

CHAPTER 1

1. INTRODUCTION

1.1 Background

1.1.1 The global picture of Abortion

For Millennia, women and girls have found themselves facing unwanted pregnancies; across time and culture, they have often turned to abortion. Abortion therefore is the oldest measure to end an unwanted pregnancy. It has been practiced in almost all societies worldwide and throughout history using various methods. For example, the ancient Greeks advocated abortion to regulate population size and maintain stable social and economic conditions [1].

It is one of most widely used methods of fertility regulation, practiced in remote rural societies as well as in large modern urban centres even when it carries great health risks and economic costs.

It remains the last measure of control women and girls have over their fertility, providing “respite and tremendous relief when performed under appropriate conditions” [2].

Among the issues related to reproductive health, none has more controversial connotations than abortion nor carries a heavier burden of stigmatization, including moral and religious condemnation. Its exact incidence, therefore, as well as that of abortion-related mortality and morbidity is still difficult to establish [3].

Nonetheless, the data that are available demonstrate that between 40 and 60 million induced abortions take place around the world each year, making the procedure one of the most frequently performed health interventions in the world. Almost half of these – up to 20 million - are unsafe because they are performed by unskilled providers, using dangerous techniques, under unsanitary conditions. This gives a ratio of one unsafe abortion to every seven live births and ninety-five percent (95%) of them occur in the developing countries [4].

Although the frequency and distribution of abortion vary, there is no country where abortions do not occur.

The issue of unsafe abortions is of special interest for African populations. Hospital admissions are merely a tip of the iceberg in many African countries, where it is calculated that there are about as many abortions as live births. Moreover, the problem is likely to worsen, because of significant changing trends in the region: increased modernization and urbanization; the earlier start of sexual relations by young people; and limited accessibility and availability of effective contraception, especially for adolescents.

Although abortion is widespread and there is evidence of a definite increase in the number of unsafe procedures and their complications [5], the situation is not yet recognized as a significant health and social problem.

Many women suffer chronic and often irreversible health problems as a result of complications from unsafe abortion. For instance, studies indicate that at least one in five women who have an unsafe abortion suffer a reproductive tract infection or injury. Some of these are serious infections, leading to infertility [6].

Unsafe abortion (and the immense personal suffering that may attend it) remains a serious global public health problem. As a result of botched procedures and the lack of accessible and appropriate emergency care, it is now one of the five leading causes of maternal mortality and morbidity, contributing to nearly 80,000 maternal deaths and hundreds of thousands of disabilities each year; this avoidable loss accounts for no less than 13% of all pregnancy-related mortality, or one in eight [7].

According to the World Health Organization (WHO), the proportion of maternal deaths in Africa attributable to abortion varies from below 10 per cent to as high as 60 per cent [8].

In many developing countries, as many as one in every four maternal deaths is caused by unsafe abortion. The risk of death following complications of unsafe abortion procedures is several times higher than that of an abortion performed professionally under safe conditions [6]. Previous studies have shown abortion-related mortality in Africa to be extremely high, ranging anywhere from 20% to 50%. One study cited a rate of 80% of all maternal deaths [9].

Unsafe abortion is also one of the most easily preventable and treatable causes of maternal death. In the words of the WHO Maternal and Newborn Health / Safe Motherhood unit, “The tragedy is all the greater because abortion-related deaths are entirely preventable”.

One of the Millennium Development Goals adopted by the United Nations (UN) is to achieve a 75 per cent reduction of maternal mortality from the year 2000 to 2015. Unsafe abortion is a major cause of maternal mortality, and there is a clear relation between maternal mortality and poverty.

However, in the words of Dr. Eunice Brookman-Amisshah, head of Ipas Africa Alliance for Women’s Reproductive Health and rights; maternal mortality can not and will not be reduced by 75 per cent by year 2015, nor will goals related to poverty reduction and economic development be achieved without attention to unsafe abortion” [10].

Yet at the same time that millions of women and girls face abuse, grave morbidity, and risk of death in their quest to end an unwanted pregnancy, millions more terminate their abortions safely and with dignity.

In Uganda, as throughout most African countries, the incidence and the health consequences of unsafe abortion for women of reproductive age are significant.

Legal induced abortion is restricted by law; only permitted on grounds to save a woman’s life, preserve her physical and mental health.

Because of legal and social restrictions, safe and humane abortion is not always available; instead, many women and girls seeking to control their fertility resort to dangerous procedures, which result in serious complications and unaccountable deaths.

The incidence of abortion in this instance is difficult to assess. Hospital-based information is the most reliable, although it usually represents just a small proportion of what may be going on in the community.

Previous studies in four selected hospitals indicated that the percentage of gynaecological cases that were incomplete abortion patients ranged from 28 per cent in district referral hospitals to 64 per cent in the national referral hospital [11].

There is now growing awareness of the burden and implications of reproductive ill health and its contribution to unsafe motherhood, sexually transmitted diseases (STDs) including HIV/AIDS, unwanted pregnancies and adolescent / teenage sexuality and pregnancy.

A five-year review of International Conference on Population and Development (ICPD) 1994 stressed the importance of ensuring access to safe abortion in accordance with the law.

Many countries have liberalized their abortion laws. By 1990, it was estimated that 75% of the world's population lived in countries where induced abortion is permitted on medical or on broader social and economic grounds; however, many women still resort to abortions performed by unskilled providers or in unsafe conditions [12] because of barriers that impede access to safe abortion. Such barriers include lack of information, distance, economic constraints, and lack of confidentiality.

In a number of countries, access to safe legal induced abortion is either completely prohibited, allowed only to save the mother's life, or permitted only when the pregnancy is a result of rape or incest.

Globally, 25% of the world's population lives in countries with very restrictive abortion laws where women lack access to safe abortion services [13]. With one in four women living in countries where abortion is forbidden or allowed only to save a woman's life [14], safe and legal abortion services are out of reach for many women with unwanted pregnancies.

Controversies have often led authorities to deny the existence of the problem and to adopt a policy of neglect. For many women, however, the law is not the prime consideration: they are more concerned about the societal norms and attitudes within their immediate community. Therefore, achievement of this aspect of reproductive autonomy requires something over and above national legislation; abortion has to become "legal" in people's minds if women are to stop resorting to unsafe clandestine abortions and become able to exercise their reproductive choice with safety and dignity.

Abortion is a social and medical reality of such worldwide significance that it can no more be legislated out of existence than the controversy surrounding it can be stilled.

Yet breaking the cycle of abortion neglect, silence and denial is never easy, and attempting to provide useful research results with little or no funding in hostile settings is difficult.

1.1.2 Uganda – country background

According to United Nations, Uganda is one of the least developed, poorest countries in Africa. The country is ranked as the 141st of 162 countries on the UNDP Human Development Index [15]. It is located in the eastern part of the African continent, with two thirds of the country lying above the equator. The country is land locked and lies on the northern shores of Lake Victoria. It covers an area of 236,040 square kilometers of which 15% is covered by fresh water bodies. It shares borders with Sudan to the North, Kenya to the East, Democratic Republic of Congo to the west, Tanzania and Rwanda to the south and south-west respectively.

According to the most recent census, Uganda has a population of 26.8 Million people. There was an increase of 8.0 million persons over a period of 12 years (1990 – 2002) translating into an annual population growth rate of 3.4% up from 2.5% observed in the 1980 –1991 period. Of the total inhabitants, 50.1% are females (39% of whom are in reproductive age group) and 49.9% are males. The distribution of the population shows that 88% of the population lives in the rural areas while 12% is urban based.

Uganda is a republic that gained independence from Britain in 1962, and has 18 distinct ethnic groups and similar number of languages. English is the official spoken and written language.

Uganda is divided administratively into 56 districts. The main economic activity is agriculture and more than 80% of the people are peasant farmers living in rural areas [16].

The GDP per Capita as purchasing power in US dollars is 1200 and gross GDP in US dollars is 6500.

Assuming a minimum basic expenditure required for food and basic family requirements to be \$24 per month, 35% of Ugandans fall below this threshold and are said to be living in absolute poverty, while 74% are said to be living below the poverty line [17].

The literacy rate for the total population stands at 69.6%, although the literacy rates for men (79.5%) are much higher than for women (60.4%). However, the proportion of illiterate is much higher in rural areas.

Public Health Infrastructure is organized in a hierarchical manner on the basis of both catchment population and administrative boundaries. A tiered level of services is provided from the community to the National Referral Hospital.

Health services have traditionally been divided into curative and preventive or primary health care, although curative health services have long been taking the lion's share of the budget, with a hospital in nearly each of the 56 districts. However, health services have been reoriented to primary health care (PHC) by transforming the health system from curative orientation to preventive. More attention is given to public health programmes, health education and information. Community capacity building has been used as a strategy to promote the implementation of PHC.

The Health Sub-district (HSD) – newly created health service zones based on the catchment population and administrative boundaries, has been adopted as a policy strategy for increased decentralization of service delivery and the expansion of access to essential obstetric care at the community level. One of the key services provided at the Health Sub-districts is emergency obstetric care in the form of caesarean sections, blood transfusion and postabortion care.

The Ministry of Health is now only responsible for setting standards of care, supervision and monitoring.

Uganda has gone through a period of political turmoil during which most health infrastructure was destroyed. Attempts by the current administration to revive the broken down health services have still not improved the quality of services. It is therefore not a surprise that only 43% of the parishes have some form of health facility and 49% of the population lives within five kilometers of a health facility.

Most of the health indicators especially in rural areas where the funds are channeled have either stagnated or declined outright, a factor attributed to petty corruption and lack of trained staff. The maternal mortality ratio shows a slight decline, 505/100,000 live births as compared to 700/100,000 live births in 1988; the infant mortality rate is 83/1000 live

births. The fertility rate of around seven children per woman is among the highest in the world even in comparison to other developing countries which average three children per woman; contraceptive prevalence rate is 18.2%, and life expectancy at birth is 43.4. The adolescent pregnancy rate is 32% and 70.1% of women in the age category 20 – 24 years have had a birth before 20 years of age [18].

Since 1986, the government of Uganda has made considerable effort to restore the health sector through the implementation of structural adjustments programmes.

In view of the above, a National Health Policy (1999 – 2008) was formulated and a Health Sector Strategic Plan (HSSP – 2000-2005) was developed. Health care therefore since then is coordinated by the new Health Sector Strategic Plan.

Priority is given to provision of minimum health care package (targeted to major causes of ill health) to increase access, quality and equity. The Health Sector Strategic Plan is implemented through Sector Wide Approaches (SWAPS), Result Oriented Management (ROM) and Output-Oriented Budgeting.

Uganda runs one of the most effective anti-HIV campaigns in Africa and is one of the first countries where the prevalence is declining. In spite of this, AIDS remains the primary killer among adults. The epidemic is likened to the poverty situation.

Uganda faces serious challenges to improving the health and well-being of its people. The Ministry of Health and its partners in government, the donor community and civil society have responded with concerted action, in many cases achieving significant gains.

These achievements are particularly notable given serious funding limitations in the health sector. The allocation to the health sector has increased only slowly over recent years, from 8.9% in fiscal year (FY) 2001/02 to 9.6% in FY 03/04, which is low in relation to the Poverty Reduction Strategy (PRS) and to the Abuja commitment of 15%. Again, despite the PRS commitments, the absolute budgetary increase year-to-year is very low - 0.4% from FY 03/04 to FY 04/05.

Inadequate budgetary allocation is a major obstacle to improving public health services. If the 2003/04 health sector share of 9.6% is maintained, and if the economy continues to grow at rates envisaged by the current Medium Term Expenditure Frame, it will take 36 years to attain the agreed target of Abuja commitment of 15%.

However, the low level of funding does not categorically preclude improvement of health services and ultimate health outcomes. Allocation of government funds, including in the health sector, can better prioritize the needs of the poor.

1.2 Problem statement

Over the last decade, fertility trends in Uganda have virtually not changed much despite improvement in the Contraceptive Prevalence Rates (CPR) (from 7.8% in early 1990's to 18.2% in 2001).

Considering the contraceptive prevalence rate of 18.2%, the unmet need for family planning is estimated at 38% [17]. With a Total Fertility Rate (TFR) of 6.9, it can be inferred that significant access barriers to family planning exist in the country.

Uganda, as many other Sub-Saharan African countries faces a problem of high number of women who resort to abortion as a method of fertility regulation, even in the face of strict abortion laws.

Abortion law in Uganda, like in most African nations, has its origin in the laws of the former colonial powers, who have since reformed their own laws.

Studies carried out at one of the national hospitals in the early 1990's indicated that induced abortions constituted 25% of all abortion-related cases admitted at the gynaecological emergency ward, and abortion-related deaths represented 35% of all maternal deaths, with 60% of them occurring among teenagers [19].

It is estimated that fifty-nine per cent (59%) of gynaecological admissions in urban hospitals are abortion-related in young women [20].

These figures underestimate the true extent of the problem, however, since they represent only those women who make it to hospitals for treatment; women who seek services from the private providers or through other means are excluded from these estimates, as are women who do not seek or who lack access to services.

The recent Demographic and Health Survey (DHS) estimates put the average for the maternal mortality ratio in a range of 700 to 505/100,000 live births for the period 1988/89 – 2000/01. However, a national study conducted at 97 health facilities, including

30 hospitals, found the institutional maternal mortality ratio to be as high as 846 per 100,000 live births [21]. Unsafe abortion is estimated to contribute to between 20 to 35% of maternal deaths and a much higher proportion of reproductive health morbidity.

Most researchers now share the opinion that abortion is no longer a preserve of urban communities; it is a common and increasing practice in rural communities too.

In Uganda, young people aged 10 – 24 years constitute one third of the population – 7.9 million. Among these, adolescents are particularly at risk of unwanted pregnancies owing to the restrictive abortion laws.

Teenage pregnancies are common, three out of ten women aged 15 – 19 years were already mothers or pregnant with their first child. Among adolescents with no education, the rate was six out of ten [22]. The teenage pregnancy rate of 32% in the country is ranked among the highest adolescent pregnancy rates in Sub-Saharan Africa. Moreover, 36,000 girls below 15 years of age were already in marriage by year 2002 [22].

Approximately 15 – 23% of female youths (15 – 24 years of age) who have ever been pregnant have had an abortion [23].

It follows that exposure to life-threatening pregnancy complications, and therefore risk of long-term morbidity or even death is not uncommon among adolescents. In the 1990s, one third of maternal deaths in a rural district in Uganda occurred among women below 20 years [24].

Poor abortion-related care is easy to perpetuate in circumstances where abortion is forbidden, secretive and controversial topic.

Although in principle “rather strict” is not necessarily synonymous with “unsafe”, in reality, and particularly in a poor country like Uganda, it is difficult to get a clandestine abortion performed safely. Unsafe abortion procedures, untrained abortion providers, restrictive abortion laws and high mortality and morbidity from abortion tend to occur together. Thus, unsafe abortion remains a major public health concern in Uganda.

A concerted effort to reduce the health impact of unsafe abortion through postabortion care is being undertaken. However, few service providers have undergone training on postabortion care, and services are not provided in all the appropriate primary level health

service delivery points. Many women never make it to health facilities: the fear of humiliating treatment and of legal recriminations, along with poverty and lack of access, undoubtedly deters many critically ill women and girls from seeking desperately needed emergency care.

