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Abortions in Low Resource Countries

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1. Introduction

Abortion is the termination of pregnancy within the first half of pregnancy (WHO) or before 28 completed weeks within the context of developing countries. However, fetuses weighing less than 500 gms 0r less than 900gms in the developed or developing counties constitute abortion. [1, 2, 3]

The tabulated estimates of the frequency of abortions by WHO (1994) showed that there were about 20 million illegal abortions performed each year and the greatest majority of these unsafe abortions occur in developing countries and particularly countries in which abortion law was restricted and illegal. Incidentally these were also the countries that presented a lack of supplies and commodities as well as insufficient trained personnel. In these countries many maternal deaths due to complications of abortions are either not registered or deliberately concealed. [2, 3, 4]

2. Clinical classifications

Clinical classification divides abortions into different categories that determine their prognosis and different therapeutic approaches. Abortions are spontaneous or induced, the spontaneous type accounting for 10-15% of all known or suspected pregnancies. The true incidence especially in developing countries may not be known because of the difficulty to recognize early pregnancies and their losses. The commonest cause of spontaneous abortion is chromosomal anomalies and the most common of these anomalies is Autosomal trisomy occurring in about 51.9% of the anomalies. The second most common type of chromosomal anomaly in spontaneously aborted fetuses is monosomy x (45, xo) and occurs in 18.9% of aborted fetuses. (Scott 1986). The rates of spontaneous abortions are relatively constant between populations and are rarely the cause of severe abortion complications and maternal death.

The clinical categories of spontaneous abortions are the following:

- Threatened abortion
- Inevitable or Eminent Abortion
- Incomplete abortion
- Complete Abortion
- Missed Abortion
- Habitual Abortion

- **Induced abortions:** This is abortion carried out in an environment inappropriate for service delivery and/ or by persons and providers in-experienced in abortion care delivery and without adequate infection prevention measures. Induced abortion can also be carried out by trained abortion providers within appropriate service. Induced abortion can be sub-classed into:
- **Therapeutic abortion:** This is abortion conducted for medical indications either to save the life of the woman and preserve the physical and mental health, foetal malformation incompatible with extra uterine life (anencephaly, multi-organ malformations, transposition of the great blood vessels, active rubella infection in early pregnancy etc) and rape as spelled out in the penal code in its articles 337-340 for Cameroon. These indications though restricted in our environment and the developing countries are still underutilized. Other legal indications for abortion include economic or social factors or pregnancy resulting from incest. The Cameroonian law permits marriage of first cousins. Therapeutic abortion is also indicated in situations of missed abortion or blighted ovum.
- **Clandestine or unsafe voluntary abortion:** This is abortion carried out by unqualified, non competent staff, in an inappropriate environment and without infection prevention. Complications of such procedures occur latter and the patients are usually admitted 2-3 days after the procedure.
- **Septic abortions:** This is usually a consequence of unsafe abortion. In the study on the Assessment of the National Magnitude of abortion and direct cost evaluation in Cameroon 23.1% of all abortions were induced [3, 11]. This figure is just the tip of the iceberg as most risk free induced abortions carried out by qualified health care providers are complication free. A number of septic abortions may be a consequence of a spontaneous abortion.

Abortion remains a major public health problem in Sub-Saharan Africa. When an unmarried young woman becomes pregnant in a low resource environment she faces a difficult dilemma: if she decides to carry the pregnancy to term, this is usually characterized by poor antenatal care and obstructive complications. Some 40% of all abortions are high risk and unsafe with one woman in 400 dying from complications. Hospital studies in Sub-Saharan Africa show that 30-40% of maternal deaths are due to complications of unsafe abortion. It is now accepted that about ninety percent of abortion complications occur in developing countries with risk of death in Africa being one in 150 cases [3]. It is also accepted that about 50% of all pregnancies are not planned and 25% of these pregnancies are unwanted and this explains the high number of about 100.000 women who die from complications of abortions in developing countries every year. In Africa south of the Sahara, other major factors contribute to the high numbers of death due to abortions and these include: low prevalence rate of modern contraception (13% in Cameroon) with a high unmet need for family planning(44% in Cameroon)(DHS 2010). This is also coupled with low education of adolescent girls and women as well as early and forced teenage marriages.

