ABORTION AND ITS MANAGEMENT

OUTLINE

- Definition
- Classifications
- Causes
- Diagnosis
- Complications
- Management
- Prevention
- Burden/Magnitude

Definitions

- Abortion is defined as termination of pregnancy, either spontaneously or intentionally, before the fetus develops sufficiently to survive.
- Expulsion or extraction from its mother of a fetus or embryo weighing < 500g
- The gestational age at which the fetus is considered sufficiently developed to survive varies with regions of the world
- Nigeria – 28 weeks
- US – 20 weeks
- WHO – 20 – 24 weeks

CLASSIFICATION

It may be spontaneous or induced

According outcome

- Safe
- Unsafe

CLASSIFICATION

Clinically

- Threatening
- Complete
- Incomplete
- Missed
- Inevitable
- Septic
- Recurrent

Spontaneous Abortion

- Commonest complication of pregnancy
- Synonym: Miscarriage
- Incidence
  - 15% - clinical pregnancies
  - 60% - chemical pregnancies
- 80 % occur prior to 12 weeks gestation

Spontaneous Abortions

- Common in the extremes of maternal age(<20 &>35) and but much more in the upper extreme

- Increasing paternal age also increases the risk of spontaneous abortions

Causes of spontaneous abortion

- Genetic
- Maternal
- Toxic factors
- Trauma

Genetic Abnormalities

Chromosomal abnormalities

- Common in first trimester abortions
- 50-60% of fetuses expelled spontaneously contain chromosomal abnormalities
- Autosomal trisomy is the most frequent abnormality detected.

Maternal causes

- Maternal infections
  - Malaria
  - UTI
  - TORCHS syndrome
- Maternal disease
  - Anaemia
  - Hypertension
  - DM
  - SCD
  - Malnutrition
  - Cardiac disease etc

Maternal causes

- Uterine Defects
    - Cervical incompetence
    - Congenital anomalies
    - Previous scarring (Asherman's syndrome, myomectomy

Usually cause second trimester losses

Immunologic

- Rhesus incompatibility

Toxic factors

- Alcohol
- Smoking
- Radiation
- Cytotoxic drugs

Trauma

- Direct (gunshot wound to uterus)
- Indirect (removal of ovary containing corpus luteum of pregnancy)

Spontaneous Abortion

- Threatened
- Inevitable
- Incomplete
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Threatened Miscarriage

- When bleeding occurs in early pregnancy without dilatation of the cervix.
- About half of these will expel the fetus eventually
- Demonstration of fetal echo at the time of diagnosis is associated with favourable outcome
- Malaria and UTI are associated in this environment with threatened abortion
- Differentials include ectopic pregnancy and should be ruled out

Complete and Incomplete Miscarriage

- **Incomplete** miscarriage is evidenced by continued increasing bleeding following expulsion of products of conception
- The cervical os is almost invariably open
- There is usually abdominal pains as the uterus attempts expulsion of the products of conception
- The likelihood of incomplete abortion increases with increasing gestational age
- **Complete** miscarriage is when the whole products of conception is expelled and cervical os is closed.

Missed Abortion

- This is said to occur when a dead product of conception is retained behind a closed cervical os.
- Women usually report regression of symptoms of pregnancy
- The uterus is usually smaller than the corresponding gestational age
- Coagulopathy is more commonly associated with missed abortion compared to others

Inevitable Miscarriage

- In the presence of abdominal cramps which may be radiating to the back, Increasing bleeding, dilatation of the cervix.
- A threatened abortion becomes inevitable
- In more advanced pregnancy, loss of amniotic fluid in the presence of a pre-viable fetus is considered inevitable abortion

Recurrent Miscarriage

- This is defined as 2 or more CONSECUTIVE spontaneous miscarriages
- Majority of the women who are diagnosed as having recurrent miscarriages usually have a successful pregnancy with or without treatment

Recurrent Miscarriages

Potential etiologic factors in the causation of recurrent pregnancy loss.

Factor	Association with RPL	Causation of RPL
Parental genetics	Definite	Definite
Uterine abormalities	Definite	Probable
Uncontrolled thyroid disease	Probable	Probable
Uncontrolled diabetes	Probable	Probable
Polycystic ovary syndrome	Definite	Probable
Antithyroid antibodies	Doubtful	Doubtful
Antiphospholipid antibodies	Definite	Probable
Factor V Leiden mutation	Definite	Probable
Th1 cytokine bias	Probable	Probable
Increased NK cell cytotoxicity	Probable	Probable
Maternal HLA alleles	Probable	Probable
Parental HLA sharing	Doubtful	Doubtful

Note: RPL = recurrent pregnancy loss; Th1 = T helper 1; NK = natural killer; HLA = human leukocyte antigen.