Health facilities also have limited capacity to manage abortion complications despite it being a major contributor to maternal mortality and morbidity. Available statistics from the 97 health units studied indicated that only 40% were able to manage complications of abortion. These were characterized by poor services for postabortion care - ranging from inadequate skills to lack of equipment, supplies and drugs in most health units [21].

Public awareness about the existence of these services in some public health facilities, particularly among adolescent and single women who tend to have less access to reproductive health services, is low.

Despite the fact that 49% of Ugandan population lives within 5 kilometers of a health facility, geographical access to health facilities however, does not translate into access to required services.

A baseline survey done for the Safe Motherhood Project showed that 33% of health facilities in the country did not provide maternity services and only 57% of hospitals were equipped to administer general anesthesia [25].

Inequitable distribution of health personnel between districts and between urban and rural settings compounds the whole problem. Over 80% of doctors and 60% of midwives and nurses are located in hospitals, which mostly serve urban populations [26].

1.3 Justification of the study

Findings from the previous studies are merely a “tip of the iceberg” in as far as the abortion situation is concerned. Data management in most health facilities at that time was very poor. It was difficult to obtain reliable statistics on the incidence of abortion and its associated morbidity and mortality since records on abortion patients were neither well kept nor easily retrievable.

Since 1997, there have been major reforms in the health sector. Health information systems is one area the Ministry of health has focused its attention. At every level of health care, health workers have received training on health management information systems (HMIS); and at each district and regional referral hospital, trained records managers have been recruited. The quality of data in most health facilities has since then improved tremendously. A study undertaken in a big health facility at present would yield a more reliable picture of the magnitude of abortion-related morbidity and mortality.

To date, published epidemiological research on abortion has been limited to only a few facilities, mostly at Mulago National Hospital, a large, tertiary-level facility in Kampala. Soroti Hospital is located 330 Kilometers from Kampala; such a distant hospital in a rural setting may provide a completely different picture of the incidence of abortion given the opinion that abortion is no longer a preserve of urban communities.

Gaps also existed in the previous studies done as no attempts were made to address the issue of the care abortion patients received from health facilities. This is the first study to utilize the World Health Organization standard guidelines to assess treatment methods used in the management of postabortion complications in a relatively bigger health facility in Uganda.

Furthermore, data from these studies are outdated as they were conducted in the early 1990's.

Above all, the 1994 United Nations International Conference on Population and Development in Cairo and the Beijing Platform for Action endorsed at the UN Fourth World Conference for Women in September 1995 recognized unsafe abortion as “a major threat to the health and lives of women” and called for the promotion of “research to understand and better address the determinants and consequences of induced abortion, including its effects on subsequent fertility, reproductive and mental health and contraceptive practice as well as research on treatment of complications of abortion and postabortion care” – some areas this study has focused upon.

1.4 Aims of the study

1.4.1 General Objective

In a distant rural setting of one of the least developed countries, and using a hospital-based approach:

To assess the magnitude of abortion-related morbidity, mortality and its management at Soroti Referral Hospital.

1.4.2 Specific Objectives

1. To estimate the number of abortion cases treated at Soroti Referral Hospital from January to December 2004.
2. To estimate the number of abortion cases with serious complications managed at Soroti Referral Hospital from January to December 2004.
3. To identify the characteristics of women treated for postabortion complications at Soroti Referral Hospital.
4. To assess the treatment methods used in the management of postabortion complications at Soroti Referral Hospital.

1.5 Operational definition of terms

Maternal mortality

Maternal mortality is defined according to World Health Organization as the death of a woman while pregnant or during childbirth, or within 42 days of termination of pregnancy irrespective of the duration and the site of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes [27].

Abortion

Abortion refers to the termination of pregnancy from whatever cause before the foetus is capable of extra uterine life [28].

Induced abortion

Induced abortion refers to the termination of pregnancy through a deliberate intervention intended to end the pregnancy [28].

Unsafe abortion

Unsafe abortion is “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 [29].

Incomplete abortion

Incomplete abortion refers to retention of some of the products of conception within the uterus or the cervical canal.

Medical / Legal definition of abortion in Uganda

The medical and legal definition of abortion in Uganda is the termination of pregnancy before the 28th week of gestation.

Unwanted pregnancy

A pregnancy that for a variety of often overlapping reasons is unexpected and undesired.

Reproductive Health

Reproductive Health is ‘a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity, in all matters related to the reproductive system and to its functions and processes [30].

Reproductive tract infection

Any infection associated with the reproductive/sexual organs.

CHAPTER 2

2. Literature Review

2.1 Which women seek abortion and why?

Every woman has an abortion for the same reason – because she cannot cope with a particular pregnancy at a particular time [31].

Numerous factors could determine her unwillingness to carry the pregnancy to term – for example, age, economic instability, a strained or unstable relationship, coerced non-consensual sex. Often the decision is driven by a need to balance roles and responsibilities within socially defined boundaries [32].

A strong motivation to seek an abortion rests on the widespread desire for smaller families, the need to control the timing of births and the failure or inconsistent use of contraception. Poor access to family planning services, shifts from rural to urban settings, poverty and hardship, increase in non-marital sexual activity, adolescent sexuality coupled with unprotected sex, all contribute to the continuing practice of abortion in the developing world.

Non-use of contraception accounts for the majority of un-wanted pregnancies. Worldwide, between 120 and 150 million married women who want to limit or space future pregnancies are not using a contraceptive method and have an unmet need for family planning information and services. This situation will continue to worsen due to a surge in demand on two fronts: first, more people are expressing the wish to use modern contraceptive methods, thanks to successful education programmes; secondly, the number of people of reproductive age is on the increase. By 2015, the number of women of reproductive age will increase by around a third (36 per cent) [33] – thus increasing also the need for reproductive health services.

There are many reasons why women who want to avoid pregnancy do not use contraceptives, including ambivalence about pregnancy, lack of knowledge about contraception, their own or their partner's opposition to family planning, poor access to contraceptive services, fear of side effects and the woman's perception that she cannot become pregnant [34, 35].

In addition, between eight and thirty million pregnancies each year result from contraceptive failure either through inconsistent or incorrect use of family planning methods or method-related failure [36].

The reasons why women opt for less effective methods include lack of knowledge about modern methods, religious values that proscribe modern contraceptive use, concern about side effects, partners' objection and difficulty in paying for or obtaining a modern method.

Despite the fact that family planning services are more effective and available than ever before, estimates suggest that at least 350 million couples worldwide lack information about contraceptives and access to a range of modern family planning methods. Between 12 and 15 million unmarried women also lack access to services that will enable them to achieve their reproductive intentions [37].

The increasing gap between age at menarche and age at marriage means that there is a longer period during which single women may have an unwanted pregnancy. Lack of access to family planning services for young and single women greatly contributes to the high rate of abortion.

Many women leave hospitals after treatment for complications of unsafe abortion without any counseling on how to prevent future pregnancies, and without a contraceptive method [38].

For most women in the developing world, where abortion is usually restricted and unsafe, contraception would seem to offer a better fertility regulation option. Yet research findings indicate the extensive use of induced abortion even in countries with good family planning services. The Netherlands (also with a small family norm) has a comprehensive programme of sex education, good contraceptive and emergency contraceptive services, and safe legal abortions. As few as 6% of first births may be unplanned and the abortion rate is one of the lowest in the world (6 per 1,000 in 1994, compared with 26 per 1,000 in the USA). Yet abortion remains a necessary part of fertility control [39].

Even if all contraceptive users were to use methods perfectly all the time, nearly six million unintended pregnancies would occur annually [40]; and no matter how effective

family planning services and practices become, there will always be a need for access to safe abortion services [41].

Unsafe abortion is a public health problem at all ages, but particularly among young women who often have poor access to family planning information and services, and who are less likely than older women to have the social contacts and financial means to obtain a safe abortion. Up to 70% of all women hospitalized for abortion complications in Africa are younger than 20 years [42]. Studies indicate that a majority of women undergoing illegal abortion are young, unmarried students without children who turn to abortion because contraceptives are not available to them and pregnancy is a ground for expulsion from school [43].

Young girls who decide to carry their pregnancy to term usually face insurmountable difficulties, particularly shame and social isolation from their family and peers, interruption of employment or careers, increased economic hardship, and a diminished opportunity for a later marriage. Not surprisingly, the most common solution to an unwanted pregnancy for a non-married girl in most parts of the world is an abortion.

While the desire to continue schooling or working is the most important motivation for an abortion among young unmarried women in Sub-Saharan Africa, marital problems appear to be a motivation for an abortion among married women in the region [44].

In Uganda, the reasons cited for resorting to abortion among young women include: inadequate information on sexuality and reproductive health, early sexual activity, early marriage, sexual exploitation, lack of adolescent-parenthood dialogue, lack of adolescent-friendly services – not client (adolescent) – oriented in terms of time, cost, location, negative attitude of health providers, low contraceptive use because of poor access and ignorance [20].

Other factors women cite for unwanted pregnancy include rape, lack of control over contraception, mental or physical health problems and severe malformation of the fetus [11, 45, 46].

A small but growing number, whose position deserves respect, do not wish to have children at all [47].

In some Asian countries, notably China, Korea and Taiwan, preference for sons also influences abortion decisions in the context of small family norms [48].

2.2 Morbidity and Mortality:

Unsafe abortion is one of the great neglected problems of health care in developing countries and a serious concern to women during their reproductive lives.

Unsafe abortions may be induced by the woman herself, by non-medical persons or by health workers in unhygienic conditions. Such abortions may be induced by insertion of a solid object (usually root, twig or catheter) into the uterus, an improperly performed dilatation and curettage procedure, ingestion of harmful substances, or exertion of external force.

The morbidity and mortality risks of induced abortion depend on the facilities and skill of the abortion provider, the method used and certain characteristics of the woman herself, such as her general health, presence of sexually transmitted disease (STD) or other reproductive tract infection (RTI), age, parity, and the stage of the pregnancy. The risks involved also depend on the availability and utilisation of treatment facilities once complications have occurred. Adding to the trend to seek an abortion, many women, and particularly adolescents often present themselves too late for abortion, when the procedure carries the greatest risk.

According to the conditions in which the unsafe abortions are performed and the methods used, a variety of severe complications may occur. Complications such as sepsis, haemorrhage, genital and abdominal trauma, perforated uterus or poisoning may be fatal if left untreated. Death may also result from secondary complications such as gas gangrene and acute renal failure.

Data from Nigeria and Latin America (where legal restrictions make access to safe abortion extremely difficult) suggest that 4 out of every 10 procedures result in severe complications; the risk is particularly grave for those in rural areas [49, 50].

Typical multiple complications from illegally induced abortion are reported in a study of 840 patients in Ibadan, Nigeria, in 1989: sepsis (86%), haemorrhage (35%), uterine

perforation (16%), lower genital tract injury (10%), renal failure (0.4%), coma (0.4%) and embolism (0.2%) [51]. Permanent disability can result from unsafe abortion; the risk of a hysterectomy following a septic abortion is higher in young women [52].

Long-term consequences of abortion may include chronic pelvic pain, pelvic inflammatory disease (PID), tubal occlusion and secondary infertility.

A high incidence of ectopic pregnancy and premature delivery, and increased risk of spontaneous abortions in subsequent pregnancies are other possible consequences of poorly performed abortions. Women harboring STDs are at increased risk of an ascending postabortal infection [53, 54, 55].

The risk of infertility [56] increases with each episode of ascending PID, and Salpingitis [57].

Studies indicate that about 20% to 30% of unsafe abortions may lead to reproductive tract infections of which between 20% and 40% lead to PID and consequent infertility.

Although less studied, in many instances the social consequences – such as family disruption and various forms of ostracism – may be at least as important [58] not to mention the woman's vulnerability to legal proceedings.

Since all unsafe abortions are not induced, The World Health Organization (WHO) has established criteria for categorizing whether a presenting abortion complication is the result of a spontaneous or induced abortion [59].

Distinguishing between spontaneous and induced abortion among women hospitalized for abortion complications is difficult.

In some countries under restrictive legislation, induced abortion may be tolerated and women may be open to discussing their experiences – this was the case in Turkey before liberalization of the law, in Malaysia [60] and in Bangladesh [61].

In other countries, where women fear retribution or inadequate care, they are likely to deny unsafe procedures even in the face of the most obvious evidence – This was the case in the past studies in Latin America [62] and in many African countries [63, 64].

To overcome this problem several different criteria for classifying abortion cases as spontaneous or induced can be devised, based solely on clinical evidence.

The WHO re-classification scheme categorizes women who have had an abortion into four classes:

1. *'Certainly' induced abortion:* A case is classified as 'certainly' an induced abortion when the woman herself provides this information, when such information is provided by a health worker or a relative (in the case of a deceased woman), or when there is evidence of trauma or of a foreign body in the genital tract.
2. *'Probably' induced abortion:* A case is classified as 'probably' an induced abortion when the woman: (a) has signs of abortion accompanied by sepsis or peritonitis; and (b) states that the pregnancy was unplanned (either she was using a contraceptive method during the cycle of conception or she was not using a contraceptive method because of reasons other than desired pregnancy).
3. *'Possibly' induced abortion:* A case is classified as 'possibly' an induced abortion if only one of the conditions listed under (2) above is present.
4. *'Spontaneous' abortion:* All other cases are classified as 'spontaneous' abortions if none of the conditions listed above is present or if the woman states that the pregnancy was planned and desired.

The severity of the clinical picture is likely to vary from country to country depending on the methods used to clandestinely terminate pregnancy and the barriers women encounter in reaching the hospital ward when complications arise. Where a hospital is accessible, women may seek care even at the slightest sign of complication; when the hospital is inaccessible, women will reach it only when their condition has become critical. The resulting overall picture of abortion cases would look substantially different in these two settings.

2.3 Impact of legislation and policies on the health of women who undergo abortion:

Abortion is not just illegal and clandestine insofar as the law is concerned, but also in people's minds. Until a society accepts that abortion is needed by women, and that women and abortion providers should not be punished for it, legal abortions will rarely be

provided except in exceptional circumstances. It is only when women's autonomy to decide not to continue a pregnancy is recognized as an ethical imperative and in law, not only for health-related reasons but also for social, economic and psychological reasons, that abortion will become available to the vast majority if and when they need it.

In almost all countries (98%), the law permits abortion to save the woman's life. In 62% of the countries some provision is made for preserving the woman's physical health as a basis for legal abortion, although definitions of the risk to health are diverse [65]. Evidence shows that restrictive legislation is associated with higher rates of unsafe abortion and a correspondingly high mortality.

It is however, the number of maternal deaths, not abortions, that is most affected by legal codes [66]. In the case of Romania, for example, the number of abortion-related deaths increased sharply after November 1966 when the government tightened a previously liberal abortion law. The figure rose from 20 per 100,000 live births in 1965 to almost 100 in 1974 and 150 in 1983 – an increase of 650 per cent [67]. The law was again liberalized in December 1989 and, by the end of 1990, maternal deaths caused by abortion dropped to around 60 per 100,000 live births – a reduction of 67 per cent.

The situation in Mexico, a country where abortion is acknowledged as the third most important cause of maternal mortality accounting for 8% of all registered maternal deaths [68], is a clear example of how abortion laws affect the lives of women. Since 1936, the only circumstance for which abortion was legally permitted in all Mexican states and the Federal District was a pregnancy that resulted from rape. Such abortions were to be performed within the first trimester of pregnancy.

