Acknowledgement

The purpose of the Verbal autopsy of maternal death is to understand the determinants of maternal death and to provide stimulus for action at all levels. The review will help us to understand to what extent the implementation of NRHM programmes have contributed to improving the quality of health of Muslim and Dalit women. This review has been conducted by Centre for Health And Resource Management (CHARM) supported by OXFAM India.

Centre for Health And Resource Management (CHARM) would like to extend earnest thanks and appreciation to the functionaries of Health and ICDS departments of Maner and Phulwarisharif PHCs for their support during the review.

Our gratitude is extended to OXFAM, India for its valuable comments and support from the inception of the review.

The members of the communities merit singular appreciation for their valuable time and honest sharing of experience and challenges. We appreciatively acknowledge their efforts.

Dr Shakeel ur Rahman

Centre for Health And Resource Management

Patna

Table of Content

Acronyms

AHS	:	Annual Health Survey
ANC	:	Ante Natal Care
ANM	:	Auxiliary Nurse Midwife
AWC	:	Angan Wari Centre
AWW	:	Angan Wari Worker
CBMDR	:	Community Based Maternal Death Review
CHARM	:	Centre for Health And Resource Management
CHC	:	Community Health Centre
C S	:	Civil Surgeon
CSO	:	Civil Society Organisation
DLHS	:	District Level Household and Facility Survey
EAG	:	Empowered Action Group
EmOC	:	Emergency Obstetric Care
FBMDR	:	Facility Based Maternal Death Review
FHW	:	Frontline Health Workers
HSC	:	Health Sub Centre
ICDS	:	Integrated Child Development Scheme
IEC	:	Information, Education, Communication
IFA	:	Iron Folic Acid
IV	:	Intra Venous
MDR	:	Maternal Death Review
MMR	:	Maternal Mortality Ratio
MDG	:	Millennium Development Goal
MIS	:	Management Information System
MOIC	:	Medical Officer In-charge
MTP	:	Medical Termination of Pregnancy
NFHS	:	National Family Health Survey
NRHM	:	National Rural Health Mission
PHC	:	Primary Health Centre

PMCH	:	Patna Medical College Hospital
PNC	:	Post Natal Check-up
RCH	:	Reproductive and Child Health
RGI	:	Registrar General of India
RMP	:	Rural Medical Pratitioner
SC	:	Scheduled Castes
SRS	:	Sample Registration System
TBA	:	Traditional Birth Attendant
UNFPA	:	United Nations Population Funds
UNICEF	:	United Nations Children Fund
VHND	:	Village Health and Nutrition Day
VHSC	:	Village Health and Sanitation Committee
WHO	:	World Health Organisation
WRA	:	Women in Reproductive Age

Introduction and Background

1.1. Context

Preventing maternal death associated with pregnancy and child birth is one of the greatest challenge for India. One woman dies every nine minute in India from any cause related to pregnancy. Each year in India, roughly 28 million women experience pregnancy and 26 million have a live birth. 15% of all pregnancies are likely to develop complications. Of these, an estimated 55,000 maternal deaths and one million new born deaths occur each year[1]. In addition, millions more women and new born suffer pregnancy and birth related ill-health. Thus, pregnancy-related mortality and morbidity continues to have a huge impact on the lives of Indian women and their new born.

Out of estimated total 536000 maternal deaths worldwide, developing countries account for 99% of the deaths in 2005. About 50% of global maternal deaths occur in sub-Saharan African region, followed by 35% of maternal deaths occur in the region of South Asia. India accounts for 22% of all maternal deaths in the world and 62% of all maternal deaths in South Asia[1].

It is difficult to assess the extent of progress made to achieve MDG5 target, as reliable data on maternal mortality is not available from many countries; developing countries in particular, where maternal mortality is high. In developing countries the systems of recording deaths are not working properly, which leads to missing out the deaths occurred in the community. Even if the death is registered the cause of death is not filled properly. Maternal death registration is no exception to in such a situation[2].

Improving maternal health is the fifth goal among the eight Millennium Development Goals (MDG) adopted following the Millennium summit. International community committed itself to reducing the Maternal Mortality Ratio (MMR), and set a target of a decline of 75% during 1990 to 2015, within the MDG monitoring framework. This makes the MMR, a key indicator for monitoring progress towards the achievement of MDG5[1].