Christiansen. Management of recurrent pregnancy loss. Fertil Steril 2005.

Induced Abortions

- This is **medical** or **surgical** termination of pregnancy before the time of fetal viability.
- There are a few therapeutic indications
- **In Nigeria majority are criminal or illegal**
- Most are unsafe abortions

Induced Abortions: Surgical Methods

- Surgical Methods
  - Dilatation & Curettage
  - Manual Vacuum Aspiration
  - Hysterotomy

Induced Abortions: Medical Methods

- Medical Methods (by several Routes of Administration)
  - Intravenous Oxytocin
  - Hyperosmolar Glucose
  - 30% Urea
  - 20% Saline
  - Misoprostol
  - Mifepristone
  - Methotrexate

Unsafe Abortion

'Unsafe abortion' is defined by the World Health Organization as 'a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards or both'[2]. Of note, 'unsafe' is not a synonym for 'illegal' or 'clandestine'. For example, legal abortions may be unsafe because of poorly trained clinicians, inadequate facilities, or both.

Unsafe tools used for induced abortion

Alligator pepper, chalk and alum

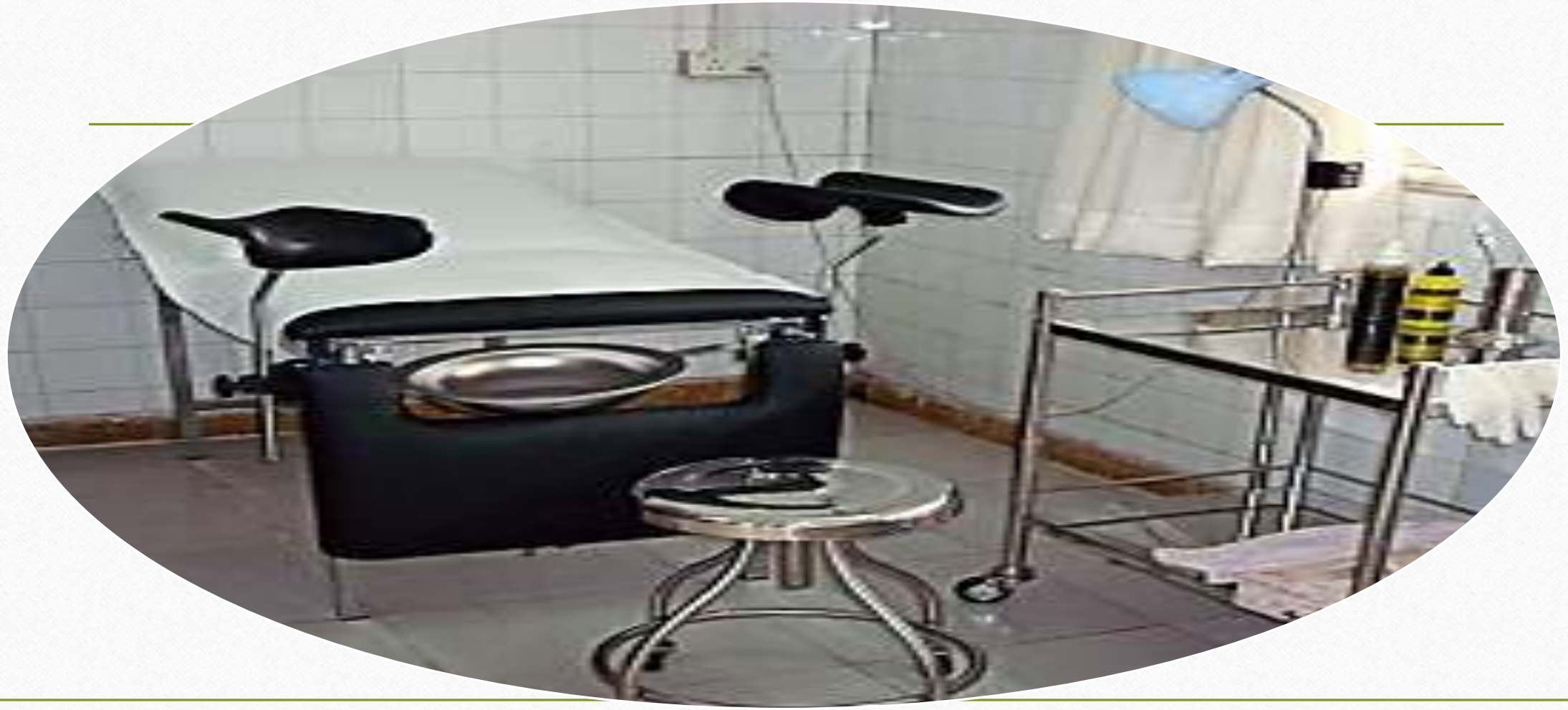
Cassava plant

Bahaman grass

Quinine and other Drugs

Bleach

Expected theatre set-up for safe abortion



Management

- Usually management of complications
- Investigations
  - Packed Cell Volume/FBC
  - Blood grouping in case of Rh negative
  - Crossmatching of blood
  - Pelvic Ultrasound
  - Abdominal X-ray (erect and Supine)
  - PT/PTTK
  - HVS/ECS for MCS
  - Sepsis work up as indicated
- Post Abortion care

Management: Threatened Miscarriages

- Ultrasound for fetal viability
  - Internal os assessment
- Reassure/Bed rest
- Abstinence from sexual intercourse
- Repeat ultrasound after 1 week

Management: Missed miscarriage

- Make a diagnosis usually by ultrasound
- Rule out coagulopathy and sepsis
- If early, expectant management may be instituted in the absence of sepsis or coagulopathy
- MVA if less than 12 weeks, medical induction with or without MVA if older
- Prophylactic antibiotics
- Send specimen for histology

Management: Recurrent mid-trimester miscarriages

- This is applied to recurrent mid-trimester abortions due to cervical incompetence
- Cervical cerclage insertion
- Two major methods
  - Shirodkar
  - McDonald

Management: Inevitable miscarriage

- FBC
- Group/crossmatch blood
- Relieve pain
- Give oxytocics to accelerate abortion process (if contracting)