Victims/survivors of sexual violence (VSSV) before modification of the penal code to include three additional grounds – (when the pregnancy presents a grave risk to the health of a woman, severe fetal malformation and artificial insemination without the woman's consent) for obtaining a legal abortion, faced a second assault by the state. The aftermath of sexual violence, including sexually transmitted infections (STI), HIV/AIDS, forced pregnancy, unsafe abortion, high-risk sexual behavior requires a wide range of interventions. These in Mexico were poorly coordinated if offered at all; and when provided, were implemented by a hostile and judgmental medical / legal system [69].

One of the most complicated routes women have to navigate is access to legal abortion services when they become pregnant from rape, which is not a rare event. Different studies in Mexico indicate that between 7.4% and 26% of raped women become pregnant [70]. Despite the encouraging and favourable changes in the abortion law in Mexico, provision of legal abortions in the health services and law enforcement is far from adequate. Doctors can refuse to carry out the procedure on grounds of conscience, or the paperwork needed from the local authority can take too long to prepare, beyond the first trimester of pregnancy. Hence, the prevailing conditions of secrecy and risk still apply in most cases.

The “Paulina case” exemplifies this scenario. This was a 13-year-old girl in Mexico who became pregnant in 1999 after being raped. Although she received permission to obtain a legal abortion, the hospital convinced her mother through misleading information to decline the abortion barely 16 days before the three-month limit for a legal abortion. In April 2000, she gave birth to a boy [71].

Contrary to common belief, legislation of abortion does not necessarily increase abortion rates. It only changes the conditions under which abortions are performed. The Netherlands, for example, has a non-restrictive abortion law, widely accessible contraceptives and free abortion services, and the lowest abortion rate in the world – six abortions per 1,000 women of reproductive age per year [72]. Studies indicate that mortality and morbidity from criminal abortions and emergency evacuations diminish with liberalization of the law [73].

Where the law forbids it, abortion is simply less visible and more dangerous. When discussing the impact of the law, it is important to realize that even under restrictive abortion laws some women will have the resources to evade them by obtaining private care or traveling to countries where the law is more liberal. The corollary is that, under the most liberal law, some women will encounter economic or social barriers to abortion that still make them prefer an unsafe procedure. Sometimes procedural barriers to services such as mandatory counseling, waiting periods, and consent requirements introduce intolerable delays and undermine a woman’s autonomy.

In many countries, access to legal abortion is still difficult or impossible due to high cost, unavailability or inaccessibility of services, lack of trained providers, administrative barriers, and lack of information.

In addition, several governments are actively working to restrict sexual and reproductive health rights – in particular, a woman’s right to choose and obtain a safe abortion. The reinstatement of the Mexico City Policy – (now referred to by family planning supporters as the Global Gag Rule) by the United States Administration in 2001 with an aim of reducing the incidence of abortion may instead worsen the situation. According to this rule, international (foreign) non-governmental organizations (NGOs) receiving USAID funds are prohibited from performing abortions in cases other than a threat to the life of the woman, rape, or incest; providing counseling and referral for abortion; or to lobby to make abortion legal or more available in their own country even when these activities are carried out with their own funds. However, U.S. NGOs can continue to perform, counsel, refer, or advocate on abortion with funds from non-U.S. government sources without risking their eligibility to receive U.S. family planning assistance. This has created a forced separation of family planning services from abortion-related services, thereby increasing the number of women who are denied access to comprehensive sexual and reproductive health services such as pre and post-abortion family planning.

By refusing to sign up to the Global Gag Rule, the family planning associations in Kenya, Zambia, and Nepal lost a total of about \$1.4 million and had to close many clinics that were providing a full range of sexual and reproductive health services to socially excluded and underserved clients [74]. Reducing access to contraception leads to more unwanted and high-risk pregnancies and more unsafe abortions with their toll of maternal illness, injury, and even death. The Global Gag Rule therefore puts at risk the Millennium Development Goals.

Despite the evidence that allowing abortion on liberal grounds reduces morbidity and mortality risks from induced abortion, only 22 per cent of the 190 countries in the world have abortion laws allowing it on request [75].

In some countries, the immediate priority is not to legalize abortion but rather to make safe abortion services available to the full extent of the laws [10]. The services must be

much more accessible. This requires training health personnel so that they are conversant with national laws and regulations as well as with technical procedures, ensuring equipment and supplies, and designing protocols, regulations and policies that promote access to quality abortion services.

It is imperative to note that safety should not be viewed as a question of safe medical procedures being used by the individual providers, but also about removing the risk of exposure and the fear of imprisonment and other punitive measures for both women and providers, even where illegal abortion is tolerated.

2.4 Quality of Care:

Despite liberalization of abortion laws in some developing countries, the infrastructure to provide legal and safe abortion lags behind, and many women still resort to abortion outside approved facilities or rely on unskilled providers when faced with an unwanted pregnancy.

In the past decade, in spite of improvements in the safety of abortion procedures used and better access to treatment for complications for some women in developing countries, the number of women requiring treatment for serious complications of unsafe abortion remains very high and many women never receive care at all [76].

In many developing countries, safe abortion services are not available to the full extent permitted by the law. Many health workers, including doctors and nurses, lack vital information about its legal status or do not know how to perform abortions. Many women who would qualify for safe and legal abortion services are turned away due to providers' lack of knowledge about the exact implications of the law, or due to providers' ambiguous attitudes towards abortion, particularly vis-à-vis young women, unmarried women and marginalized groups [38, 77, 78].

When women experience complications due to unsafe abortion, appropriate medical care is often unavailable or inaccessible. Lack of protocols for postabortion care, misdiagnosis, punitive attitudes on the part of the health care providers, and case

overload result in life-threatening and costly delays for women seeking treatment from the health system [79].

Whatever the legal status of abortion, high quality services for treating and managing complications of abortion should be accessible to all women [80].

Bringing abortion services out into the open is a pre-condition for ensuring quality of care, accessibility, availability and affordability, especially for poorest women. This encourages health professionals to provide a defensive service. In Guyana, for example, although most clandestine abortion providers before the law was changed in 1995 were medical professionals, septic abortion was the third highest cause (19%) of hospital admissions. After the law changed, the same group of abortion providers organized themselves and voluntarily began to provide prophylactic antibiotics. Admissions to the main public hospital for septic abortion and incomplete abortions fell by 41% within six months of the decision [81].

A specific combination of integrated services known as “postabortion care” that can significantly reduce abortion-related maternal morbidity and mortality, and help break the cycle of repeat unwanted pregnancy and unsafe abortion hence improving the overall health status of women are mandatory.

These services include:

- emergency treatment of abortion complications
- postabortion family planning counseling and services, and
- links to comprehensive reproductive health services.

Emergency treatment of abortion complications

To prevent abortion-related mortality, the World Health Organization recommends that at least some of the components of emergency care for abortion complications be available 24 hours a day [3]. These should exist at every facility, at every level of the health system – from community-based health posts to specialized hospitals since many women with serious complications require immediate care.

These emergency medical services for abortion complications should include:

- an initial assessment of the woman's status
- a consultation with her about her medical condition and treatment plan
- a medical evaluation (brief history and limited physical and pelvic examinations)
- prompt referral and transfer system as appropriate, depending on the level at which a woman enters the health system
- stabilization of her condition and treatment of complications (e.g. severe bleeding, sepsis, intra-abdominal injury, uterine perforation)
- uterine evacuation to remove products of conception.

If a woman's condition permits, counseling about her condition and procedure options should be provided before treatment of complications, and counseling and reassurance should be offered during treatment. Afterwards, counseling on self-care should also be given.

Every facility should have trained and authorized staff, appropriate equipment, explicit protocols for treatment procedures, a coordination mechanism between relevant units / departments and effective referral networks [4].

The United Nations General Assembly's 1999 fifth-year review of the ICPD agreed that "in circumstances where abortion is not against the law, health systems should take measures to ensure that such abortions are safe and accessible". Some countries are now training midwives and other health providers to offer postabortion care, including links to family planning services in order to prevent repeat abortions.

In Ghana, midwives from community-based health centres and private maternity homes were trained to treat cases of incomplete abortion and to counsel women on post abortion family planning methods [82].

In Nigeria, doctors and midwives from the Christian Health Association of Nigeria (CHAN) have been trained to provide postabortion care, as well as other reproductive health services, including screening and treatment for STDs [83].

The Key to a successful service is to select staff with common vision and commitment to women's health, and then maintain their morale and motivation by support and counseling.

A good example is the Broussais Clinic in Paris, where the goal is not only to perform the correct procedure, but also to empower women to make decisions about their overall health and wellbeing. A similar mission has been adopted by Parivar Seva Sanstha (PSS) in India, which strives to enhance women's quality of life by improving their reproductive health: women who seek to terminate pregnancy have the right to do so with safety, dignity and personal support [84].

The Clinique d'Orthogenie of Broussais Hospital in France, and Parivar Seva Sanstha in India, are two different programmes operating in very different settings but with a shared commitment to providing high-quality abortion care in a context of broader reproductive health services. They however operate in legal climates that allow for safe services.

In both programmes, each woman or girl who arrives for abortion receives crucial basic care, including:

- Appropriate medical treatment to ensure complete abortion and safe recovery
- If medically appropriate, choice about issues such as anesthesia and /or method of abortion
- Supportive counseling
- A range of related reproductive health services, including a choice of contraceptive methods to help her avoid another unwanted pregnancy.

Indeed, an important part of the success of both the Broussais Hospital Clinic and PSS rests on the selection and training of staff who believe that having an abortion is an opportunity to protect one's health and to move forward in one's life – not a time to suffer.

The Clinique d'Orthogenie at Broussais Hospital was established in 1982 following liberalization of abortion law in France; which created a shortage of physicians willing to perform abortions. It was opened in 1983 to conform to the French law requiring that all Public-sector hospitals offer abortion services. It is now a shining example of care shaped specifically to respond to the needs of its clients.

Today, the Clinic not only offers a range of abortion services, but has expanded its mandate to address a wide range of reproductive health issues.

Even with the range of reproductive health care available, abortion remains the cornerstone of the Broussais Clinic.

The staff understand that many women can assume greater autonomy when they feel they are in a supportive environment.

In maintaining staff commitment and morale, Dr. Elisabeth Aubeny's (The Clinic's First Director) comment reflects the moral framework that guides the staff in this regard: *"one must always keep in mind that it is never easy for women to have an abortion. Our job is to offer the best choice for women by offering the best choices of services---. It requires a basic respect for each woman and a commitment to women's autonomy and their rights in decision making."*

At the Broussais Hospital Clinique d'Orthogenie, the staff achieve the final measure of success when clients say "Thank you for the day I spent here."

Toward that end, they undertake an enormous effort day after day to give meaning to the guiding words of Dr. Aubeny: *"Women have a right not only to abortion. They also have a right not to suffer."*

With a similar mission, Parivar Seva Sanstha (PSS) – meaning Family helping organization, was formed in 1976 in response to the government's call to tackle the growing problems of its floundering family planning programme and inadequate safe abortion services.

Even with limited resources, PSS commitment to offering care that is friendly, safe, affordable, and efficient remains paramount.

Universally, clients arrive with the expectation that PSS will provide friendly, safe, and efficient abortion services. PSS providers are clearly pleased that their clients have a reputation for excellence and that former clients, medical providers, pharmacists and government health workers all recommend their service. To this end, one provider noted, *"The only women who don't come here are women who don't know about us."*

The commitment to providing safe, efficient, and humane abortion services has been a hallmark of the success of PSS. Much thought and effort go into improving quality of care.

Although abortion is PSS's flagship service in the clinic and remains central to its mission, PSS has expanded from a singular focus on abortion provision to a more comprehensive reproductive health agenda.

Along with its clinical and pragmatic innovations, the cornerstone of PSS's success remains its commitment to quality and to a client orientation. The primary mission – to improve the quality of life of people through improving their reproductive health – has not changed. Nor has the belief that women seeking to terminate pregnancy have the right to do so with safety, dignity and personal support [85].

Postabortion family planning

The possible return to ovulation within two weeks following pregnancy termination makes women who have had an abortion at immediate risk of a subsequent pregnancy. However, many women and their health care providers are not aware of the prompt return of fertility after an abortion.

Research suggests that many women who receive treatment for abortion complications would like to use a family planning method. However, because of inadequate attention to women's needs and deficient provider knowledge, many of these women leave the hospital without being offered counseling or a contraceptive method.

In Malawi, Uganda and Zambia, between 52 and 79 percent of women treated for abortion complications indicated that they would have liked to receive a family planning method. However, less than 10 percent received a method [11]. A hospital study in Egypt revealed that many doctors had little knowledge about contraception or practical training to enable them to counsel women about postabortion family planning. Fewer than three percent of the women treated for abortion-related complications discussed contraception with hospital staff [86].

Under no circumstances should women be pressured to accept a particular method, nor should contraceptive acceptance be a prerequisite for treatment of abortion-related complications [87]. Women who have experienced a spontaneous abortion and who want to become pregnant again soon should be provided with information. They should be referred to reproductive health services where they can get counseling, specialized care,

such as infertility counseling or treatment of sexually transmitted diseases (STDs). Similarly, all women who have had an induced abortion should be offered accurate information on family planning, sensitive counseling, a range of contraceptive methods and referral for ongoing care.

Links to reproductive health care and other services

Linking emergency postabortion care services with other reproductive health services is essential and logical, yet in much of the world, these services remain distinctly separate. As a result, many women have no access to reproductive health care and suffer poor overall health.

It is important to identify the reproductive health services that each woman may need and offer her as wide a range of services as possible. Such services include:

- Treatment of reproductive tract infections
- Cervical and breast cancer screening and treatment (if applicable)
- Advice on proper nutrition
- Advice on family planning methods
- Advice about antenatal care
- Links to under-five clinics for existing children (if applicable)
- Referral for services following sexual violence
- Referral for counseling services following diagnosis as HIV-positive

These services should target specific risk groups who may need both treatment for abortion complications and referrals for other health and social services. These include adolescents, victims of rape and sexual violence, women with STDs, including HIV/AIDS, women in refugee settings and marginalized populations.

2.5 Economic Impact on individual women / family and the public health system:

Treatment of abortion-related complications often requires several days of hospitalization and staff time, as well as blood transfusion, antibiotics, pain control medicines and other

drugs. Providing this care depletes funds and medical supplies needed for other types of treatment [57]. As much as 50% of hospital budgets in some developing countries are used to treat complications of unsafe abortion [88, 89].

Where abortion is clandestine and unsafe, women (or their partners or families) are buying drugs and other means of self-induced abortion and/or paying clandestine providers, while both public health services and women are paying for the treatment of abortion complications, often in tertiary level hospitals, where costs are highest. Costs (economic and social) incurred for unsafe abortions not only include acute care, however, but also the long-term complications of damage to the reproductive organs, pelvic inflammatory disease and secondary infertility.

Moreover, the need for blood transfusion to deal with hemorrhage and other complications of unsafe abortion should be considered against the background of increasing HIV sero-prevalence in many developing countries. Costs to families, especially for a woman's existing children, also include those that result from maternal death.

