Internal Examination

- 8th August- Community Medicine-60 marks
- 10th August – ENT- 40 marks
- 12th August- Ophthalmology- 40 marks

Prelims- From 3rd October

- Likely to be reschedule in any unavoidable circumstances.

A. How many minimum antenatal visits are recommended?

B. Recommended schedule for desirable antenatal visits are?

C. Name the infectious diseases screened during antenatal period routinely.

D. Name the Urine pregnancy test kit Made by Government of India.

- 35 years old woman came to sub centre with 14 weeks of amenorrhoea to register her pregnancy. MPHW noted following findings .
- Height 153 cms, Weight- 55 kg, BP- 116/78 mm/hg
- $G_5 P_2 A_2$, 1 child expired within 1 hour after birth.
- Living child was 18 months old.
- What additional information are required?

Contd..

- Both deliveries were at PHC & normal.
- As per MAMATA card-

She attended only 2 AN visits during 8 & 9 month before delivery. Information about 2 TT doses were there.

? Current Visit name the lab. Investigations to be conducted.

Contd..

Current Visit the lab. Investigations result-

Urine- Albumin , sugar normal,

Malaria- negative, Hb- 8 gm%

Write the protocol for Antenatal care for her during this visit.

What is the protocol for Management of anemia

- Conformation of pregnancy .
- Registration & filli the MAMATA card
- 1st dose of TT.
- Refer for Rh typing at PHC, VDRL, HIV, Hep B
- IFA - 2 IFA tablets (*100 mg* elemental iron and 0.5 mg folic acid)

Hb estimation- after a month.

- If the level has increased>continue with two tablets of IFA daily till it comes up to normal.
- If it does not rise in spite of the administration of two tablets of IFA daily and dietary measures, refer the woman to the MO at the PHC.

Smita Is No More

The flame is extinguished but the light lingers on...

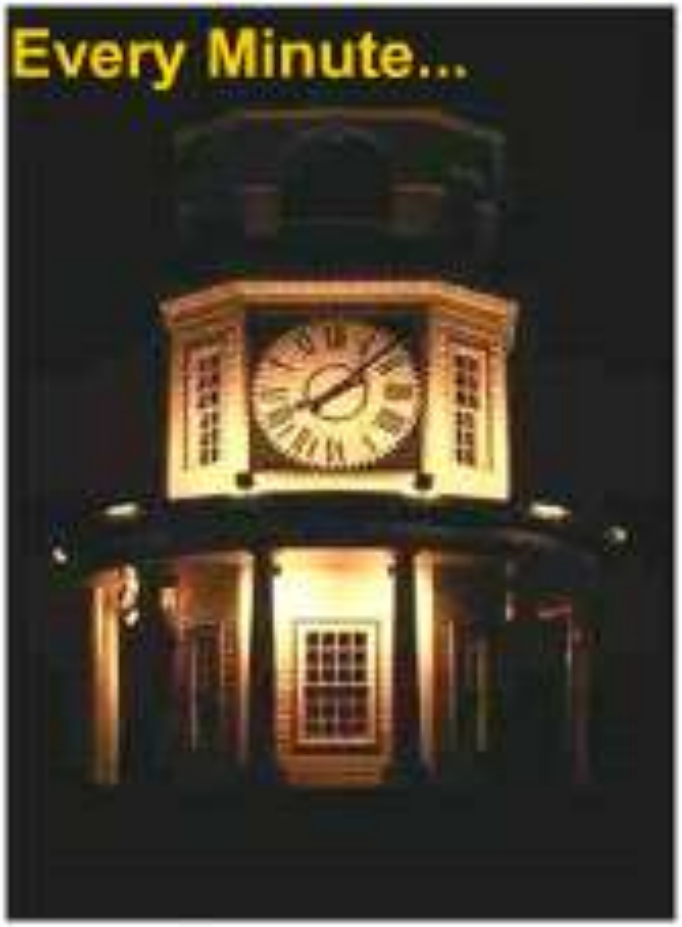
Maternal Mortality

"A Mother can never be replaced"