- Manual vacuum aspiration

Management: Incomplete miscarriage

- Resuscitate
- Investigations
- Oxytocics
  - Ergometrine
  - Oxytocin
- MVA for evacuation of retained products
- Antibiotics and Tetanus Prophylaxis if induced (especially illegally)
- Follow the principles of post abortion care (PAC)

Management: Complete miscarriage

- Cervix is closed
- Investigations
  - FBC
  - MP, Urinalysis
- USS confirms empty uterus
- Prophylactic antibiotics

Management: Septic abortion

- Evidence of infection together with incomplete abortion
  - Pyrexia
  - Rigors
  - Abdominal pain
  - Odorous vaginal discharge
- Predisposing factors
  - Induced abortion
  - Retained products of conception

Management: Septic abortion….

Investigations

- FBC
- Clotting profile
- Septic screen
- E/U
- Abdomino pelvic USS
- ± X - ray

Management: Septic abortion……

- Septic abortion usually incomplete abortion
- Requires evacuation
- Septic uterus is soft
    - Easier to perforate
- Give oxytocics to contract uterus
- Give antibiotics for at least 6 hours before evacuation

Management: Septic abortion……..

- Life threatening condition
- Review by senior colleagues
- Multi – disciplinary management
  - General Surgeons
  - Physicians
  - Anaesthetists

Management: Septic abortion……

- Oxytocin drip
- Resuscitation
  - IV fluid
  - Blood transfusion
  - Fluid chart
- Antibiotics (Triple Regimen)
- Cover anaerobic + aerobic organisms
- Tetanus prophylaxis
- Analgesics
- Post-evacuation: Contraceptive counselling

Complications of septic Abortion

Early/Immediate

- Peritonitis
- Pelvic/intra-abdominal abscess
- Haemorrhage
- Coagulation failure
- Deaths : (Unsafe abortion)13% of maternal deaths

Long-term complications of unsafe abortion

- Chronic pelvic pain
- Chronic PID
- Ectopic pregnancy
- Infertility
- Asherman's syndrome

Other causes

- Infections
- Immunologic factors
  - Antiphospholipid antibodies
  - Lupus anticoagnlant
  - Anticardiolipin antibodies

Treatment : low dose aspirin/Heparin

POST-ABORTION CARE

The essential components of PAC include:

- Emergency treatment for complications of spontaneous or induced abortion
- Postabortion family planning counseling and services
- Linkages between emergency care and other reproductive health services, for example, management of STIs.
- Counseling tailored to each woman's emotional and physical needs; and
- Community and service provider partnerships.