Maternal death *is defined as the death of a woman who dies from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy or child birth or within 42 days of termination of pregnancy, irrespective of duration and site of the pregnancy.*

Maternal Mortality Ratio (MMR) *is the number of women who die from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, per 1,00,000 live births.*

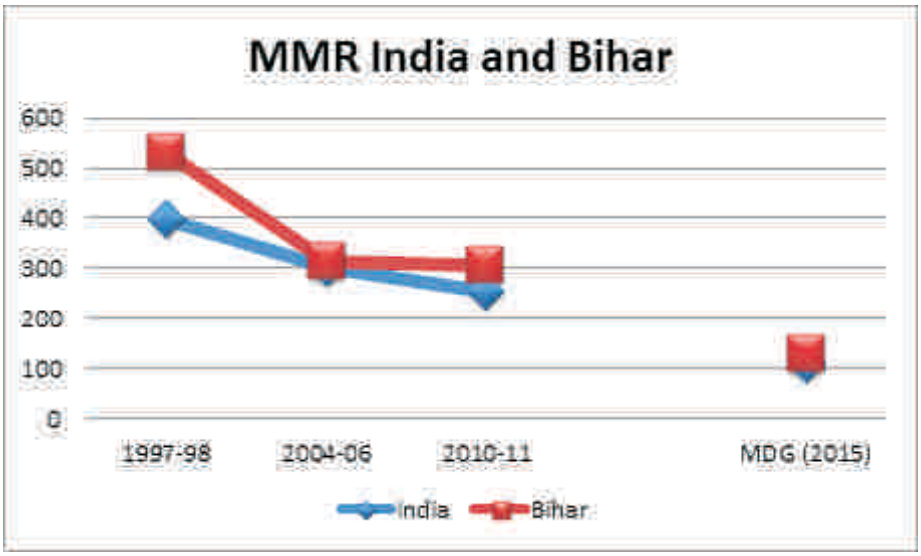
1.2. MMR India and Bihar

Maternal Mortality Ratio (MMR) in India has shown a noticeable decline from 398/100,000 live births in the year 1997-98 to 301/1,00,000 live births in the year 2001-03 to 254/1,00,000 live births in the year 2004-06 to 178 in 2012 (SRS) as per the latest RGI-SRS survey repor. However, to accelerate the pace of decline of MMR in order to achieve the NRHM and MDG Goal of less than 100 per 100,000 live births, there is a need to give impetus to implementation of the technical strategies and interventions for maternal health. Levels of maternal mortality vary greatly across the regions, due to variation in underlying access to emergency obstetric care, antenatal care, anaemia rates among women, education levels of women, and other factors[3].

About two-thirds of maternal deaths occur in EAG (Empowered Action Group) states – Bihar and Jharkhand, Orissa, Madhya Pradesh and Chattisgarh, Rajasthan, Uttar Pradesh and Uttarakhand and in Assam, all these states being among the 18 high focus states under NRHM[3].

Each year in Bihar, roughly three million women experience pregnancy. Out of these an estimated 8500 maternal deaths occur each year. Life time risk for a woman having maternal death in Bihar is 1.22% as compared to 0.7% of India[5].

Maternal Mortality Ratio in Bihar showed a decline from 531 in the year 1997-98 to 312 in the years 2004-06 to 305 per 1,00,000 live births in the years 2010-11 as per the latest Annual health Survey report, released in 2013[4].



1.3. Causes of Maternal Deaths

The causes of maternal deaths are both direct and contributory. Direct obstetric and non-obstetric causes include Haemorrhage, Sepsis, Eclampsia, Obstructed labour, Abortion, related Anaemia, etc. Underlying contributory causes include social, behavioural, cultural and economic factors.

Three delays that contribute to maternal deaths are:

- ***Delay in decision making***
- ***Delay in reaching appropriate health facility***
- ***Delay in receiving health care at facility***

1.4. Why conduct Maternal Death Review (MDR)

MDR is conducted with a goal to reduce maternal mortality and morbidity. The objectives of MDR are to understand the determinants of maternal death and to provide stimulus for action at all levels. MDR leads to identifying gaps and the reasons for maternal deaths, for taking corrective actions to fill such gaps and improve service delivery. The process of MDR should not be utilized for taking punitive action against service providers.

Maternal Death Review is contemplated to be implemented in two forms – ***Facility Based Maternal Death Review (FBMDR)*** *and* ***Community Based Maternal Death Review (CBMDR),*** *which are defined as below:*

FBMDR *is a process to investigate and identify causes, mainly clinical and systemic, which lead to maternal deaths in the health facilities; and to take appropriate corrective measures to prevent such deaths.*

CBMDR *is a process in which deceased's family members, relatives, neighbours or other informants and care providers are interviewed, through a technique called Verbal Autopsy, to elicit information for the purpose of identification of various factors – whether medical, socio-economic or systemic, which lead to maternal deaths; and thereby enabling the health system to take appropriate corrective measures at various levels to prevent such deaths.*

There are other approaches as well to understand why women die during pregnancy related causes; such as confidential enquiries into maternal deaths, learning from women who survived: "near miss" cases and evidence based clinical audit.