Unsafe abortion situations are characterized by lack of equity in cost, safety and quality of care. In some Bolivian hospitals, women who present with signs of induced abortion are being charged higher fees for treatment of complications than women who appear to have had spontaneous abortions, which contribute to delays in obtaining care [90]. In Egypt, as elsewhere, the price for a clandestine abortion increases in proportion to the level of safety [91].

Women tend to wait until complications become severe before seeking help, increasing both the cost and complexity of treatment. Furthermore, women attending untrained providers have been found to make more visits for care and spend more overall than women attending trained providers in the first place [92].

A recent study in Tanzania found out that 34% to 57% of all admissions to the gynaecological ward of a hospital in Dar es Salaam were women suffering from complications of abortion. It cost the hospital \$ 7.50 per day to treat each woman. The national health budget allocated only \$ 1 per person per year for health care.

In terms of average length of hospital stay, only three of 455 women were treated and discharged on the same day; 25% needed one day, almost 50% needed 2 days and the remainder needed 3 – 5 days more to recover [90].

In Guyana, about 25% of the blood available at the main public hospital was used to treat abortion complications before the law was changed [81].

CHAPTER 3

3. METHODOLOGY

3.1 The Study Setting

The Study was conducted in the Department of Gynaecology and Obstetrics (emergency ward and inpatient ward) of Soroti Regional Referral Hospital at Soroti district in Uganda. Soroti District is located on the East of Lake Kyoga. It has a total population of approximately 366,871 (as projected for year 2004). Of these, 188,130 are females, of which 43,270 are of reproductive age. The majority of the people are rural subsistence farmers of mainly two different ethnic groups – Iteso (predominant) and Kumam (minority).

Soroti Regional Referral Hospital is a 250-bed Government hospital handling all abortion-related cases and complications arising from abortion. Under decentralization structure, it is responsible for some public health activities in Soroti Municipal Council Health-Sub district. It provides support supervision of reproductive health programmes to all the four Health Centre IV's of Soroti district, and five Health Centre IV's of Katakwi and Kaberamaido districts. The hospital receives referrals from all the surrounding districts.

Soroti Referral hospital was chosen for this study because of its unique nature:

It is located in a distant rural setting, and attends numerous cases of abortion complications in the North-Eastern region of Uganda.

It also offered a safe and convenient place to study abortion and to interview women who had abortion complications.

More importantly, the principal investigator's knowledge of the local languages in the study area was deemed an important asset in building trust on the side of the respondents.

Figure 1: Map of Uganda showing the location of Soroti District where Soroti Regional Referral Hospital is situated.



Source: The World Factbook - Uganda

3.2 Research Design

This was designed as a cross-sectional descriptive study, with a simultaneous collection of prospective and retrospective data from women who came and /or were referred to Soroti hospital for management of abortion complications during the period 1st January to 31st December 2004.

The study design had two main elements:

- (a) case-record review of abortion cases
- (b) structured interviews of abortion patients.

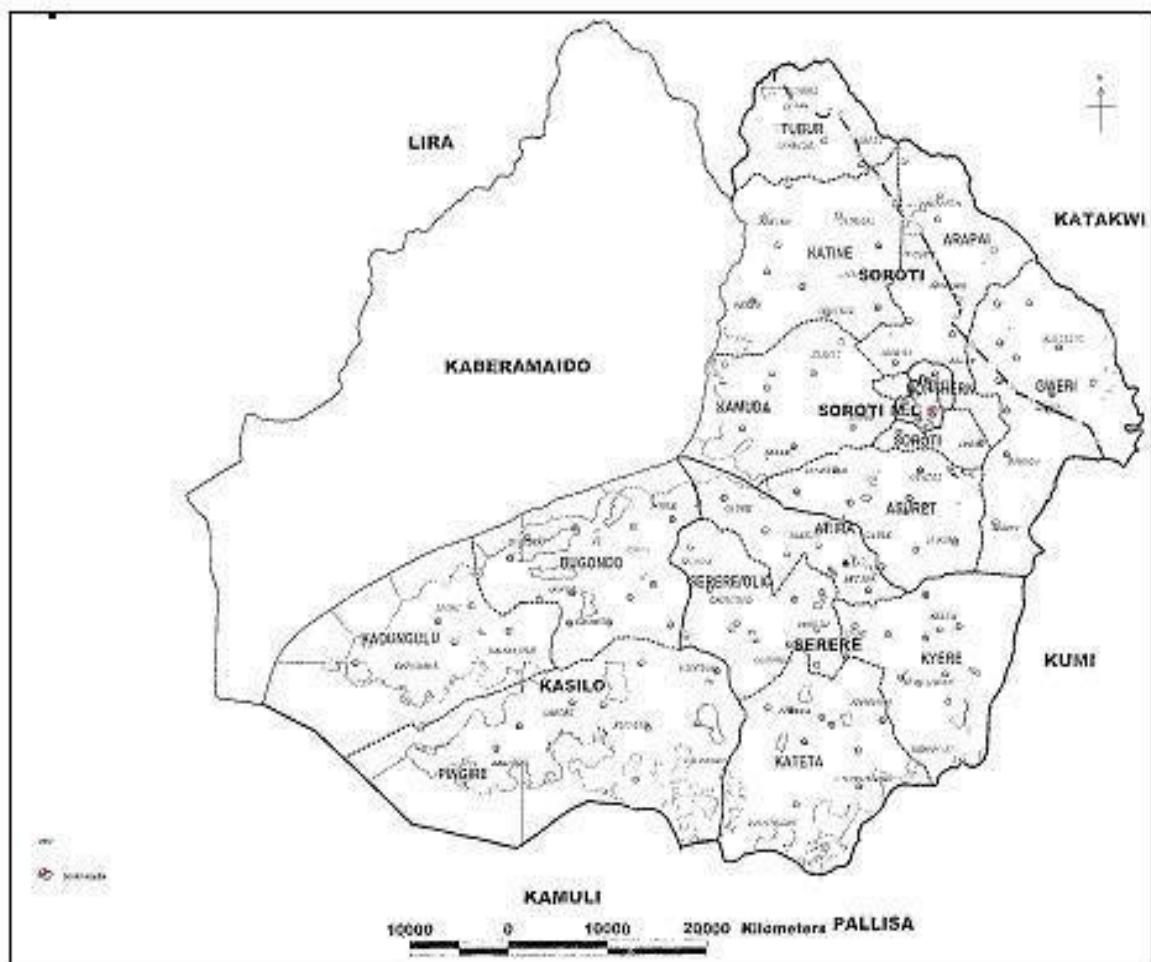
The retrospective case-record review/prospective data collection was done from 1st September to 31st December 2004.

It is important to note that this design was not meant to distinguish between spontaneous abortions and induced abortions.

Attempting to differentiate between spontaneous abortions and induced abortions is not recommended in research on abortion in contexts where it is restricted by law [93].

Besides, differentiating between spontaneous and induced abortions is extremely difficult, if not impossible to confirm clinically and presents both ethical and methodological challenges in a patient interview [94].

Figure 2: Map of Soroti District showing the location of Soroti Regional Referral Hospital



Source: Soroti District Planning Unit

3.3 Variables

The definition of the main variables was based on the objectives of the study.

For objective 1, an abortion case for purposes of this study was defined as any woman of reproductive age who presented to hospital with a missed period (delayed menstrual bleeding – more than a month had passed since her last menstrual period), with at least two out of three of the following symptoms:

- vaginal bleeding,
- cramping or lower abdominal pain similar to labor (contractions), or
- passage of products of conception

These symptoms were assessed in association with signs of loss of a non-viable pregnancy in the first or second trimester of gestation.

For objective 2, serious complications referred to in this study included:

- a) Abortion with severe haemorrhage necessitating blood transfusion.
- b) Abortion with sepsis and at least 48 hours of hospital stay
- c) Abortion with possible intra-abdominal injury with or without surgical intervention.
- d) Abortion with trauma to the genital tract
- e) Death in an abortion case who presented to this hospital.

For purposes of this study, septic abortion was defined as any diagnosed abortion case who presented with three out of five of the following signs:

- Fever (temperature greater than 38⁰C)
- Lower abdominal tenderness (with or without rebound tenderness)
- Pus in the cervix or vagina
- Uterine tenderness (Cervical motion tenderness)
- Foul-smelling vaginal discharge

Likewise, intra-abdominal injury case was defined as any diagnosed abortion case who presented with three out of four of the following signs:

- Distended abdomen
- Decreased bowel sounds

- Rigid (tense and hard) abdomen
- Rebound tenderness

An ectopic pregnancy and acute appendicitis were ruled out in the above cases and a confirmation from a surgical intervention was /or was not necessary.

For objective 3, the characteristics of interest included: age, parity, marital status, education status, socio-economic status and contraceptive use.

For objective 4, standard guidelines developed by World Health Organization for managing postabortion complications were used in making comparisons with the treatment methods that were applied at Soroti Hospital. The treatment methods covered all aspects of management (clinical assessment, investigations – where applicable, urgent resuscitative methods – when indicated, surgical procedures, drugs and protection against tetanus).

3.4 Study population / Sampling

All women admitted to Soroti hospital with a diagnosis of pregnancy loss from 1st January 2004 through 31st December 2004, were included in the sample.

A non-probability (convenience) sampling technique was used to recruit the women who accepted to participate in the study during the prospective data collection period.

A total of 794 cases, which were identified from hospital records, and those interviewed during the four-month period, constituted the sample for the study. Fifty-seven (57) women who agreed to participate in the study were subsequently interviewed during the four-month period.

It was not deemed wise to calculate the sample size because the magnitude of abortion-related morbidity and mortality in this hospital was not known, and it was assumed to be changing from time to time. Instead, the studies covered a period of 12 months.

3.5 Survey Instruments and their Administration

Prior to the study, the designed instruments, which included checklists and structured questionnaires were tested from one district hospital which was equally handling large number of abortion complications. The aim was to cross-check the appropriate question order, the thoroughness of the responses, and assessment of reliability and validity of interviewee responses. It also helped to identify the nature of the existing records for their suitability of the designed checklists.

Following the pre-test, no appropriate modifications were made to the instruments.

The structured questionnaire was designed with anticipation that respondents would be reluctant to discuss the topic of abortion.

Before the interview, the nature of the study was explained to each woman and her consent to participate in the study was obtained. Each participant was also assured of the confidentiality of her report and, whenever possible, anonymity. Interviews were conducted as privately as possible, and at a time convenient to the woman during her stay in the hospital.

Interview topics included:

- (a) socio-economic and demographic characteristics – current age, residence, highest level of formal education attained, main economic activity including partner's, occupation, current marital status and duration
- (b) reproductive history – number of pregnancies, number of children born alive / still living and age of youngest child, previous experience of abortion and type, length of gestation at time of abortion, and whether the pregnancy was planned or unplanned
- (c) fertility control – knowledge of family planning / contraception; contraception ever-use, consistency, intentions during previous pregnancy / future; reasons for method failure and non-use, opinions on termination of unwanted pregnancy following contraceptive use.

Data from hospital record excerpts was collected using checklists. The sources of information were manual registers from gynaecological or women's ward and operating theatre. The cases were identified and their individual records were retrieved for further

scrutiny. Those that met all the inclusion criteria as defined in the variables were included in the sample.

The checklists solicited for information on the patient's age, parity, duration of hospital stay, diagnosis and complication at time of presentation.

The checklist that was adapted from World Health Organization standard guidelines for management of postabortion complications solicited for information on:

- (a) clinical assessment – history, physical / pelvic examination
- (b) resuscitative measures
- (c) investigations
- (d) drugs – types, combinations, route
- (e) tetanus protection.

The trends in record keeping were also observed during the study period.

3.6 Weaknesses and Strengths of the Methodology

A few methodological problems arose that could affect the interpretation of the results.

First, was the non-conducive hospital environment for the interview process. The hospital was crowded, noisy and lacked a very secure place for privacy; a factor that was detrimental to building the trust necessary for a discussion of such a sensitive issue.

Second, was the respondent's reluctance to participate in the study, a situation which is understandable in a country like Uganda where abortion is restricted by law, and severely condemned by religious and social mores.

Third, was the poor record keeping in the hospital. Some files could not be retrieved for further scrutiny in order for these cases to be included in the sample. Moreover, some vital information was missing in the manual registers and patient files.

Despite the limitations of a hospital-based study, the design was preferable to a population based-study as substantial underreporting of abortion is likely to occur in research that relies on self-reported data. In addition, the study design avoided the

contentious ethical issues of asking women about the origin of their abortion while they sought medical care in a setting where induced abortion is restricted.

The principal investigator attempted to improve case identification by first extracting the information from the manual registers, and then retrieving all the files to double-check for the clinical signs recorded.

3.7 Data processing and analysis

The data was entered in SPSS program version 12, cleaned and frequency tables were generated. Further analysis was performed by cross tabulation of relevant variables and information arranged in tables.

3.8 Ethical considerations

As mentioned already, after having been informed about the study and the methodology used, women were enrolled in the study after obtaining their consent. The Appropriate Regional Ethics Committee in Norway and the National Council for Science and Technology in Uganda accepted the study.

CHAPTER 4

4. RESULTS

4.1 Introduction

The results of the study are presented in the following sequence:

- Magnitude of abortion-related morbidity and mortality
- Serious complications of abortion
- Socio-demographic characteristics of the women
- Assessment of treatment of postabortion complications

4.2 Magnitude of abortion-related morbidity and mortality

Table 4.2.1 shows the numbers of abortion cases and other gynaecological conditions that were registered in Soroti hospital for the year 2004. Abortion remained the most common single reason for admission to the gynaecological ward in the hospital.

The hospital registered 1392 different gynaecological cases for the twelve-month period of which 794 were abortions – representing 57% of the total gynaecological cases. Twenty (20) maternal deaths were recorded of which five (5) were due to serious complications of abortion.

In order to describe the level of abortion in the population of women of reproductive age, and compare the incidence of abortion in this hospital to that obtained from other studies, or over time, the abortion rate was calculated.

Likewise, abortion ratio (a proxy for the number of pregnancies) indicates the probability of pregnant women resorting to abortion.

The magnitude of abortion-related mortality in the setting is indicated by the case-fatality rate (number of abortion-related deaths per 1,000 women admitted with incomplete abortion).

A subset of maternal mortality ratio – abortion mortality ratio (number of deaths due to unsafe abortion per 100,000 live births during the same period) represents the risk of

death due to unsafe abortion; and in the communities served by this hospital by the abortion mortality rate.

In this setting, the abortion rate was found to be 18,3 per 1,000 women (15 – 49 years of age); taking into account that Soroti District had 43,270 women of reproductive age by year 2004 and the number of abortions registered was 794; per 1,000 women, the abortion rate would be calculated as: $794/43,270 * 1,000$.

The abortion ratio was 204,4 per 1,000 live births (i.e. $794/3,884 * 1,000$). The denominator used was the number of live births registered only in Soroti hospital for the year 2004, which was 3,884. It does not include the live births in the community, which the study did not estimate.

The abortion case fatality rate was 6,3 per 1,000 abortions; recalling that 5 abortion-related deaths occurred out of the 794 abortions in the hospital; therefore per 1,000 abortions, the case fatality rate would be calculated as: $5/794 * 1,000$.

