Retrospective Study of Maternal Deaths from April 2019- May 2020 at Comprehensive Emergency Obstructive and New-born Care Jabugam, of Chhotaudepur District

- By
- Shweta Verma
- 0835
- MBA HM-23

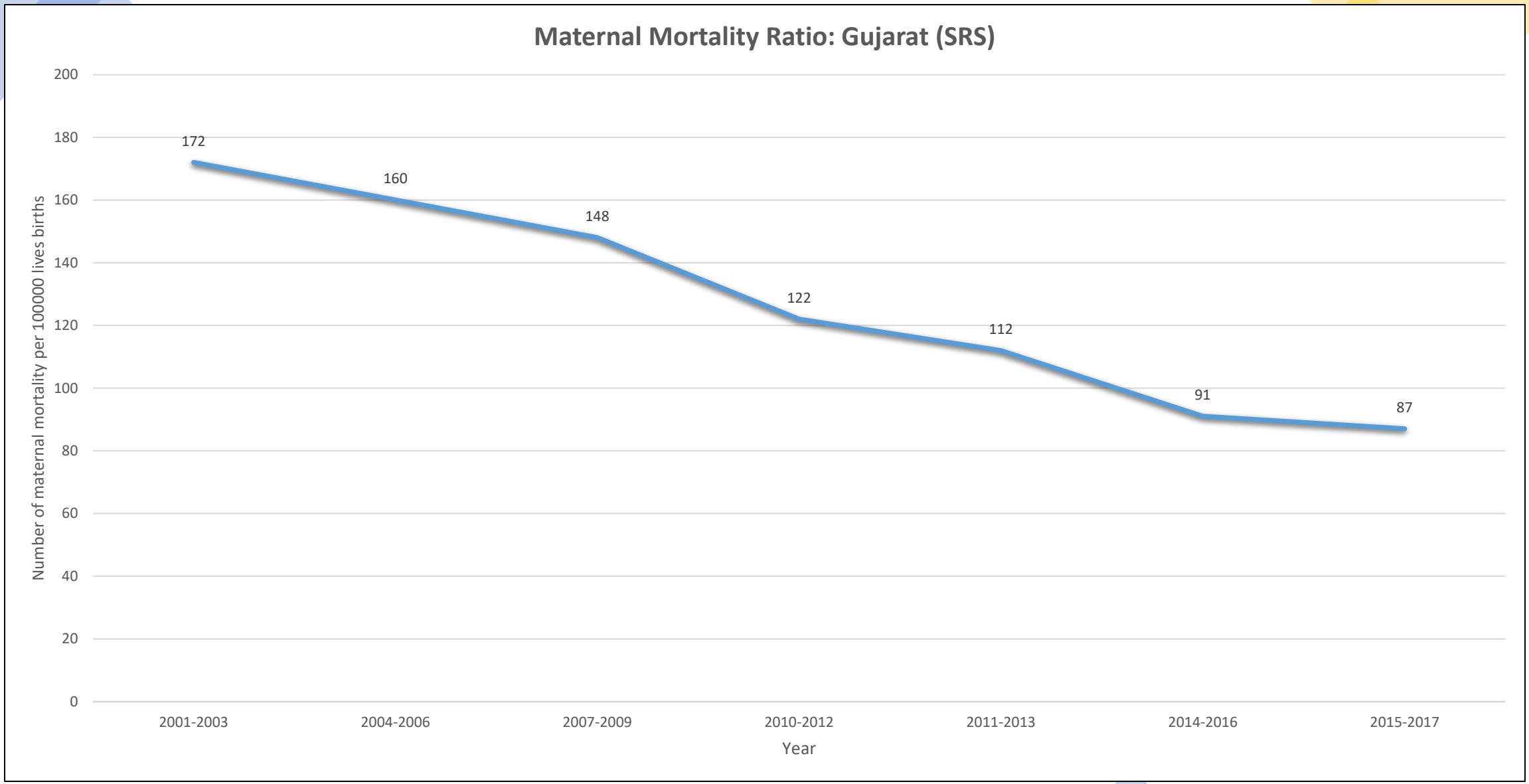
INTRODUCTION

- Under the Millennium development Goal (MDG) 5, the objective for India was to lessen Maternal Mortality ratio (MMR) by seventy five percent between 1990 and 2015. Maternal Mortality ratio (MMR) in India in the year 1990 was 556, which implied roughly 1.4 lakh ladies dying per year. The objective for India was thus assessed at 139 for each 1, 00,000 live births continuously by the year 2015. Internationally MMR around then was 385, which converted into about 5.32 lakh women dying each year. According to the most recent report of the Registrar General of India, sample registration system (rGisrs), Maternal Mortality ratio (MMR) of India was 167 for each 100,000 live births in the period 2011-13. As far as numbers, this converts into around 44,000 maternal mortality in India (303,000 maternal mortality during a similar period all inclusive).

- Regardless of a 33% decrease, India stays one of the significant contributors of maternal mortality in the world. For each demise, there are a lot more who endure changing degrees of sullen conditions. What's more, by and large of maternal mortality, the babies additionally die for need of care because of causes, for example, preterm birth complications and intrapartum-related complexities. Pregnancy-related mortality and mortality continues to have a huge impact on the lives of Indian ladies and their new-born babies. According to the ongoing sustainable development Goals, India is focused on lessening its MMR to under 70/lakh live births. Levels of maternal mortality change enormously over the areas, because of varieties in basic access to emergency obstetric care, antenatal care, anaemia rates among ladies, education levels of ladies, and different components.