Besides there is cruel need for services for risk groups like adolescents, and unmarried mothers and to these we must add the role played by restrictive abortion laws that still exist and prevail in the region. The restrictive laws on abortion do not permit adolescents and women to terminate an unwanted pregnancy under safe and legal conditions. Most countries of Francophone Africa still respect and use the 1920 anti Abortion French law and

consequently most termination of pregnancy in the region is done by untrained personnel and in very unsafe conditions. [6, 7, 8]

3. Reproductive rights of women, adolescents and abortion laws

Though most developing countries still have restrictive laws towards safe abortion services, they are signatories to a number of international treaties and laws as concerns the reproductive rights of the woman and the adolescent. Reproductive health can be defined as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life, which they have the capability to reproduce, and the freedom to decide when and how often to do so. Men and women therefore have a right to be informed and have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for fertility regulation which are not against the law. It also implies that couples have the right of access to appropriate health care services that will enable women go through pregnancy safely and provide the best chances of having a healthy infant. [9]

The International Planned Parenthood Federation (IPPF) has produced a formal statement declaring women and men´s sexual and reproductive rights to be essential components of human rights. The IPPF rights are developed based on the international human rights agreements and consist of 12 principles.

The laws on abortion are described in a number of documents such as:

- International treaties, conventions, agreements and covenants: In principle, international treaties, when ratified by a country, supersede the national law. This is not the case in most of our developing countries.
- National laws (The national medical ethics code): The lack of clarity in many laws is a serious dysfunction and Health care providers´ apprehensions cause them to decline involvement, so that women resort to illegal and unsafe practices in cases where the law actually allows procedures by skilled and qualified providers.
- Customary laws, Islamic (Shar´ah) laws.

40.5% of the world´s population lives in countries with restrictive law on abortion, though they are signatories to most of the treaties and conventions on the rights of the woman. However, abortion is legalized for the following indications in the world, socioeconomic factors (14 nations, 20.7%), mental health (20 nations, 2.7% of world´s population), physical health (35 nations, 10.1%), and safe life or prohibited (72 nations, 26%) [10].

4. Abortion complications [5, 8, 12, 13, 14]

Studies carried out within the countries have shown abortion to be associated with a number of complications. Complications of abortions are a leading cause of morbidity and mortality of women in low resource countries.

The tables below highlight some of these complications.

Complications	Frequency	Percent
Hemorrhage	30	34
Cervical Laceration	20	22.7
Vaginal Vault Tear	9	10.2
Cervical Burns	6	6.8
Septicaemia	6	6.8
Uterine Perforation	4	4.6
Pelvic Abscess	4	4.6
Pyometria	3	3.4
Intestinal Perforation	2	2.3
Rectal Perforation	2	2.3
Bladder Perforation	2	2.4
Total	**88**	**100**

Source: Leke, Tikum (1991).

Table 1. Common complications associated with suspected or induced abortions.

Medical complications of abortion	Spontaneous abortion	Safe induced abortion	Unsafe induced abortion
Haemorrhage	mild	mild	Moderate -severe
Infection	mild	mild	Severe
Internal trauma	mild	mild	Severe
Hospitalization	short	short	Prolonged
Morbidity, Infertility	low	low	Moderate –severe
Maternal mortality	low	low	High

Table 2. Abortion consequences, Spontaneous, Safe induced and Unsafe induced abortions.

The table clearly demonstrates that induced abortion is usually associated with severe morbidity such as haemorrhage, anaemia, infection, fistulae, infertility, ectopic pregnancy and upper and lower genital tract lacerations. These complications are still commonly seen in our environment today since the law remains restrictive and adolescents as well as single mothers are most affected by the need for abortion services.