The abortion mortality ratio was 129 per 100,000 live births; still, only live births in the hospital were considered, hence the abortion mortality ratio being: $5/3,884 * 100,000$.

The abortion mortality rate was 1,4 per 100,000 population. Considering that the population of Soroti District by year 2004 was 366,871, the abortion mortality rate was calculated as: $5/366,871 * 100,000$.

Table 4.2.1: Different Gynaecological conditions registered at Soroti Hospital for year 2004.

<i>Condition</i>	<i>No. cases In year</i>	<i>Cases as % of total</i>
Abortions	794	57.0
Urinary tract infections(UTI)	126	9.0
Ectopic pregnancy	84	6.0
Uterine fibroids	52	3.7
Pelvic inflammatory disease(PID)	93	6.7
Carcinoma of Cervix	54	3.9
Puerperal sepsis	43	3.1
Ovarian tumours	7	0.5
Dysfunctional uterine bleeding(DUB)	41	3.0
Genital prolapse	8	0.6
Trauma/assault	25	1.8
Molar pregnancy	7	0.5
Hyperemesis gravidarum	23	1.7
Intra -uterine foetal death(IUFD)	10	0.7
Menorrhagia	2	0.1
Carcinoma of vulva	1	0.1
Imperforate vagina	1	0.1
Carcinoma of endometrium	3	0.2
Incompetent cervix	1	0.1
Infertility	1	0.1
Others(HIV/AIDS related diseases, Pneumonia, URTI, Herpes Zoster, Psychoses etc)	16	1.1
Total	1392	100

Key:

Column 1: type of gynaecological condition registered

Column 2: number of cases for each condition recorded for the year 2004

Column 3: proportion of each condition as percentage of total cases

Age distribution of the study sample

The age distribution of the sample is shown in table 4.2.2. The incidence of abortion among the study sample is concentrated among the younger age groups. The mean age was 26 years and the peak age group was 20 to 24 years. Sixty-eight per cent (68%) of the abortions took place among women less than 30 years of age.

Table 4.2.2: Age distribution of abortion patients

Age(years)	Women	
	(N)	%
15 – 19	129	21.4%
20 – 24	160	26.5%
25 – 29	121	20.0%
30 – 34	104	17.2%
35 – 39	57	9.4%
40+	33	5.5%
Total	*604	100.0%

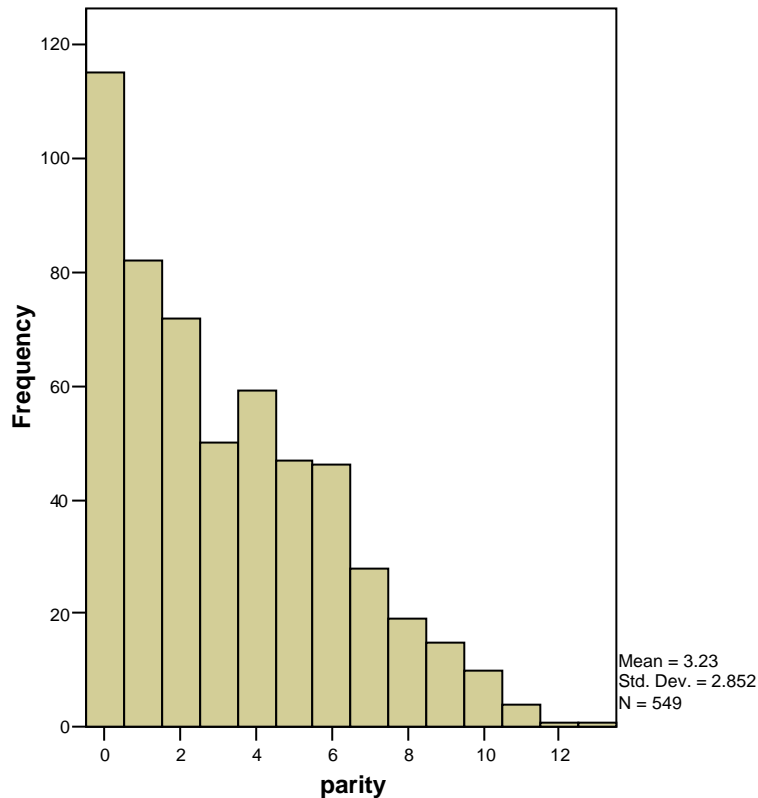
* The total does not add up to 794 because some cases had either the parity or the age missing. During the analysis, SPSS eliminates all the cases with missing values. These cases had initially been included in the sample because they met the inclusion criteria.

Parity of abortion patients

The distribution of abortion patients according to their parity is shown in figure 3, and the parity distribution in different age groups is shown in figure 4.

Abortion patients had a mean parity of three. Nearly fifty per cent (50%) of them had a parity of two. Twenty two per cent (22%) had a parity ranging from six (6) to thirteen (13).

Figure 3: Distribution of abortion cases according to their parity (n = 549)

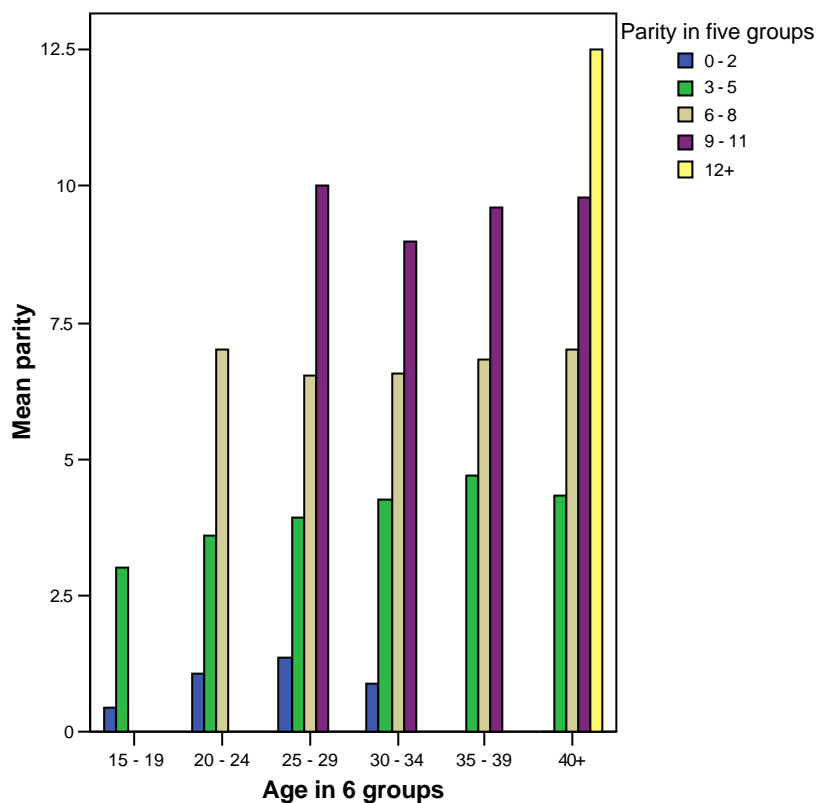


* Only 549 abortion cases are represented in the figure above. One hundred forty-five cases had their parities missing in the patient files; these were eliminated by SPSS during the analysis.

As shown in figure 4 below, the parity in young patients was in a range of 0 -2. A parity of 3 to 5 was existent in all the age groups and the difference in terms of parity scores for this particular parity group showed almost a uniform trend in all the age groups. Groups with higher ages had higher parity scores than those with lower ages.

Univariate analysis using Two-way between-groups analysis of variance showed that there was no significance difference in parity scores among the different age groups [agegp6: sig = 0.086].

Figure 4: Distribution of parity in different age groups among abortion patients.



4.3 Serious Complications of abortion patients

Sixty-three (63) patients had serious complications of abortion.

Table 4.3.1 shows the types of complications that were recorded as occurring most frequently among abortion patients. Haemorrhage and sepsis were the two most common presenting complications.

The amount of time that abortion patients with serious complications remained hospitalized ranged between 24 and 696 hours (mean = 124; median = 96).

There were five (5) abortion-related deaths. Three women died of severe haemorrhage; one woman died of septic shock and in one woman, the cause of death was not documented.

Table 4.3.1: Serious Complications of Abortion

Complication	Women	
	(N)	%
Severe haemorrhage	37	58.7%
Sepsis	15	23.8%
Intra-abdominal injury	1	1.6%
Death	5	7.9%
Sepsis + Haemorrhage	2	3.2%
Sepsis + Suspected intra-abdominal injury	3	4.8%
Total	63	100.0%

4.4 Profile of the Women

Characteristics of the abortion patients who were interviewed from the ward

Fifty-seven (57) women accepted to participate in the study, making a hospital participation rate of 90%; six (6) women declined to be interviewed, making a rejection rate of 10%.

Socio-demographic Characteristics

The sample distribution of the abortion patients according to selected socio-demographic characteristics is shown in Table 4.4.1.

The sample was made up mostly of young women (24 years of age or less) with low level of education, low social economic status and living in rural areas (villages). Close to two-thirds of the abortions took place among women who were 24 years of age or less, of which slightly more than one-third of the abortions were in women aged 19 years or less; who also constituted the peak age group. Two-thirds of the women were married and about half had been in a marital union for more than five years. One-quarter of the women identified themselves as single/never married and twelve (12) women identified themselves as students. The most common reported occupation was housewife.

Table 4.4.1: Socio-demographic Characteristics of the Women admitted for Abortion Complications

<i>Characteristic</i>	<i>Category</i>	<i>(N)</i>	<i>%</i>
Age (years)	19 years or less	20	35.1%
	20 – 24	17	29.8%
	25 – 29	9	15.8%
	30 – 34	7	12.3%
	35 – 39	2	3.5%
	40+	2	3.5%
Current residence	Village	37	64.9%
	Township	6	10.5%
	Town	14	24.6%
Highest level of formal education attained	No school	14	24.6%
	Primary school	28	49.1%
	Secondary school	14	24.6%
	College/University	1	1.8%
Current marital status	Married	33	57.9%
	Single / Never married	15	26.3%
	Divorced	3	5.3%
	Co-habiting	4	7.0%
	Widowed	2	3.5%
Marital duration	Less than 1 year	4	10.5%
	Between 1 and 2 years	7	18.4%
	Between 3 and 5 years	8	21.1%
	More than 5 years	19	50.0%
Partner's main economic activity	Agriculture	16	43.2%
	Market vendor	5	13.5%
	Government / Private sector employee	3	8.1%
	Casual labourer	8	21.6%
	Other	5	13.5%
Occupation	Student	12	21.1%
	Dependent	5	8.8%
	Housewife	38	66.7%
	Other	2	3.5%
Social status	Low	39	68.4%
	Intermediate	12	21.1%
	High	6	10.5%

Contraceptive behaviour and Contraceptive intentions

The sample's distribution by contraceptive behaviour and contraceptive intentions is shown in Table 4.4.2 below.

The proportion of abortion patients who reported not using contraceptives was higher than those who had ever used a contraceptive method at some point in their lives.

Thirty-three (33) out of the fifty-seven (57) women had never used a contraceptive method; twenty-four (24) of the women had used a contraceptive method at some point in their lives.

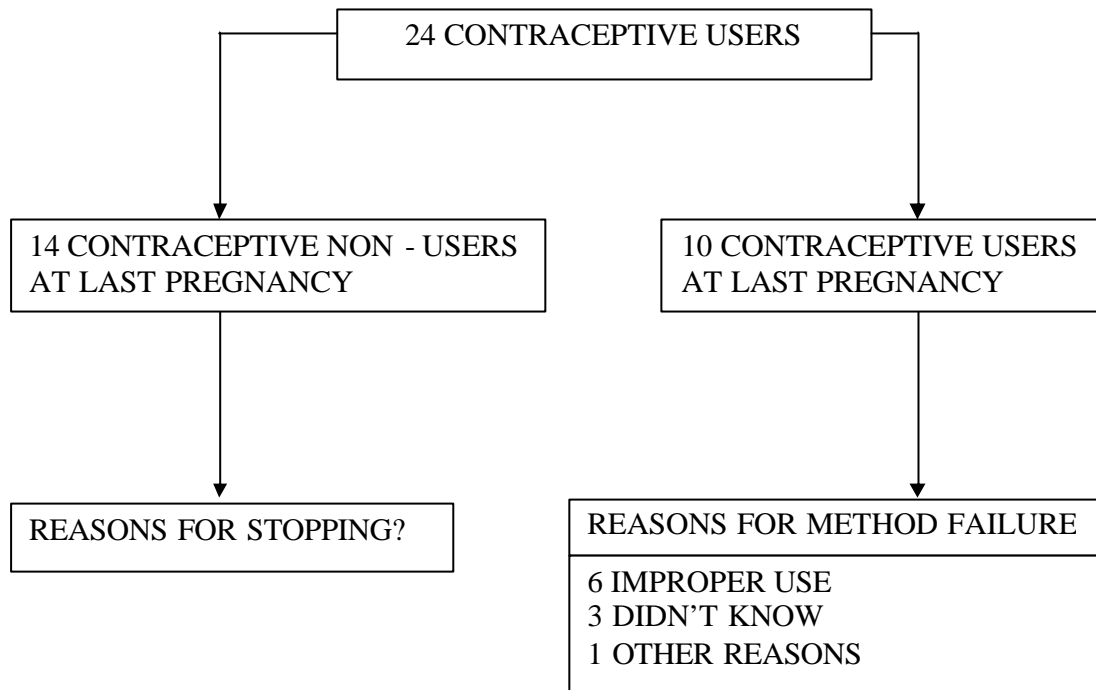
Among the women who had ever-used contraceptives, more women reported not using contraceptives at the time the last pregnancy occurred.

Of the women who reported the use of some method of contraception at the time the last pregnancy occurred, a majority had used condoms .

The main reason given by contraceptive users for the method failing at the time of the last pregnancy was "improper use." Three (3) out of ten (10) women could not identify the reason for method failure.

A diagrammatic illustration of contraception use during the last pregnancy is shown in figure 5 below.

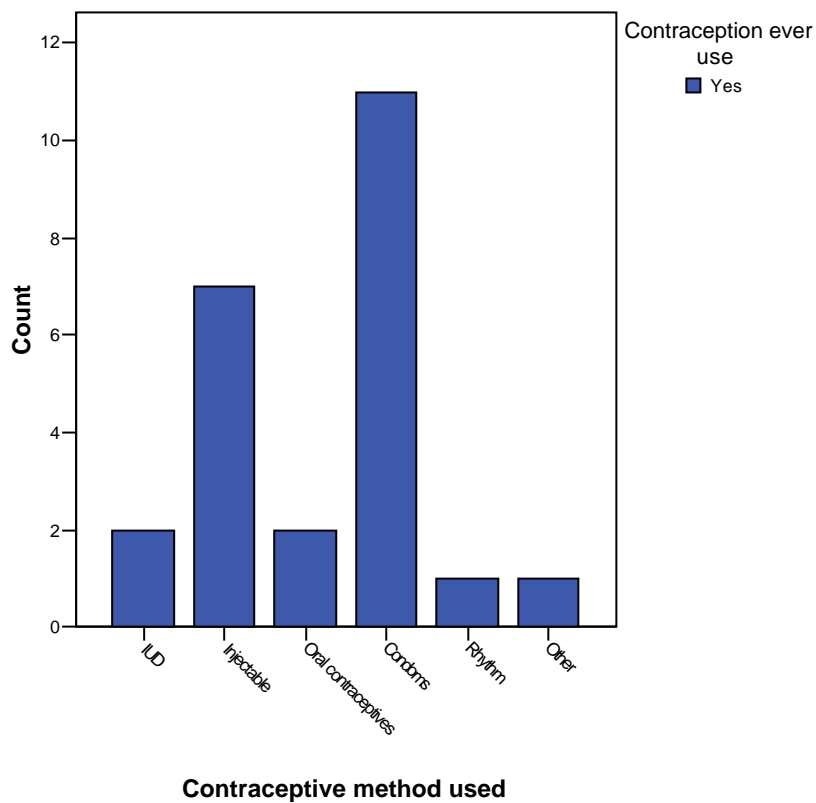
Figure 5: An illustration of Contraceptive use during the last pregnancy.