- Around 65% - 75% of the complete assessed maternal mortality in India happen in a bunch of states – Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh and Assam. All these states are a part of the 18 high focused states under National Health Mission (NHM). Uttar Pradesh alone adds to over 30% of the maternal Mortality in India. The Maternal Death Review (MDR) process started by Government of India in 2010 endeavoured to improve the nature of obstetric care and diminish maternal mortality and morbidity by investigating the lacunae in the health framework towards the prerequisites of pregnancy and labor. The significance of MDR lies in the way that it gives detailed investigation on different factors at facility, office, area, local and national level that are required to be routed to diminish maternal mortality. Investigation of these mortality can distinguish the delays that add to maternal mortality at different levels and data used to receive to fill the gaps in the service delivery.

- Maternal Mortality: Magnitude of problem in Gujarat
- About 14,14,000 pregnancies per year
- 12,86,000 deliveries per year
- MMR (2015-2017) is 87/1lakh live births.
- Estimated 1900 maternal mortality per year (5-6 mortality per day)


Maternal Mortality Ratio: Gujarat (SRS)
Number of maternal mortality per 100000 lives births
200
180
160
140
120
100
80
60
40
20
0
172
160
148
122
112
91
87
2001-2003
2004-2006
2007-2009
2010-2012
2011-2013
2014-2016
2015-2017
Year

Research Question

- What has been the trend of maternal mortality in CEmONC, Jabugam from April 2019 to April 2020?
- What are the causes of maternal death in CEmONC, Jabugam Hospital from April 2019 to April 2020

Objectives

- To study the trend of maternal mortality in CEmONC, Jabugam from April 2019 to April 2020.
- To identify the major cause of the Maternal Death in the CEmONC Jabugam Hospital of the Chhotaudepur District.
- To identify one of the 3 delays responsible for the maternal death in the CEmONC, Jabugam Hospital from April 2019 to April 2020.

METHODOLOGY

- **Study design –** Cross- sectional study.
- **Time Frame –** February 2020 – May 2020.
- **Type of Data-** Secondary data.
- **Study setting-** CEmONC Jabugam Hospital of Chhotaudepur District.
- **Target Group-** Patients family and ASHA Workers.
- **Sample Size –** 08 Verbal Autopsy from April 2019 to April 2020.
- **Sampling Method-** Convenience Sampling.
- **Research Instruments –** Verbal Autopsy and Telephonic interview with the ASHA and Patients family.

