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## **Contribution of Healthy Timing and Spacing of Pregnancy (HTSP) In Improving Maternal, Newborn and Child Health**

Authors

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### **INTRODUCTIONS**

Healthy Timing and Spacing of Pregnancy (HTSP) is recognized as a critical and essential preventive child survival intervention that effectively complements curative and other child health interventions, with additional benefits to the mother, family, men, community and the society. It is a key intervention associated with reduced risk of low birth weight, prematurity and newborn abnormalities and deaths in infants, as well reducing health risks to mothers after a live birth or abortion, and risks to adolescents. It creates awareness and increases demand for family planning services which is critical to the continuity, retention and long-term use of family planning For countries to reduce their burden of disease and reach their Millennium Development Goals. Adding HTSP interventions to their strategies and programs should be considered a priority because of significant, multiple health benefits for women and babies.

### **1 Benefits of healthy timing and spacing of pregnancy (HTSP)**

#### **1.1 HTSP is associated with reduced risk of:**

- Pre-term births, low birth weight, small for gestational age, and, in some populations, stunting or underweight conditions
- Death for newborns, infants, and children under five
- Pre-term births, small for gestational age, and low birth weight, when mothers wait at least six months from the time of a miscarriage or abortion before attempting a pregnancy again Finally, HTSP allows young children to experience the substantial health benefits of breastfeeding for a full two years.

#### **1.2 HTSP Benefits for Mothers**

- gives mothers two years to prepare physically, emotionally, and financially for their next pregnancy, if they choose to have a baby.
- helps young mothers in avoiding induced pregnancies; high blood pressure and associated complications, obstructed and prolonged labor, iron-deficiency anemia, and maternal death
- Provides mothers with two full years before becoming pregnant again to focus on their newborns, partners, and other children
- is associated with reduced risk of pregnancy complications like preeclampsia
- Allows two years of breastfeeding, which is linked with reduced risk of breast and ovarian cancer.

#### **1.3 HTSP Benefits Men**

- Helps men safeguard the health and wellbeing of their partners and children
- Allows men time to plan financially and emotionally for their next child, if they choose to have one.

- Contributes to a man's sense of satisfaction from supporting his partner in making healthy decisions regarding HTSP and family planning use and raising a healthy family

#### 1.4 HTSP Benefits Communities

- Benefits communities by helping to reduce deaths and illnesses among mothers, newborns, infants, and children.
- Benefits communities by helping to reduce poverty and to improve the quality of life among community residents.

#### 1.5 HTSP Benefits to Policy Makers and the Nation

- Benefits the entire society by providing women with more time to study, be better educated and better themselves in many ways, work and contribute more to the society.
- Benefits the entire society by helping to reduce resources allocate for taking care of the health problems that would be associated with the health consequences of short birth interval.
- Benefits the nation workforce by improving maternal and child health and disabilities and thus boosting the socio-economic development and people life expectancy.

### 2. Traditional and Current Practice for Healthy timing and spacing of pregnancy

#### 2.1 Traditional

- Emphasis more on family planning methods and population control
- Very limited information of benefits of HTSP
- Provider influenced or dictated choice for client
- Little or no informed consent from client
- Limited method mix
- Little or no involvement of men
- Spouse consent required for all methods in developing countries

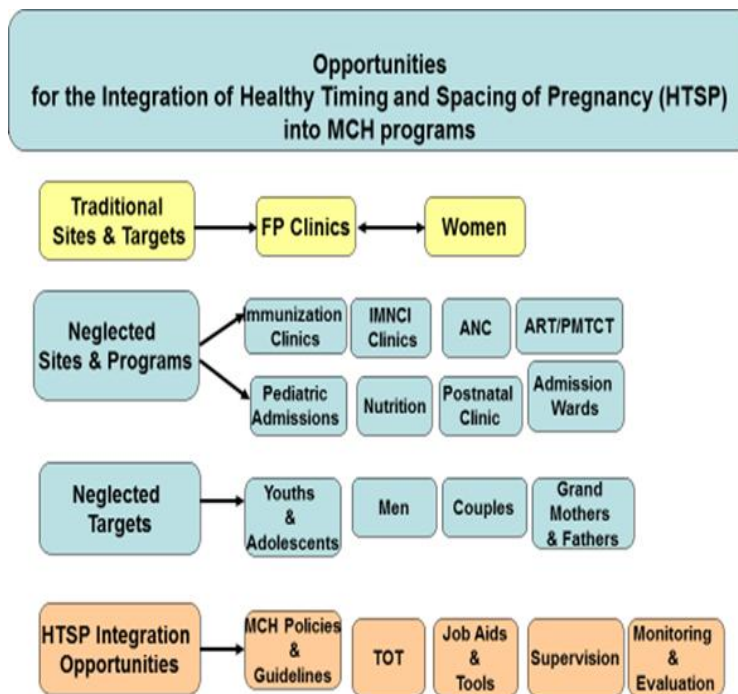
#### 2.2 Current

- Emphasis on health and non-health benefits for HTSP to woman, child, men, family and community than on FP methods
- Evidence available to demonstrate HTSP benefits to mother and child
- Provider initiated counseling at all maternal and child health encounters in the Health system
- Informed consent from client
- More method mix
- More involvement of men in Family planning /Reproductive health matters
- Spouse consent limited to permanent methods

#### Similarities and differences between Health timing and spacing of pregnancy (HTSP) and Family planning (FP)

S/No	Characteristics	HTSP	FP
1	Key component	Emphasis on key messages on benefits of birth spacing to enable woman and couples make informed choice on birth spacing and fertility intentions	Emphasis on the family planning methods to achieve fertility intentions
2	Family Planning Methods	All Methods can be used to achieve birth spacing or limit pregnancies	All Methods can be used to achieve birth spacing or limit pregnancies
3	Commonly targeted Audience	Women, couple and adolescents	Women
4	Service site	All maternal and child health service Entry points to care. Community outreaches	Family planning clinics only