In sub-saharan Africa reports from hospital studies suggest that induced abortion is probably increasing (Mbango) [13].Besides many of the patients with abortions are young, nulliparous and single but women of all reproductive ages, both married and single, suffer from the consequences of unsafe abortions.

In Yaoundé, Cameroon Leke and Tikum [6] reported that induced abortion was fifty times more likely to cause maternal death than a normal delivery in the same environment. They also reported that complications of induced abortion contributed to 34.6% of maternal mortality in their hospital.

A similar experience has been reported in Addis Ababa where a community based study showed that 24% of all maternal deaths directly related to pregnancy were attributed to complications of induced abortions.

QUANTITY OF PUS	FREQUENCY	%
<5000ml	14	36
500 – 999ml	7	18
1000 – 1999ml	14	36
2000 – 6000ml	4	10
TOTAL	**39**	**100**

Nana P.N. et Al (2005)

Table 3. Quantity of pus collection.

Peritonitis is a common complication of induced abortion in low resource countries. The above table reports on the amount of pus collection seen at laparotomy in women operated for post abortum peritonitis.The volume of pus found at surgery ranged from 20-6000ml with a mean of 1206ml. Abscess collection was seen in the pouch of Douglas, paracolic gutters and the sub-splenic angle.

ORGAN	FREQUENCY	%
The Uterus	27	54
Small intestine	5	19
Sigmoid colon	2	8
Bladder	1	4
Omemtum	10	38
No lesion found	23	46

Nana P.N. et Al (2005)

Table 4. Traumatic lesions found at surgery

Complications of induced abortion normally include damage to other organs. In 54% of the patients there was perforation on the uterus. The uterus was not perforated in 46% of the cases. Abdominal viscera were damaged in 18 of the 27 patients with uterine perforation. In two patients the small intestine and / or omentum herniated into the uterine rent. The length of the rent varied between 1 and 10 cm, involving the fundus, posterior, anterior and lateral walls of the uterus. In six of the fifty patients the fundus and / or the corpus was gangrenous. There were more than one perforation of the small intestine in two of the five affected cases. One of the two patients with a rent on the sigmoid colon required the presence of a visceral surgeon. The patient had a segmentary resection of the colon and colostomy with eventual end to end anastomosis.

Tables 5 and 6 clearly shows that unplanned pregnancies account for 38.7% of all patients presenting with incomplete abortion. A similar percentage carries had an in the complete (38.1%) carried induced abortion after 12 weeks of pregnancy. Unmet contraceptive needs

coupled with lack of knowledge or family planning, financial constraints and lack of a male support all favour women to seek induced abortion.

Nature	Frequency	Percent
Wanted	245	61.3
Unwanted	155	38.7
Total	**400**	**100**

Report Leke et al (2009)

Table 5. Nature of pregnancy (Wanted/Unwanted)

Gestation (Weeks)	frequency	percent
3-12	229	61.9
13-20	109	29.5
21+	32	8.6
Total	**370**	**100**

Report Leke et al (2009)

Table 6. Distribution of patients by gestational Age.

5. Methods of pregnancy termination in low resource countries

The method used in terminating a pregnancy in low resource countries is provider dependent and consist of the following:

Individual: This is done through the ingestion of different concoctions such as whisky, blue detergent, medications contraindicated in pregnancy and the use of potassium permanganate. In a study carried out in the Tiko and Limbe towns Leke et al, reported that the following substances were used for pregnancy termination, native medication 33%, pharmaceutical products 29%, D&C 21%. The woman was the provider in 40 % and the General Practitioner in 15% of cases.

Traditional doctors/ non qualified providers: Several types of concoctions are administered either orally or as vaginal pessaries. Sometimes different instruments such as hysterometers, sponge forceps, cassava stems etc are used to initiate the procedure as seen in Figure 1 below.

Among the several substances used by traditional doctors and non qualified providers to induce abortions are the below. Some of these substances certainly contain prostaglandin-like or oxytocin-like substances that initiate contractions. A greater number are using Misoprostol since its introduction into the list of essential drugs.

