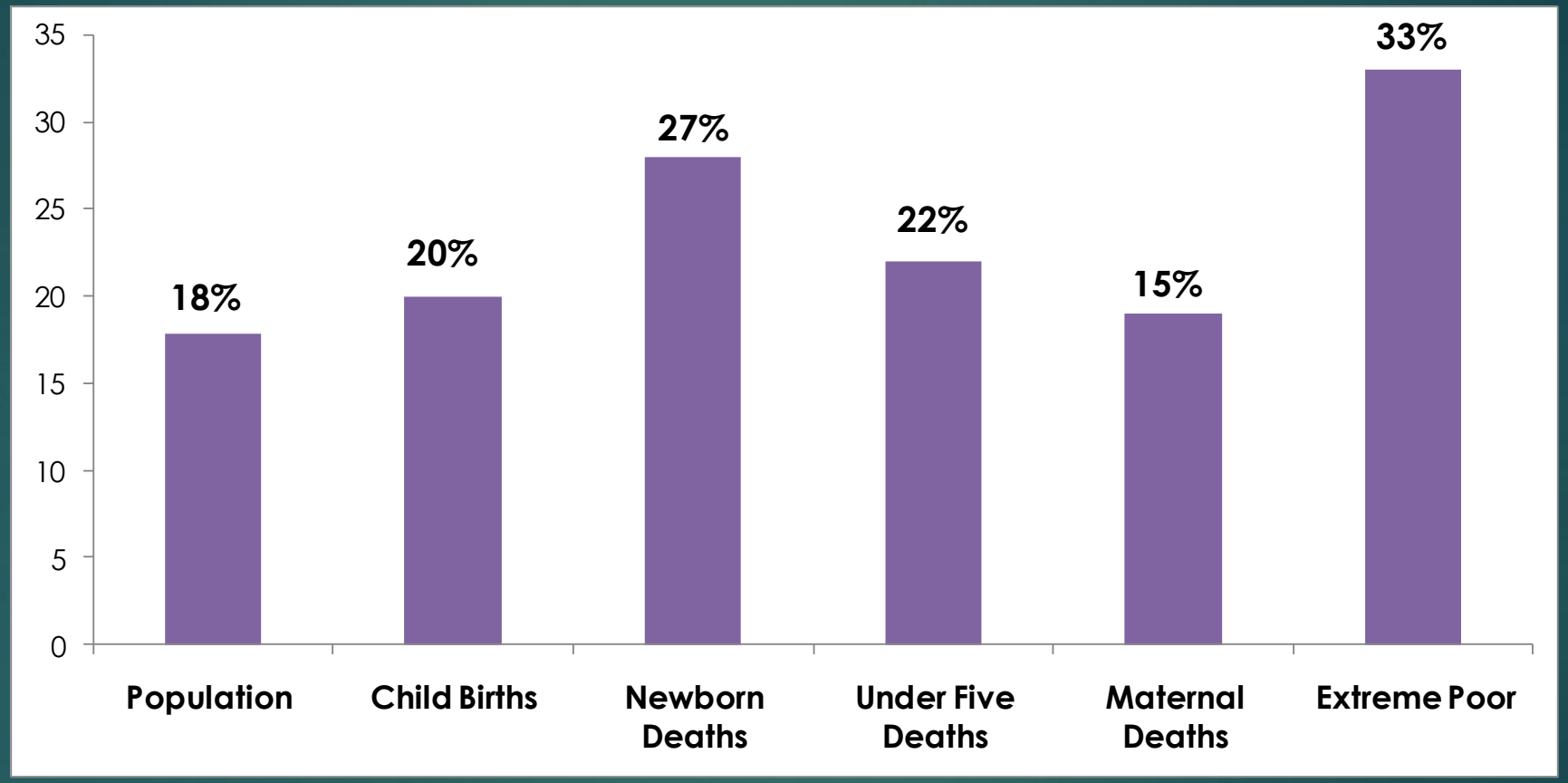
GUIDED BY: DR.SEEMA MEHTA

SUBMITTED BY:
DR SWATI BANSOD

INTRODUCTION

- Globally 287 000 maternal deaths occurred worldwide in the year 2010. The maternal mortality ratio (MMR) in India was estimated at 130 maternal deaths per 100, 000 live births in the year 2014-16. Obstetric complications are a leading cause of death among women of reproductive age, and for every woman who dies approximately 20 more suffer injuries, infection and disabilities related to pregnancy or childbirth. Therefore, to accelerate the pace in decline of maternal mortality rate to achieve the NRHM and MDG Goal of less than 100 per 100,000 live births, Maternal Death Review (MDR) as a strategy was formulated by India.
- It is an important strategy to improve the quality of obstetric care and reduce maternal mortality and morbidity. In the National RCH-II program, maternal death audit was considered an important example of reform and innovation, but due to various factors the maternal deaths remained underreported causing a gap in the evidenced based decision-making process.