1.5. Systems for Recording Maternal Deaths

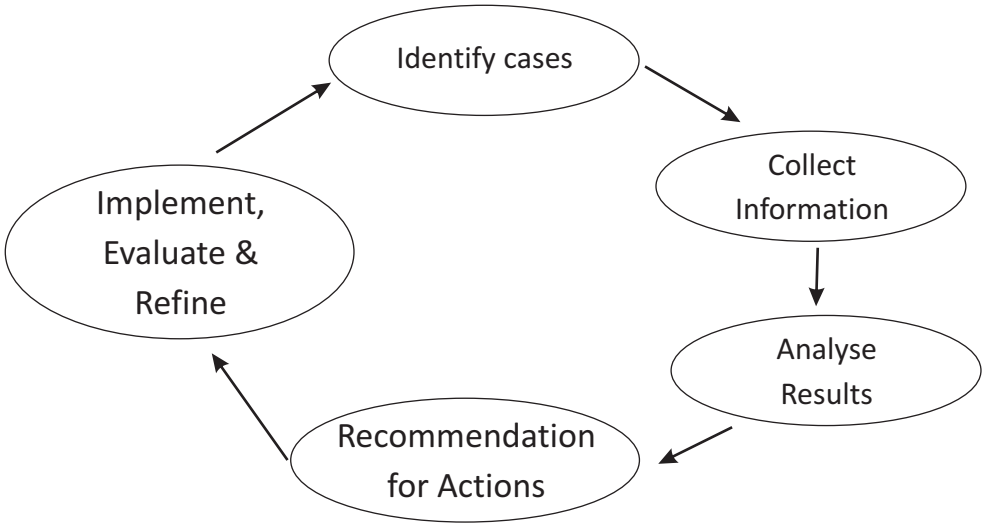
A state in India has following systems for recording maternal deaths and compilation of vital statistics:

1. Civil Registration System
2. Health Department MIS
3. Sample Registration System (SRS)
4. Integrated Child Development Scheme (ICDS)

1.6. Maternal Death Surveillance Cycle

Maternal Death surveillance cycle begins with identifying cases of maternal deaths, review the cases, to look for avoidable factors, promote change in practices, review outcome of these changes and refine and develop strategies based on the learning.

Maternal Death Surveillance Cycle



In this background a verbal autopsy of maternal deaths has been carried out amongst the marginalised section of the communities to understand its determinants in order to reduce maternal mortality and morbidity.

The main purpose of CBMDR is to identify various delays and causes leading to maternal deaths, to enable the health system to take corrective measures at various levels. Identifying maternal deaths would be the first step in the process, the second step would be the investigation of the actors /causes which led to the maternal death – whether medical, socio-economic or systemic, and the third step would be to take appropriate and corrective measures on these, depending on their amenability to various demand side and communication interventions.

METHODOLOGY

2.1. Objectives of the review

Undertake situational analysis of determinants of maternal deaths among Muslim and Dalit women in Patna district, Bihar

2.2. Review design

Qualitative methods were used for the review. The investigators collected the information through the verbal autopsy for twenty two deaths that occurred during the review period and were analysed to understand the circumstances and issues related to maternal death. Verbal Autopsy is a technique whereby family members, relatives, neighbours or other informants and care providers are interviewed and asked for a narrative to elicit information on the events leading to the death of the mother, during pregnancy/ abortion/ delivery/ within 42 days after delivery, in their own words in order to identify the medical and non-medical (including socioeconomic) factors for the cause of death of the mother.

Two teams of investigators were formed and trained to do verbal autopsy. The formats developed under NRHM for Community Based Maternal Death Review was used for the investigation. Immediately after the training, two teams of investigators undertook maternal death review between September 2012 and August 2013.

2.3. Review period

Maternal deaths of women in reproductive age group (15-49) years occurred during September 2012 to August 2013.

2.4. Review Area

The review was conducted in eleven panchayats of two blocks of Patna District of Bihar. According to Census 2011 Patna district has a total population of 57,72,804 and contributes 5.66 % of the state's population and has a total literacy of 64% with female literacy at 52%. The proportion of Muslim population in the district is about 8% and SC contributes 15% of the total population. The proportion of STs is very meagre with 0.2%.

One of the blocks of Patna, Phulwarisharif having a total population of 1.91 lakh (Census 2001) is spread over in about 100 villages. According to Census 2001 the total population of SC and Muslims are, 25% and 21% respectively in the Phulwarisharif block.

Another block Maner has a total population of 201345 (2001 census) and is spread over 120 villages. The proportion of Muslim population is 3.7% and SCs contribute 16.5% of total population of Maner block.