The below picture on figure 2 shows a woman operated for suspected abdominal pregnancy at term. Per operatively, the foetus was found to float in the abdomen, the placenta was adherent to the omentum, and other scarred wounds from perforation were seen on the uterus. It is possible the Placenta villi migrated through the perforation to become adherent on the omentum. Secondarily, the uterus ruptured and the foetus continued to grow within

the abdominal cavity. After surgery, patient acknowledged she terminated a 2nd trimester abortion that was complicated and had uterine evacuation twice. The rent was repaired, tubes ligated and placenta delivered by partial omentectomy.

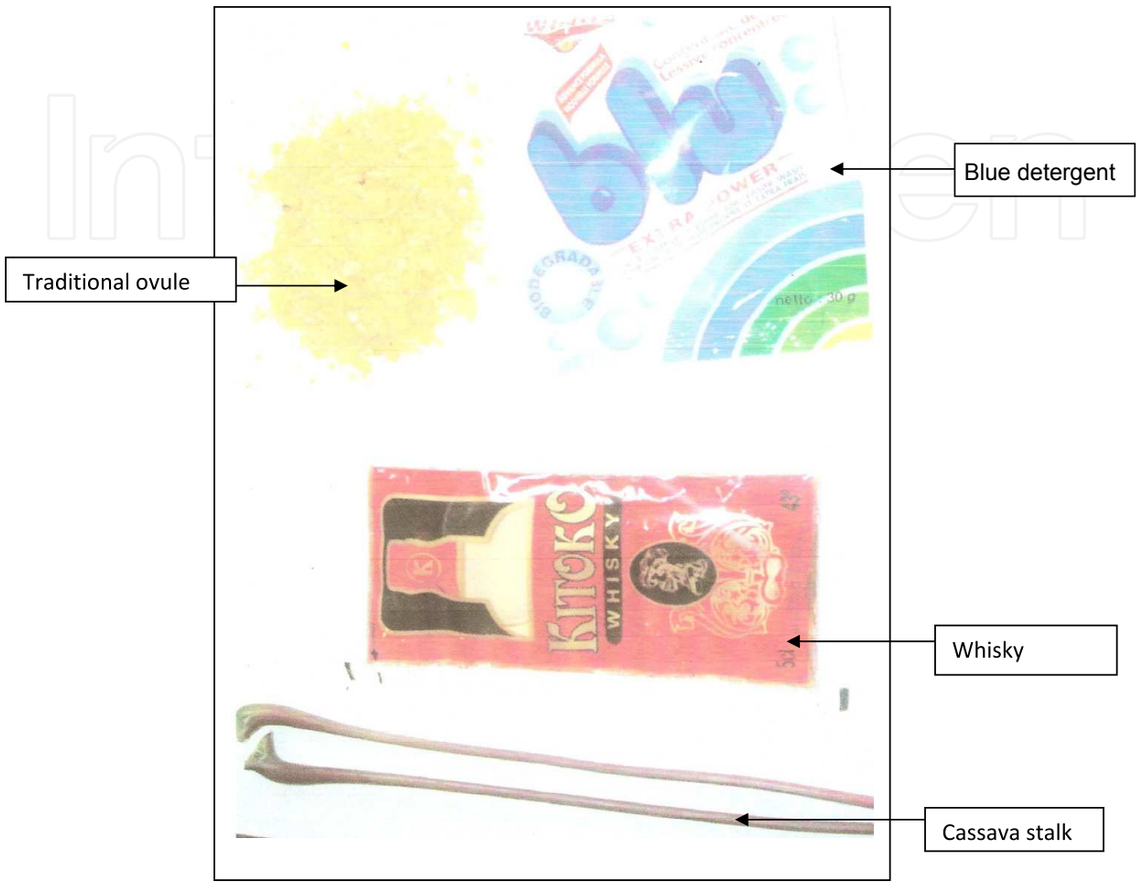


Fig. 1. Concoctions and instruments.