Learning Objectives

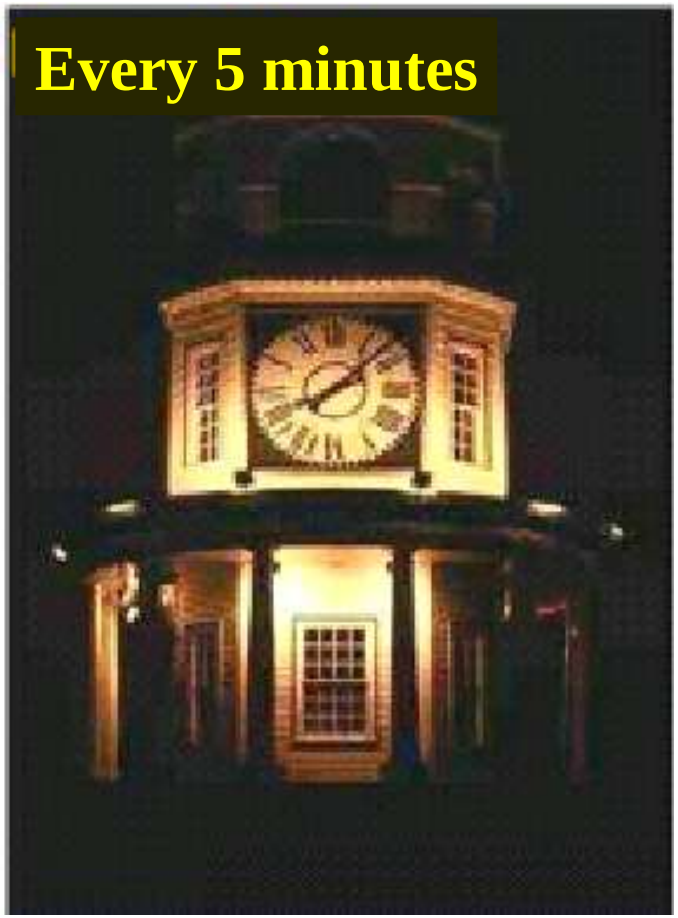
- At the end of this lecture each student should be able to:
  - Define Maternal Mortality
  - Enumerate the measures of maternal mortality
  - Enlist causes of Maternal Mortality
  - Understand the importance of prevention of maternal mortality
  - Enlist various schemes and programmes related to the Maternal Mortality

Maternal Death Watch



- 380 women become pregnant
- 190 women face unplanned or unwanted pregnancy
- 110 women experience a pregnancy related complication
- 40 women have an unsafe abortion
- 1 woman dies from a pregnancy-related complication

Maternal Mortality Rate in India



- A woman dying every five minutes.
- In 2010, 19 per cent of the 287,000 maternal deaths are contributed by India.
- This is the highest burden for any single country

Maternal Mortality

- Explain maternal mortality
- MMR- define
- Current MMR
- Reasons/ causes- direct/ indirect/ 3 delays
- Prevention- ANC, INC,PNC- EOC, Em OC

  Service provision- programmes, centres

Maternal Death
Definition (WHO)

Death of a woman while pregnant or within 42 days of delivery or termination of pregnancy, irrespective of the duration and the site of the pregnancy from any cause related to or aggravated by the pregnancy or its management.

Pregnancy related death

It is a death of woman while pregnant or within 42 days of termination of pregnancy, irrespective of cause of death

Late Maternal Death

- Death of woman from direct or indirect obstetric causes more than 42 days but less than one year after termination of pregnancy.

Measures of Maternal Mortality

Measures of Maternal Mortality

- **Maternal Mortality Ratio**:

- **Maternal Mortality Rate**:

- **Life time risk of Maternal Death**:

Measures of Maternal Mortality

Maternal Mortality Ratio:

- represents the risk associated with each pregnancy
- It is calculated as the number of maternal deaths during the given year per **1000 live births** during the same period.
    - **Used for international comparison**

$$\text{Maternal Mortality Ratio (MMR)} = \frac{\text{Number of maternal deaths}}{\text{Number of live births to women}} \times 100000$$

$$\text{Maternal Mortality Rate} = \frac{\text{Number of maternal deaths}}{\text{Number of living women (15-49 years)}} \times 100000$$

Measures of Maternal Mortality

Life time risk of Maternal Death:

- Takes into account both
  - -the probability of becoming pregnant and
  - -the probability of dying

as a result of the pregnancy cumulated across a woman's reproductive years.