CASE STUDIES

Chetnaben Pravin Bhai Bariya

- Background-

Chetnaben Pravinbhai Bariya, a 30 years old pregnant woman used to live in Singapura-Kadwal village in pavijetpur taluka of Chhotaudepur district. She was living with her husband, Pravinbhai Bariya, father and mother in law and grandparents, in a joint family, where the total numbers of family members were 6. Her Family belonged ST as well as BPL category with 10000-12000 INR family income per month. The family had own cultivable land of 5 acres and some cattle. Family has own pucca house. Her husband has education till primary level and works on their own farm whereas, she was illiterate and a housewife.

Medical History

- Chetnaben had a history of 4 pregnancies out of which, 2 were abortions, one still birth and one live birth so, she was having a male child of 3.5 years already. She had no history of tobacco or alcohol consumption. She received 2 ANC visits and 2 doses of tetanus toxoid. During ANC period, she was taking iron tablets. She registered her name at hospital for delivery but not at CEmONC, where she was brought after referral.
- She was suffering from Anaemia from the antenatal stage. When she was having 3rd month of pregnancy, her Hb was 4-5 gram/dl therefore she had to undergo treatment of blood transfusion of 3-4 unit at private hospital, Halol. She regularly visited halol private hospital as well as bodeli private hospital during her antenatal stage, as informed by the ASHA and FHW during telephonic discussion.

Factor associated with maternal death

Lack of preparedness of CHC (Kadwal CHC)

Lack of prior registration for delivery at suitable health facility.

Irregular ANC Check-up and no treatment for the anaemia.

Delay Identified

- Delay in decision to seek care and possible reason could be poor understanding of complications and risk factors in pregnancy and when to seek medical help.

2. Daxaben Vankar

- Backgound

Dakshaben Vankar, 20-year-old lady, from Piplad village, Kawant taluka, died on 6th march, 2020, on the way to SSG hospital which is the nearest referral point from CEmOC-CHC, Jabugam.

On 5th March, 2020, Dakshaben was brought to CEmONC-CHC, Jabugam at 11:40pm with severe jaundice when she was in labour stage of pregnancy. She was referred from Kawant CHC to district hospital Chhotaudepur and then to Jabugam. After 30 min of admission, she started developing complication. Treatment was initiated immediately after admission.

Medical History

- Daxaben Vanker had only one ANC Check-up out of the four compulsory ANC Check-up. She was suffering from the severe jaundice and didn’t go for the proper treatment for the jaundice thus making it one of the probable causes for her death. Even she had low Hb level therefore making her weak. She was the patient of the sickle cell anaemia and was on medication for the treatment of the treatment of the same. She died during her first pregnancy.

Factor associated with maternal death

Following three are the major factors related with this event:

- **1. Preparedness of Health system:** Delay in referral- Unavailability of 108, ambulance since the vehicle was engaged in catering service at different place.
- **2. Service provision and utilization:** i. less consumption of ANC services- Only one ANC visit was done by the diseased.
- ii. Lacking Regular counselling regarding provision and utilization of ANC services, by frontline workers.
- **3. Community Factors:**
- i. Hiding the history of sickle cell anaemia and previous hospitalization;
- ii. Casual attitude towards doctor’s advice- Family didn’t take the patient to the physician, as per gynaecologist’s advice.
- iii. Financial incapability

Delay Identified

1) Delay in decision to seek care due to-

- Poor understanding of complications and risk factors in pregnancy and when to seek medical help.
- Financial implications.

2) Delay in receiving adequate health care due to-

- Inadequate referral systems.
- Poor facilities and lack of medical supplies.

3. Jasoben Vadesingh Nayaka

- Background-

Belonging to patra village of Jambughoda block, which is in Chhotaudepur district of Gujarat, Jashodaben Vadesingh Nayaka who was a 34 years old lady and a mother of one living child was about to give birth to the fifth kid (fifth gravida). She and her husband were illiterate and belonged to the BPL category where both were labourers. After marriage they migrated to Netra village of Kutch, Gujarat to get employment. In between they use to come to their native occasionally.

