Actions to reduce maternal deaths

Important aspects: Antenatal care

- All ANC to be examined by MO and HR ANC by Gynaecologist.
- Early registration, minimum 4 check ups and ideally 8 check up.
- BP recording and Hb estimation should be accurate and also calibration of equipment
- Monitoring of weight increase and Hb status in each visit
- Lab tests like Hb, urine, bl gr, SCA, VDRL, HIV, Thyroid for all
- Sonography of all ANC at least one and additional as per specialist advise
- Review of how many HR ANC and which HR factor as per percentages given
- HR identification, severe anemia detection and tracking and follow up till she is delivered
- Birth plan monitoring. To decide birth place as per high risk factor identified
- Village wise referral plan and it should be as per HR condition. Avoid multiple referrals
- Identify messenger for difficult villages and also vehicle for transport of mother in case of emergency

High risk ANC identification and tracking

Sr no.	High Risk factor	Approximate prevalence	
1	HDP	8%	**MIS data shows that our HR identification is 11%** **Range is - 4% (Nagpur)** **- 33% (Bhandara)**
2	GDM	5%	
3	Previous LSCS	5%	
4	Preterm labour	7%	
5	Abnormal presentation	3 to 4%	
6	Severe anemia	2%	
7	Adolescent pregnancy	3 to 5%	
8	Multiple pregnacy	2%	
9	Hemorrhage	1 to 2%	
10	Heart disease	1%	
	TOTAL	About 41%	

Important aspects: Intranatal care

- Delivery point mapping as L1 L2 L3 and strengthening as per norm
- Trained staff (Nursing staff as well as MO)
- Labour room as per guidelines with functional equipments, protocols, kits like eclampsia/PPH, NBCC. CS, MS, MO to take round frequently
- Operationalisation of FRU, making available specialists
- Ensuring availability of emergency LSCS (monitoring 8 PM to 8 AM LSCS. Highest is Nandurbar 42%. Dhule, Sangali and Nagpur with 0 LSCS during this period. Nanded, Aurangabad very low)
- Ensure functionalization of BSU at each FRU and availability of blood / components

Important aspects: Postnatal care

- Post natal care important as 68% deaths are during post natal period
- Ensure minimum required stay at health facility and focus on improving quality of PNC Care visits.
- The patient should be observed for a minimum of two hours in the labour ward, during which time her vital signs are to be monitored closely; at least every thirty minutes.
- Home visits during PNC visit (1, 3, 7, 14, 28, 42 days)
- Quality of HBNC visits by ASHA
- Family Planning services

Maternal death review

- Each maternal death to be reviewed very seriously with all details as per format
- Ensure complete reporting and filling of physical formats.
- Monthly review of Maternal deaths and corrective actions based on recommendations by DQAC.
- Maternal death to be reviewed under chairmanship of DM and Mun Commissioner.
- DD level audit of selected maternal deaths (Quarterly)

Hypertensive disorder in Pregnancy (PIH/Eclampsia/Preclampsia)- 16% of maternal deaths

- Early diagnosis of hypertension in pregnancy and its management.
- Blood pressure should be properly recorded in each antenatal visit especially by MO.
- About 8% ANC having hypertensive disorders. As per MIS – 2 to 3%
- **Referring patients with severe symptoms -** Give the loading dose of magnesium sulphate and antihypertensive. Contact higher center when referring such patients.
- For everyone with severe hypertension check platelet count and liver enzymes to exclude HELLP Syndrome .
- Management of eclampsia and pre eclampsia as per the protocol.
- Patients with pre-eclampsia should be carefully monitored for at least 72 hours after delivery as eclampsia can develop in postpartum period.
- Severe hypertension of 160/110 and above should be controlled with parenteral antihypertensives as it may lead to cerebral hemorrhage.
- The preventive doses of Oral Calcium supplementation- Ensured by Health Staff to reduce risk of hypertensive disorders/pre-eclampsia/eclampsia.
- Capacity building of staff on use of eclampsia kit.

Obstetric Haemorrhage (APH/PPH) – 13 % of maternal deaths

- **Women with known risk factors for obstetric hemorrhage** –Delivery in FRUs with facilities for blood transfusion, laboratory work up and surgical procedures.
- All labour room should be equipped with PPH Box.
- Postpartum patient - monitored for at least 2 hours after delivery.
- In addition to recording pulse and BP, the uterus should be palpated to make sure that it is hard and contracted and the bleeding is within normal limits.
- PPH is most common cause of death in transit .Ensured , properly applied TVUAC (transvaginal uterine artery clamp) clamps, UBT ,condom tamponade or effective packing should be done depending on the type of PPH along with IV Fluids.
- PPH deaths were due to atonic PPH. This stresses the importance of AMTSL
- BSU to be made operational in all FRU. Ensure availability of blood and components (Ongoing bleeding can lead to DIC)

Sepsis (Puerperal Sepsis, Post Surgical Procedure , Septicemia)

- Ensure 100% institutional deliveries.
- Follow up during post natal period
- Signs of sepsis should be picked up at the earliest for timely diagnosis and intervention. Antibiotic to be started by ANM before referral
- Prevention of Sepsis - Appropriate infection prevention and control measures in all obstetric situations.
- Strict asepsis in all routine procedures in LR and OT
- Daily inspection of wound in cesarean patients to find out the early stage of infection.
- Early warning signs of sepsis should not be ignored.
- Proper sterilization of instruments to be ensured and adequate sets of instruments to be kept ready after autoclaving depending on the number of deliveries.