Numbers

- Life time risk of Maternal Death

  - **World:** **1 in 75**
  - Industrial countries: 1 in 4100
  - Sub-Saharan region: 1 in 13
  - **India:** **1 in 55**
  - Sri Lanka: 1 in 610

MDG 5- Reduce by three quarter between 1990 & 2015

India-167 maternal deaths per 100,000 live births

Gujarat- 122 maternal deaths per 100,000 live births (Source- SRS 2012)

Goal

To reduced MMR

to

100/100,000 by 2010

Factors/Causes Of Maternal Deaths

Direct Obstetric Causes

- Antenatal
- Intranatal
- Postnatal

Direct Obstetric Causes
Antenatal

- Antepartm H’ge,
- Unplanned Pregnancy
- Unsafe abortion, Illegal abortion
- PIH
- Pre eclampsia, eclampsia
- Malpresentation
- Multiple birth

Direct Obstetric Factors/Causes

Intranatal

- PPH
- Sepsis
- Toxmia
- Prolonged labour
- Malpresentation
- Embolism

Postnatal

- Sepsis
- Toxmia (48 hrs.)
- HIV

Indirect: Causes Of Maternal Deaths

-Height:-<140cms

-Age: <20 yrs,

Primi>35 yrs

-Marital Status

-Accidents

Bad obstetric history

-Anemia, malnutrition

-Multipara

--Wantedness status of the Pregnancy

-Narrow birth interval-< 3 years

-Associated disease:

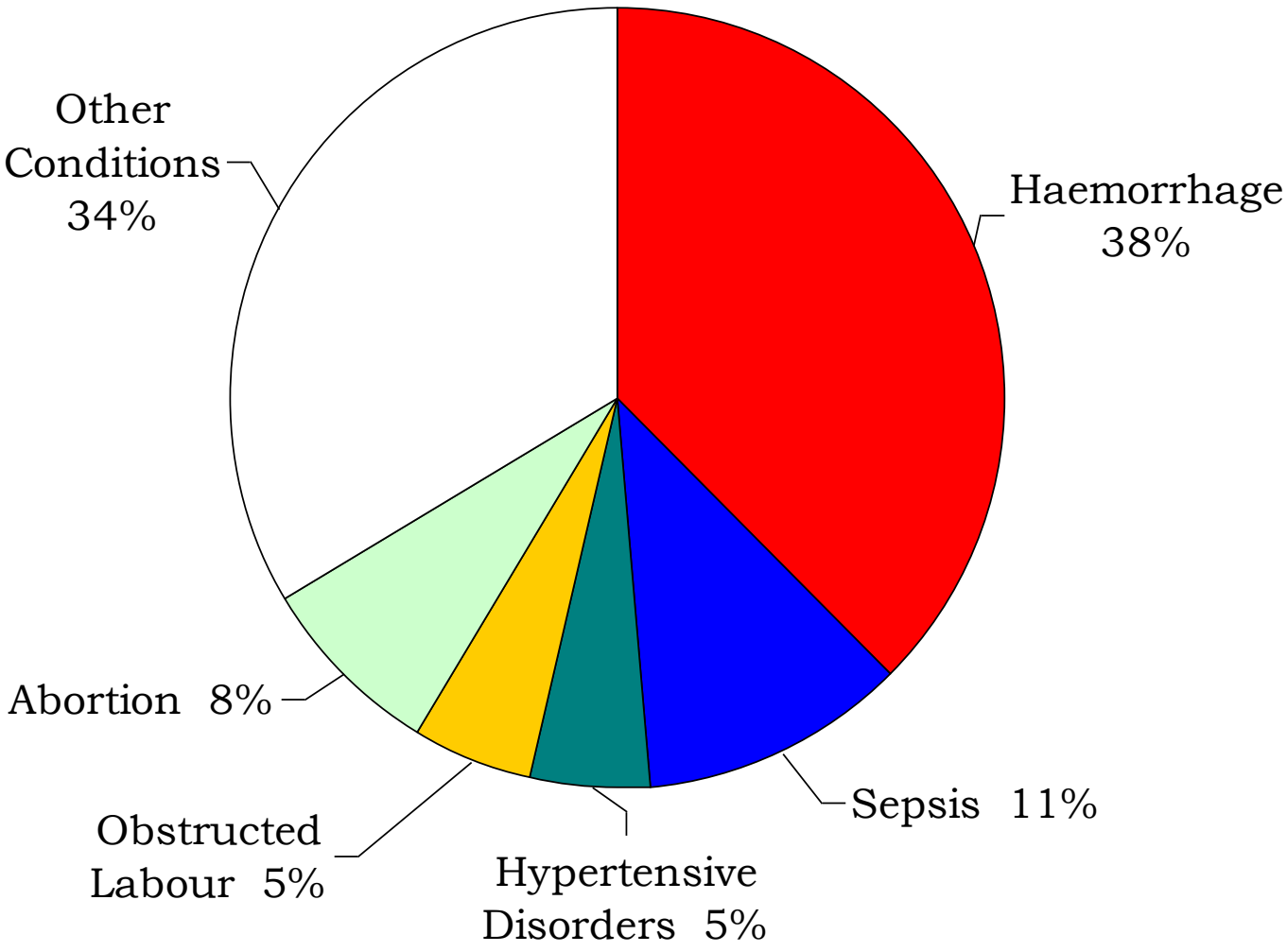
HIV,STD, TB.