As per the ASHA worker and FHW who followed up the case, Jashodaben had a love marriage but because she did not get acceptance by the in-laws, she was living in her parental village with her husband. From there they migrated to Kutch in search of work. She was living in a separate kuccha house just besides her parent’s house. During first 8 months of pregnancy, she was in Kutch and after that they came to patra for delivery.

Medical History

- Jasodaben had only one ANC Check-up out the four compulsory ANC Check-up. She was patient of the Sickle Cell and even her mother was sickle cell patient and died during the delivery like her.
- She was even suffering from the jaundice and didn’t too proper treatment for it thus making it one of the factors for her death. She didn’t have any history of the tobacco or alcohol consumption. He had history of multiple pregnancy from which she had only one living kid. She died during her fifth pregnancy.

Factors associated with maternal death

WHILE REVIEWING THE DEATH, FOLLOWING FACTORS CAME UP TO BE RELATED :

1. ILLITERACY AND POVERTY OF THIS COUPLE HAS SHOWED ITS EFFECT ON THE BEHAVIOUR TO CONSUME THE HEALTH SERVICES.

2. HEALTH IS NOT A FELT NEED: JASHODABEN'S HUSBAND USED TO DRINK AND SMOKE A LOT AND DID NOT PAY ATTENTION TO WIFE'S PREGNANCY. THE COUPLE USED TO HAVE FREQUENT FIGHTS AT HOME.

3. DELAY IN WOMAN SEEKING HELP.

4. LACK OF UTILIZATION OF FACILITY-BASED ANC SERVICES WHICH CAN HELP IDENTIFYING RISK FACTORS AND THUS OCCURRENCE OF COMPLICATIONS CAN BE PREVENTED AND/OR MANAGEMENT OF COMPLICATED CASES CAN BE PLANNED.

Delays Identified

1) Delay in decision to seek care due to-

a) The low status of the women.

b) Poor understanding of complications and risk factors in pregnancy and when to seek medical help.

c) Financial Implications.

d) Acceptance of maternal death.

4. Jignisha Bhil

- Background

Jigishaben Sandeepbhai Bhil, a 24 years old pregnant lady was living in kevdi Village of Naswadi block, Chhotaudepur district of Gujarat. It was her first pregnancy. She was living with her husband Sandeepbhai, father and mother in law and grandparents, in a joint family. They belonged to ST category of hindu religion. Belonging to the BPL category, family owned 3 acres of cultivable land and some cattle. Family owned pucca house in their village. Her husband was educated till secondary level and worked in their own farm. She herself was educated till primary level and was a housemaker.

Medical History

- Jignishaben was having a medical history of high blood pressure from before her marriage as per ASHA worker, FHW and her husband. Despite having a high-risk pregnancy, she did not register her name at any health facility for delivery with no history of ANC visit and any medications as well as sonography till 6 moths of ANC period. The reason behind is lack of awareness regarding the same. She took MTP kit during 6^{th} month of ANC stage.

Factors associated with the maternal death

1. Social Aspects

a) Tribal Belt

b) Lack of proper education

c) Lack of awareness

d) Home delivery rather than institutional delivery

2. Wrong practices affecting maternal health outcomes

a) Existence of dayan (Traditional birth attendant)

b) Existence of the bhuva (who practices black magic)

3. Health seeking behavior

a) Lack of awareness regarding regular ANC checkups.

b) Untreated anemia during ANC- Lack in women seeking proper treatment

4. Health Facilities

a) Lack of timely referral

b) Lack of timely decision

Delay Identified

1) Delay in decision to seek care due to

a) The lower status of the women

b) Poor understanding of the complications and risk-factors in pregnancy and wen to seek medical help.

c) Financial Implications

2) Delay in receiving adequate healthcare due to

a) Poor facilities and lack of medical supplies

b) Inadequately trained and poorly motivated medical staff

c) Inadequate referral systems

5. Sangeetaben Pravinbhai Nayaka

- Background

Sangeetaben Pravinbhai Nayaka, a 28 years old lady used resident of Lehvat village, Chhotaudepur district of Gujarat. She had a nuclear family where she and her husband were the only family members and belonged to the BPL category. Being an illiterate woman, she was a housewife, but they had cattle and owned a pucca house.