5	Side Effects	None	Depends on family planning method
6	Cost	Free	Cost associated with some FP methods
7	Cultural Acceptability	Widely acceptable within cultural context of the society	Some methods are not acceptable in some cultures
8	Religious Acceptability	Widely acceptable within cultural context of the society	Some methods are not acceptable by some religious bodies or faiths



(Reference [http://www.basics.org/documents/Advocacy-Presentation\\_What-is-HTSP.pdf](http://www.basics.org/documents/Advocacy-Presentation_What-is-HTSP.pdf))

**Integration of Maternal infant and young child feeding and HTSP**

Maternal infant and young child feeding is integrated with FP and HTSP for the first 1,000 days - conception to age 2

- Mothers counseled on breastfeeding and future contraceptive use during antenatal checkups
- Mothers supported in immediate and exclusive breastfeeding for 6 months to assure infant nutrition, and concurrently delay the onset of menses (Lactational Amenorrhea Method)
- At 6 months, mothers begin complementary feeding (solids + breast milk) for infants, and a modern method of contraception to protect them from another too-soon pregnancy
- Protection from pregnancy enables mothers to breastfeed until the child is at least 2 years old, reducing the risk of undernutrition and enables mothers to space pregnancies by at least 2 years for healthiest outcomes
- Undernutrition may result in stunting that leads to impaired health and reduced intellectual capacity that can be passed on to the next generation

(Lundgren, Tuverno, Best Practices Res Cli Endocrinal Meta. 2008)

(Reference: Lundgren, Tuverno, Best Practices Res Cli Endocrinal Meta. 2008)

### **Impact of birth –to-Pregnancy interval on Mortality**

- 1.6 million Deaths in children under five could be eliminated if all birth-to-pregnancy intervals were 24 to 36 months.

### **4 Healthy timing and spacing of pregnancy components**

To achieve HTSP outcomes, three components have been developed: Those are Delay, Limit and space pregnancies.

- A. For spacing, the couples who desire a next pregnancy after a live birth, for the health of the mother and baby, wait at least 24 months before trying to become pregnant again. Consider using an FP method of your choice without interruption during that time and for couples who decide to have a child after a miscarriage or abortion,

#### **4.1 When Can I Get Pregnant After Miscarriage?**

During the first three months of pregnancy, the risk of miscarriage is quite high. Statistically, 10% to 20% of all pregnancies result in miscarriages. A miscarriage is defined as the sudden loss of a pregnancy before 20 weeks. This is a common event, yet very difficult for a woman and her partner to deal with. After recovering from the impact of a miscarriage, the most common question asked by women is, “when can they then try to get pregnant again?” It is important to speak to your health care provider and make sure that you have emotionally and physically healed before you try to become pregnant again. A healthy lifestyle is imperative for a healthy pregnancy. Here are some tips to help you go through a healthy pregnancy after experiencing a miscarriage after a miscarriage, trying to get pregnant again can be stressful and confusing. If you are thinking about getting pregnant soon after a miscarriage, it is important to understand the steps you can take to promote a fruitful pregnancy.

#### **4.2 Recovery and Preparation**

It is very important that you give yourself time to heal both emotionally and physically before you try to conceive again. Physical recovery after a miscarriage is quick and takes only a few days. Within a month, your body will be working normally and your menstrual cycles will begin once again. It is possible to become pregnant during your first menstrual cycle after your miscarriage.

The most important part of the healing process is the mental healing. You want to make sure that you and your partner are emotionally ready to try again. A miscarriage can cause a severe feeling of loss and confusion, especially if it is the first pregnancy. You may feel anger and guilt. Give yourself time to recover and do not push yourself through your grief.

If you have had two or more miscarriages, you must talk to your family doctor before trying to conceive again. You may have to undergo some tests to determine the underlying cause of your miscarriages. Your doctor may also recommend some treatment methods before you attempt another pregnancy.

If you have had a molar pregnancy. A molar pregnancy is when a benign tumor forms in the uterus. This occurs when the placental develops into abnormal cysts instead of a fetus. Your family doctor may recommend that you wait at least six months to a year before you try to conceive after a molar pregnancy.

#### **4.3 What the Research Says**

Studies have shown that women who become pregnant within six months of their miscarriage have better chances of proceeding with a healthy pregnancy. Compared to those who waited longer than six months to become pregnant, women who got pregnant earlier had a lesser risk of suffering complications during pregnancy and labor.

Similarly, women who waited over two years to become pregnant after a miscarriage were at greater risk of a life threatening ectopic pregnancy. An ectopic pregnancy is when the egg is implanted outside the uterus, most often in the Fallopian tubes. These women were also more likely to undergo a C-section and/or have a low-birth-weight baby at a premature age.

The same study included women who had miscarried late in pregnancy and similar results were found when compared to those who miscarried earlier in pregnancy; both groups were better off conceiving earlier rather than later. However, the study showed that women who have signs of infection or weak immune systems might have to wait longer to conceive after a miscarriage.

#### 4.4 Do I Need to Go Through Special Tests before Attempting Another Pregnancy?

If you have had more than two miscarriages, you may want to undergo some tests to determine the cause of the miscarriages before you try again. Some tests that can identify the issues include:

- **Blood tests:** a comprehensive checkup of your blood levels can trace any hormonal or immune system problems.
- **Chromosomal tests:** both you and your partner will have blood tested for chromosomal issues. If the tissue from the miscarriage is available, this will be tested as well.
- **Ultrasounds:** an ultrasound can give a clear image of the uterus and can help doctors detect any issues with the structure of the uterus. Hysteroscopy. A small scope may be inserted through your cervix into your uterus that can give an inside view of your uterus and Fallopian tubes.
- **Hysterosalpingography:** This is a minimally invasive technique that uses a dye to highlight the inside of the uterus and the Fallopian tubes in x-rays.
- **Sonohysterogram:** A fluid is inserted into your uterus and an ultrasound is performed to detect any issues in the lining of the uterus.