INDIA'S CONTRIBUTION TO GLOBAL BURDEN



Data Source :
UN Interagency estimates 2015 for child mortality, Trends in Maternal Mortality- Interagency 2015, SRS 2013; Extreme Poor : People living on < 1.25 USD / Day (World Bank report -2010)

STATES WITH HIGHEST MMR

India & major states	MMR
India	130
Assam	237
Bihar/Jharkhand	165
Madhya Pradesh/Chhattisgarh	173
Odisha	180
Rajasthan	199
Uttar Pradesh	201

Source: SRS bulletin 2014-16

MATERNAL DAETH REVIEW SYSTEM

- To address these challenges of maternal mortality and morbidity, the government launched Maternal Death Review (MDR) process in 2010.
- One of its key focuses was also to improve quality of obstetric care. It analyzed various factors based on community, facility, and district at regional and national level.

TYPES OF APPROCHES FOR INVESTIGATION OF MATERNAL DEATHS REVIEW

- Community based maternal death review (Verbal autopsy)
- Facility based maternal death review
- Confidential enquiries into maternal deaths
- Surveys of severe morbidity (near miss)
- Clinical audit

HEALTH MANAGEMENT INFORMATION SYSTEM (HMIS) AT A GLANCE

HMIS is defined as:

"A tool which helps in gathering, aggregating, analyzing and then using the information generated for taking actions to improve performance of health system"

USE OF HMIS AT DIFFERENT LEVELS OF HEALTH DEPARTMENT

National and State level :

- It is useful for assessing the progress of national health programs. For example, by analyzing full immunization coverage in different states, the officer responsible for child health can evaluate performance of immunization coverage in various states, so that they can allocate resources more effectively and strengthen support for the States.

State and District level:

- Helps Programme Managers to track the progress of implementation of various programs.
- It enables them to distinguish well performing areas from those that require more support and resources

Sub-District level such as Block, PHC, sub-Center and other facilities

- Efficient and effective registering and collation of data.
- Improvements in data quality.
- Systems for complete reporting.
- Timeliness and accuracy.
- Provision of data analysis tools.
- Interpretation and translation of data to guide action and intervention at local level

BASIC CONCEPTS OF HMIS

Data

NO.of pregnant women died at the facility or community or during transportation

INFORMATION

Deaths at the facility

facility based death review conducted

KNOWLEDGE

-how may deaths occur in the facility or at the community level

-what were the causes of deaths

-what can be the reason for underreporting of the maternal deaths

RATIONALE

According to SRS bulletin 2014-16 Uttar Pradesh ranks second in the maternal mortality ratio after Assam. Due to the increased maternal death incidences continuous monitoring and evaluation of the maternal health status is to be done. For this purpose, a tool was introduced by NRHM called Health Management Information System and to improve the quality data in UP a supporting tool was introduced called UPHMIS. The study was aimed to identify the frequency of maternal death data uploaded on the HMIS/UPHMIS portal and to identify the probable reasons of non-reporting.

OBJECTIVES

- To assess the status of maternal death reporting on HMIS/UPHMIS portal at 75 districts of Uttar Pradesh

- To identify the reason of underreporting maternal deaths in the HMIS/UPHMIS portal at 75 districts of Uttar Pradesh

LITERATURE REVIEW

Author	Year	Study location	Sample Size	Salient Features
A district-based audit of the causes and circumstances of maternal deaths in South Kalimantan, Indonesia				
Gunawan Supratikto, Meg E. Wirth, Endang Achadi, Surekha Cohen, and Carine Ronsmans	1994	Indonesia	130 maternal deaths were reviewd	Delay in decision making (77%) and poor quality care (60%) lead to maternal deaths and the major causes were hemorrhage (41%) and hypertensive diseases(32%).The audit done led to changes in obstetric care in the district.
A strategy for reducing maternal mortality				
Abu Bakar Suleiman, Alex Mathews,Ravindran Jegasothy, Roslinah Ali, & Nadeswary Kandiah	1994	Malaysia	1066 reported maternal deaths	44,48,46 and 39 per 100,000 live births were the maternal mortality ratio for the successive year and the major causes of deaths were post-partum hemorrhage (24%), hypertensive disorders of pregnancy (16%), obstetric pulmonary embolism (13%) and associated medical conditions (7%)

