Session 14: The Prospective Morbidity Survey (PMS)

Aims and Objectives
Defining key outcomes

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Table 2-2 WHO Figa-Talamanca criteria used for reclassification of abortion cases

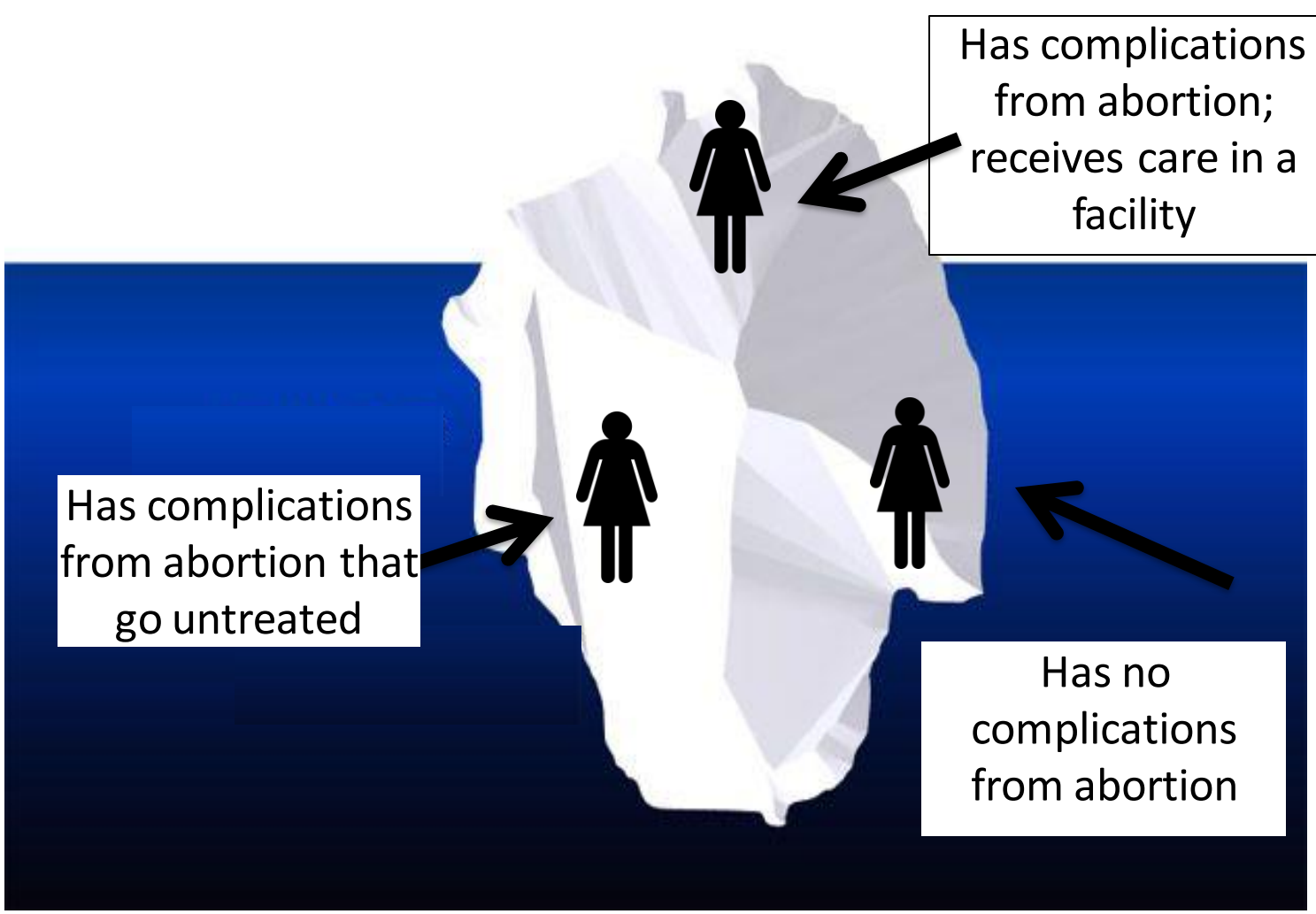
	Criteria	Certainly induced abortion	Probably induced abortion	Possibly induced abortion	Spontaneous
1	**Woman's statement that she had an induced abortion**	Classify in this category if (1) OR (2) OR (3) is present	Not present	Not present	Not present
2	**Health worker or relative's statement if woman died due to abortion**		Not present	Not present	Not present
3	**Evidence of genital trauma or foreign body**		Not present	Not present	Not present
4	**Sepsis or peritonitis or admission thereafter**	This criterion may be present or not present	Classify in this category if criteria (4) AND (5) are present	Classify in this category if criteria (4) OR (5) is present	Not present
5	**Pregnancy unplanned (use of contraception during the cycle of conception)**	This criterion may be present or not present		Classify in this category if criteria (4) OR (5) is present	Not present