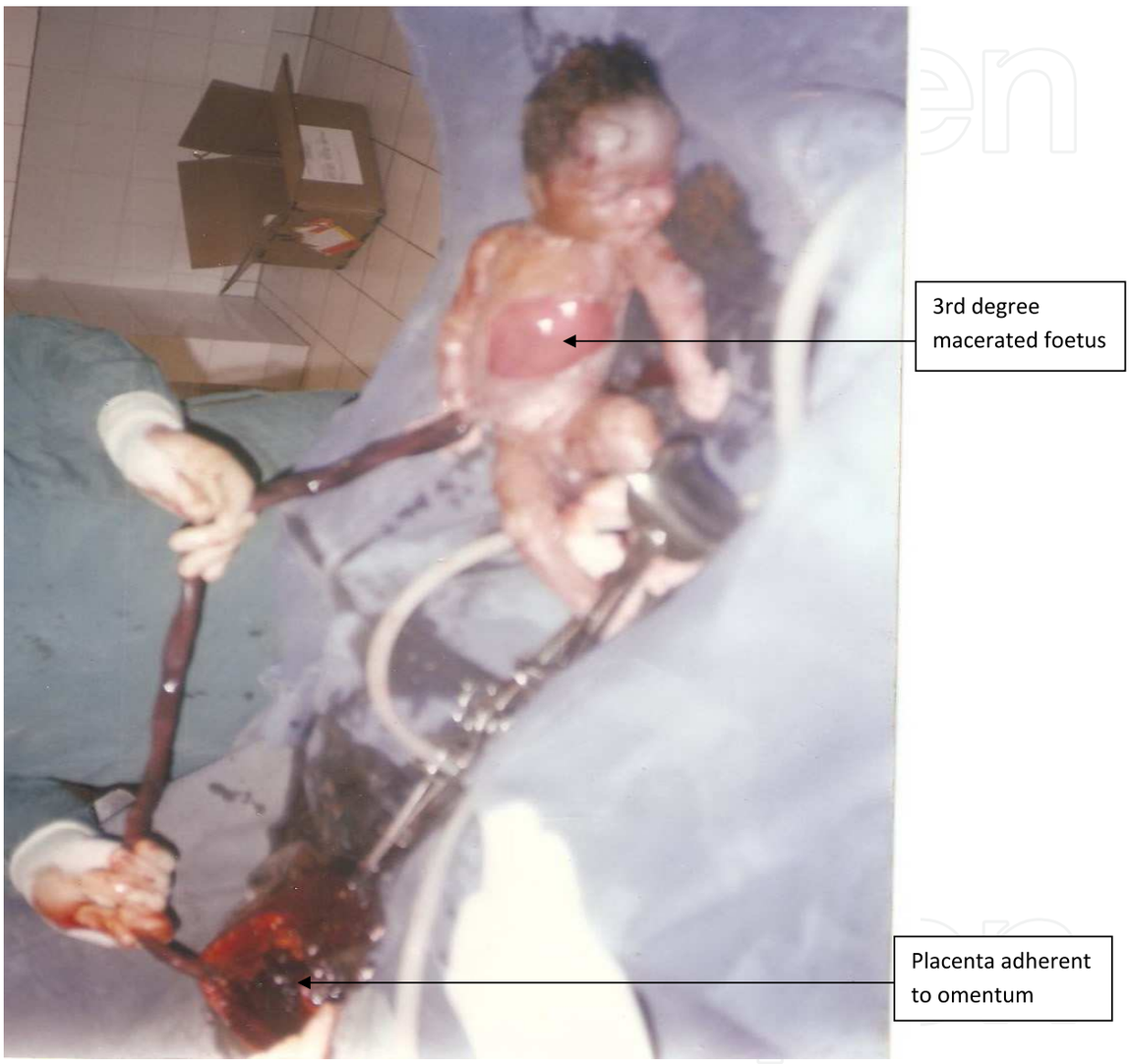
Nurses and Midwives: Here attempts are made to carry out procedures seen within the hospital in unsafe environment and sometimes not taking into consideration the gestational age of the pregnancy. Methods like amniotomy, dilatation and curettage, medical abortion with misoprostol and oxcytocin are utilised.