2.5 Demographic Profile – Patna District

Variable	Data
Total Area	3202 sq.Km
Ward	72 wards
Total Population	5,772,804(1) (2011) update
Density	1,803/Km2
Male Population	3051117
Female Population	2721687
Adolescent Population	103,615
Sex Ratio	892:1000
Literacy	63.82%
• Male	73.81%
• Female	52.17%
SC Population	
• Male	473340
• Female	324807
BPL Population	46%
Total no. of Blocks	23
Total no. of Gram Panchayat	331
Total no. of Revenue Villages	1389

2.6 Health Infrastructure – Physical – Patna District

Variable	Date
No. of sub Divisional Hospital	6
No. of Referrals	4
No. of BPHCs	23
No. of APHCs	96 (Sanction) 60 (Actual)
No. of HSCs	418/393
No. of Anganwadi Centers	3937/3652

2.7 Health Infrastructure – Human Resource – Patna District

Variable	Data
No. of Specialist:	
Gynaecologist	27
Paediatrician	22
No. of ANMs	523 (regular), 378 (Contractual)
No. of A Grade Nurse	44 (regular)
No. of Aganwadi Workers	3233
No. of Asha	3004
No. of Villages having source of Drinking Water	1076

(Source: District Health Action Plan 2012, District health Society, Patna)

Observations

3.1. Maternal Death Registration

The maternal deaths registered in the rural areas are comparatively less against the deaths registered in urban areas due to the fact that most maternal deaths occur at city hospitals. Another reason behind this may be lack of registration of the maternal deaths in rural areas. Most of these deaths might have occurred in homes which is why it is not registered with the system.

Although it is mandatory to register birth and death in India under "The Registration of Births and Deaths Act, 1969", there is no provision of any kind of punishment under the act for not registering a birth or death by above mentioned individuals. Burial or funeral grounds at villages or at the towns of Block headquarters of the districts do not send any notification to the registrar as done by the funeral and burial grounds of the Municipal Corporations of the state.

The Crude Death Rate of Patna district is 5.04 per 1000 population as per the Annual Health Survey, 2011. The maternal mortality in developing regions typically contributes 20 to 30% of all female deaths in reproductive ages[6]. MMR of Patna division is 258 which are lowest for all the nine administrative division of Bihar, whereas Purnea division is worst performer with 377 as MMR (Annual Health Survey – 2011).

3.2. Cause of Death analysis for reported deaths of Women in Reproductive Age (WRA)

3.2.1. Age wise distribution of maternal death

Table-1 shows the distribution of WRA deaths as per age groups. Most deaths (15/22) were in 20-25 years of age group while age group below 20 years constituted the second largest group (4/22) reporting maternal deaths.

Table-1: Age wise distribution of WRA died

Age Group	Frequency
<20 Years	4
20-25 Years	15
25-35 Years	2
35 Years or More	1

3.2.2. Types of maternal death

Table-2 shows the type of maternal deaths. Majority of death (10/22) were post natal deaths (deaths occurring after delivery). Five of the deaths were reported during ante natal period and five deaths during Intra natal period (deaths occurring during delivery) out of 22 maternal deaths reviewed. Two of the deaths reviewed were abortion deaths.

Table-2: Distribution of type of maternal death

Type of Death	Frequency
Antenatal	5
Delivery Death	5
Post natal	10
Abortion	2

3.2.3. Place of maternal death

Table 3 shows the distribution of place of death. Most of the deaths (10/22) occurred in private Hospitals. It is a sad commentary on public health facilities offering emergency obstetric care (EmoC) or lack of it in the vicinity of the review area. It also entails that the members of the community did not trust the quality and variety of services of government health facilities in case of obstetric emergency. Maner and Phulwarisharif PHCs don't provide EmoC services. Danapur Sadar hospital that provides EmoC does not have the patronage of the community.

Table-3: Distribution of place of maternal death

Place of Death	Frequency
Govt. Hospital	3
Private Hospital	10
Home	4
Transit	5

All the three deaths that occurred in the government hospitals were reported in Patna Medical College Hospital. The main reason for these pregnant women of choosing Patna Medical college Hospital (PMCH) is that it is closer to Phulwarsharif and Maner Blocks where the maternal death review was undertaken. But at the same time it also indicates the poor facilities of handling EmOC in PHCs (in case of Maner and Phulwarisharif) and Sadar Hospital (in case of Danapur Sadar Hospital).

Five out of 22 maternal deaths happened during transit. This can be attributed to many factors like delay in arranging transport, delay in arranging money, delay in making decisions, delay in reaching appropriate health facility etc.