A number of tests and procedures can be performed to help identifying the cause of the miscarriage. However, the majority of women undergo miscarriages for unknown reasons, and go on to have healthy subsequent pregnancies.

#### 4.5 What to do in improving chances of healthy pregnancy?

A healthy pregnancy needs a healthy body. If you have an active and healthy lifestyle, you can increase the chances of having a healthy baby and pregnancy.

If you are planning on conceiving or if there is a chance of getting pregnant, it is important to take a folic acid supplement. This will help in the development of your baby's brain. Having a healthy weight can also improve your chances of healthy pregnancy. Being under or overweight can cause complications during your pregnancy and labor. A healthy diet is essential and you should try to limit your caffeine intake. Smoking, alcohol and illegal drugs must be avoided at all costs.

If you have had previous miscarriages, you will have to take extra care for future pregnancies. If you are pregnant again after multiple miscarriages, consult with your midwife or family doctor to devise a plan for monitoring and maintaining your pregnancy.

#### 4.6 Deal with Your Emotions and Feelings in the Process

Becoming pregnant again after a miscarriage can be both an extremely happy and an extremely stressful experience. You will be overjoyed at being given the chance to become a mother again but at the same time you might be anxious about the possibility of suffering another miscarriage.

You may not want to tell anyone about your pregnancy until you are further along. The grief you felt during your miscarriage may resurface. Do not worry, as this is normal.



It is important that you share your feelings with someone, maybe your partner or other family members and friends. A counselor or your family doctor can also help you cope with your emotions during this time.

**B) Delay:** adolescents, for theirs and their baby's health, they have to wait until they are at least 18 years of age, before trying to become pregnant. Consider using an FP method of your choice without interruption until you are 18 years old where needed.

Delaying a first pregnancy until a woman is at least 18 years old is healthiest for both the mother and baby. Couples who are sexually active can use a contraceptive method to prevent a pregnancy before the woman reaches the age of 18. Delaying pregnancy until the woman is at least 18 years of age will allow a woman's body to fully mature. Otherwise, she faces a greater risk of complications that can be serious and even fatal. Complications of pregnancy and childbirth remain a major cause of death in many countries. The youngest mothers face the highest risk. Maternal death rates for young women, ages 15 to 18, are twice as high as for women ages 20 to 24, and girls under age 15 are 5 times more likely to die during childbirth than women ages 20 to 24. Women under age 18 are more likely to have high blood pressure during pregnancy, which may lead to life-threatening seizures. They are more likely to face other dangers as well, such as severe anemia (low blood iron), bleeding, and infection. Also, because a girl's pelvis has not yet grown large enough for the baby to pass through the birth canal, she often faces prolonged obstructed labor. The pressure resulting from labor that lasts for more than 12 hours can cause the mother a fistula (see box on page 26 for explanation). All these complications may be fatal or cause long-term health problems. Babies born to women younger than 18 years old are more likely to be born before reaching full term, have low birth weight, and have problems during birth that could be fatal. When they do survive, these children may

#### **4.7 How to Delay Pregnancy Without Contraception**

Secure enough to postpone pregnancy without contraception? For couples who find children who have had enough or may want to give the distance to the next child, contraceptive use is a must. Another case for couples who do not want to be bothered to use contraception or may be concerned with the side effects they cause, an alternative way to prevent pregnancy without contraception can be used. However, this method often have a high risk of failure and requires expertise.

#### **4.8 How to Delay Pregnancy without Contraceptive Methods Periodic**

- **Abstinence**

This method is basically done by limiting sexual activity only when you are not in the fertile period. This method can only be done if you have a regular menstrual cycle, outside of this provision, the risk of failure is obtained to be quite high. Some ways to determine the fertile period include the following:

- **Basal Temperature Method.**

Method to determine the fertile period is done by measuring the body temperature of the wife regularly. Body temperature was measured and recorded every morning, when the body temperature rises one or one and a half degrees centigrade it is a sign of ovulation is the expenditure mature egg from the ovary. Standard temperature usually ranges between 36 degrees Celsius.

Mucus Method Rahim. How to determine the fertile period is done by taking into account the characteristics of the cervical mucus. But this way is more difficult and requires expertise that would be better to consult with your doctor to find out how to do this with the right method.

Calendar method. Calendar method is highly dependent on regular menstrual cycles. Therefore make sure you have a regular menstrual cycle. Ovulation or fertile period usually comes about 14 days after the first day of menstruation, for you with a 28-day menstrual cycle. Given the life span of the egg 2 to 3 days and

the sperm cells in utero between 2 to 5 days so it's good to avoid 5 days before that date and 3 days after that date.

#### **4.9 Delaying Pregnancy Sexual Methods Disconnected**

This method is quite simple: by obstructing the meeting of egg and sperm cells. This is done by removing the sperm outside the womb. This method has a high failure rate because the husband is hard to resist the release of sperm cells. Besides this way many considered reducing pleasure in sexual intercourse.

Delay or prevent pregnancy by using contraceptives have a risk of failure, but if it is done without the risk of contraceptive failure is much higher, because the required skills and knowledge. However, on the one hand by delaying pregnancies without contraception is more natural and without side effects: lifelong health problems.

#### **4.10 Limit pregnancies to a mother's healthiest ages, 18 to 34**

As the saying goes: Age is not nothing but a number. But when it comes to getting pregnant and having a healthy pregnancy, it can matter. Rest assured, most healthy women who get pregnant after age 35 and even into their 40s have healthy babies. That doesn't mean, though, that you shouldn't think about smart steps you can take to maximize your health and your baby's health during pregnancy.

#### **4.11 How Can I Increase My Chances of Having a Healthy Baby?**

Preconception checkups and counseling. When you decide that you are ready to have a baby, it is important to take some steps prior to conception. See your doctor for a checkup to make sure you are healthy prior to conception. Talk to him to make sure you are emotionally prepared for pregnancy.