Source Figà-Talamanca et al. (1986)(25).

Exit interviews

- Typical inclusion criteria- women presenting for PAC admitted for a minimum of 24 hours
- Able to consent (age, physical/clinical condition)
- Data collected includes- sociodemographic information, reproductive history, type of abortion and surrounding circumstances, experience of care

Which Women does the PMS capture?



Overall aims and objectives

- To assess the frequency of abortion-related complications
- To provide detailed data on the severity of complications
- To provide detailed data on the clinical care women receive
- To assess the factors associated with varying severity of complications
- To explore the experiences of care for women receiving PAC
- It can provide data for detailed costing studies

Definitions (1)

- An abortion is defined as the loss of pregnancy before foetal viability i.e. before a foetus becomes capable of independent extra-uterine life. The age of foetal viability varys according to settings.

- An induced abortion, also known as a termination of pregnancy, is an abortion initiated by deliberate action undertaken with the intent of terminating pregnancy.

- A spontaneous abortion is one which is not induced, even if an external cause is involved such as trauma or communicable disease.

Definitions (2)

Different terms describe the progressive stages of abortion (spontaneous or induced):

- Threatened abortion case-definition: light bleeding and/or abdominal pain in pregnant women <28 weeks of gestation with a closed cervix and embryo/foetal cardiac activity.

- Inevitable abortion case-definition: bleeding +/- abdominal pain in a pregnant women <28 weeks of gestation with an open cervix, product of conception still inside the cavity (with or without embryo/foetal cardiac activity at ultra-sound if done).

- Incomplete abortion case-definition: bleeding + expulsion of some product of conception +/- abdominal pain in pregnant women <28 weeks of gestation with an open cervix and retention of product of conception in the uterus cavity (with no embryo/foetal cardiac activity at ultra-sound if done).

Definitions (3)

- Complete abortion case-definition: bleeding + expulsion of all product of conception +/- abdominal pain in a pregnant women <28 weeks of gestation with a closed + an empty uterus cavity (no gestational sac & endometrial thickness <8mm(57)) at ultra-sound.
- Missed abortion case-definition: embryo/foetal demise with product of conception still inside the uterus cavity confirmed by ultrasound (gestational sac ≥ 25mm with no yolk sac or embryo; OR a fetus with a crown-rump length (CRL) of ≥7mm with no cardiac activity) with a closed cervix and no vaginal bleeding in a woman who was <28 weeks of gestation.
- Septic abortion case-definition: fever with foul smelling vaginal discharge within 42 days after an abortion.

Defining key outcomes (1)

Inclusion criteria:

1. Women admitted for abortion-related complications.

   Any hospitalizations resulting from (1)miscarriage/spontaneous or (2) induced abortion including (3) missed, (4) inevitable, (4) incomplete, (5) complete and (6) septic abortion whatever the abortion type (induced or spontaneous) and the severity (up to near-miss and death). Define gestational age here.