Diabetes, Hypertension,

Cardiac, Renal, hepatic…

-Malignancy

Causes of Maternal Death in India



Maternal Death Study

•28 year old 3rd para named Laxmi conceived for third time.

• She and her family members believed in traditional practice. They denied any antenatal check up and had planned home delivery.

•During second trimester she developed oedema and it was increasing. Even after counseling to undergo institutional delivery by MPHW, they denied and her family member convinced only to get her deliver by traditional birth attendant (TBA) at home only.

•Laxmi developed eclampsia during labour. The birth attendant who was conducting delivery asked family members to take mother to CHC (20 kms away) for further management.

•As there were no any male member at home, Laxmi's husband and two male relatives were called to arrange her referral.

• 10 minutes- for male members to come home.

•25 minutes - to arrange transport as Ambulance driver was on leave and out of station.

•15 minutes - transportation time to reach CHC

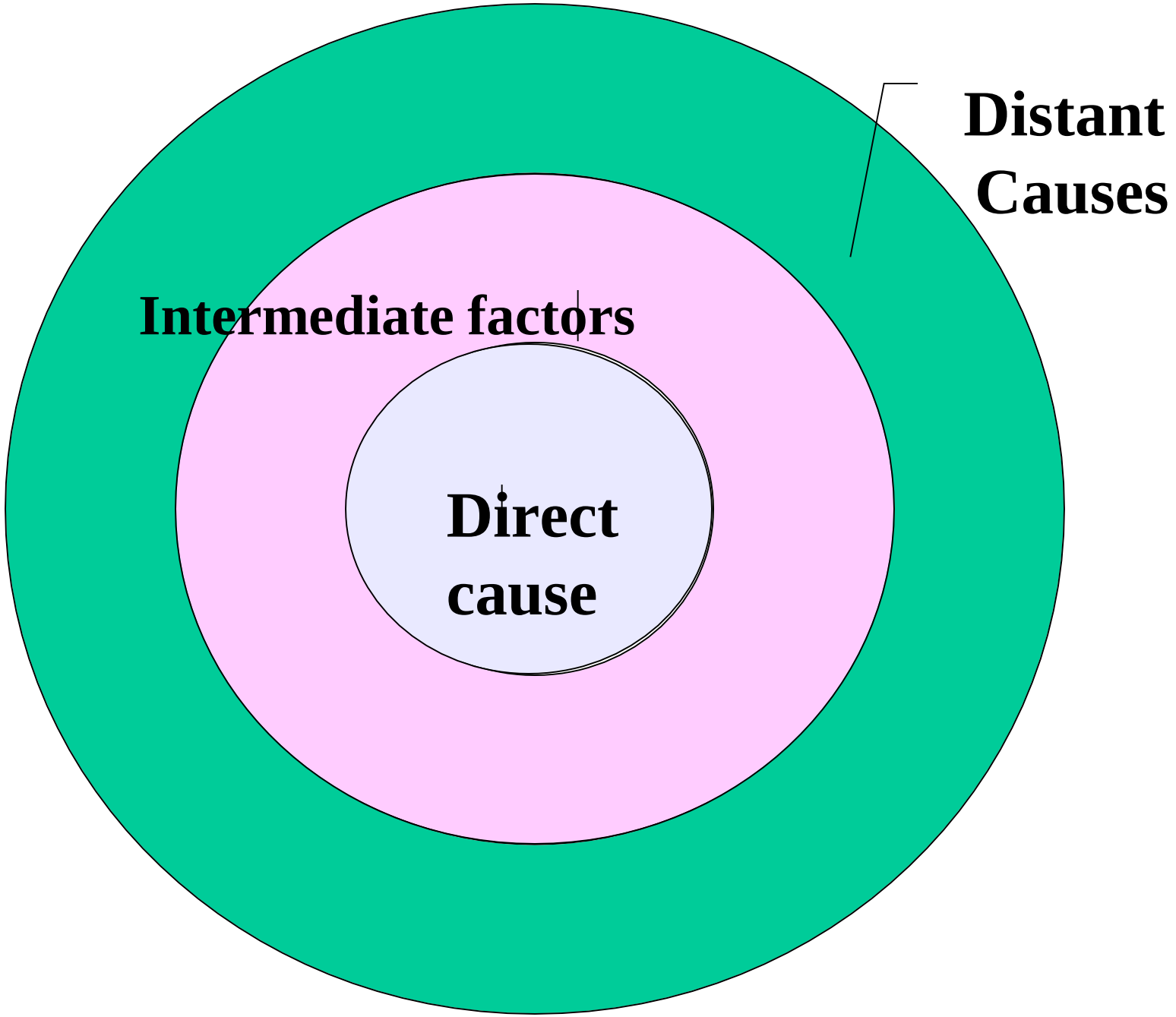
Meanwhile her condition detoriated and doctors tried a lot but could not save her.


One or more
risk factor present
No risk factor
present

Maternal Health Services

- Good quality maternal health services are not universally available and accessible
  - > 35% receive no antenatal care
  - ~ 50% of deliveries unattended by skilled provider
  - ~ 70% receive no postpartum care during 1st 6 weeks following delivery

Non obstetric Factors Affecting Maternal Mortality


Distant
Causes
Intermediate factors
Direct
cause

Non obstetric Factors Affecting Maternal Mortality in the Developing Countries

Distant Factors

- Socio-Economic Status

  of woman, house hold , community
- Illiteracy
- Women workload

Non obstetric Factors Affecting Maternal Mortality in the Developing Countries