Get early and regular prenatal care. The first 8 weeks of your pregnancy are very important to your baby's development. Early and regular prenatal care can increase your chances of having a safe pregnancy and a healthy baby. Prenatal care includes screenings, regular exams, pregnancy and childbirth education, and counseling and support.

Getting prenatal care also helps provide extra protection for women over 35. It allows your doctor to stay ahead of health conditions that are more common in women who are older when they get pregnant. For instance, your age may increase your risk for gestational diabetes and preeclampsia, a condition that causes high blood pressure along with protein in the urine. During prenatal visits, your doctor will check your blood pressure, test your urine for protein and sugar, and test your blood glucose levels. That way, any potential problems can be caught and treated early.

Consider optional prenatal tests for women over 35. Your doctor may offer you special prenatal tests that are particularly applicable for older moms. These tests help determine the risk of having a baby with a birth defect. Ask your doctor about these tests so you can learn the risks and benefits and decide what's right for you.

Take prenatal vitamins. All women of childbearing age should take a daily prenatal vitamin containing at least 400 micrograms of folic acid. Getting enough folic acid every day before and during the first 3 months of pregnancy can help prevent defects involving a baby's brain and spinal cord. Taking folic acid adds an important level of protection for older women, who have a higher risk of having a baby with birth defects. Some prenatal vitamins have 800-1,000 mcg of folic acid. This is still safe in pregnancy. As a matter of fact, some women need more than 400 mcg for protection against birth defects. Do not take more than 1,000 mcg (1 milligram) of folic acid without asking your doctor. Women with a history of a child with neural tube defects need 4000 mcg.

#### 4.12 How Can I Lower My Risk for Pregnancy Problems?

You deserve the same TLC as your baby. Taking care of yourself will help you manage any existing health problems and protect you from pregnancy-related diabetes and high blood pressure. And the healthier you are, the better it will be for your little one.

Keep up with other doctor appointments. If you have a chronic health problem such as diabetes or high blood pressure, be sure you keep up with your regular doctor appointments. Managing your condition before you get pregnant will keep both you and your baby healthy. Be sure to see your dentist for regular exams and cleanings, too. Having healthy teeth and gums lessens the chance of preterm birth and of having a baby with a low birth weight.

Maintain a healthy, well-balanced diet. Eating a variety of foods will help you get all the nutrients you need. Choose plenty of fruits and veggies, whole grains, beans, lean meats, and low-fat dairy products. You should eat and drink at least four servings of dairy and other calcium-rich foods every day. That way you'll keep your teeth and bones healthy while your baby develops. Also be sure to include good food sources of folic acid, such as leafy green vegetables, dried beans, liver, and some citrus fruits.

Gain the recommended amount of weight. Talk with your doctor about how much weight you should gain. Women with a normal BMI should gain between 25 and 35 pounds during pregnancy. If you were overweight before getting pregnant, your doctor may recommend that you gain only 15 to 25 pounds. Obese women should gain about 11 to 20 pounds. Gaining the appropriate amount of weight lessens the chance of your baby growing slowly and reduces the risk of preterm birth. You also lower your risk for developing pregnancy problems such as gestational diabetes and high blood pressure.

Exercise regularly. Regular exercise will help you stay at a healthy pregnancy weight, keep your strength up, and ease stress. Just be sure you review your exercise program with your doctor. You'll most likely be able to continue your normal exercise routine throughout your pregnancy. But your doctor can help you figure out if you'll need to scale back

Stop smoking and drinking alcohol. Like all pregnant women, you should not drink alcohol or smoke cigarettes during your pregnancy. Drinking alcohol increases your baby's risk for a wide range of mental and physical defects. Smoking increases the chance for delivering a low birth-weight baby, which is more common in older women. Not smoking can also help prevent preeclampsia.

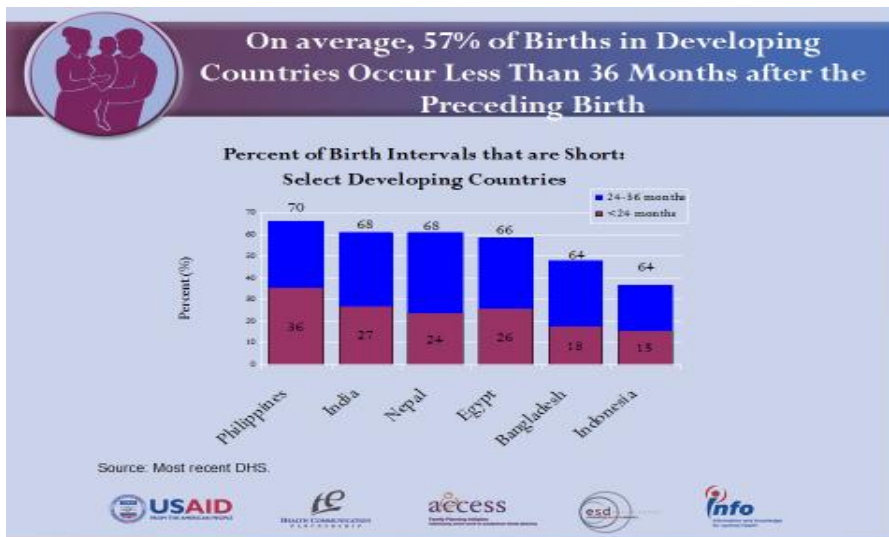
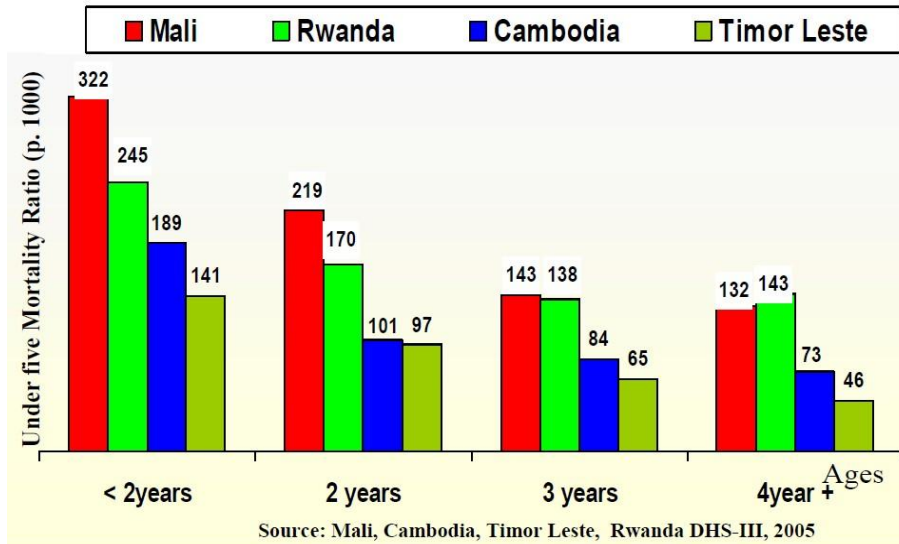
Ask your doctor about medications. Talk with your doctor about what medicines are safe to take during pregnancy and while breastfeeding. This includes prescription and over-the-counter medicines, supplements, and natural remedies.