Prevention of unsafe abortion

- Primary
  - Provision of RH information and services
  - Provision of quality sexuality education
  - Provision of family planning methods
  - Improved access to adolescents
- Secondary
  - Counseling for women with unwanted pregnancy
- Tertiary
  - Treatment for women with complications of unsafe abortion

Abortion in Context

- All countries & women of all ages
- Married and unmarried women
- Women with and without children

Planned Pregnancy

A woman may want to have a child, but:

- Pregnancy may threaten the woman's health or survival
- Fetal abnormality not compatible with life
- Partner, family or community pressure

Unintended Pregnancy

- Health considerations
- Socioeconomic concerns
- Cultural reasons
- End childbearing or space births
- Rape, incest
- Other personal reasons

Unintended Pregnancy

- **222 million**

  → women who do not want to become pregnant but are using no contraceptive method or a traditional method

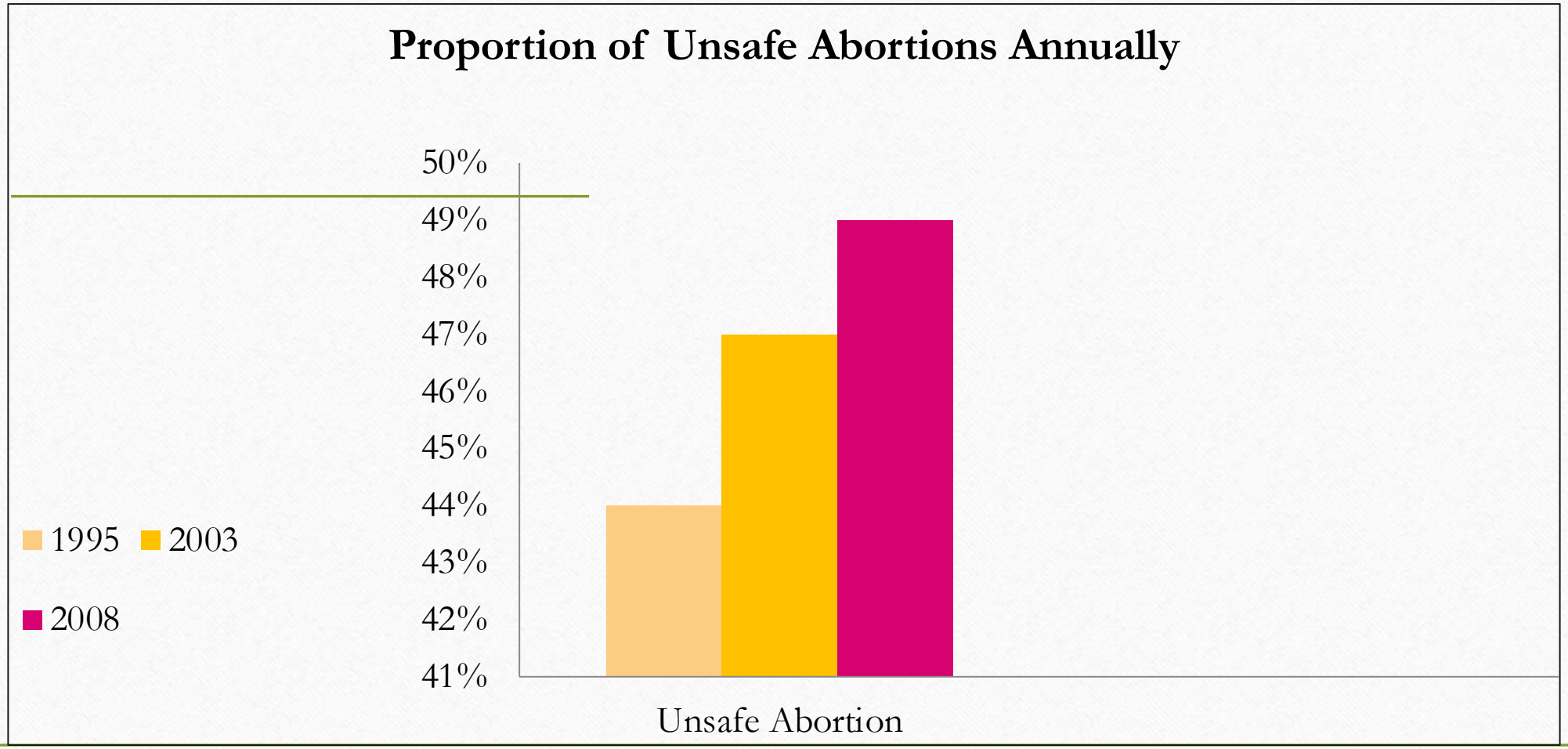
- **33 million**

  → accidental pregnancies among contraceptive users

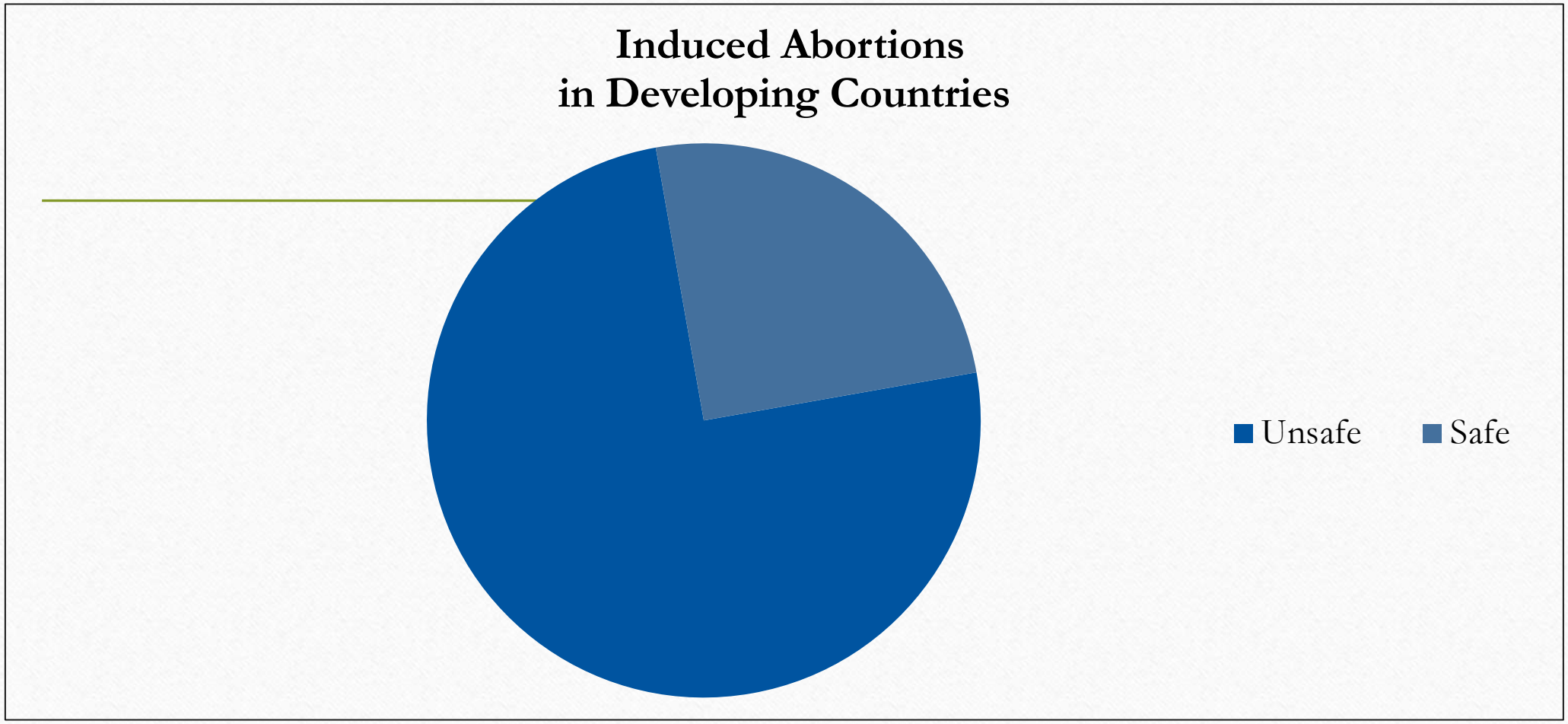
Public Health Context

- **85 million**
  - → unintended pregnancies annually in the developing world
- **40 million**
  - → end in abortion