Doctors: Even though most African countries still use the old techniques of dilatation and curettage to evacuate the uterus for incomplete abortions or pregnancy termination, a gradual and progressive increase in the number of Doctors and midwives trained in the use of the manual vacuum aspirator is increasing in the milieu. This is the advised method for pregnancy termination as most epidemiological studies have shown that vacuum aspiration (electric or mechanical) is the safest, simplest, economic and effective means of inducing first trimester abortion as well as treating first trimester incomplete abortion.

Advantages of the manual vacuum aspirator.

- Reduction of post evacuation complications,
- Increased access to service.

- Shortened duration of hospitalization.
- Reduction in abortion service cost
- Reduced utilization of scarce resources.
- Technique easy to learn and use by several categories of health personnel.



[Dr. Nana's P.N's collection]

Fig. 2. Macerated foetus from perforated uterus.

5.1 Medication abortion

African countries are barely initiating the technique of medication abortion mostly because of the restrictive abortion laws that still prevail. The technique consist of administering Mifeprostone 200mg orally followed by four tablets of prostaglandin (Misoprostol 200 ug), administered vaginally or sublingually 24-48 hours later.

6. Strategies to avoid the tragedy of induced abortions [9,10,14,15,16]

In view of the prevalence of adolescent sexuality, unwanted and unplanned pregnancies, lack of male support and teenage marriages in the developing countries, especially Africa South of the Sahara, it is not surprising that abortion has become a major public health issue. In this respect society today has to take cognizance of the existence of the problem and some strategies to curb and probably avoid the tragedy of induced abortions would include the following:

- **Primary prevention of unsafe abortion:** This means avoiding unwanted and unplanned pregnancy through the following actions:
  - Education of youths: Several studies have shown that education of the girl influences the age of first marriage, intercourse and pregnancy. The tragedy of unwanted teenage pregnancy and the consequences of induced abortions will therefore be reduced. Increased education of the girl also prevents early pregnancy and marriage. Teenage marriage and pregnancy is commoner in communities where the girls do not attain secondary education.
  - Sex Education: This constitutes a component of youth education and must be started at home by parents. Teenage pregnancy is today seen at eleven and twelve years and therefore sex education should start much earlier. In a study published by Leke et al, 38.6% of all induced abortions were carried out by teenagers (10-19 years), and 30% of them were not conversant with their ovulation period. Sex education should be taught to both sexes.
  - Traditional Practices: Some traditional practices are in favour of teenage marriages. Likewise some prohibit pregnancy before marriage or before the education of the girl. Factors like early marriages favour teenage unwanted and unplanned pregnancies, leading to induced abortion and its consequences. In Africa, 20% of all pregnancies occur in the adolescents and 70% of all pregnant adolescents are unmarried or are in union. Adolescent marriage is also a common cause of divorce in Africa. Traditional Doctors are also providers of abortion services, and use quack methods (insertion of cassava stalk or other objects into the cervix). These unfavourable traditional practices must be abolished either by policy makers, chiefs of communities or through the education of the adolescents, parents and the community.
  - Access to Health Services: Provider attitude towards adolescents with unwanted pregnancy may encourage the pregnancy to be carried to term. On the other hand, improper counseling may lead to the desire to terminate the pregnancy.
- **Secondary Prevention:** This involves the provision of abortion service within the context of the law. Post abortion care services should also be made accessible to patients. The introduction of the MVA into all the health structures of the country coupled with training of providers amongst the nurses, midwives and General Practitioners will improve on patient care. The introduction of medication abortion with mifeprostone and misoprostol in the management of missed abortions will also help in the reduction of abortion related complications.
- **Tertiary Prevention:** This entails counseling and the provision of family planning. It is advisable and indicated to start a family planning method before discharge after abortion because ovulation can occur within two weeks of abortion and 75% of the women will be ovulating within six weeks of the abortion. The other reproductive

health services such as cancer screening, infertility, sexually transmitted infection control and nutritional counseling should be considered. The integration of these services ensures better utilization of personnel and service and better sustainability of programmes in low resource areas.