Again, more women (almost half) in the contraception ever-use category had used condoms; about one-third had used Depo-Provera injection. The consistency of method use was declining with time. Eleven women (11) - approximately half the number of contraceptive users indicated having used a method consistently for only six months.

Figure 6 shows the various contraceptive methods used by the women at some point in their lives.

Figure 6: Contraceptive Methods Ever-use by abortion patients



The proportions of women who thought to use a contraceptive method and those who did not think of using a method before they got pregnant were the same. Whatever the circumstances for non-availability of contraceptives for those who particularly expressed the desire to use a contraceptive method, this clearly points to the unmet need for family planning services.

The main reasons for non-use of contraception among the 33 women included - partner disapproval, desired pregnancy and fear of side effects.

Table 4.4.2 Distribution of the women according to Contraceptive behaviour and Contraceptive intentions

<i>Characteristic</i>		(N)	%
Contraception ever use	Yes	24	42.1%
	No	33	57.9%
Contraceptive method used	IUD	2	8.3%
	Injectable	7	29.2%
	Oral contraceptives	2	8.3%
	Condoms	11	45.8%
	Rhythm	1	4.2%
	Other	1	4.2%
	Consistency of method use	0 – 1 months	3
	2 – 6 months	8	33.3%
	7 - 11 months	1	4.2%
	1 – 2 years	5	20.8%
	3 – 4 years	4	16.7%
	5 years or more	3	12.5%
Contraceptive intentions before pregnancy	Thought to use	26	46.4%
	Didn't think	26	46.4%
	Can't remember	4	7.1%
Contraception use in recent pregnancy	Yes	10	41.7%
	No	14	58.3%
Method used prior to recent pregnancy	Injectable	1	10.0%
	Oral contraceptives	1	10.0%
	Condoms	7	70.0%
	Rhythm	1	10.0%
Reasons for method failure	Improper use	6	60.0%
	Other	1	10.0%
	Don't know	3	30.0%
Reasons for method non-use	Religious reasons	1	3.0%
	Lack of knowledge about methods	2	6.1%
	Partner does not approve	9	27.3%
	No source (unable to obtain a method)	1	3.0%
	Desired pregnancy	6	18.2%
	Not having regular sexual relations	3	9.1%
	Did not know I could become pregnant the first time	3	9.1%
	Fear of side effects	5	15.2%
	Other	3	9.1%

Abortion and Contraception

Table 4.4.3, shows the sample's distribution according to pregnancy status, stage of abortion, women's views on contraception use after abortion and pregnancy termination following contraceptive use.

Table 4.4.3: Distribution of women according to Pregnancy status, Stage of Abortion and Personal Views regarding Postabortion Family Planning and Pregnancy termination following contraceptive use

<i>Characteristic</i>		(N)	%
Pregnancy status	Planned	23	40.4%
	Unplanned	34	59.6%
Stage of current abortion	Within the first 12 weeks	45	78.9%
	13 - 24 weeks	11	19.3%
	After 25 weeks	1	1.8%
Postabortion family planning opinion	Yes	32	56.1%
	No	8	14.0%
	Don't know	17	29.8%
Pregnancy termination opinion following contraceptive use	Yes	15	26.3%
	No	38	66.7%
	Don't know	4	7.0%

Pregnancy Status

The proportion of women who had unplanned pregnancies was higher than those whose pregnancies were planned.

The women who had unplanned pregnancies most likely terminated them deliberately.

Stage of Abortion

Most of the abortions (about four-fifths) occurred in the first trimester. The remaining one-fifth of the abortions took place in the second trimester.

Personal Views

As seen from Table 4.4.3, after abortion, a majority of women expressed the desire to start using contraceptives. Women however are known to be receptive to contraception after abortion experience. The desire for contraceptives after the abortion points to an urgent need for postabortion family planning services in this hospital.

Women expressed differing views about pregnancy termination following contraception use. Two-thirds of the women were opposed to terminating a pregnancy resulting from contraceptive method failure while one-quarter supported pregnancy termination in the event of contraceptive method failure.

Table 4.4.4 shows the distribution of pregnancy losses and children born alive in two selected characteristics (age and marital status) in two marital status categories (married and single/never married) among abortion patients. The results are from a summary of a cross-tabulation to investigate the joint effect on age/marital status on pregnancy loss/children born alive/children still living.

The results indicate that two-thirds of the respondents in the age category 19 years or less who were single/never married had one abortion. This category also constituted the highest number of women who had experienced an abortion and had no children born alive. Five (5) out of nine (9) of the married women in the age category 20 – 24 years had two abortions, and three (3) out of seven (7) of married women in this same category had one abortion. Adding the numbers of married women in the age category 20 – 24 years who had one or two abortions, it means eight (8) out of sixteen (16) - (half) of the women in the category had abortion experience. The same group also constituted the highest number of married women with two children born alive and one child still living.

Higher numbers of pregnancy losses (four and above) were existent in only married women aged 24 years and above. Married women aged 25-29 years constituted the highest number with four children still living. A few married, co-habiting, divorced and widowed women who were 20 years of age and above reported having two (2) to ten (10) children born alive.

Table 4.4.4: Distribution of Pregnancy losses / Children born alive in two selected characteristics (age and marital status) of the Abortion Patients

Pregnancy loss	Age (in years)						TOTAL
	19or<	20-24	25-29	30-34	35-39	40+	
1 Married	3	3	4	1	1	1	13
Single/Never Married	11	2	0	0	0	0	13
Total	14	5	4	1	1	1	26
2 Married	2	5	3	3			13
Single/Never Married	1	1	0	0			2
Total	3	6	3	3			15
3 Married			1	2	1		4
Single/Never Married			0	0	0		0
Total			1	2	1		4
4 Married		1	1				2
Single/Never Married		0	0				0
Total		1	1				2
Children born alive							
0 Married	4	2					6
Single/Never Married	11	3					14
Total	15	5					20
1 Married	0	2	1				3
Single/Never Married	1	0	0				1
Total	1	2	1				4
2 Married	1	4	2	1			8
Single/Never Married	0	0	0	0			0
Total	1	4	2	1			8
3 Married					1	1	2
Single/Never Married					0	0	0
Total					1	1	2
4 Married			2	1			3
Single/Never Married			0	0			0
Total			2	1			3
5 Married		1	3	1			5
Single/Never Married		0	0	0			0
Total		1	3	1			5
Total in all Categories	20	17	9	7	2	2	57

Up to 5 pregnancy losses and 10 children born alive were registered but all that information is not reflected in the table due to the smaller numbers in subcategories. Only two subcategories which had more numbers in the marital status category are shown in the table. The figures in columns represent the number of women in the corresponding listed marital status category belonging to the age group listed in the column who had the listed number of either pregnancy loss or children born alive. The total number of women in all the marital status categories under each age group is indicated in the last row.

Similarly, when the effect on contraceptive use/highest level of education attained on pregnancy loss was considered, the women who had primary education and were not using contraceptives constituted the highest numbers of women who had one or two abortions. Women with primary education constituted the highest number of contraceptive non-users. None of the women with primary education who had used a contraceptive method reported having induced the abortion.

About three-quarters of the women with secondary education who were using contraceptives had one abortion and one-quarter had two abortions. Overall, nine (9) out of thirteen (13) of the women with secondary education who were using contraceptives reported having induced the abortion. Women with secondary education constituted the greatest proportion of contraceptive users.

Very few of women who had no schooling (the illiterate group) and were not using contraceptives had one abortion; two (2) out of eight (8) women had two abortions.

A summary resulting from the cross-tabulation of contraceptive use/highest level of education attained and pregnancy loss/induced abortions in two selected categories of highest level of education attained (primary school and secondary school) is shown in Table 4.4.5.

Table 4.4.5: Distribution of pregnancy losses / induced abortions in two selected characteristics (Contraceptive use and level of education attained) of the abortion patients

Pregnancy Loss		Contraception Use		
		Yes	No	Total
1	Primary School	3	13	16
	Secondary School	11	1	12
	Total	14	14	28
2	Primary School	3	7	10
	Secondary School	2	0	2
	Total	5	7	12
Induced Abortions				
0	Primary School	7	20	27
	Secondary School	4	0	4
	Total	11	20	31
1	Primary School	0	1	1
	Secondary School	8	1	9
	Total	8	2	10
Total in all categories		24	33	57

Up to 5 pregnancy losses were registered, but due to smaller numbers of contraceptive users/ non-users in the education sub-categories, pregnancy loss 3, 4 and 5 could not be presented in the table. Similarly, up to 2 induced abortions were registered but the figure is not shown for the same reason. Still, due to very small numbers in other education sub-categories, only two education sub-categories are shown. The figures in columns represent the number of women in the corresponding listed education sub-category belonging to either contraception use group or contraception non-use group listed in the column who had the listed number of either pregnancy loss or induced abortion. The total number of women belonging to contraception use group and contraception non-use group is indicated in the last row.

4.5 Treatment Methods Assessment

The assessment of treatment methods was made from the 63 abortion patients who had serious complications of abortion.

Clinical Assessment

Table 4.5.1 shows the trend of clinical assessment for abortion patients who were diagnosed for complications of abortion, admitted and treated at Soroti hospital.

Table 4.5.1: Clinical Assessment of Patients with Abortion Complications

<i>Parameter</i>	<i>Status</i>	(N)	%
Diagnosis	Incomplete abortion	42	66.7%
	Other*	21	33.3%
Reviewed history	Complete	1	1.6%
	Incomplete	62	98.4%
Physical examination	Complete	1	1.6%
	Incomplete	62	98.4%
Pelvic examination	Complete	1	1.6%
	Incomplete	62	98.4%
Products of conception in Vaginal or Cervical canal	Assessed	43	68.3%
	Not assessed	20	31.7%

*Most of these were recorded as either septic abortions or perforated uterus

As seen from table 4.5.1, the clinical assessment done for abortion patients with serious complications in this hospital is not in conformity with World Health Organization standard guidelines for management of postabortion complications. In a substantial number of patient files, reviewed history, physical/pelvic examination findings were not recorded. In others, rarely was a detailed history taken. Comments like “patient very sick”, “transferred from medical ward”, “referred from”, “this is an incomplete abortion”, existed in many patients’ files without any detailed history from the patients.

It proved extremely difficult to find a history that matched that suggested in the World Health Organization standard guidelines for management of postabortion complications. Similarly, important general and physical examination findings could hardly be found in records. Most patient files had only the diagnoses and the treatments which the patients received

Out of the 63 abortion patients with serious complications, only one patient’s case notes whose general condition had been noted as very poor met the criteria in WHO standard guidelines for management of postabortion complications. The patient died after 24 hours

of management in the gynaecological ward. By observing how abortion patients were received and attended to, and from the discussions I held with clinicians, I noticed that patients who came in very critical conditions got better attention from the medical staff in the ward.

Investigations and treatment

Table 4.5.2 shows the investigation and treatment trends for postabortion complications at Soroti Referral Hospital.

A different picture emerged from investigation and treatment of postabortion complications when compared to clinical assessment.

Close to three-quarters of the patients were investigated from the laboratory as requested by the clinicians. Thirty-seven (37) women with severe haemorrhage including one (1) woman with suspected intra-abdominal injury and two (2) women with sepsis who had low haemoglobin levels had blood grouping and cross-matching of their blood specimens done. This confirms the previous finding of haemorrhage being the most common presenting complications among abortion patients. None of the patients with postabortion complications who did not need blood transfusion got screening services for Rh factor.

Despite sepsis being the second frequent complication among the abortion patients, only two (2) out of forty-one (41) patients had complete blood count, including platelets; Erythrocyte sedimentation rate (ESR) done. The hospital was also not performing blood culture and sensitivity tests.

Five (5) patients with suspected intra-abdominal injury were not investigated using abdominal X-ray. The reasons given by hospital authorities were that either the X-ray machine had broken down at the time the services were needed or the hospital was simply unable to afford the X-ray films.

Antibiotics were used for therapeutic and prophylactic purposes on all the admitted abortion patients. One-third of the women were prescribed Penicillin or Ampicillin + Gentamycin + Metronidazole. None of the patients was prescribed doxycycline.

About two-thirds of the patients were prescribed other antibiotic combinations including ciprofloxacin and cephalosporins.

Table 4.5.2: Investigations / Treatment for Postabortion Complications

<i>Parameter</i>		(N)	%
Resuscitative measures	Oxygen	1	2.3%
	IV fluids	2	4.7%
	Safe blood	12	27.9%
	IV fluids / safe blood	27	62.8%
	All the 3 above	1	2.3%
Lab. Investigations routinely done when requested	Yes	40	71.4%
	No	15	26.8%
	Not applicable	1	1.8%
Type of Lab. investigations	Blood grouping and cross-matching	38	92.7%
	None	1	2.4%
	Blood grouping / CBC, Hb or haematocrit +ESR & platelets	2	4.9%
Chest x-ray used in heart failure cases	Yes	1	1.6%
	No	1	1.6%
	Not applicable	61	96.8%
Abdominal x-ray used in suspected intra-abdominal injury patients	No	5	7.9%
	Not applicable	58	92.1%
Surgical procedures used for treating complication	Sharp curettage (D&C)	28	44.4%
	Laparotomy for suspected intra-abdominal injury	4	6.3%
	Not Applicable*	31	49.2%
Antibiotics prescribed	Yes	57	100.0%
Antibiotic combination regimen commonly used	Penicillin or Ampicillin + Gentamycin + Metronidazole	19	33.3%
	Penicillin + Chloramphenical	1	1.8%
	Other	37	64.9%
Antibiotic route	Intravenous	42	73.7%
	Intramuscular	2	3.5%
	Oral	13	22.8%
Pain control med. Prescribed	Yes	43	78.2%
	No	12	21.8%
Analgesic type prescribed	Pethidine	3	7.0%
	Paracetamol	29	67.4%
	Other	11	25.6%
Diuretics used in heart failure cases	No	2	3.4%
	Not applicable	57	96.6%
Tetanus protection given	No	56	100.0%

*Not Applicable in surgical procedures used for treating complication refers to cases that had been diagnosed as complete abortion but had other complications not requiring surgical intervention.

About three-quarters of the patients received the antibiotics intravenously. Approximately one-quarter of the patients took the antibiotics orally. This was the category of patients who did not need evacuation.