3.2.4. Number of Institutions visited before death

The analysis shows that half of the pregnant women had visited more than two health facilities (both government and private) for treatment. One pregnant woman had to visit five and another to four health facilities. It implies that even the private health facilities in the vicinity of the review area offering EmoC services are not well equipped to render such services.

Table - 4: Number of Institutions visited before death

# of Institution visit	Frequency
Zero	3
One	9
Two	5
Three	3
Four and more	2

Lack of trained staffs and facility were the most common reasons cited by the health facilities that referred the pregnant women (12/19). In two cases the patients were referred to another facility without offering any reason to them.

Table - 5: Reasons for referral

Reasons	Frequency
Lack of Staff and Frequency	12
Lack of Blood	2
Others	3
No explanation	2

3.2.5. Age at marriage of pregnant women

Marriage of girls before attaining 18 years continues to be prevalent in Muslims and Dalits in the project area. Majority of maternal deaths (13/22) was reported among the girls who had married before 18 years of age.

Table - 6: Distribution of maternal deaths as per the age at marriage

Age Group	Frequency
Less than 18 years	13
18-26 years	9

3.2.6. Gravida wise distribution of maternal deaths

Table 7 shows the distribution of maternal deaths as per the gravida status of pregnant women. Primi-gravida (first pregnancy) were most susceptible to maternal death (12/22); although multi parity also influenced the maternal death in significant way – five maternal deaths were reported among women who had been pregnant four or more number of times. Nearly two-thirds of maternal death happened after pregnant women had completed 28 weeks of pregnancy (Table 8).

Table-7: Gravida wise distribution of maternal deaths

Gravida	Frequency
One	12
Two	3
Three	2
Four & more	5

Table-8: Distribution of maternal deaths as per the weeks of pregnancy

Week of Pregnancy	Frequency
Less than 16 weeks	3
16-28 week	3
more than 28 week	16

3.2.7. Ante Natal check-up

Although the vast majority of pregnant women under review belonged to poor socio-economic background, many among them still preferred private health facilities for ANC. Of the 15 cases that had ANC, 10 have gone to a private health facility (see Table 10). The community is not opting a HSC or a PHC for ANC for two entirely different reasons. The pregnant women don't visit HSC because it is not open on many times and more importantly it is devoid of most of the facilities required for ANC, whereas, the distance and poor transport facility are big deterrents for the community in accessing PHC.

Table-9: Distribution of maternal deaths as per the number of ANC

Number of ANC	Frequency
Zero	7
One-Three	13
Four or more	2

Of the eight cases visiting a government health facility one had gone to PHC and four women had it during VHSNDs at AWC. Seven cases had no ANC. All the women having no ANC belonged to Phulwarisharif block. ANCs were not carried out in accordance of the guidelines. Only two of the woman had all the four ANCs. In most cases it was one to two times and in some cases three times. TT vaccination and distribution of IFA tablets were the only components covered under ANC, whereas ANC should also include Haemoglobin estimation, Urine analysis for detection of albumin and sugar, Blood Pressure examination, weight measurement, clinical examination of abdomen by palpation, counselling on nutrition, preparedness of birth etc.

Table-10: Distribution of maternal deaths as per the place of ANC

Place of ANC	Frequency
VHSND	4
PHC	1
Govt/Pvt Hospital	3
Private Hospital	7

3.2.8. Three Delays of Maternal death

Analysing the verbal autopsy of maternal deaths for the three delays it was found that transport delay was reported in eight out of 22 cases, who decided to go to a health facility for treatment of the pregnant mothers (see Table 11).

Table-11: Distribution of types of delays in maternal deaths

Type of Delay	Frequency
Decision Making	3
Arranging Transport	8
Initiating treatment	11

In half of the cases the delay was in initiating treatment at different health facilities while in three cases there was delay in making decisions by the family members of the pregnant women.

Table-12: Distribution of types of transport used by families of the victims

Transport used	Frequency
Auto Rickshaw	15
Government Ambulance	1
Private Ambulance	1
Foot	2

Shockingly in only one case the Government run ambulance (popularly referred as 102 or 108) was used by the attendants of the victims. Auto rickshaw was the commonest mode of transport (15/19) for the pregnant women to visit a health facility (See Table 12). Treatment delays were mostly at local private and local government health facilities. The local private health service providers included Traditional Birth Attendants, Unqualified Rural Medical Practitioner and qualified allopathic doctors. PHCs at Phulwarisharif and Maner and Danapur Sadar Hospital were the local government health facilities where the deceased were taken before going to Patna Medical College Hospital. The decision delays were reported in three cases. The reason for this was that the family members could not gauge the intensity of the complication of the pregnant women who died. In nine out of twenty two cases under review more than one delay were reported behind the maternal deaths.