Abortion prevention cannot be limited to health providers alone. The prevention is therefore multi-disciplinary involving several sectors which include:

- Health system: The absence of adolescent clinics in our hospitals is a hindrance to service delivery to this group. Adolescent clinics will permit adolescent needs to be specially addressed.
- Social Welfare Structures: With the economic recession that has hit the nation since the 1990s´, cases of child abandonment and infanticide are seen in our services. Social welfare structures to cater for those babies and their young mothers are nonexistent. Such a service will certainly reduce the rate of abandonment and will favour the reinstatement in schools, thus improving in the health of the adolescent girl.
- Youth Involvement. In all programmes destined for the improvement of the youths it is absolutely necessary to involve the young people themselves in the conception and the implementation of the programme. The community should be consulted and involved, while the community health care provider (Traditional birth attendant) should be trained, provided a limited scope of activity and supervised.
- Review and reinforcement of the abortion law: The economic crisis of the 90´s in some African countries has lead to unemployment and low salaries for health personnel. Health personnel (Doctors and Nurses) are involving themselves more and more in induced abortions as a source of income, almost creating Abortion networks. They may be competent in uterine evacuation techniques but the procedures are carried out under unsafe conditions. Post abortion infection complications and other morbidities do occur to add to the number of abortions carried out by unqualified staff. The abortion law governing safe abortion practice has to be reinforced to prevent such complications and women should be permitted to obtain safe abortion service within the limits of the law. The restricted laws need to be revisited and modified to ease access to safe abortion services.

Complications of unsafe abortion are a major cause of human suffering. In order to address the issue:

Policy makers must examine the factors behind the reliance on unsafe abortion. It is now appropriate for serious discussions to be carried out on the abortion law, develop laws and policies that will reduce mortality and morbidity from unsafe induced abortion. By so doing the health budget as well as individual finances spent in the management of abortion complications will be used in other areas of reproductive health.

Health care Providers can play a major role in the delivery of abortion services through the creation of links by identifying and talking with key actors who often represent the shared interests of the broader communities. These actors include: government officials, leaders of women´s groups, leaders of youth groups, traditional medicine healers, health-committee members, leaders of men´s groups, religious leaders, traditional birth attendants and community-based health worker.

Other activities that can be provided by health care providers are:

- Increase awareness and education by providing women, their families and their partners with needed information on unplanned pregnancy, the availability of contraceptive services, legal indications for induced abortion, dangers of unsafe abortion and the importance of seeking abortion related care only from trained providers.
- Ensure immediate treatment of complications through a comprehensive approach to abortion care. To reduce maternal morbidity and mortality from induced abortion, early counseling and use of family planning is advised. Adequate treatment of abortion complication and correct follow-up will help to reduce morbidity and mortality from induced abortion.
- Monitor service delivery through the creation of quality of-care committees to assist in assessing services, make recommendations and participate in the implementation. Health care providers will also share results of the monitoring process within committee meetings.
- Prevention of infection through the respect of basic hygienic measures in the service and outside the service, especially the disposal of hospital waste materials.
- Advocate for improved policies carried out at grassroots level together with other stakeholders and non-governmental organizations working in the area.

Health care Providers in their mission to reduce maternal mortality and morbidity, a consequence of induced abortion will carry out other activities such as:

- Hands-on training of junior staff and task shifting of abortion care to Midwives and General Practitioners.
- Offering abortion services to the full extent of the law of the country.
- Creating clinics to counsel women on family planning methods and provide family services.
- Using professional bodies to introduce new technologies in abortion care and family planning and to organize training of Trainers courses in comprehensive abortion care.