Analgesics were prescribed to more than three-quarters of the abortion patients. Paracetamol was prescribed to slightly more than two-thirds of the patients. One-quarter of the patients had other analgesic prescriptions including diclofenac sodium, ibuprofen and indomethacin. None of the 63 patients was prescribed morphine; Pethidine was prescribed to only three (3) patients.

Two-thirds of the women had blood transfusion. Blood products were usually administered as whole blood rather than packed cells or platelets. Twenty-seven (27) women requiring blood products received one unit while thirteen (13) women received two units.

Intravenous fluids (Ringer's lactate and isotonic saline solution) were used to restore fluid volume in patients who had lost a lot of blood or had septic shock.

With regard to surgical procedures used for treatment of complications, sharp curettage (D&C) was used in 28 of the 63 patients. Twelve (12) out of thirty-one (31) patients had retained products of conception removed manually; the other nineteen (19) patients were diagnosed as complete abortion cases, but had other abortion complications.

None of the abortion patients was managed using a manual vacuum aspirator (MVA), a portable, non-electric device for uterine evacuation of first trimester incomplete abortion and for induced abortion.

The hospital however, has a manual vacuum aspirator which was provided by the World Health Organization.

Four (4) women required surgical procedures other than evacuation. Laparotomy was performed on four (4) women who had been diagnosed as cases of perforated uterus or suspected intra-abdominal injuries, and one (1) patient ended up with a hysterectomy.

None of the patients got tetanus protection despite the vaccine and the necessary supplies for its administration being readily available in the hospital. Poor history taking may have contributed to this. Factors that predispose such patients to tetanus were not adequately explored.

CHAPTER 5

5. DISCUSSION

This study has shown that abortion is a serious public health problem among women, a practice that merits serious scrutiny and a clear plan for reduction. Key findings in the study provide important comparisons to findings from past-related studies.

The abortion-related morbidity of 57%, one-quarter abortion-related deaths, a case fatality rate of 6,3 per 1,000 abortions and abortion mortality ratio of 129 per 100,000 live births in a hospital with a small bed capacity, makes this magnitude comparatively higher. Previous studies on abortion in the early 1990's put the magnitude of abortion-related morbidity in the range of 28% - 64% in a district referral hospital and national referral hospital respectively; and a case fatality rate range of 0,3 – 2,4 per 1,000 abortions [11, 19].

The abortion ratio of 204,4 per 1,000 live births is also considerably higher in comparison to findings from previous studies that documented the incidence of induced abortion [43, 95]. Even if 38% of all pregnant women in Uganda are known to deliver in health facilities under skilled attendance [18], the calculated abortion ratio is a true approximate estimate. Soroti hospital with a bed capacity of 250 and less than a quarter of them on the maternity ward, was able to conduct 4,065 deliveries in a year (2004). Moreover, abortion ratio is a useful measure in that it is independent of other factors unrelated to reproduction.

In interpreting the study results, it is important to keep in mind that it is not known what proportion of women in Soroti and the surrounding districts served by Soroti hospital had abortion and got complications that necessitated admission to hospital. Many women who experience unsafe termination of pregnancy do not have complications and, therefore, do not present for postabortion care; the WHO estimates that 50% to 90% of women who undergo unsafe abortion do not have medical complications [8]. Some women might have also sought services from private providers or through other means, while others may have not sought services at all or they lacked access to the services. Some might have died before reaching hospital. The figures could therefore be an under-estimate of

the true extent of the problem. Therefore, these data may not be representative of all women who had abortion in the study area.

It is also difficult, if not impossible to determine the true number and etiology of abortion complications in a country with strong social and cultural taboos and legal restrictions on abortion. The fact that six (6) women declined the interview could be linked to some of these reasons. Besides, linking the most common clinical symptoms of abortion, such as haemorrhage and sepsis to particularly induced abortion is difficult. The interviewed sample may not therefore be representative of all the abortion patients who were managed at that time. A rejection rate of 10% , however, creates a minimal potential for bias in the results given that the participation rate was high (90%).

The difficulties of obtaining very reliable data based on an application of clear medical criteria to differentiate between induced and spontaneous abortions, led to classification of all types of abortion under one category – induced abortions.

Hospital records rarely differentiate between induced and spontaneous abortions. When they do, induced abortions invariably are under-reported or misreported due to ethical/moral constraints that hinder data collection. Few studies have achieved higher than 75% accuracy of reporting and sometimes only a quarter of abortions known to have been performed are admitted to by respondents [60, 96, 97, 98]. In a rare follow-up study of 118 women admitting only to spontaneous abortion in Merida, Mexico in 1979, 77% later admitted that the abortion had been induced [99].

In this study, about a quarter of the respondents admitted to having induced the abortion, and more than three-quarters reported the abortion to be spontaneous. Moreover, thirty-four (34) women out of the small sample of fifty-seven (57) women interviewed reported that their pregnancies were unplanned.

A recent example in the long list of studies detailing the difficulties of separating spontaneous from induced abortions in hospital settings is presented in a study that investigated abortion in developing countries [100].

The classification criteria proposed by WHO in the 1980's provides a starting point, although it falls short of resolving the issue.

In light of these uncertainties, the decision to place abortions in one category creates unavoidable bias in statistical analysis, which must be taken into account when these results are being considered. This view is backed by some hospital studies where the data suggests that up to 80% or more of all abortion cases admitted are likely to have been induced rather than spontaneous [8].

It is also well known that spontaneous abortion is rarely fatal and seldom presents with complications. Against a background of economic hardship and poverty in a context where the study was conducted, very few of spontaneous abortion cases could have made it to hospital. Besides, the decision to seek help depends on the legal status and fear of retribution, accessibility (geographic) of health services, social attitudes, and the attitudes of health facility staff; factors which all don't favour an abortion patient in Uganda.

On admission, women were reluctant to admit to induced abortion and in most instances insisted it to be spontaneous. The admissions data therefore was only indicative of the total number of abortions. Past studies on abortion in Latin America and many African countries with restrictive legislations on abortion document experiences of women denying unsafe abortion procedures even in the face of the most obvious evidence [62, 63, 64].

The abortion mortality ratio of 129 per 100,000 live births translates into an institutional maternal mortality ratio of 516 per 100,000 live births. Comparing this figure to that of the recent Demographic and Health Survey [18] and other institutional maternal mortality ratios [21], the objective of the Ministry of Health of reducing the maternal mortality ratio from 506 to 354 per 100,000 live births by year 2005 cannot be achieved.

The socio-demographic/economic characteristics of the women who were studied are similar to those in other studies in terms of age, marital status, level of education, social and economic status, occupation, contraceptive use and parity [5, 20, 23, 24, 34, 35, 42, 43, 101].

The study results from both retrospective and prospective data testify to the fact that abortion is mainly a problem of young women, i.e. those aged 24 years or less. The difference was only noticeable in the peak age groups; while the peak age group was 20 –

24 years from the retrospective data, the prospective findings showed the peak age group to be 19 years of age or less.

The fact that the majority of the women who sought abortion were young illustrates one point: The pregnancies were unplanned and unwanted.

Analysis of prospective data showed that thirty-four (34) out of fifty-seven (57) women had unplanned pregnancies, and only twenty-three (23) of the women reported their pregnancies to be planned.

For many women, young and old, one important variable to consider when trying to understand the motivation to seek an abortion is contraception behaviour. About three-fifths of the sample of women interviewed had never used a contraceptive method at some point in their lives. Even the few who had used contraceptives, many (about half) were able to use it for only six months.

In Uganda, it is well known that many young women do not use contraceptives [19, 20]. Such conduct is the result of inadequate information on sexuality and reproductive health, lack of friendly services especially for adolescents – not client oriented in terms of time, cost and location; negative attitude of health providers, poor access and ignorance [20].

From the findings, it emerged that unstable relationships is not the only motivation for seeking abortion; married women in harmonious and stable relationships also choose to have it. In a country where 74% of the population lives below the poverty line [17], abortion may be the only solution for a family that foresees the difficulties of raising another child.

Considering that many girls get married even when they are not 15 years of age [22], there is a very high possibility that some of these women had unplanned/unwanted pregnancies soon after previous deliveries and were compelled to terminate them. More so, the contraceptive pattern in Uganda reflects the fact that most newly married, and generally young women below 25 years, rarely use any reliable and effective contraceptives. Women in Uganda tend to employ modern contraception at high birth order [102].

One possible explanation is the relationship between contraceptive practice and gender distribution of family composition. The Uganda Demographic and Health Survey of 1995

showed that sex composition of children born in a family plays a crucial role in the timing of contraceptive practice. Approximately 7% of women practiced modern contraception after their third or fourth child.

Despite more than half the interviewed sample of women being married, it does not necessarily mean that most women who turn to abortion in Uganda are only married women. Studies of similar nature have shown that single women often resort to abortion in the event of an unwanted pregnancy [19, 101]. In this study, women who identified themselves as single/never married constituted one-quarter of the study sample. It is mainly this category of women who terminate their pregnancies deliberately [103].

Regarding education, the results suggest that most of the women seeking abortion have either primary or secondary education. A few studies that have looked at this characteristic came up with similar findings [38]. The women in the secondary education category, a majority who are still students dominated in the induced abortion category - a finding similar to those in previous studies [1, 19, 101]. The respondents who were students in this study cited the following reasons for the abortion: fear of being expelled from school, continue with education, fear of parents and no access to contraceptives.

Overall, most of the women studied were of low social status, lived in rural areas and housewives, whose partners depended mainly on agriculture as a source of income.

Taking a detailed view of modern contraceptive use, the level of contraceptive awareness from the respondents was relatively high (in two-thirds of the respondents). However, the level of contraceptive use was low (two-fifths of the women). Previous studies have also shown such a trend [101].

The level of contraceptive use seemed to have a relationship with the level of education attained. The majority of contraceptive users in this study had secondary education. Given that this is the same group that constituted the highest number of induced abortion cases, it appears that many of them were not using their contraceptive method of choice properly. Indeed, the findings indicate that improper use was the main reason for method failure.

Considering that the majority of the respondents indicated the male condom as the contraceptive method that most of them used, it was not uncommon, according to the

respondents for the partner to use it at the beginning of the sexual act and abandon its use subsequently. Amidst the intensive campaigns on the fight against HIV/AIDS by the government of Uganda through the “ABC” strategy, the male condom has been highly popularized and many young women in Uganda know it as perhaps the only solution to HIV/AIDS and unwanted pregnancy. These findings seem to disprove this assumption.

Taking a closer look at the reasons women gave for not using contraceptives, partner disapproval, desired pregnancy and fear of side effects were the major reasons cited; however, partner disapproval featured most among all the reasons. Men in Uganda, especially the illiterate group, strongly oppose use of modern contraception for family planning [102]. A few of the respondents quoted a common statement which their partners mentioned, *“It is better to achieve the desired family size quickly before HIV/AIDS strikes”*.

Concerning parity of women seeking abortion, overall, parity levels ranged from nulliparous to thirteen with 22% of the women having parity levels ranging from 6 to 13. Most studies have reported a range of 0 to 10. Non-use of contraception or use of irregular and ineffective contraceptive methods is the likely contributing factor to this.

With regard to the medical complications of abortion in this study, haemorrhage and sepsis emerged as the most common presenting complications. Similar findings are documented in a study that was carried out at Mulago National Hospital in Uganda [11]. These medical complications of abortion, particularly of unsafe abortion, are a well-known cause of maternal morbidity and mortality. Unsurprisingly, a quarter of the maternal deaths that occurred in the study setting were abortion-related. The figure could even be much higher given the experience of the difficulties of documenting the toll on women’s lives in settings where access to safe abortion is most lacking. [96, 104].

In some situations, it is not uncommon to notice women collapse and die on their way to hospitals or in emergency wards, and are sent straight to mortuaries with no post-mortems done. From the medical records, it was very clear that most of these deaths resulted from severe haemorrhage. Lack of “safe blood” in this setting is not a very rare occurrence. Some unlucky patients make it to the hospital only to succumb to death either because of the patient relative’s inability to afford additional costs of moving the patient

to another facility where transfusion can be possible, or due to the delays created by the long chain of referrals.

The fact that one abortion patient had to undergo a hysterectomy shows how treatment for abortion complications can have a long-term impact on women's lives and fertility.

Other health consequences of unsafe abortion such as ectopic pregnancy, cervical incompetence, increased risk of spontaneous abortions and premature births in subsequent pregnancies; together with the long-term complications like chronic pelvic pain, pelvic inflammatory disease, tubal occlusion and secondary infertility were beyond the scope of this study, but their effects on society must be born in mind.

Treatment of abortion complications is paramount if the toll of suffering and death that unsafe abortion brings to the great number of women who face unwanted pregnancy and suffer serious complications is to be averted.

The first step in providing care to a woman suspected of having an incomplete abortion is to assess her clinical situation in order to make a diagnosis and initiate any emergency treatment. The initial assessment may reveal or suggest the presence of immediate life-threatening complications such as shock, severe vaginal bleeding, infection/sepsis or intra-abdominal injury. These problems should normally be addressed without delay in order to save the patient's life or keep her condition from worsening. Even without complications, we know that incomplete abortion can become life-threatening if definitive treatment (removal of any retained products of conception) is delayed.

However, the clinical assessment that most of the abortion patients who presented to Soroti hospital received was far from meeting the set standards in WHO guidelines. With virtually no history taken and scanty examination findings recorded, the presence of life-threatening complications may have been hard to detect. Above all, making an accurate diagnosis in such circumstances becomes impossible, and the treatment initiated may not benefit the patient.

A comprehensive medical history is helpful in ruling out other conditions that mimic incomplete abortion. For example, some contraceptive methods notably IUD, Norplant implants, Progestin-only injectables and pills can be associated with a bleeding pattern that may be mistaken for incomplete abortion. Likewise, a ruptured ectopic pregnancy or

ruptured ovarian cyst can also cause intra-abdominal haemorrhage, and the symptoms will be similar to intra-abdominal injury. In addition, history of drug allergies, bleeding disorders, chronic medications (especially corticosteroids), and ingestion of herbs or medicine (poison) always helps in subsequent decisions on management.

Women who present with postabortion complications may be at risk of developing tetanus. Few women are fully immunized against tetanus; in 1986, only 16% of the pregnant women in the developing world were adequately protected [105]. In this study, none of the abortion patients received tetanus toxoid prior to discharge. Clinicians should be aware that some patients may present with trauma to the genital tract (vulva, vagina or uterus) which may have been contaminated with dirt or faeces, or the patient received an abortion in which dirty instruments were used; this will require attention to the issue of tetanus. A thorough knowledge of the patients' immunization status is always necessary.

The junior doctors (intern doctors) who manage the bulk of abortion patients in the hospital are well versed with World Health Organization standard guidelines for management of postabortion complications. They however, attribute the aspect of poor history taking to the heavy workload in the hospital.

In health facilities where the incidence of abortions complications is high, services can easily be overwhelmed with more patients than staff can treat in a reasonable time. An example is what used to happen at Kenyatta National Hospital in Kenya prior to the introduction of manual vacuum aspiration to treat abortion-related complications; the bed occupancy in the emergency gynaecological ward was 300 percent (i.e. three patients per bed), and 90 percent of these women had been admitted for incomplete abortion [106]. Given such situations, patients end up acquiring nosocomial infections while awaiting treatment - a situation noticed at Kenyatta National Hospital [107].