3. WHO analysis of causes of maternal death: a systematic review				
Prof Khali S Khan, Daniel Wojdyla, Lale Say, Dr A Metin Gulmezoglu, Paul FA Van	2006	Worldwide	34 data set (35197 maternal deaths)	In Africa hemorrhage is one of the leading causes of death, hypertensive disorders caused most of the deaths in the Carrabin and Latin America
Maternal death inquiry and response in India - the impact of contextual factors on defining an optimal model to help meet critical maternal health policy objectives				
Henry D Kalter,Pavitra Mohan, Archana Mishra, Narayan Gaonkar, Akhil B Biswas, Sudha Balakrishnan,Gaurav Arya, and Marzio Babille	2011	4 districts of Rajasthan, M.P and W.B		Government shared the finding of maternal death after the death inquiry procedure which has increased the notification in maternal death

METHODOLOGY

RESEARCH QUESTION

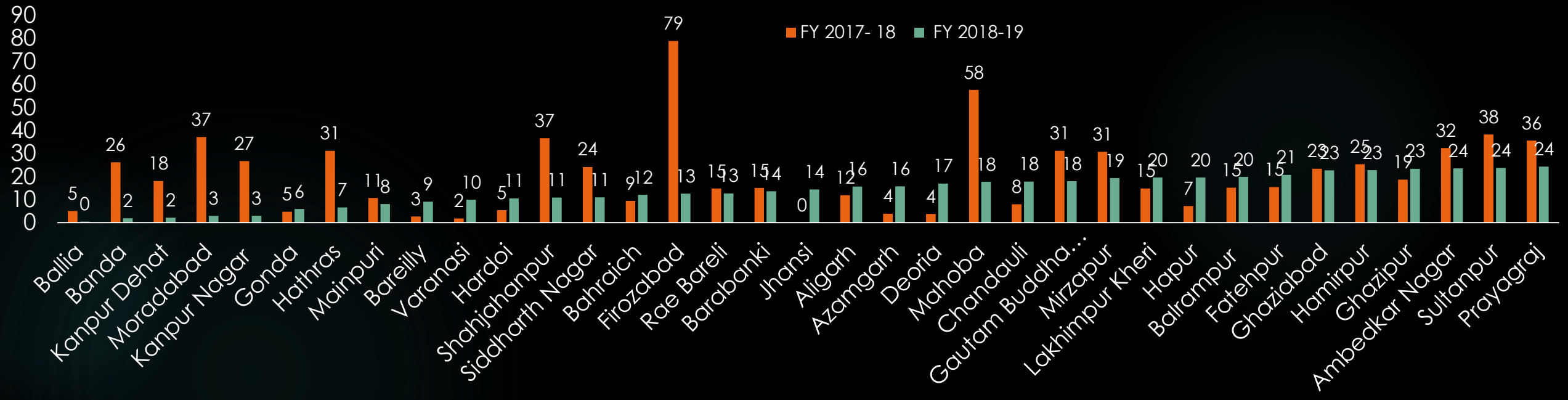
What is the current scenario of maternal death reporting in the HMIS/UPHMIS portal after the introduction of MDR process by the government?

- **Study design**: Retrospective observational study
- **Sample size:** 75 districts of UP (Reference Period April 2018-March 2019)
- **Data collection method:** The study was based on the secondary data collected from the HMIS elements uploaded at the UPHMIS portal.
- In-depth discussion with the support staff, of the facilities (4) for identifying the reasons of less reporting

The data was derived out from the portal under the following indicators

- Maternal deaths
- Maternal deaths abortion
- Maternal deaths bleeding
- Maternal deaths HTN-fits
- Maternal deaths high fever
- Maternal deaths obstructed labour
- Maternal deaths other
- Community based maternal review conducted
- Infection/sepsis (maternal) died at facility
- Infection /sepsis (maternal) out referral (died)
- Maternal death review conducted