Non availability of government run Emergency Obstetric Care (EmOC) facility in the vicinity was reported to be one of the major contributory causes of maternal deaths.

3.2.9. EmOC (Emergency Obstetric care)

The nearest government health facility from Phulwarisharif block where EmOC services are available is Patna Medical college Hospital which is about 20 to 40 KMs from the residences of the victims. Similarly for WRA in Maner block, nearest EmOC services in a government health facility is in Danapur Sadar Hospital which is about 10 to 30 km away.

3.2.10. Reported causes of maternal deaths

Varied causes of maternal death were reported by the attendants of the victims. In half of the cases (11/22) severe anaemia and haemorrhage was reported to be the cause of maternal death (see Table 13). Financial constraints, distance of government health facility rendering EmOC services, non- availability of ambulance

were cited as contributory causes of death. Four pregnant mothers died of sepsis and one each from retention of Placenta and ectopic pregnancy. There were non-obstetric causes of death in five cases.

Table-13: Distribution of probable cause of maternal deaths

Cause of Death	Frequency
Anaemia/haemorrhage	11
Sepsis	4
Placenta Retention	1
Ectopic Pregnancy	1
Others	5

Out of pocket Expenditure

Nine out of twelve families had spent somewhere between Rs 15000 to 35000, another twelve families spent a sum between Rs 5000 to 15000 and one family had spent less than Rs 500 on the treatment of deceased women. The family that spent Rs 500 only got some treatment form local unregistered medical practitioner and did not take the pregnant woman to any health facility. The costs included expenditure on transport, indoor hospitalisation in private health facilities and medicines and other consumables. Eleven out of eleven families had to borrow money from local money lenders (Mahajan) at an exorbitant rate (120% annually). Rest of the families were able to pool in money from the family members or arranged for.

The community is forced to dish out considerable amount of money for getting treatment of pregnant women with complications.

Table-14: Distribution of source of money arranged for treatment

Source of money arranged	Frequency
Self	2
Family	9
Loan	11

Discussion

Maternal Mortality is an acid test for country's health system. Maternal deaths are not inevitable. India is a leading contributor of maternal deaths as a country in the world. But still maternal deaths are not systematically reported or analysed in many states of India. There are several obstacles in the process of birth and death registration in several states of India. Death certificate is necessary for insurance, inheritance and other legal procedures, in India. But usually women and children do not have any property in their name or life insurance. Such deaths are mostly not reported as there is no incentive of property transfer or insurance money claim for passing through the administrative procedure for the registration.

Absence of good quality EmOC services at primary and secondary government health facilities is a big impediment in reducing MMR in the state. It becomes all the more daunting task in case of Muslim and Dalit women as vast majority of them belong to poorest wealth quintile and can ill afford the cost of institutionalised treatment at a private health facility. The out of pocket expenditure for the members of community is prohibitive even at government health facility.

out of pocket expenditure for the members of community is prohibitive even at government health facility.

Government hospitals do report all deaths. But government hospitals do not keep a separate list of maternal deaths occurred in the hospital. There is no maternal death audit even in Patna district which is the state capital and where state health department is also located.

Presently, there are no sincere efforts made to enumerate all maternal deaths in the district by district health office; there is no dedicated officer who looks after maternal deaths reported by district. Sincere efforts are needed for the reporting of all deaths of women of reproductive age group and their analysis by cause. Health Officers make informal efforts and pressure to hide maternal deaths and prove it as non-maternal death. There is a culture of fear of reporting events with negative outcome.

There is an urgent need for addressing these issues of reporting maternal deaths and enumerating all of them. Coordination between various departments (Health, ICDS, Panchayats etc.) and dedicated and sincere efforts from health departments is the need of time to improve the reporting of maternal deaths.

Frontline Health Workers (FHW) like ANMs, AWWs, ASHAs are not trained and oriented towards maternal death review. Two of three delays – delay in decision and delay in transport can be minimised to a great extent if FLWs counsel caregivers of pregnant women about the danger signs during pregnancy and during and after delivery and also on birth preparedness.

Delay in receiving appropriate and adequate care can occur at different times and for different reasons. Whenever there is delay and for whatever reason, delay is dangerous because delay can cause death. All types of delay should be avoided to prevent maternal death and promote safe motherhood. The delay in making decision to seek care is due to inability of care givers to understand the gravity and enormity of the situation. It is linked to many factors like educational and economic status of the family, the status of women in the family, their health seeking behaviour, who in the family makes the decision to seek care and the characteristics of the illness. It is as well associated to how well the mother and the caregivers have been counselled by FHWs on early danger signs of maternal health and birth preparedness.