Distant Factors

- Socio-Economic Status

  of woman, house hold , community
- Illiteracy

Intermediate Factors

- Reproductive Behavior
- Health Behavior
- Access to Health Services
- Action taken in case of complication

Reproductive Behavior

Too early,

Too frequent &

Too many children

Health Behavior: Prenatal, Natal & Postnatal

- ✓ Non utilization of Health Care Services including
  - o Family planning
  - o Harmful traditional practices
  - o Unsafe abortion

Access to Health Care Services

- ✓ Access to information about services
- ✓ Physical Access to Services

  Location of facilities / services
- ✓ Financial Accessibility to Services
- ✓ Quality of services

Action taken in case of complication

- **3 delays**

1. **Delay in recognizing the problem & taking decision to seek care**
2. **Delay in Reaching care**
3. **Delay in Receiving care**

-Recognizing the problem-

Lack of awareness of danger signs, low status of women, no control over resources, lack of decision making

Delay 1

-Deciding to seek care-

Inaccessible health facility, fear of cost , fear of poor treatment

-Recognizing the problem- Lack of awareness of danger signs, low status of women, no control over resources, lack of decision making

-Deciding to seek care- Inaccessible health facility, fear of cost , fear of poor treatment

3 delays

1-Delay in deciding to seek care on the part of the individual, the family, or both

Social/Community Factors

- **Low social status of women**
- **Myths and Misconceptions**
- **Lack of education**
- **Cultural and Tradition**

Medical Factors

- **Failure to screen and refer high risk pregnancies**
- **Lack of timely recognition of danger signs by the birth attendant and referral for the same**

Delay 2: Delay in reaching the health facility (high costs, lack of transportation, poor roads).