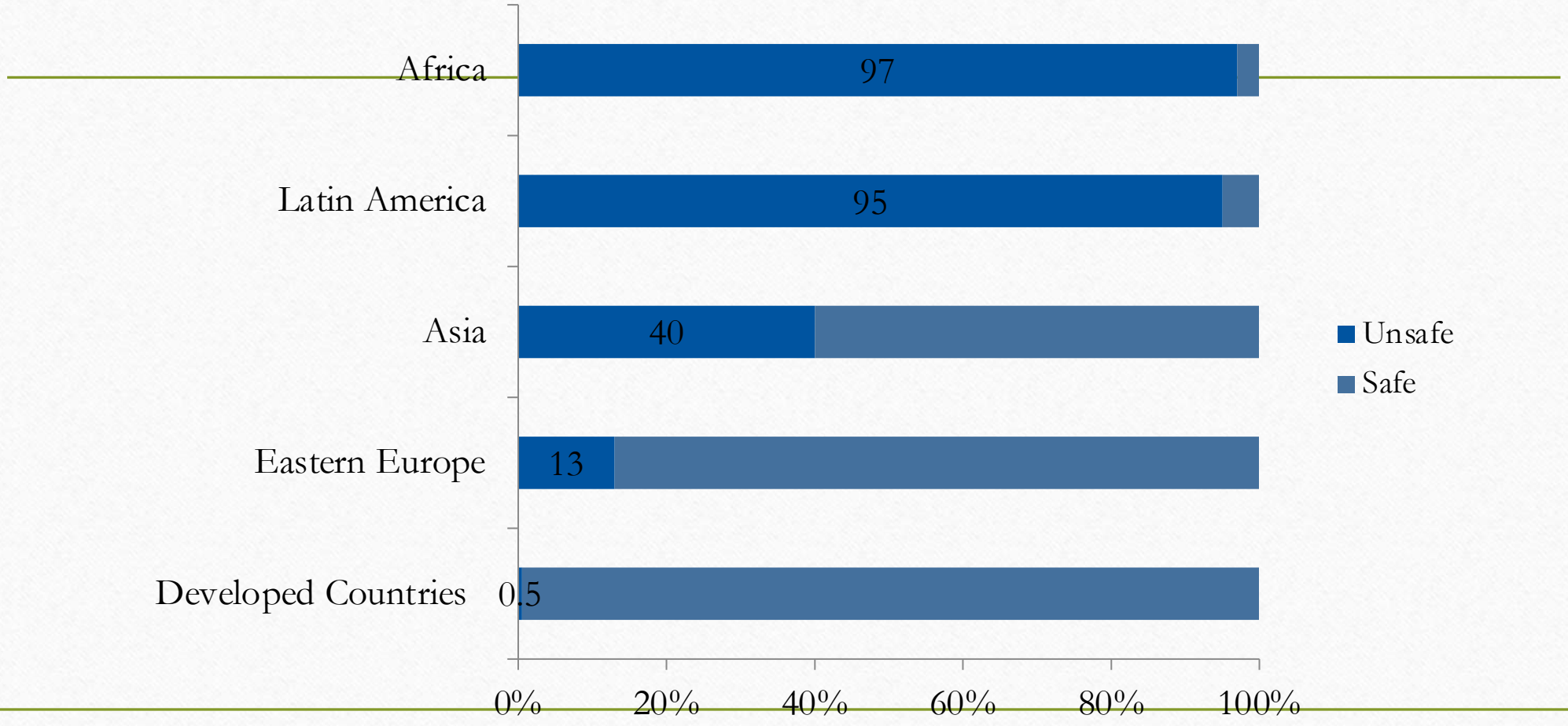
Public Health Context



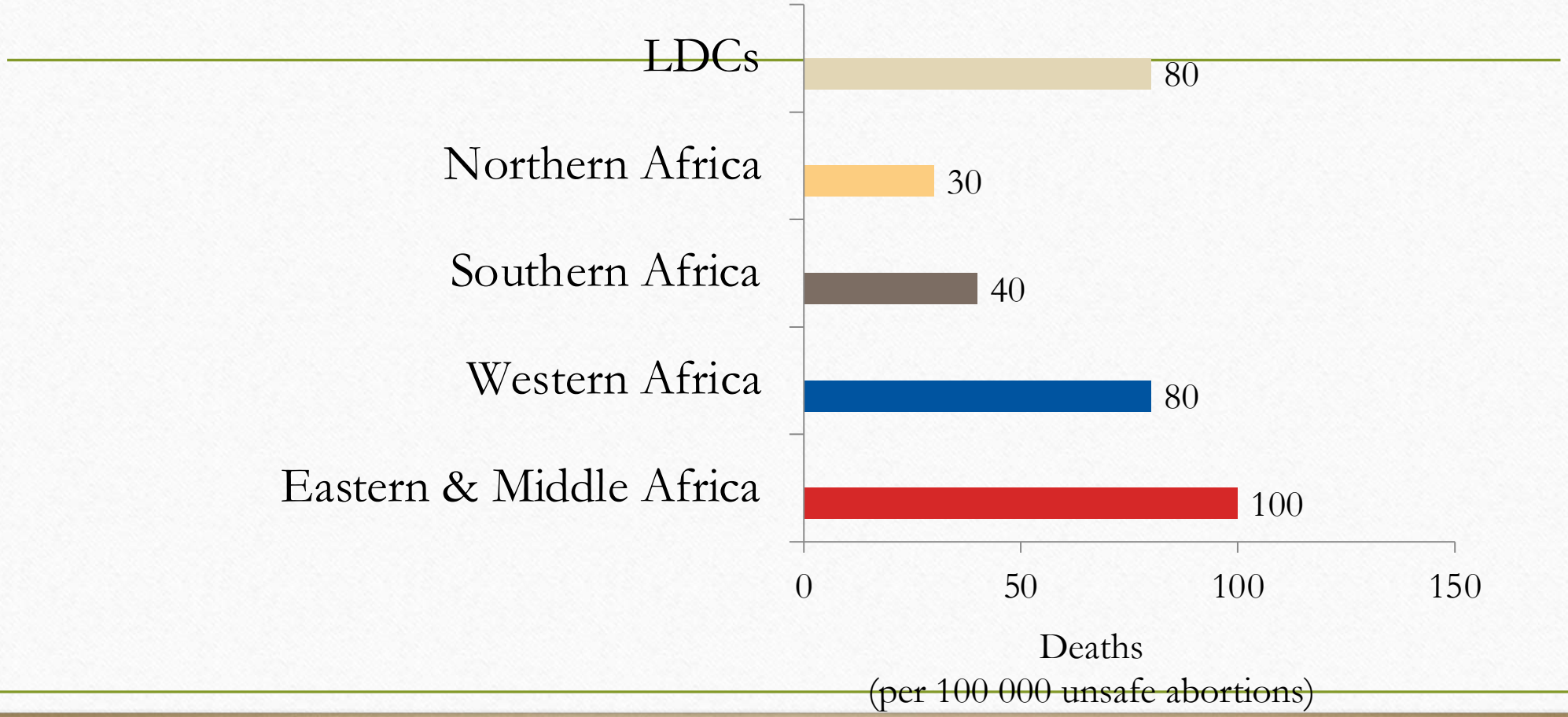
Public Health Context



Proportion of abortions that are unsafe



Risk of death due to unsafe abortion



MAGNITUDE

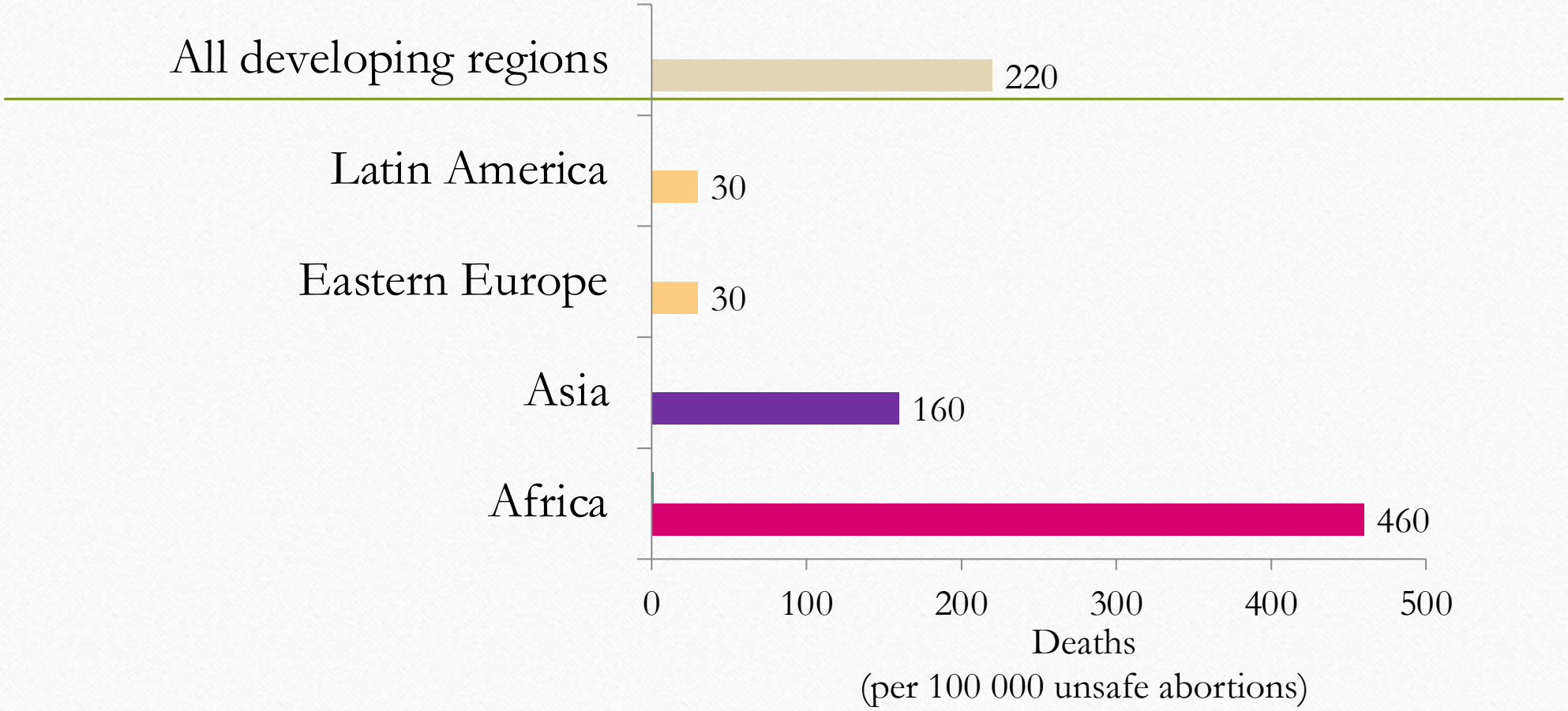
- It is estimated that in Africa, about 29,000 women die each year from complications related to unsafe abortion, accounting for 14% of all maternal deaths.
- The stigma around abortion makes it difficult to gather data on this issue, however, and numbers may in fact be much higher.