2. Ages of participants

3. Over a period of 28 days (~ I month)

4. In X facilities

Defining key outcomes (2)

Exclusion criteria:

We do not include women admitted for threatened abortions, ectopic pregnancies or molar pregnancies in this study.

- Ectopic pregnancy: An ectopic pregnancy is one in which implantation occurs outside the uterine cavity. The fallopian tube is the most common site of ectopic implantation (greater than 90%) more rarely, it can be in other locations such as the abdominal cavity or the cervix.
- Molar pregnancy: Molar pregnancy is characterized by an abnormal proliferation of chorionic villi with an absence of embryo/fœtus or an abnormal embryo/fœtus

***At presentation, it is difficult to clearly diagnose ectopic and molar pregnancy, women with ectopic or molar pregnancies are often managed in PAC services but are not per se women receiving post-abortion care.

Classifying abortion-related complications

Level of Severity	Criterion
Low (requires all criteria)	Temp. < 37.3 degrees Celsius
	No clinical signs of infection
	No system or organ failure
	No suspicious findings on evacuation
Moderate (requires ≥1 criterion)	Temp. 37.3–37.9 degrees Celsius
	Localized peritonitis (tender uterus, discharge)
	Offensive products of conce
High (requires ≥1 criterion)	Death
	Shock
	Evidence of foreign body/m
	Organ or system failure
	Temp ≥38 degrees Celsius
	Pulse > 119 beats/minute
	Generalized peritonitis

*Does not include physical evidence of misoprostol tablets.

(Source: adapted from Rees et al. (1997) (87))

Mild morbidity (requires all criteria)
- Temperature 35.1°C–38.9°C with no clinical signs of infection*
- No system or organ failure†
- Systolic blood pressure ≥90 mm Hg
- Haemorrhage not requiring any transfusion

Moderate morbidity (requires ≥1 criterion)
- Temperature 37.3°C–38.9°C
- Clinical signs of infection*
- No organ or system failure†
- No sign of shock‡
- Haemorrhage not requiring any transfusion

Severe morbidity (requires ≥1 criterion)
- Temperature ≥39°C or ≤35°C and a clinical sign of infection§
- Sepsis/septicaemia with no signs of septic shock‡
- Pelvic abscess or pelvic peritonitis with no signs of shock‡
- Clinical anaemia without haemorrhagic shock‡
- Uterine perforation without laparotomy or repair of perforated uterus, repair of gut perforation, hysterectomy

Near-miss (requires ≥1 criterion)
- Haemorrhagic shock‡
- Septic shock‡
- Generalised peritonitis
- Uterine perforation with laparotomy or repair of uterine perforation, repair of gut perforation or hysterectomy
- Organ/system failure†
- Massive blood transfusion¶

Death
- Loss of the life of a woman as a result of an abortion complication

Definitions within abortion severity

- Potentially life-threatening complication:

An extensive category of clinical conditions, including diseases that can threaten a woman's life during pregnancy and labour and after termination of pregnancy.

- Abortion-related near-miss:

A maternal near-miss case that occurs due to abortion. It is a woman who nearly died but survived a life-threatening complication that occurred during any type of abortion (i.e. miscarriage or induced abortion) or within 42 days of the end of the pregnancy