**5 Contribution of Healthy timing and spacing of pregnancy in improvement of maternal and child Survival.** Healthy timing and spacing of pregnancy (HTSP) programs are designed to improve maternal and child survival by helping woman and families make informed decisions about delaying first-time pregnancy and spacing subsequent pregnancies; all within the context of contraceptive choice. It is essential for these programs to take into account families' fertility intentions and desired family sizes, as well as socio-cultural factors in the environments where they are implemented.

Studies in developing countries have shown that infant mortality can be reduced by up to 24 percent and under-5 mortality by up to 35 percent in families whose children are born at least three years apart (also expressed as an easier-to-calculated gap of at least two years between birth and conception). Similar gains in maternal and child health are made when a woman's first pregnancy occurs after 18 years of age. Moreover, in the particular cases of miscarriage and induced abortions, a space of at least 6 months before new conception has also proven to greatly reduce health risks for newborns and mothers.



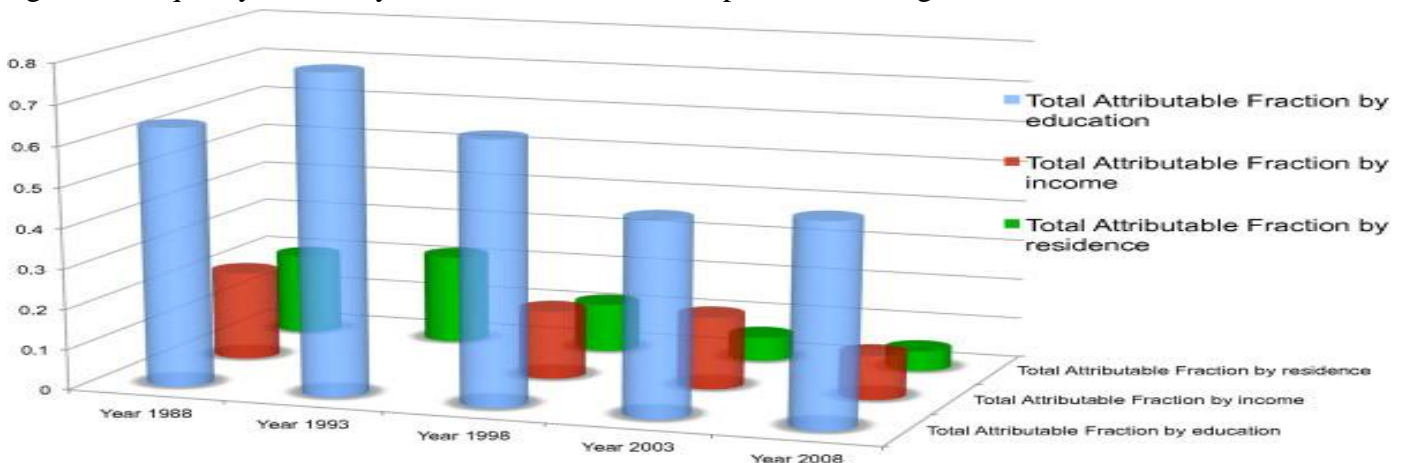
Figure1: Relationship of Under 5 Mortality Rates with Increased



In 27 developing countries, 90%+ of women do not want a child within two years, but only 40% are using a method of FP (Senegal-8%, India-24%, Haiti-38%)

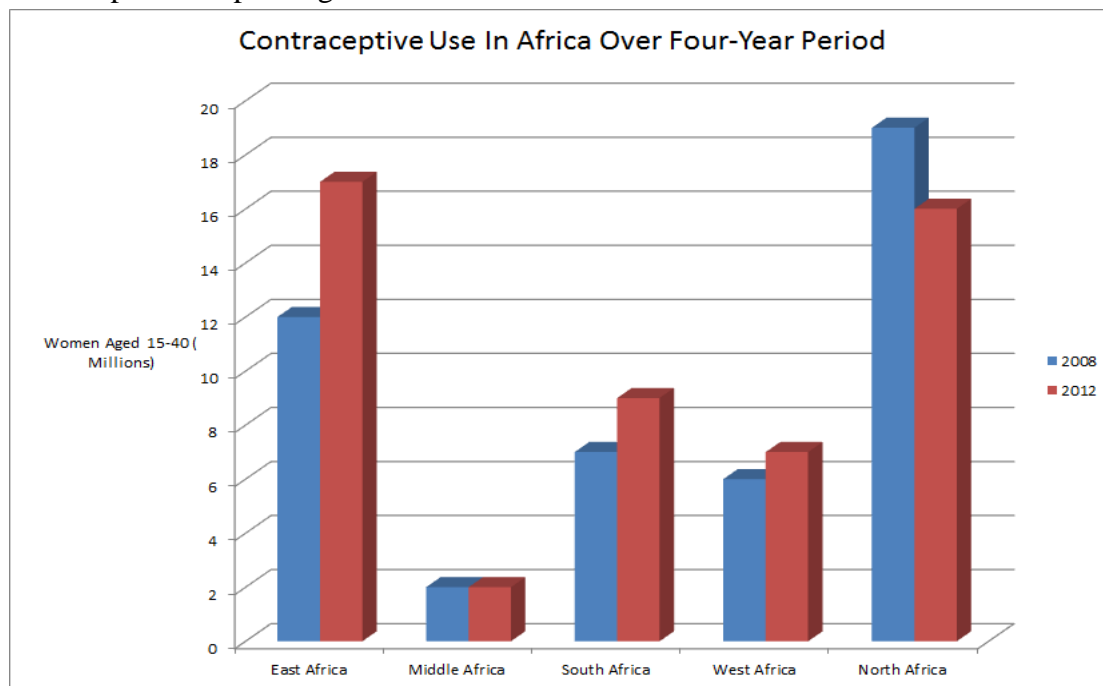
57% of pregnancies in developing countries occur less than 36 months after the preceding birth. Women who do not breastfed may become pregnant again 28 days after giving birth. Without the protection of FP, 85% of sexually active women will become pregnant within the first year after a birth (USAID 2007)