In order to reduce maternal mortality and morbidity due to unsafe abortion, the following additional measures must be reinforced:

- Ensure immediate post abortion care in unsafe abortion.
- Ensure post abortion family planning service and its extension to risk groups.
- Institute training and counseling of service providers in post abortion care.
- Advocate for modification of the restrictive laws.
- Encourage community participation in the prevention of unsafe abortion.
- Fight for the prioritization of reproductive health programmes.

7. Adolescents and young women

Adolescent Health is one of the eight components of reproductive health. This group of women is still to be properly taken care of within our health institutions. They are seen at consultation with their parents and sometimes this may hinder good communication between the health care provider and the adolescent or young unmarried woman. There is need therefore to create adolescent clinics within our health settings to cater for the

problems of the young woman and adolescent. Safe, respectful abortion information and care are essential to ensure young women´s and adolescents´ sexual and reproductive health and well being. Pregnancy and motherhood outside of marriage are stigmatized in many societies, which may cause young, unmarried pregnant women to seek abortion. Other reasons that may favour the decision to terminate a pregnancy in this group are: a desire to continue education, an unsupportive or no partner, inadequate resources, pregnancy resulted from violence or abuse, health risks, or she doesn´t want to become a mother at that time or age.

Unsafe abortion is a large contributor to maternal mortality and morbidity among young women. It has been reported that adolescent girls in developing countries undergo at least 2.2-4 million unsafe abortions each year. In sub- Saharan Africa, over 60% of unsafe abortions are among young women younger than 25 years. Worldwide, young women under the age of 20 make up to 70% of all hospitalizations from unsafe abortion complications. In 2003, young women accounted for approximately 45% of the estimated unsafe-abortion- related deaths. [17] There are many social, economic, logistical, policy and health-system barriers to safe abortion care for young women, these barriers consist of: stigma and negative attitudes, fear of negative repercussions, lack of access to comprehensive sexuality education, limited financial resources, cost of care, transportation, involvement of laws and concerns over privacy and confidentiality. Young women therefore resort to unsafe abortion even in environments where abortion is legal or seek abortion service or treatment for abortion complications much latter than married women [10, 17].

Abortion care service for young women must therefore have the following characteristics:

- Respect for young women and adolescents and their rights.
- Participation by the young women in all stages of service delivery.
- Accessibility.
- Safety and appropriateness.

8. Conclusion

The observed global change in sexual behavior, particularly among the youths is to a large extent responsible for the increased prevalence of unwanted pregnancies and its consequence induced abortion. It must be emphasized that women will continue to seek to terminate unwanted pregnancy by abortion despite the great risk to their health and life. Induced abortion and its complications place a great burden on the limited individual, hospital and community resources, as it often prolongs the duration of hospitalization. The unavailability and inaccessibility of family planning to the semi-urban and rural populations in developing countries explains the high rate of unwanted pregnancies and the complications of induced abortion.

The above statements under conclusion are in line with the conclusion of Konje J.C. and al [18] who ended their studies in Ibadan with the following words «Provision of legal abortion would reduce the incidence of sepsis after termination while reproductive health education and information dissemination and provision of accessible family planning services would greatly reduce the number of unwanted pregnancies" and of course their consequences like induced abortions and complications.

Legal access to abortion services must be accompanied by equipment and commodities at the facilities to offer abortions, by training of providers in modern technology in abortion care as well as availability and easy access to family planning.

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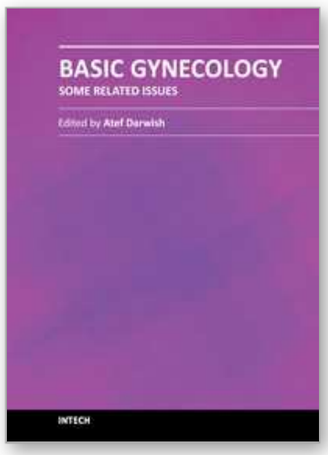

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