Medical History

- She had a history of two abortions as communicated by the FHW, ASHA and husband of Sangeetaben. However, this was her third gravida with the history of 2 still births. During last pregnancy, she was having a history of two ANC check-ups and two doses of tetanus vaccine. Once she visited PHC Devhat and once Hadvad CHC for the same.

Factors associated with maternal death

a) Poor management of PPH
b) Unavailability of the required blood units at L3 facility
c) Delay in referral
d) No proper treatment of anaemia

Delays Identified

1. Delay in decision to seek care due to

- The lower status of the women
- Poor understanding of complications and risk factors in pregnancy and when to seek medical help.
- Financial Implications

2. Delay in receiving adequate health care due to

- Poor facilities and lack of medical supplies.
- Inadequately trained and poorly motivated medical staffs.
- Inadequate referral systems.

6. Urmilaben Virambhai Rathwa

- Backgound

Urmilaben Virambhai Rathwa, a 24-year-old woman was reciding at tadgam village of bodeli block in chhotaudepur district. She was living with her husband Virambhai. She was having her own cultivable land and a pucca house. Her husband had education till higher secondary level and was in service sector. She was a housewife. To review her death, her husband, ASHA worker and FHW were interviewed by telephonic communication

Medical History

Urmilaben was in last trimester of pregnancy. During ANC period, she completed 3 ANC visits and got 2 doses of tetanus toxoid. She used to take iron tablets as per doctor's advice. As such she was not dealing with any kind of heavy work but, she used to have breathlessness on and off during ANC period. Urmilaben was suffering from sickle cell disease before her marriage as per her Husband, ASHA worker and FHW. During 2nd month of pregnancy, she went to a nearby PHC (Atadungri). There she got her Hb level checked which was 9gm%. During 6th month of pregnancy, she visited CEmONC, Jabugam where her sonography and blood tests were conducted.

She was admitted at CEmONC, Jab gam on 2nd September 2019 at 2:20 pm. It was her first pregnancy. Within two hours (4:21am) of admission, she delivered a IUD baby and after 3 hours and 9 minutes of delivery she died at 7:30am. To find out the preventable factors which contributed to her death, our team reviewed her death. Both, facility based as well as community-based review of this maternal death was conducted.

Factors associated with maternal death

Delay in Timely referral: Urmila reached to CEmONC 24 hours after complication aroused.

Lack of preparedness of facility: Preparedness is the key for any L3 facility to tackle the medical emergency **(sickle cell crisis in this case)**.

High Prevalence of Sickle cell anaemia: In the tribal belt of Chhotaudepur district.

Delay Identified

1) Delay in decision to seek care due to

- The lower status of the women
- Poor understanding of complications and risk factors in pregnancy and when to seek medical help.
- Financial Implications

2) Delay in receiving adequate health care due to

- Poor facilities and lack of medical supplies.
- Inadequately trained and poorly motivated medical staffs.
- Inadequate referral systems

7. Ushaben Hiteshbhai Rathwa

- Background

Ushaben Hiteshbhai Rathwa, a 20 years old lady used to live in Baroda with her husband. It was her first pregnancy. She could pursue only till primary education and was a housewife. Her husband had education till higher secondary level and working in service sector. When event occurred, she was brought to facility from her parent's house which is in Devat village of Devat taluka in Chhotaudepur district, Gujarat.

Team could not contact her husband as his phone was continuously switched off but a telephonic interview of one FHW was conducted who is serving at kawant CHC. According to her, Ushaben was staying at Baroda with her husband. There she used to go to the health facility for ANC check-up. Before one week of her death, she came to her father's house. When she visited Kawant CHC, there was a strike going on so from Kawant CHC, she was taken to CEmONC, Jabugam. It was her last trimester.