The delay in reaching the health facility is affected by factors like distance, availability of transport, roads and cost of transport. Much hyped free ambulance service of the government continues to be a far cry for Dalits and Muslims.

Delay in receiving adequate treatment implies that skilled staffs, drugs, sterile equipment and blood for transfusion are available at the health facility.

The poor Physical and HR Infrastructure had led to more adverse result of pregnancy. Out of 534 PHCs, 480 are functional as 24x7, however due to storage of staff nurses only 281 PHCs are strengthened with 3 staff nurse. 70 CHCs, 46 SDHs, 36 DHs are functioning on 24x7 basis. A total of 149 health facilities including DH, SDH and CHCs are operational as FRUs7. In most of the cases different phases of delay combine resulting in to adverse outcome of pregnancy.

History of Maternal Health Programming in India	
1980s	*TBA Training under MCH*
1992-93	*Child Survival and Safe Motherhood*
1997	*Reproductive and child Health (RCH)*
2005	*RCH II + NRHM + JSY + JSSK (Institutional delivery only foucs)*
2014	*RMNCH = A (SBA Focus)*

Case Study

Case Study 1

Smt Ganeeta Devi was married to Sri Lal bau Rai when she was 17 years old. She was resident Badal tola, a Dalit hamlet falling under Maner Block of Patna district. She became pregnant soon after her marriage. As is the custom in Bihar, she came back to her maternal place for the delivery of first child.

It was a chilly winter night. In the wee hours of 11th December 2013 she started having pain abdomen. She had completed nearly nine months of pregnancy. Local Traditional Birth Attendant was called to examine her. She told to mother of Ganeeta Devi that it is labour pain. The parents arranged an auto rickshaw and took her to Maner PHC at 5.30 AM, which is about three KM from their home.

The attendants were given a slip to bring medicine from the market by the Nurse after admission in the PHC. When father of Ganeeta devi returned with IV fluids, injections and other medicines purchased from the market, the nurse informed him that she will not keep the patient in the PHC on the pretext that she is not allowing her to touch her body and conduct examination. The parents made repeated requests with folded hands to the attending nurse, but she did not budge.

The parents, denied permission to keep Ganeeta at PHC, took her to a nearby private doctor' clinic. After admission three bottles of IV infusion and eight injections were administered on her. When these attempts to deliver the child failed, the attendants got Ganeeta admitted to another doctor's clinic at Maner Bazar at around 3.00 PM. Another attempt with IV infusion and few injections were made for Ganeeta to deliver the child. Failing this the doctor told to her parents that operation will be done to deliver the child. Another doctor was called from Patna. To conduct The Caesarian Section. A dead child was delivered after CS. The doctors asked parents of Ganeeta to arrange blood immediately for transfusion. Maner does not have any blood bank – either in private or government. The father rushed to Patna and bought blood from private bllod bank after paying Rs 4000/. After a while, when blood was being transfused to Ganeeta, she gained consciousness, though transiently.

The doctors pronounced after re-examining her that she should be immediately rushed to Patna Medical college hospital, which is at a distance of about 35 Km. Once again an auto rickshaw was arranged and Ganeeta made her way to PMCH with running blood transfusion. Five Km before PMCH she breath her last in the auto rickshaw during the transit.

Shambhu Ram and Laxminia Devi, the parents of Ganeeta devi, had lost both their daughter and grandson within a span of 16 hours. But the trauma still haunts them. They are still paying back the loan of Rs 35000, they had arranged from the local money lender.

Case Study 2

Shameema khatoon was married when she was only 17 years old. She delivered a male child after one year of her marriage. Her husband died after two years of marriage. Her parents married her for the second time. She lived in Nauhsa gali in Phulwarisharif. She became pregnant after one year of second marriage. She had three ANC during the pregnancy in a private hospital.

It was raining heavily on 13th of July 2013 when she started having labour pain. She was taken on an auto rickshaw to a private doctor at Walmi inPhulwarisharif. The doctor conducted Caesarian Operation on 14th July and a live male child was born. In the night of 14th-15th July her condition deteriorated. The attending doctor said that she is breathless and referred her to another hospital. The attendants of Shammeema took her to another lady doctor at Harron Nagar, near Phulwarisharif. The doctor demanded Rs 8000/ for the management of the patient and further said that she can't guarantee her wellbeing.

Shammema belonged to a poor family. She had no wherewithal to arrange such a huge amount and that too at a short notice. The lady doctor referred her to Patna Medical college Hospital. The attendants of the patient hired a private ambulance and they took her to Heart hospital as somebody told them that her breathlessness is due to weak heart. The doctors at the heart hospital refused her admission saying she is not suffering from a heart problem.