Classifying abortion-related complications

Near-miss	Potentially life-threatening complications (PLTCs)	Moderate	Mild
Cardiovascular	Severe hemorrhage *(Perceived abnormal blood loss greater than 1000mL, and/or any bleeding with hypotension (systPA<100mm Hg), and/or any bleeding requiring blood transfusion (<2 units), and/or Hemoglobin <4g/dL)*	Bleeding *(Heavy bright red vaginal bleeding (with or without clots), Blood soaked pads/towels/clothing, pallor)*	Vaginal Bleeding
Respiratory	Severe systemic infection (*Presence of fever (body temperature>38 degrees Celsius) + confirmed or suspected infection (for eg. septic abortion, endometritis, chorioamniotis, generalized peritonitis) + at least one of the following sign : 1) new/worsened altered mentation, 2) respiratory rate ≥ 22, 3) systolic BP ≤ 100mm Hg OR Tetanus infection signs*)		Cervix open
Renal			Abnormal vital signs (S*tandalone abnormal temperature, heart rate, systolic/diastolic blood pressure, and respiratory rate)*
Coagulation			
Neurologic			Abnormal mental status *(agitated, lethargic, comatose)*
Hepatic	Other intra-abdominal injury *(Evidence of bladder, rectum, bowels mechanical injury)* Generalized Peritonitis *(T°C>38,5°C + abdominal guarding (contracture = hard abdomen like roc) or rebound +/- ileus (decreased/no bowels sound, tenderness)*		Abnormal appearance (Sick-looking, pallor, jaundice, clammy) Abnormal abdominal exam (Rebounding/guarding. Distended, decreased bowel sounds, tense/hard, tenderness on palpitation)
Uterine	Uterine perforation *(Rupture of uterus confirmed by laparotomy)*	Uterine Infection-Endometritis or Chorioamniotis *(Chills, fevers, sweats Foul smelling vagina discharge History of interference with pregnancy)*	Uterine tenderness; Cervical Motion tenderness; Foul smelling vaginal discharge; Evidence of foreign body; Adnexal mass

Defining near-miss organ dysfunction (1)

- Cardiovascular dysfunction
  - *Shock : Syst PA <80mmHg alone or SystPA<90mmHg for >60min with pulse rate>120/min despite aggressive fluid replacement (>2L)*
  - *Cardiac arrest: loss of consciousness and absence of pulse/heart beat*
  - *Severe hypoperfusion: lactate>6mmol/L or 46mg/dl*
  - *Severe acidosis : PH<7,1*
  - *Use of continuous vasoactive drugs (for eg: dopamine, epinephrine, dobutamine, norepinephrine, adrenaline)*
  - *Cardio pulmonary resuscitation*

Defining near-miss organ dysfunction (2)

- Respiratory dysfunction
  - *Acute cyanosis,*
  - *Gasping (terminal respiratory pattern where the breath is convulsively and audibly caught)*
  - *Severe tachypnea (respiratory rate>40 breaths/min)*
  - *Severe bradypnea (respiratory rate<6 breaths/min*)
  - *Severe hypoxemia (O2 saturation <90% or PAO2/FiO2<200 for >60 min)*
  - *Intubation/ventilation >60min not related to anaesthesia*

Defining near-miss organ dysfunction (3)

- Renal dysfunction
  - *Oliguria non responsive to fluids or diuretics: urine <30mL/h for 4h or <400mL/24h*
  - *Severe acute azotemia (creatinine > 300umol/ml or >3.5 mg/dL)*
  - *Dialysis for acute renal failure*

- Coagulation dysfunction
  - *Failure to form clots*
  - *Severe acute thrombocytopenia (<50,000 platelets/ml)*
  - *Massive transfusion of blood or red cells (≥ 2 units)*

Defining near-miss organ dysfunction (4)

- Hepatic dysfunction
  - *Jaundice in the presence of sepsis or preeclampsia*
  - *Severe acute hyperbilirbuinemia (bilirubin>100umol/L or > 6.0 mg/dL)*

- Neurologic dysfunction
  - *Prolonged unconsciousness or coma (Glc <8 lasting>12hrs.)*
  - *Stroke*
  - *Uncontrollable fit/status epilepticus*
  - *Global paralysis*

Classifying severity

- Severity classifications are mutually exclusive
- Women are classified into the highest level of severity for which they met the criteria
- There is a need to coordinate with clinicians within the health system to determine the feasibility of using all of these criteria or making reasonable adaptations based on the capacity of the health system, the current content and quality of clinical records, and the burden to clinical data collectors