Figure 2: Inequality in fertility rate and modern contraceptive use among Ghanaian women from 1988-2008

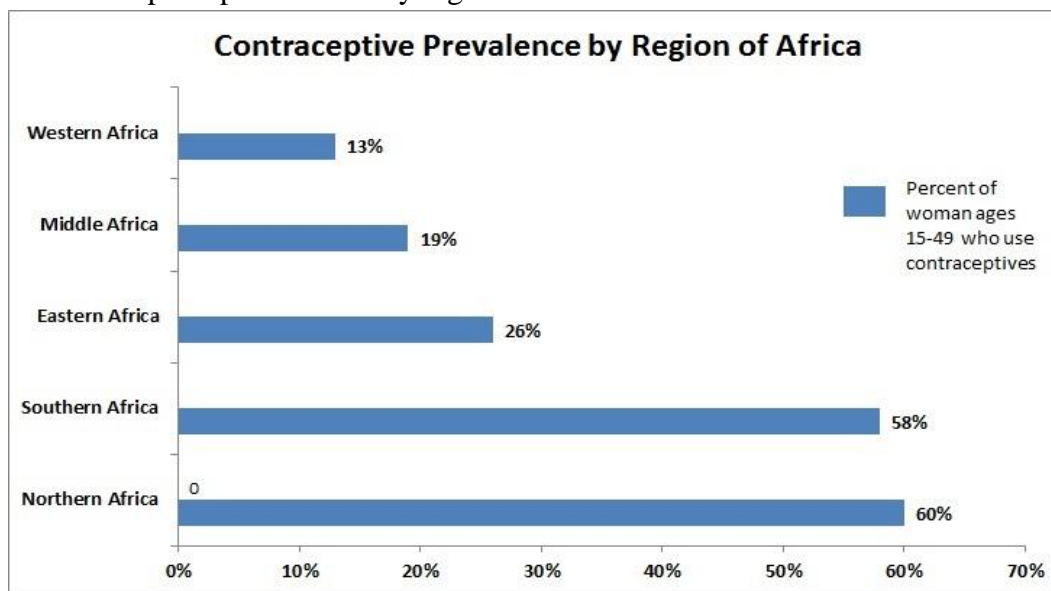


Based on this study ,One obvious observation is that the discrepancy between equality in use of contraceptives and equality in fertility must be addressed in a future revision of policies related to family planning. Otherwise this could be a major obstacle for attaining further progress in achieving the Millennium Development Goal (MDG) 5. More research into the causes of the unfortunate discrepancy is urgently needed. There still exist significant education and income related inequalities in both parameters that need appropriate action.