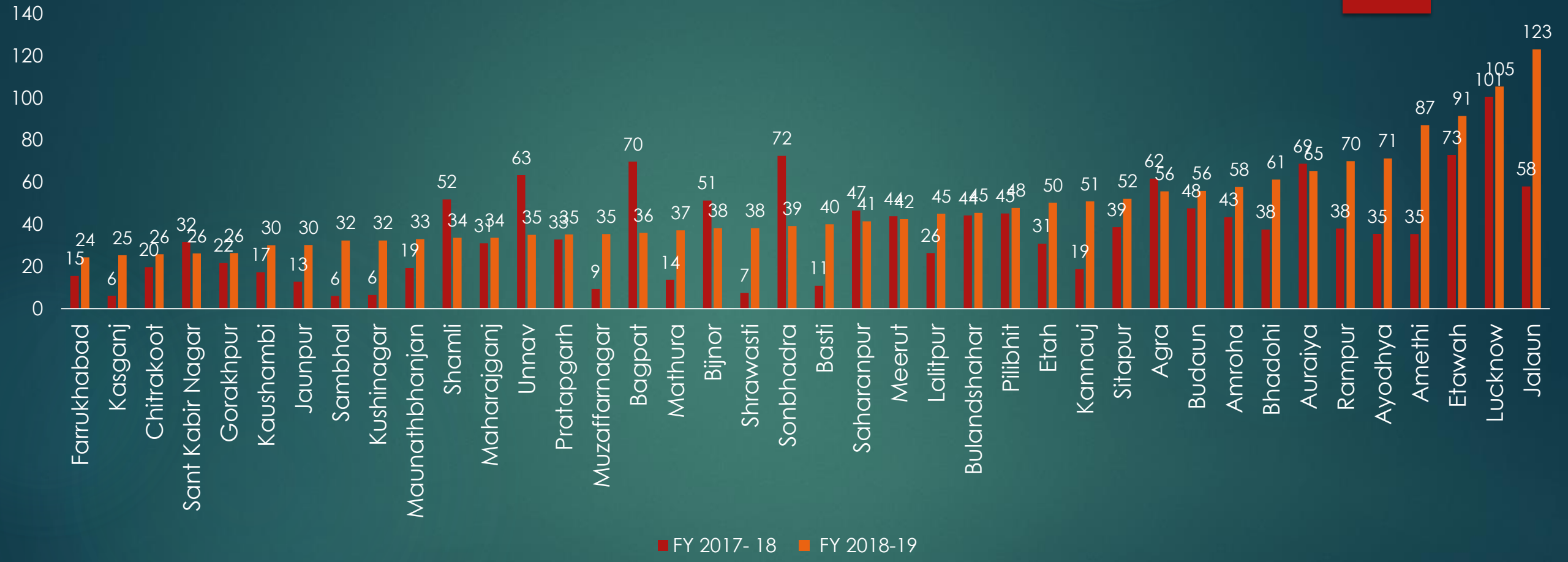
PERCENTAGE OF MATERNAL DEATHS-DISTRICT WISE



- Ballia have reported 0 maternal deaths in FY-18-19.
- Banda, Kanpur dehat, Moradabad, Kanpur nagar, Gonda, Hathras, Mainpuri, Bareilly, Varanasi reported less than 10% of expected maternal deaths

Source UPHMIS portal

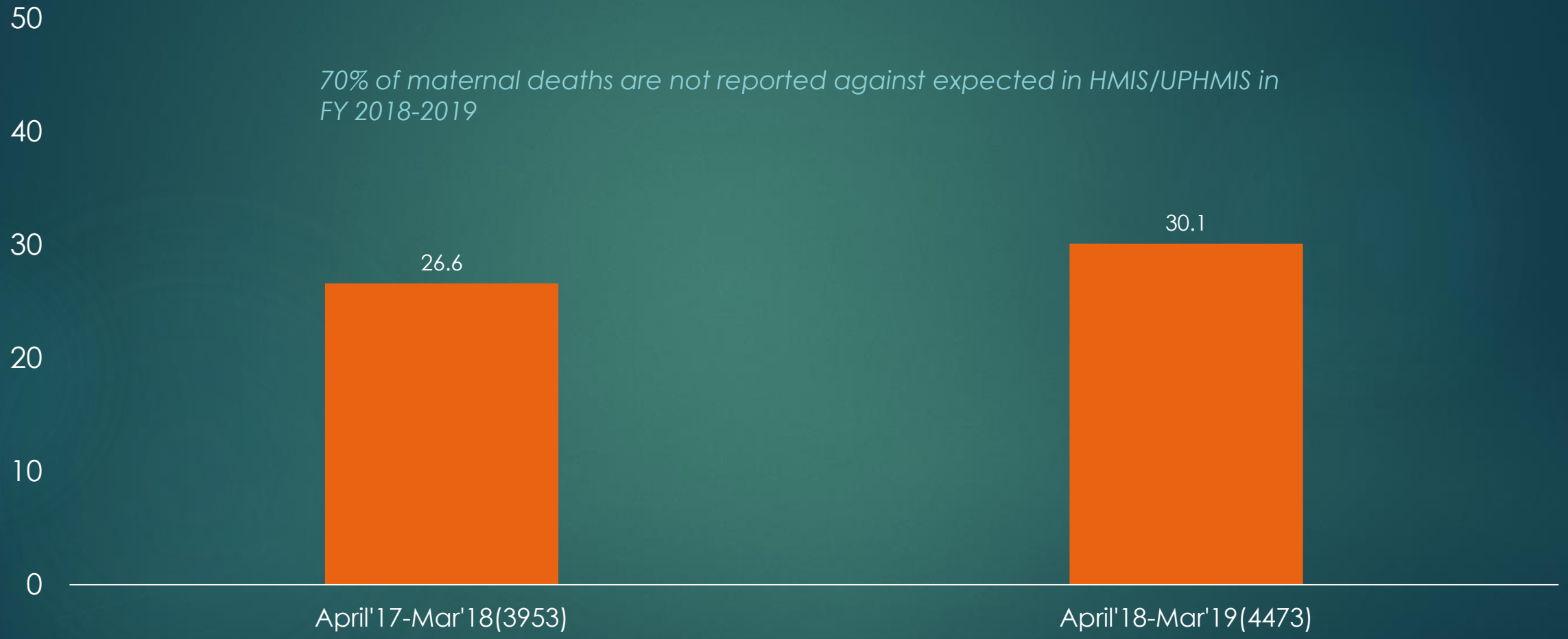
PERCENTAGE OF MATERNAL DEATHS-DISTRICT WISE