Lack of transport facility

Reaching inappropriate facility

Delay 2

Delay in reaching an adequate health care facility

Access Factors

- Lack of transport facility
- Financial barrier
- Previous bad experience
- Reaching inappropriate facility

Medical Factors

- Failure to follow proper referral protocol
- Failure to institute basic treatment before referring to another facility

Delay 3: Delay in receiving adequate treatment once a woman has arrived at the health facility (poor organisation or lack of skilled doctors and nurses, gaps in supply of equipment, shortfall of blood).

Delay 3

Delay 3 -

Delay in receiving adequate care

-Procedural delays in getting appropriate treatment at the facility

-Lack of trained staff & services at the facility

- Lack of 24 hour EmOC facility
- Motivated manpower
- Absence of requisite (specialised) manpower
- Absence of standardised management protocols
- Low availability of drugs,blood
- Lack of diagnostic and investigative facilities
- Lack of adequate nursing care and aseptic environment

PREVENTION
OF MATERNAL MORTALITY

PREVENTION

- Mortality by Direct cause
- Mortality by Indirect cause

PREVENTION

- Mortality by Direct cause

Woman

- Antenatal
- Intranatal
- Postnatal

Health care services

Antenatal Care

- Objectives of ANC
- ANC visit
- At risk mother

Objectives of Antenatal care

- Identify high risk mother
- Complication readiness
- Prophylaxis & Disease detection
- Counselling- Nutrition, Infant feeding , Family planning after delivery

Essential obstetric care (EOC)

- **1st visit: Within 12** weeks—preferably as soon as pregnancy is suspected—for registration of pregnancy and **first antenatal check-up.**
- **2nd visit:** Between 14 and 26 weeks.
- **3rd visit:** Between 28 and 34 weeks.
- **4th visit:** Between 36 weeks and term.

ANTENATAL CARE

- Minimum 4 ANC visits- Early identification of at risk mother
- TT immunization
- IFA tab.
- Lab.- Rh, Hb,Sugar, HIV, Syphilis
  - Urine- Sugar, Albumin

- HIV positive mother>> referred to ARV centre>>>>ART treatment irrespective of CD4 count>>>> Protocol for HIV exposed child

Identification of At Risk Mother

PHAME

P- Prolong pregnancy (>14 days after EDD)

Previous Bad obstetric history-CS or instrumental delivery, PPH, Foetal loss

H-Height ≤140 cms

Hydramnios

A-Anemia, threatened abortion, Ante Partum Hemorrage

M- Multiple pregnancy

- Malpresentation,

-Medical disorder- CHD,DM,STD,TB, hepatitis or jaundice…..

E-Elderly primi (≥30 years)

-Elderly multipara

-Eclampsia /Pre eclampsia

All at risk mother must undergo Institutional delivery

Intra natal Care

- **Essential obstetric care –**

Institutional delivery ,

If home delivery- by Skilled birth attendant & using

Disposable delivery kit

- **Emergency Obstetric Care, (EmOC)**

Components of EmOC

✓ Basic EmOC 6 components

1. Administer parenteral antibiotics
2. Administer parenteral oxytocic drugs
3. Administer parenteral anti-convulsants for pre-Eclampsia & Eclampsia
4. Perform manual removal of Placenta
5. Perform removal of retained products
6. Perform assisted vaginal delivery- Forceps, Vaccume

✓ **Comprehensive EmOC- A,B, C**

A. Anesthesia, B- Perform Blood transfusion

C--C-section , care of new born (management of complication)

Post natal Care

- Regular Postnatal Visits
- Identification of Complication in mother & child & referral
- F.P. counseling
- BF counselling

Post natal Care

No. Of Post natal visit- for mother & new born

1. 1st day (Home delivery)

   3rd day (Institute . Del.)
2. End of 1st week
3. End of 2nd week
4. End of 3nd week
5. End of 4th week
6. End of 6th week

PREVENTION

Woman

- Antenatal
- Intranatal
- Postnatal

Health care services

Health Care Service By Govt.