**Figure3:** Contraceptive use per Region of Africa

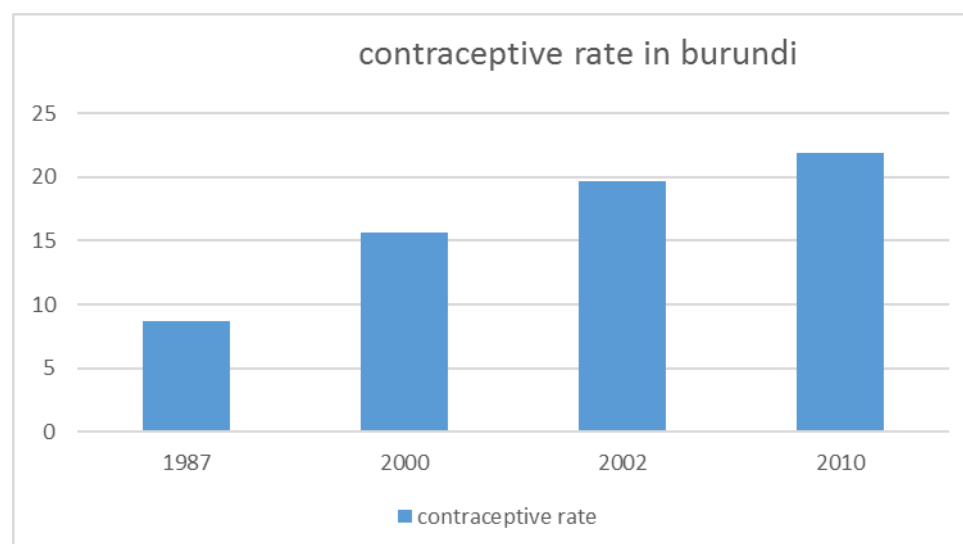


**Figure 4:** Contraceptive prevalence by region of Africa



**Figure 5:** Contraceptive prevalence (% of women ages 15-49) in Burundi

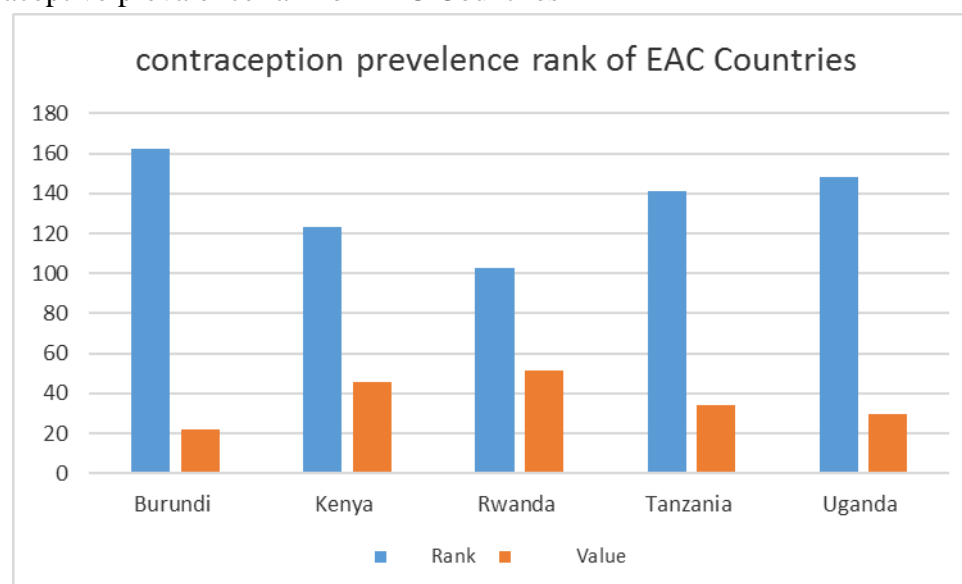
Contraceptive prevalence (% of women ages 15-49) in Burundi was last measured at 21.90 in 2010. It was at 9.7% in 1987, 15.7% in 2000, 19.7% in 2002 (Source: World Bank 2010). In Muyinga province, the contraceptive prevalence rate rose from 12% in 2007 up to 22.6% in 2013 (Source: Burundi Pathfinder operation report 2010)

**Table 1:** Contraception rank of Burundi in the world

Data set	Rank	Value	Date	Drill Down	Source
<i>Selected data set</i> Contraceptive prevalence, women, ages 15-49 (%)	162	21,9	2010	-	World bank
Contraceptive prevalence, modern methods (%)	123	10,0	2000	-	UN Data
Unmet need for contraception, ages 15-49 (% of married women)	10	32,4	2010	-	World bank
Condom use, female, ages 15-24 (%)	53	3,2	2010	-	World bank
Condom use, male, ages 15-24 (%)	55	13,1	2010	-	World bank
Condom use at last high-risk sex, female (%)	45	25,3	2005	-	UN Data

**Table 2:** Contraception prevalence rank comparing Burundi to other East African community countries

Country	Rank	Value	Date	Source
Burundi	162	21.9	2010	World Bank
Kenya	123	45.5	2009	World Bank
Rwanda	103	51.6	2010	World Bank
Tanzania	141	34.4	2010	World Bank
Uganda	148	30	2011	World Bank

**Figure 6:** Contraceptive prevalence rank of EAC Countries

date	Burundi	Kenya	Rwanda	Tanzania	Uganda
2011	-	-	-	-	30.0
2010	21,9	-	51,6	-	34.4
2009	-	45,5	-	-	-
2008	-	-	36,4	-	-
2006	9,1	-	-	-	23,7
2005	-	-	17,4	26,4	19,7
2004	-	-	-	28,2	-
2003	-	39,3	-	-	-
2002	19,7	-	-	-	-
2001	-	-	-	-	22,8
2000	15,7	-	13,2	-	-
1999	-	-	-	25,4	-
1998	-	39,0	-	-	-
1996	-	-	13,7	18,4	-
1995	-	-	-	-	14,8
1994	-	-	-	20,4	-
1993	-	32,7	-	-	-
1992	-	-	21,2	10,4	-
1989	-	26,9	-	-	4,9
1987	8,7	-	-	-	-
1984	-	17,0	-	-	-
1983	-	-	11,0	-	-
1978	-	7,0	-	-	-

Historical data for contraception prevalence rate in 5 East African community Countries 1978-2011 (Source: World Bank)

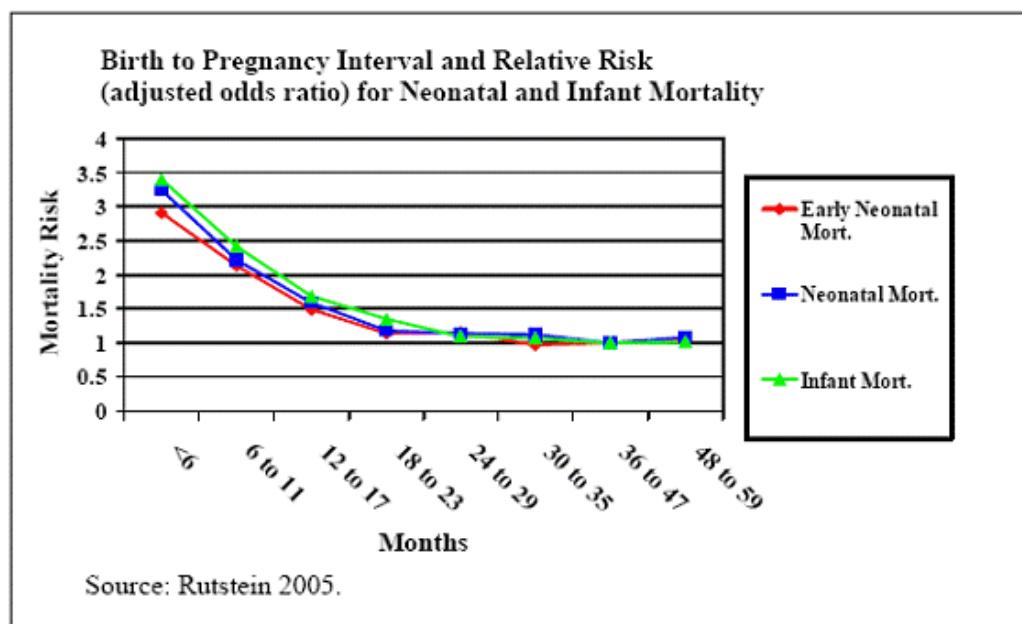
## 6 Contribution of Healthy timing and spacing of pregnancy in the acceleration of the millennium development goals 4 and 5.