In FY 2018-2019 , 28 district out of 75 have reported maternal deaths less than FY 2017-2018.

Source UPHMIS portal

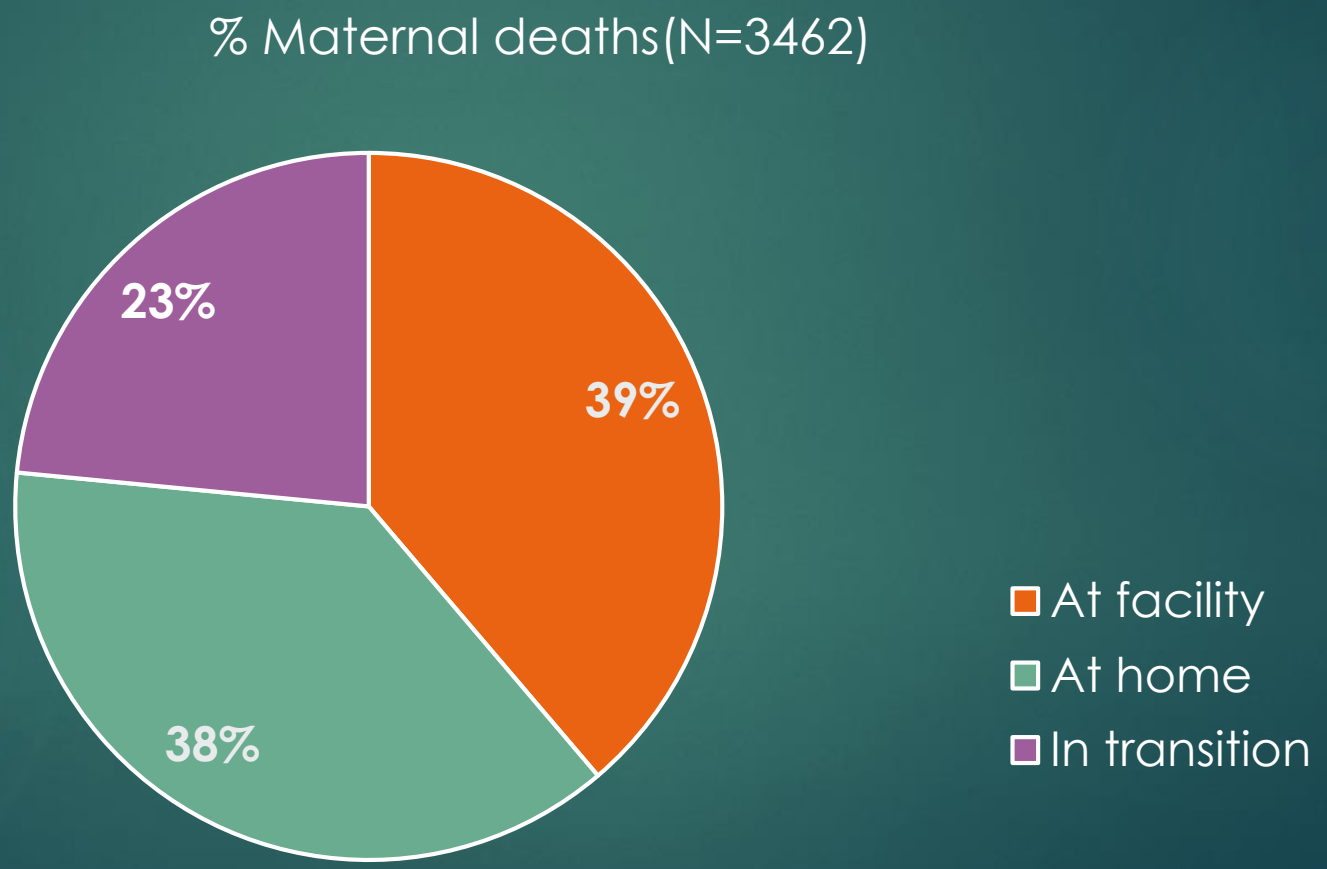
PERCENTAGE OF MATERNAL DEATHS REPORTED AGAINST EXPECTED IN THE FY-2017-2018 AND 2018-2019