After running pillar to post, Shammema was brought back to hospital at Walmi where she had delivered the child. By the time it was dawn. She was admitted once again in the same hospital. The doctor was not present at the hospital at that point of time. Paramedical staffs tried to resuscitate Shameema. Finally she breathed her last at 6 AM. Even after spending Rs 32000/ in less than 24 hours Shameema's life could not be saved.

Conclusion & Recommendation

Conclusion A

Reporting fully and correctly all maternal deaths is the first step for reducing it. There is lack of honest and committed efforts from health department of the district for enumerating and analysing all maternal deaths.

For correct recording and reporting of all maternal deaths, we recommend following actions:

1) For correct recording and reporting of all maternal deaths District Health department should appoint a nodal officer as District Maternal Health Manager (DMHM). DMHM should coordinate all services in the district related to maternal health including recording of all maternal deaths with its analysis.
2) FHWs (AWW, ANM) should identify and report all deaths of WRA (15-49 years) with cause directly to a DMHM
3) DMHM should develop liaison with all private maternity homes to collect data of maternal deaths
4) State should publish annual report on maternal deaths

Conclusion B

Difficulties of urgent references of pregnant women through free ambulance services are seen as a handicap to reducing the maternal deaths. It contributes to delay in reaching health facility.

We recommend guaranteeing equitable and free availability of ambulances for emergency transfer of pregnant women to the hospitals.

Conclusion C

The household level awareness on danger signs during pregnancy and delivery is enormously underprovided by FHWs. This has led to delay in seeking treatment for pregnant women.

We recommend that the health and ICDS departments should initiate the process of developing messages on key family behaviours as regards to maternal health and disseminate them through multimedia channel. We also recommend preparing a due list of pregnant women ensuring four ANC visits and at least three PNC home visits by FHWs.

Conclusion D

MDR showed that quality care EmOC services at primary and secondary health facilities are wanting and not up to mark forcing Dalit and Muslim women to rush to a tertiary level facility – either in private or government sector.

We recommend that the government should strengthen physical and human resource infrastructure on a priority basis. Primary and secondary level health facilities should be adequately furnished and equipped to provide quality EmOC services.

Conclusion E

Community Based Maternal Death Review is not taking place.

We recommend the following for improving CBMDR:

1) Block Health Officer should conduct verbal autopsy of all deaths of WRA and maternal deaths and analyse it. The analysis of verbal autopsies of maternal deaths should guide actions to improve maternal health in the district and state.

2) Public inquiry of all maternal deaths should be done by District Development Officer (DDO) or Collector as is the current practice in the Tamil Nadu state

3) VHSNCs and Civil Society Organisations (CSOs) should be involved for verbal autopsy so that CBMDR is institutionalised and strengthened.

References

1. Rai SK (1), Dasgupta R, Das MK, Singh S, Devi R, Arora NK, (1) Centre for Community Medicine, AIIMS, New Delhi; WHO. (2007). Maternal Mortality in 2005: estimates developed by WHO, UNICEF and UNFPA (http://www.who.int/reproductivehealth/publications/maternal_mortality_2005/mme_2005.pdf)

2. Puwar. Tapaswi I, Raman. Parvathy S, Mavalankar. Dileep V; (2009): Situational Analysis of Reporting and Recording of Maternal Deaths in Gandhinagar District, Gujrat state, IIM, Ahmedabad

3. SRS. (2006). Maternal Mortality in India: 1997-2003 Trends, Causes and Risk Factors. New Delhi: Registrar General Of India

4. Bihar Annual Health Survey Bulletin. (2012): censusindia.gov.in/vital…/07-Bihar_AHS_Bulletin_pdf

5. Bihar Annual Health Survey Bulletin. (2012); DLHS-3 (2007-08)

6. Maine D. Safe Motherhood Programs: Options and Issues 1993, p. 9

7. Report of 5th Common Review Mission, Bihar, Government of India, November 2011

About CHARM

Mission

CHARM seeks to improve the lives of marginalized and socially excluded community, minorities, dalits, women and children, by developing their capacity for participation in health care system planning, development planning and its monitoring.
CHARM endeavors to make the right to health realize for all the people by making state accountable.

Vision

To improve health & development of all people, and strengthen advocacy, policy and action in the promotion & protection of health of all.

Key Thematic areas of Intervention

Key thematic areas of intervention of CHARM have been health, nutrition, water & sanitation, HIV/AIDS, mitigation during disasters. The sub themes of CHARM include:

1) Advocacy on Health and nutrition
2) Studies and survey
3) Capacity Building
4) Direct service
5) Disaster management
6) Monitoring and supervision
7) Publications
8) Institutional strengthening
9) Water, Sanitation, Health and Hygiene