Medical History

- She received more than 3 ANC check-ups and 2 doses of tetanus vaccine. She used to have breathlessness on and off during the whole period of pregnancy and she was sickle cell positive.

Factors related with maternal death

1. **High Prevalence of Sickle cell anaemia in Chhotaudepur district.**

2. **Discontinuation of utilization of maternal health services from the same health facility till the lady delivered:** In this case, Ushaben got her 3 ANC check-ups, 2 doses of tetanus vaccine and she might/might not have received treatment for sickle cell anaemia. However, she never visited CEmONC during ANC period and there is no information on from where she got this treatment and then why she chose to deliver at CEmONC where she never visited before.

Delays Identified

1) Delay in decision to seek care due to

- The lower status of the women
- Poor understanding of complications and risk factors in pregnancy and when to seek medical help.
- Financial Implications

2) Delay in receiving adequate health care due to

- Poor facilities and lack of medical supplies.
- Inadequately trained and poorly motivated medical staffs.
- Inadequate referral systems

8. Vanitaben Udesingh Rathwa

- Background

Vanitaben Udesingh Rathwa belonged to Navatimbarva village of bodeli taluka in Chhotaudepur district, Gujarat. After her marriage last year, she had to migrate with her husband to Morbi. Both were illiterate and were working as labourers belonging to the BPL category. However, she was at her native from fifth month of pregnancy till the delivery occurred. Only the grandparents were living at navatimbarava. Her in-laws were residing at halol and a brother in-law and family in Kutch as all three families have employment at different places. She was close to her husband. It was her first delivery.

Telephonic interview was conducted with the husband and an ASHA worker who followed up the case to review this death.

Medical History

- Vanitaben had only 1 ANC Check-up out of compulsory 4 ANC Check-ups. She was severely anaemic and was suffering from jaundice. No treatment for the anaemia and jaundice was taken by the Vanita or her husband. She didn’t have any proper history of vaccination taken or consumption of IFA Tablets which is necessary during pregnancy and specially in case of HRP. She had Hb level of 6 gm/dl therefore making her severely anaemic. She was suffering from the high-grade from 15 days before she delivered and didn’t took any treatment for the same making it one of the contributory factor for the maternal death.

Factors associated with maternal death

1. Patient did not seek any treatment for long-standing high-grade fever, jaundice and anaemia. Not all the reasons are known to explain the same.

2. Lack of Prioritization of Maternal health over work at household level: In this case, earning a daily wage was more important.

3. Illiteracy: No proper education about the maternal health and importance of ANC Check-up and consumption of IFA Tablets and Calcium tablets.

4. Poverty

Delay Identified

1) Delay in decision to seek care due to

a)The lower status of the women

b) Poor understanding of the complications and risk-factors in pregnancy and wen to seek medical help.

c) Financial Implications.

2) Delay in receiving adequate healthcare due to

a) Poor facilities and lack of medical supplies

b) Inadequately trained and poorly motivated medical staff

c) Inadequate referral systems

CONCLUSION

1. Maternal Death is the important tool for the strengthening of the health system.
2. It sensitizes all the health care providers, district and state authorities to focus on averting maternal mortality.
3. Maternal Death Review helps in improving safe motherhood programmes for preventing maternal morbidity and mortality.
4. It helps in finding the lacunae's in the health system thus helping to overcome those lacunae's by taking necessary steps.
5. Communities can monitor availability, access and quality of health services.
6. 6. Through Maternal Death Review major causes leading to the death of the mother can be identified.
7. Maternal Death Review helps in identifying one the delays leading to the maternal death.
8. It helps in increasing the transparency and accountability throughout the process.
9. The tool also included issues to be explored in community level discussions, like socio cultural practices, discrimination and HIV or disability related exclusion, geography related exclusion from health services.
10. The apparatus remembered areas for: foundation data on the family, the individual history of the perished lady, her conceptive history, clinical history, story of the occasions paving the way to the lady's death, subtleties for the current pregnancy, significant subtleties for death in antenatal or postnatal period or intrapartal death, her privileges infringement – in the family and versus the wellbeing framework

- THANK YOU