% of maternal deaths is calculated against expected maternal deaths(N=14844).
Expected maternal deaths have been calculated using AHS 12-13 MMR data.

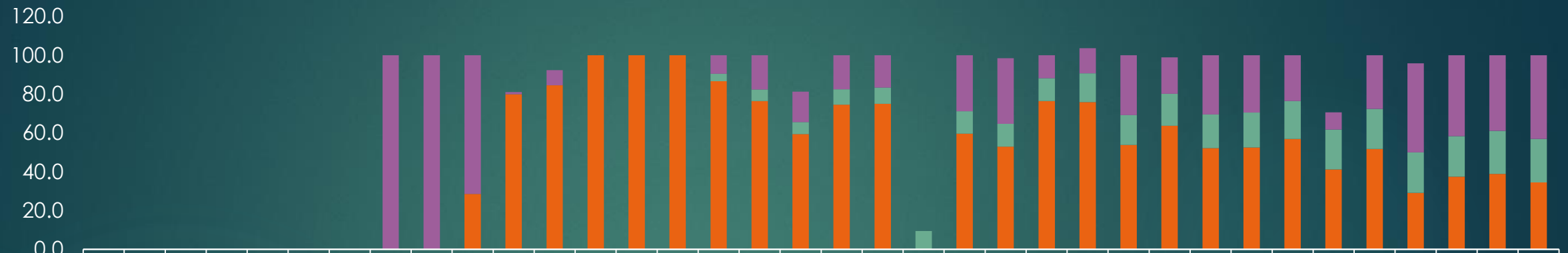
Source UPHMIS portal

PLACE OF MATERNAL DEATH REPORTED: UTTAR PRADESH



Source UPHMIS portal

PLACE OF MATERNAL DEATH REPORTED: DISTRICTS WISE



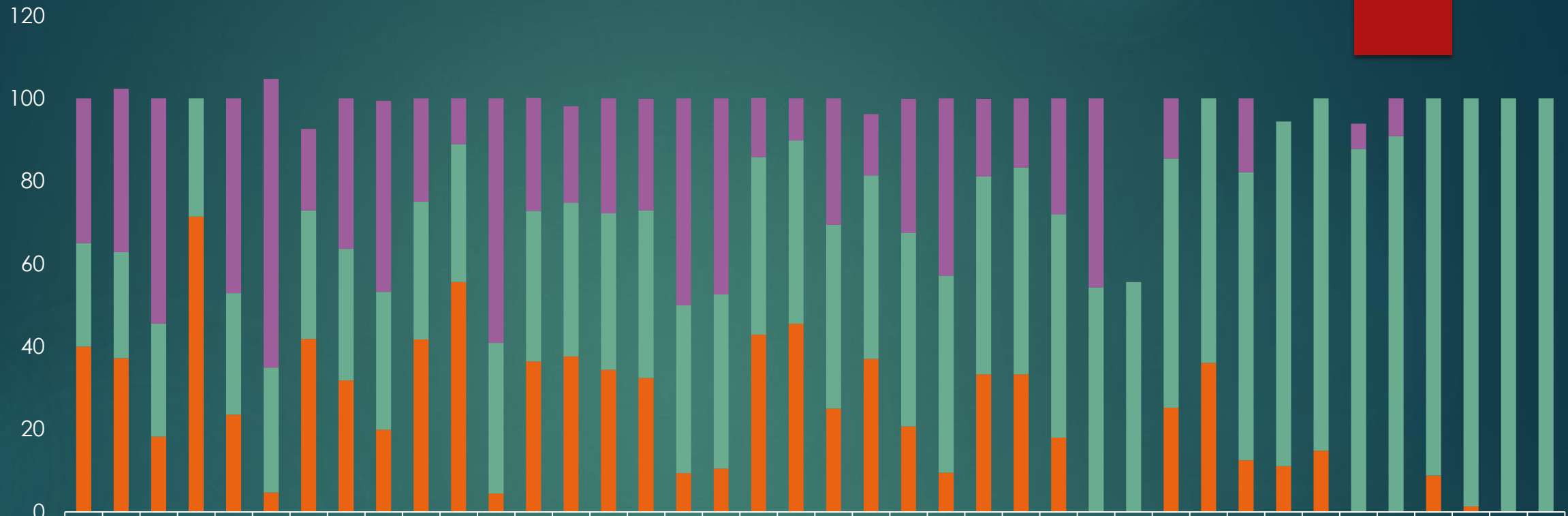
	Azamgarh	Sant Kabir Nagar	Shrawasti	Bahraich	Kannauj	Lakhimpur Kheri	Bhadohi	Chandauli	Ayodhya	Pratapgarh	Lucknow	Ballia	Firozabad	Etawah	Mirzapur	Varanasi	Gautam Buddha Nagar	Kanpur Nagar	Aligarh	Hamirpur	Kushinagar	Pilibhit	Ambedkar Nagar	Shahjahanpur	Jhansi	Jalaun	Agra	Ghaziabad	Rae Bareli	Bareilly	Bulandshahar	Saharanpur	Mahoba	Hathras	Sonbhadra	Hardoi
In Transit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	100	71.	1.0	7.7	0.0	0.0	0.0	9.5	17.	15.	17.	16.	0.0	28.	33.	11.	13.	30.	18.	30.	29.	23.	8.8	27.	45.	41.	38.	43.
At Home	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	5.9	6.3	7.9	8.3	9.5	11.	11.	11.	14.	15.	16.	17.	18.	19.	20.	20.	20.	20.	22.	22.
At Facility	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.	80.	84.	100	100	100	86.	76.	59.	74.	75.	0.0	59.	52.	76.	75.	53.	63.	52.	52.	56.	41.	51.	29.	37.	38.	34.