World Health Organization. (2011) *Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008, sixth edition* (Geneva: WHO, 2011).

Consequences of global unsafe abortion

- 47,000 related deaths
- 5 million women with disabilities
- 220,000 children motherless

Case Fatality Rates: Unsafe Abortion



- Looking further at the consequences of unsafe abortion and the case fatality.
- Africa has the highest rate of abortion-related deaths of any region with an estimated 460 deaths per 100,000 unsafe
- Africa's burden of deaths due to unsafe abortion is disproportionately heavy: "Sixty-two percent (62%) of deaths due to unsafe abortion occurred in Africa in 2008.
- This results in an estimated 29,000* women dying year in Africa from complications related to unsafe abortion -- accounting for 14% of all maternal deaths among African women and, these figures may be gross underestimate of the actual number of cases, due to under-reporting.

World Health Organization. (2011) *Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008, sixth edition* (Geneva: WHO, 2011)

Regulatory & policy context

→Maternal mortality from unsafe abortion

- Higher in countries with major restrictions to abortion
- Lower in countries were abortion is available upon request or under broad conditions

The legal status of abortion affects its **safety**

- In countries where abortion is legal and available, it is more likely to be safe, and deaths and disabilities from abortion have been shown to decrease dramatically

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- In countries where laws and policies allow abortion under broad indications, mortality from unsafe abortion is reduced to a minimum

- "The accumulated evidence shows that the removal of restrictions on abortion results in reduction of maternal mortality due to unsafe abortion and, thus, a reduction in the overall level of maternal mortality
- Therefore we can summarize here by pointing out that maternal mortality due to unsafe abortion is:
  - Higher in countries with major restrictions to abortion
  - Lower in countries were abortion is available upon request or under broad conditions

- World Health Organization (2012). *Safe Abortion: technical and policy guidance for health systems*, second edition, (Geneva: WHO, 2012).

Unsafe abortion is costly

- **$23 million** minor ~~complications at PHC~~ level
- **$200 million** out-of-pocket expenses
- **$930 million** lost income
- **$6 billion** postabortion infertility

Clear and Unambiguous

- "As a preventable cause of maternal mortality and morbidity unsafe abortion must be dealt with as part of the MDG on improving maternal health and other international development goals."

Care after abortion

Following uncomplicated abortion, no medical need for a follow-up visit

→ Adequate information on care post-abortion & regarding complications

→ Contraceptive information & supplies

→ Follow-up visit, if the woman needs or desires

Decisions → provide quality & reduce cost

- Switch dilatation and sharp curettage to vacuum aspiration or medical abortion
- Provide information to come in early for abortion when allowed or medically indicated
- Provide postabortion contraception

THE BIG QUESTION

- DO WE RECOMMEND LEGALIZATION OF ABORTION !!!!!!

THANK YOU FOR YOUR TIME

REFERENCES

- WHO Systemic Review of Causes of Maternal Death
- US Agency for International Development
- Life Saving Skills Manual.
- Family planning: Fact sheet N°351, WHO, July 2012. http://www.who.int/mediacentre/factsheets/fs351/en/index.html
- Safe Abortion: technical and policy guidance for health systems, 2nd edition, WHO, 2012.