Govt. efforts to prevent maternal death

- Programms
- Health Care Provision– Centre

  - Providers

Health Care Service- Programs/ Yojana

NRHM- National Rural Health Mission

(2005-2012)

- RCH- Reproductive & Child Health
- Chiranjivi Yojana-

- Janani Suraksha Yojana:-

Health Care Service- Programs/ Yojana

- Chiranjivi Yojana- Public private partnership\ free Delivery of below poverty line woman in private hospital
- Janani Suraksha Yojana:- ANC Rx & Ix., delivery of women totally free in all govt. hospital

Facility

- **To promote institutional delivery-**

  24X7 PHC, Additional post for Staff nurses

- **For management of complication-**

  - Linkage with higher centre

-Building up FRUs- Emergency Ob. Care

-hiring anesthetist on contractual bases

-Improve transportation- more Ambulance, 108 services,

Facility

- **Training of staff (MO)-** Assisted delivery, manual removal of placenta, pre referral management, Anesthesia (in emergency),

RCH

- Immunization,
- Essential obstetric care,
- Emergency Obstetric Care, (EmOC)
- 24-hour deliveries at PHC/CHC,
- Referral transport to indigent families,
- Blood supply at FRUs,
- Essential newborn care,
- Medical termination of pregnancy
- RTI/STD clinics,
- Several other components including promotion of Indian systems of medicine, special programmes for urban slums, tribal areas and adolescents, research, training, IEC, involvement of NGOs, MIS, supplies and logistics and minor civil works.

Health Care Provision by Govt.

Urban Area

- Urban Health Centers
- Referral Hospitals
- Tertiary care Hospitals

Rural Area

- Sub centre
- Primary Health centre
- Community Health centre
- First Referral Unit, District Hospitals. Tertiary care Hospitals
- .

Health Care Workers

Urban Area

- Grass route worker – only in high risk areas
  - Link Workers
  - Trained Traditional birth Attendant
- UHC M.O.
- Health Officers

Health Care Workers
Rural Area

Grass route worker

- **TBA-**

  Trained Traditional birth Attendant
- **ASHA-** Accredited Social Health Activist
- VHG- Village Health Guide
- MPHW(F)- Multipurpose health worker female

Health Care Workers
Rural Area

- Grass route worker
  - Trained Traditional birth Attendant
  - -ASHA- Accredited Social Health Activist
  - VHG- Village Health Guide
  - MPHW(F)- Multipurpose health worker female
- Medical Officer- PHC,CHC
- Specialist doctors at FRUs, District hospitals, Tertiary hospital, some CHCs

Incentives to workers for better quality care

- Monitory incentive to ASHA/ link worker per Mother-once they finish 6 PNC visits

Interventions: Traditional Birth Attendants

Advantages

- Community-based
- Sought out by women
- Low tech
- Teaches clean delivery

Disadvantages

- Technical skills limited
- May keep women away from life-saving interventions due to false reassurance

Indirect causes

1. Too early,
2. Too frequent
3. Too many children

1. Delay in taking decision to seek care
2. Delay in Reaching care
3. Delay in Receiving care

Promote

1. Women's status & empowerment
2. Early registration
3. Institutional deliveries
4. Improve acceptances of family planning method at proper time

1. Health facility
2. Quality of care
3. Transport

- **Each maternal death is a tragedy**
- **What is also a tragedy is failing to learn lessons from why she died**

Questions

- Maternal mortality
- Define Maternal Mortality
- Enumerate the measures of maternal mortality
- Causes of Maternal Mortality
- Prevention of maternal mortality
- Enlist various schemes and programmes related to the Maternal Mortality
- 3 delays in action for maternal complication

Maternal Mortality

- Explain maternal mortality
- MMR- define
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  Service provision- programmes, centres


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