Severe Anemia (4%) of maternal death

- As per NFHS-5 survey report for Maharashtra , Anemia in non pregnant women (15-49 years) increased to **54.5%** (NFHS-4 report 47.9%)
- IFA supplementation to women in reproductive group as per AMB guidelines.
- Treatment and prevention of Anemia by providing IFA supplementation in ANC and PNC as per AMB guidelines.
- Ensure Hb level estimation of pregnant women(Minimum 4) during ANC visits.
- Integrated approach to prevent maternal anemia and treatment of severe anemic mothers by Inj Iron sucrose at PHC level .
- Severely anemic Pregnant women (<5 gm % Hb) should be referred urgently to DH/FRU for evaluation and blood transfusion.

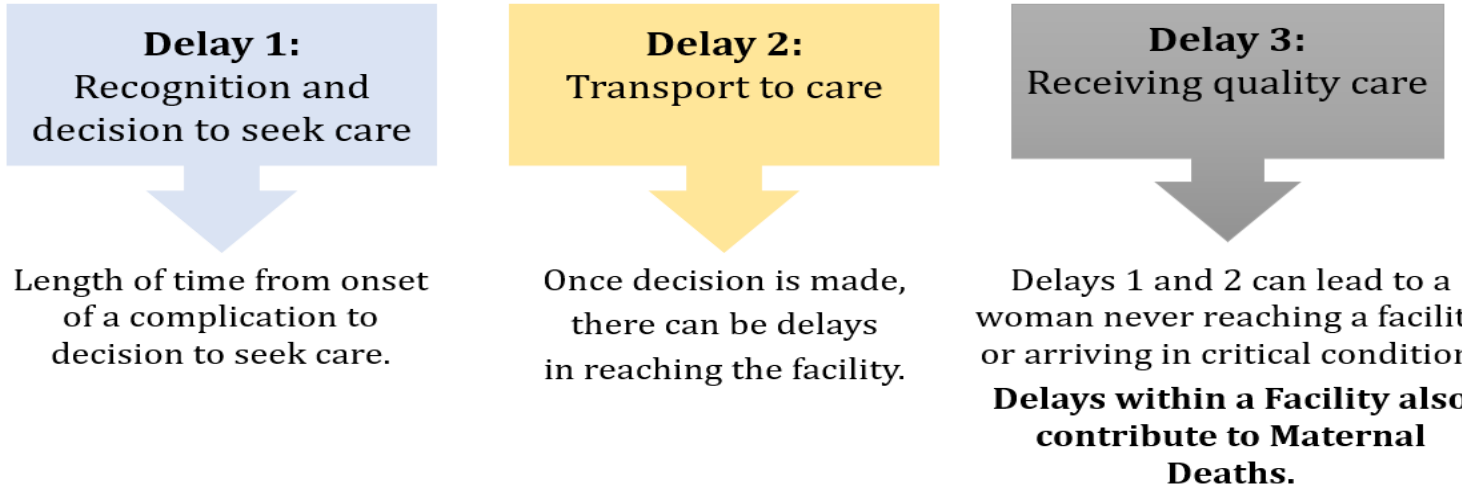
Sickle Cell Disease in pregnancy

- Use of proper protocol
- Antepartum management of SCD pregnant women .
- Multidisciplinary team should be formed at tertiary hospital for management of pregnant women with SCD .

Maternal deaths due to Respiratory , Cardiac , Hepatic and Cardiac disease

- Protocol-based treatment of non obstetric causes like respiratory, hepatic, heart disease needs to be emphasized.
- Ensure Covid-19 Vaccination of all pregnant women.

Avoiding the delay



- **Delay 1 -** Emphasizing on focused IEC of various maternal health schemes like JSY, JSSK, 102, PMMVY and 108 (only in obstetric emergencies) and sensitizing the health workers & community regarding pregnancy-related risk factors and complications among the communities.
- **Delay 2** -Strengthening referral linkages by mapping the nearby equipped health facility and preparedness of health facilities to attend the emergency cases.
- **Delay 3 –** Providing quality services at all delivery points .Preparedness of all FRU for providing emergency services should be ensured (Specialist , SN , Blood and Blood products and other logistics). Increase no. of facilities for adoption of quality standards under LaQshya and Suman.