At Facility At Home In Transit

Districts Azamgarh, SK Nagar, Shrawasti, Bahraich, Kannauj, Lakhimpur, Bhadohi have not mentioned place of death in MDSR reporting

Source UPHMIS portal

PLACE OF MATERNAL DEATH REPORTED: DISTRICTS WISE



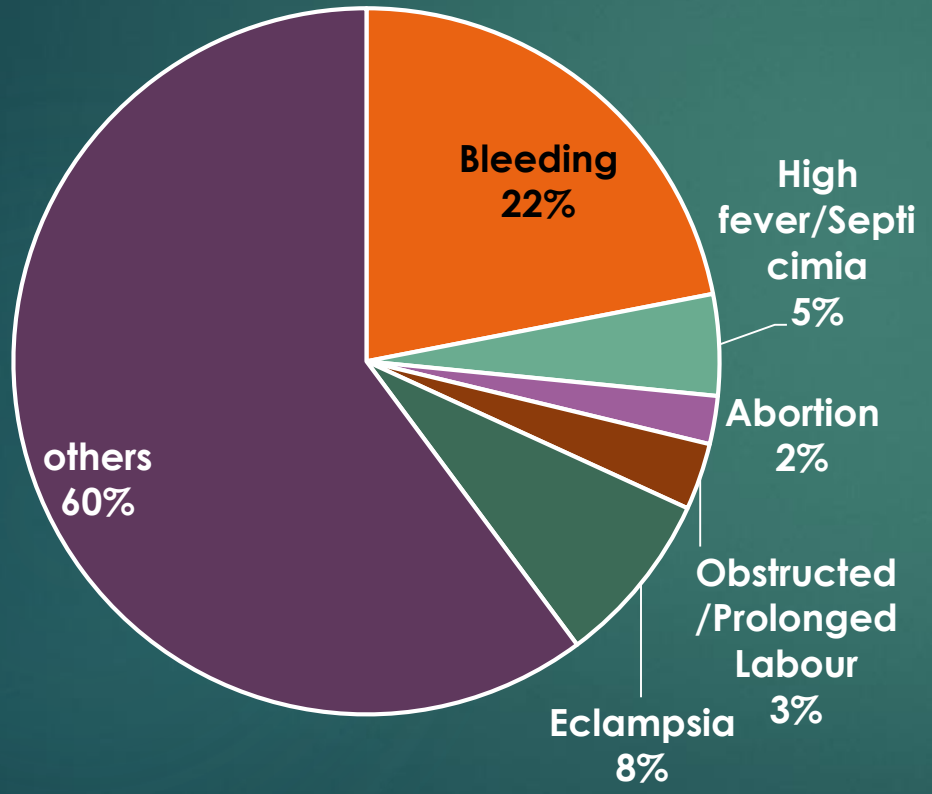
	Maharajganj	Etah	Kanpur Dehat	Muzaffarnagar	Auraiya	Kasganj	Barabanki	Shamli	Gorakhpur	Basti	Unnav	Farrukhabad	Fatehpur		Sultanpur	Lalitpur	Prayagraj	Siddharth Nagar	Mainpuri	Gonda	Rampur	Sitapur	Jaunpur	Bijnor	Banda	Meerut	Amethi	Hapur	Chitrakoot	Deoria	Moradabad	Amroha	Bagpat	Balrampur	Sambhal	Mathura	Ghazipur	Maunathbhanjan	Kaushambi	Budaun
In transition	35	40	55	0	47	70	20	36	46	25	11	59	27	23	28	27	50	47	14	10	31	15	32	43	19	17	28	46	0	15	0	18	0	0	6.1	9.1	0	0	0	0
At home	25	26	27	29	29	30	31	32	33	33	33	36	36	37	38	41	41	42	43	44	44	44	47	48	48	50	54	54	56	60	64	70	83	85	88	91	91	99	100	100
At facility	40	37	18	71	24	4.7	42	32	20	42	56	4.5	36	38	34	32	9.4	11	43	46	25	37	21	9.5	33	33	18	0	0	25	36	13	11	15	0	0	8.8	1.3	0	0