On the part of investigations, the laboratory blood tests should have also included electrolytes and urea, complete blood count – including platelets, Erythrocyte sediment rates (ESR), and blood cultures in addition to blood grouping, cross-matching and haemoglobin estimation which was commonly done. This eases the monitoring of electrolyte imbalance in the event of acute renal failure; and the making of a choice on the appropriate antibiotic combination for treating those with sepsis. In addition, all the

abortion patients, particularly those whose abortions occurred in the second trimester or later weeks of first trimester should also have had screening for Rhesus (Rh) factor. A study to determine the volume of cases with Rh-negative blood group among the incomplete abortion patients admitted to Kenyatta National Hospital revealed that the potential for Rh sensitization is quite high during this period [108].

Patients with suspected intra-abdominal injury should always have an abdominal x-ray done in addition to findings from clinical examination that may suggest the diagnosis. An upright abdominal x-ray is helpful in determining the presence of gas in the abdominal cavity – a finding common in ruptured/perforated uterus, bowel or bladder. It was a very unfortunate situation that four of the patients who received laparotomy did not get their diagnoses backed up by the abdominal x-ray results. A challenge therefore remains with the hospital authorities to prioritize allocation of the little resources they get from ministry of health to departments that urgently need them.

Treatment of incomplete abortion always requires removal of retained products of conception (POC) from the uterus. From the scanty hospital records and available information from the small sample of women who were interviewed, this study found out that most of the abortions occurred in the first trimester. The traditional method of treatment (Dilation and Curettage – D&C) was, however, still the most popular in the setting with all the patients with retained products of conception having been treated with it.

Even if dilation and curettage may be needed for patients who have complications, or whose pregnancies extend beyond 12 weeks, Manual Vacuum Aspiration (MVA) is the preferred method of uterine evacuation to treat incomplete abortion in the first trimester because it has the following advantages:

- the risk of complications is decreased
- access to services is increased, and
- the cost of postabortion services is reduced.

In addition, use of MVA offers the potential for earlier access to care, when management is easier and serious complications less likely.

Vacuum aspiration has fewer complications in nearly all situations. Thus, while complications can occur with vacuum aspiration, as they can occur with any medical procedure, it is a safer means of uterine evacuation. The four most common complications associated with uterine evacuation which include; excessive blood loss, pelvic infection, cervical injury, and uterine perforation are minimized with use of vacuum aspiration.

Furthermore, experience in several countries demonstrates that the use of MVA for treatment of bleeding complications is safer and less costly than D&C [63]. In one district hospital in Kenya, where the treatment protocol was changed from sharp curettage (D&C) under general anesthesia to MVA using local anesthesia, the average cost of treating a patient fell by 66% [109]. Similarly, in one Mexican hospital D&C was at least 50% more expensive than MVA [109]. MVA provides better quality care while using far fewer hospital resources and reducing the length of hospital stay up to 50% or more [110]. In addition, vacuum aspiration is the surgical technique recommended by WHO for use in health centres and hospitals [4, 111].

In the late 1990's, with funding from USAID and assistance from cooperating agencies, findings from a study in Uganda demonstrated that midwives in primary-level facilities could provide high-quality postabortion care services using manual vacuum aspiration and that primary-level services increased postabortion family planning counseling and method provision[112]. Today, this finding is far from the reality. In this study setting and many other health facilities in Uganda, uterine evacuation is only performed by doctors. Other mid-level providers are restricted from performing the procedure. This creates a barrier in addressing the problem of unsafe abortion.

Since the study results indicate that the time an incomplete abortion patient remained hospitalized ranged between 24 and 696 hours (mean = 124; Median = 96), in a setting like this where no postabortion family planning services were provided; use of MVA would help reduce both the treatment costs and average length of patient stay. It would also ease the provision of postabortion family planning services *immediately* following the procedure since MVA is a less painful procedure for the patient.

Focusing on drug treatment, the results suggest that the clinicians had adequate knowledge of the microbiology of postabortion infection - reflecting the resident flora in the lower genital tract. Hence, the antibiotics used were prescribed with knowledge of their effectiveness against Gram-negative, Gram-positive, anaerobic organisms and Chlamydia.

The WHO standard guidelines provide a list of recommended antibiotic combinations for treating postabortion complications. However, it must be born in mind that antibiotic coverage depends on local availability. Besides, studies have shown the effectiveness of single antimicrobial agents like cefotaxim for treating septic abortion cases [113]. In the event of single antimicrobial use, women with severe complications or whose pregnancy is second-trimester should get large doses of antibiotics and intravenous fluid replacement [114].

In this study, with a third of the patients receiving the antibiotic combination recommended in WHO standard guidelines, it is a clear indication that the clinicians were trying their best to adhere to use of standard guidelines. Their efforts were only being frustrated by the frequent shortage of drugs in the hospital. Patients who got other antimicrobial combinations also had a two-drug therapy. Doxycycline is readily available and cheap in Uganda. It was not clear however, why it was not considered for use among patients who could have needed it especially for prophylactic purposes.

The route of drug administration is an important decision for reasons of safety and for choosing the best possible way to treat the condition. Results of the study indicate that more than three-quarters of the abortion patients received the antibiotic combination through the preferred route (intravenous - IV). IV drug administration is the speedy way of drug delivery to the infected tissues. Only two patients received the antibiotics through the intramuscular route (IM). The gynaecological ward quite often lacked IV fluids which the patients' attendants had to buy from private clinics when needed. About two-thirds of the patients took the antibiotics by mouth (oral). Again, a shortage of IV or IM antibiotics was to blame for this. Oral route, however, is also recommended when the woman is not in shock, if the infection is minor, or for prophylactic purposes – which could have been the case for some of the abortion patients. In addition, patients with the postabortion triad

(i.e. pain, bleeding, low-grade fever) in many instances respond to treatment with oral antibiotics.

Retained products of conception provide an opportunity for bacterial growth. It is mandatory that blood clots or retained products of conception be evacuated from the uterus as soon as possible. In these cases, parenteral administration of medication is recommended as the patient will undergo anesthesia.

Pain management is often a neglected aspect of postabortion care. Women often experience pain from the method used to induce the abortion as well as the pain associated with uterine evacuation, whether sharp curettage or MVA is used. In addition, women are likely to be anxious and frightened. Reducing the woman's pain requires: nonjudgmental staff, a calm environment, the use of appropriate level of available pain medication, and supportive counseling [115, 116]. This study setting could not meet these requirements given the understanding that most drugs including pain relievers were always lacking; the environment was overcrowded, noisy and supportive counseling was rarely done.

When available, pain medications should not be denied to women undergoing postabortion care. It is however, not uncommon for women treated for postabortion complications not to receive pain control – either in form of medication, counseling or both. In this study, one out of five of the abortion patients were not prescribed analgesics. The lack of pain control – both medical and verbal was a clear reflection of providers' negative attitudes. Similar findings have been documented in past studies in Kenya where some providers said women should be *made* to feel pain during MVA so that they would avoid future unsafe abortions [117].

From the findings, Morphine one of the highly recommended analgesics was never used in the setting. Pethidine was prescribed to a very small number of patients mainly due to its unavailability in the hospital at most times. Clinicians had to make a hard choice between prescribing paracetamol and other nonsteroid anti-inflammatory drugs (NSAIDs) including ibuprofen and diclofenac sodium; and not prescribing anything at all. Pain medication is often accompanied by use of sedatives to relieve anxiety and relax muscles. Diazepam was readily available for this purpose.

Ensuring that women receive counseling in situation where they have little or no access to pain medication is especially important. Women need and deserve counseling and reassurance both before and during treatment, whether MVA or sharp curettage is used.

It is believed that counseling during the procedure is an important pain control strategy [116], and that fear and anxiety can increase pain [118].

The use of whole blood rather than packed cells to treat patients with severe haemorrhage merits careful attention. In a country where HIV prevalence is estimated at 7%, exposing these patients and their families to a future darkened by HIV/AIDS is likely in such circumstances. Besides, use of whole blood has other disadvantages such as circulatory overload, exposure to other infectious agents such as hepatitis, and iron overload. Transfusion should therefore be used judiciously.

Cost is one major public health issue which should not escape unmentioned in this study. There is no doubt that the financial implications for the individual woman are immense, and especially when she is poor, a teenager, single, a student, or abandoned by the responsible male partner. Besides, the psychosocial and the economic costs to families and communities as a consequence of abortion-related maternal deaths and disabilities are undoubtedly great.

The cost of treating unsafe abortion at hospitals and health centers is only one partial measure of its toll on women and the country.

Emergency treatment of abortion complications consumes a significant portion of scarce hospital resources. The requirements needed for management in addition to several days of hospitalization and staff time place great clinical, material and financial demands on the scarce hospital resources [51, 60].

Government of Uganda financial allocation to Regional Referral Hospitals in 2004/2005 financial year was UG. SHS 50,000,000 (\$ 29,986) per month. Of this, 30% (UG.SHS 15,000,000 or \$ 8,711) is the monthly allocation for purchase of drugs and other medical supplies [119]. However, information from the hospital authorities indicated that the drugs and medical supplies lasted for only one week when procured.

Given that 57% of admissions in the hospital gynaecological ward are abortion-related, and the average length of hospital stay for an abortion patient with serious complications

is 4 days or more, there is no doubt that other maternity and emergency services are compromised and a disproportionate share of hospital resources are consumed by abortion patients. Moreover, World Health Organization estimates the cost of treating a septic abortion to be three or more times that of a normal delivery [120].

The financial burden to the individual woman and family is definitely greater considering that access to health services in Uganda is still a problem and that women tend to wait until complications become severe before seeking help.

Lastly, one very important change that I noticed was the tremendous improvement in both patient management and record keeping during the study period. From the time the study began, the records started reflecting detailed histories, general and physical examination findings, laboratory and other investigations, and clear drug prescriptions. The hospital was also able to provide the gynaecological ward with file folders for the patients' treatment notes at that time.

The following questions remain unanswered and constitute suggested areas for further research:

1. What is the proportion of women with long-term sequelae that resulted from serious complications of abortion that are treated at Soroti Referral Hospital?
2. Which factors influence contraception use among women of reproductive age in Soroti District?
3. What is the proportion of young women who are currently able to obtain a contraceptive method from Soroti Referral Hospital?
4. Will change in treatment protocol, if implemented, have any impact on the reproductive lives of the abortion patients and what added benefit will it give to the hospital?

CHAPTER 6

6. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Unwanted pregnancy and unsafe abortion continue to be a major public health problem in Uganda. This study has demonstrated that the problem of abortion is still on the increase particularly among young women. A variety of demographic and socioeconomic factors – poverty and hardship, earlier start of sexual relations, shifts from rural to urban settings, influence of the media and limited accessibility and availability of effective contraception have contributed to the increase in premarital sexual activity and early pregnancy. Information about sexuality, safe sexual practices and contraception is often lacking. Responding to the needs of young women, particularly adolescents becomes difficult. This has resulted in many unintended pregnancies, a proportion of which have been terminated by unsafe abortion because of the legal restrictions. Other young women have had no other option than to continue the pregnancies – with all the attendant social and educational consequences.

The study has filled a critical gap in knowledge regarding abortion complications presenting at Soroti Referral Hospital despite the limitations of projecting the incidence of abortion complications using hospital-based data.

The results of the study are indeed a proof to the opinion that abortion is a common and increasing problem in rural areas too.

The morbidity and mortality levels related to abortion which have been revealed by this study call for a concerted effort in prevention of unintended pregnancies, and unsafe abortion. This should be made a high priority if the goal of improving women's reproductive health is to be achieved. It will remain important to study and monitor unsafe abortion so that trends can be assessed, efforts to prevent unintended pregnancy evaluated, and preventable causes of morbidity and mortality associated with abortion identified and reduced.

The problem of abortion in Uganda is mainly linked to limited access to family planning services and lack of reliable information about modern contraception. A simple answer to the issue of unsafe abortion would be to guarantee universal access and availability of

family planning information, education and services for all eligible couples and individuals, including sexually active adolescents.

Effective sex education programmes which target teenagers in-and-out of school should be instituted, and must include correct information about reproduction and contraception. Dissemination of reliable information to even the most distant areas of the districts remain the sole responsibility of the district directorates of health and the health sub-districts in light of the decentralization policy on health services. In addition, all health centres should be equipped with adequate stocks of modern contraceptives if they have trained staff who can offer the services. The methods should be responsive to the needs and preferences of clients.

Prevention of repeat abortions through provision of compassionate counseling and a range of contraceptive methods to women treated for abortion-related complications is paramount. The hospital should eliminate the administrative and physical separation between emergency treatment of abortion complications and family planning services. Many women expressed the desire to receive family planning counseling or methods after being treated for abortion complications. However, the fact that a woman had to get dressed, walk across a courtyard to the family planning clinic, check in, wait to be seen and undergo another examination impedes the provision of postabortion family planning. Many women – particularly those who were weak, in pain or emotionally drained – decided to go home instead of enduring this time-consuming and sometimes intimidating process.

Starting this service in the gynaecological ward will be a step forward towards prevention of unintended pregnancies and unsafe abortion.

The high prevalence of abortion complications in the hospital which is relatively understaffed overwhelms services. There are more patients than staff can treat in a reasonable time. To back up the few staff who have received training on postabortion care, the hospital needs to liaise with Ministry of Health to arrange training especially for registered midwives and clinical officers on postabortion care. This will improve the initial clinical assessment and examination of abortion patients with complications when they arrive to the gynaecological ward for treatment.

The treatment protocol on first trimester incomplete abortion needs to be changed. Since the hospital already has a manual vacuum aspirator, ensuring its use on incomplete abortion patients in first trimester would reduce the average length of patient stay and the high treatment costs that both the hospital and the patients meet.

The advantages of using a manual vacuum aspirator (MVA) versus the traditional dilatation and curettage (D&C) procedure have already been outlined. However, it must be reemphasized that it will promote the *immediate* provision of postabortion family planning services in the gynaecological ward if the hospital started offering these services.

Regarding the high death toll resulting especially from severe haemorrhage and with the knowledge that safe blood in some occasions becomes difficult to secure in the hospital, expansion of the existing blood bank to cater for the high demand for safe blood is an avoidable necessity. This would help reduce even the countless deaths that happen when patients have to find themselves being referred for blood transfusion from Soroti hospital to other health facilities.

Sound information is a prerequisite for health action. Without data on the dimensions, impact and significance of a health problem it is neither possible to create an advocacy case nor to establish strong programmes for addressing it. Soroti hospital administration should take a leading role in computerizing its records department and train the responsible staff in basic computer packages.

The financial allocation by Ministry of Health to Regional Referral Hospitals also needs to be revisited. A hospital with a very high patient load cannot operate without drugs for three weeks each month. The Government of Uganda ought to know that a healthy population is a potential resource for the country's development.

Last but not least, the call to make abortion legal may not yield much at this stage. Many respondents had a negative opinion on termination of a pregnancy that resulted from contraception failure. As outlined in the 1994 International Conference on Population and Development (ICPD) in Cairo, Egypt and at the follow-up conference in New York, USA; the immediate priority in Uganda still remains making abortion services available to the full extent permitted by the law.

The government and people of Uganda need to extend the spirit that made them score good results in their battle against HIV/AIDS to yet another campaign against unintended pregnancies and unsafe abortion.

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