At facility At home In transition

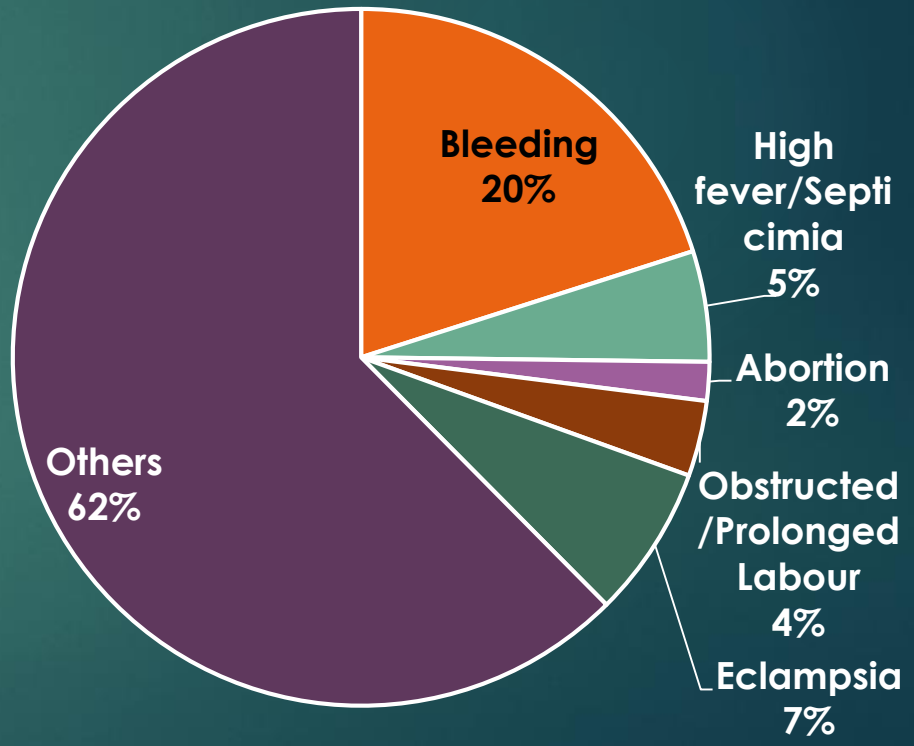
Source UPHMIS portal

CAUSES OF MATERNAL DEATH

% MATERNAL DEATH(N=3953):FY 2017-2018



% OF MATERNAL DEATH(N=4473): FY 2018-2019



Source UPHMIS portal

REASONS OF UNDER REPORTING

- Lack of human resource for data reporting
- Multitasking of staff
- Lack of research skills
- Lack of updated infrastructure (non availability of internet connection and updated versions of computers)
- Irregular training in data management

RECOMMENDATIONS

- Sensitization of the stake holders about the importance regarding the reporting of maternal death data
- Ensuring proper follow up of the status of the pregnant women after 3 days of transfer from the facility
- Ensuring adequate mapping of the areas for improved data quality
- Maintenance of proper records at the facility and community level
- Ensuring regular training of the staff and person responsible for the management of the data

CONCLUSION

Since most of the districts are still lacking behind in terms of reporting the maternal deaths therefore ruling out the actual causes of underreporting of the maternal death data will lead to improvement in the quality of the data. MDR being a new initiative, it will need close monitoring and supervision of the process to identify the problems that need to be addressed on a priority basis for its effective implementation and ultimate impact

THANK YOU