Most healthy women can use any method of contraception to practice HTSP. It is the role of the health care provider to inform, educate and counsel women and couples on the best options that are available to them. It is important to reiterate, however, that women and couples must understand that they can freely choose whether or not to use an FP method, and that they can freely decide which method they would like to use. Furthermore, counseling on FP and HTSP should consider and respond to the particular needs of women given her age, marital status, parity and stage of life.

The following Figures (4-1, 4-2, 4-3, 4-4) summarize the major findings of HTSP research. Although effective pregnancy spacing is a key positive outcome related to the use of RH/FP services, few countries have established policies and guidelines that promote pregnancy spacing for the health of mothers and children, despite evidence that suggests significant unmet need for FP is related to women's desire to space their pregnancies. The timing of the first pregnancy in women is also of concern. The research clearly shows that young women who become pregnant before the age of 18 face a number of negative health and social outcomes, as do their children.<sup>11</sup> Pregnancy is the leading cause of death among young women. Young women aged 15 – 19 are twice as likely to die of pregnancy related complications as their peers who are over 20, while young women under the age of 15 are five times more likely to die. Babies born to teenage women are more likely to die than those born to women in their 20s and 30s.

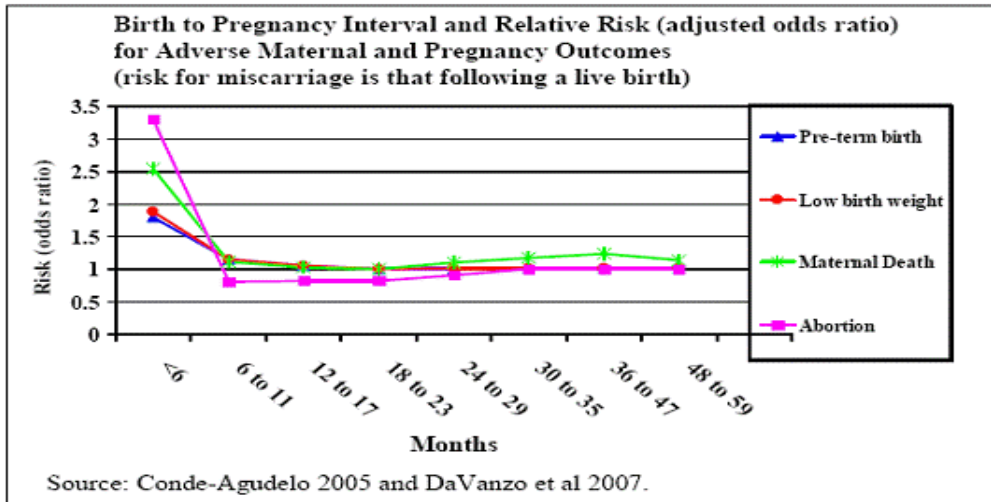
The infant mortality rate averages 100 deaths per 1,000 births among mothers younger than 20, compared with 72-74 deaths per 1,000 births among mothers 20-29 and 30-39.<sup>12</sup> Adolescent pregnancy and birth rates are influenced by the fact that young women ages 15 to 19 are less likely to use modern contraceptives than women ages 20 to 24. Lower use may reflect a lack of awareness of family planning among women who marry young, societal expectations about having a first child, and more limited access to services for adolescents. Promoting policies and implementing programs that help young women delay their first pregnancy until the age of 18 will have a significant impact on the wellbeing of young women and their babies

**Figure7:** Improved Pregnancy Spacing is Associated with Reduced Infant Deaths

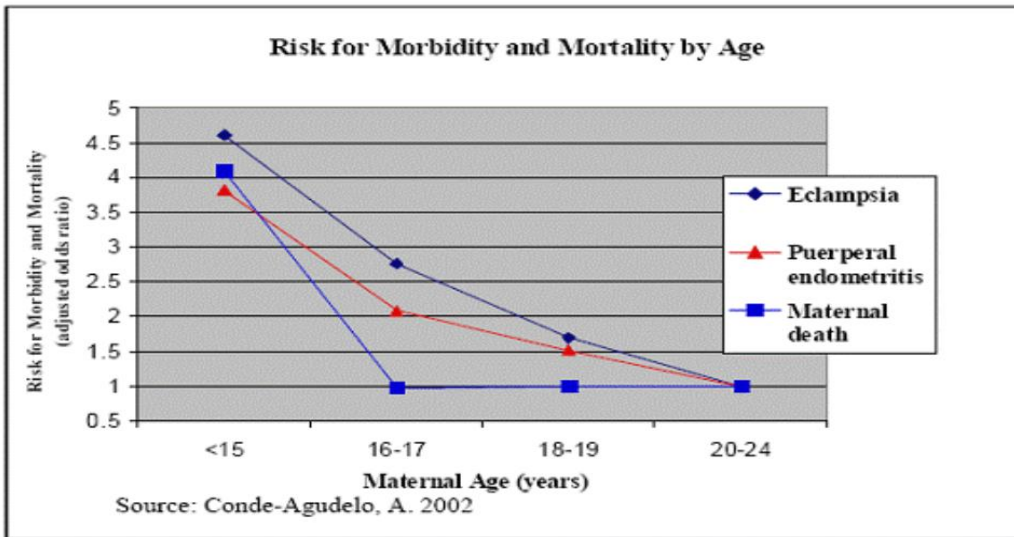




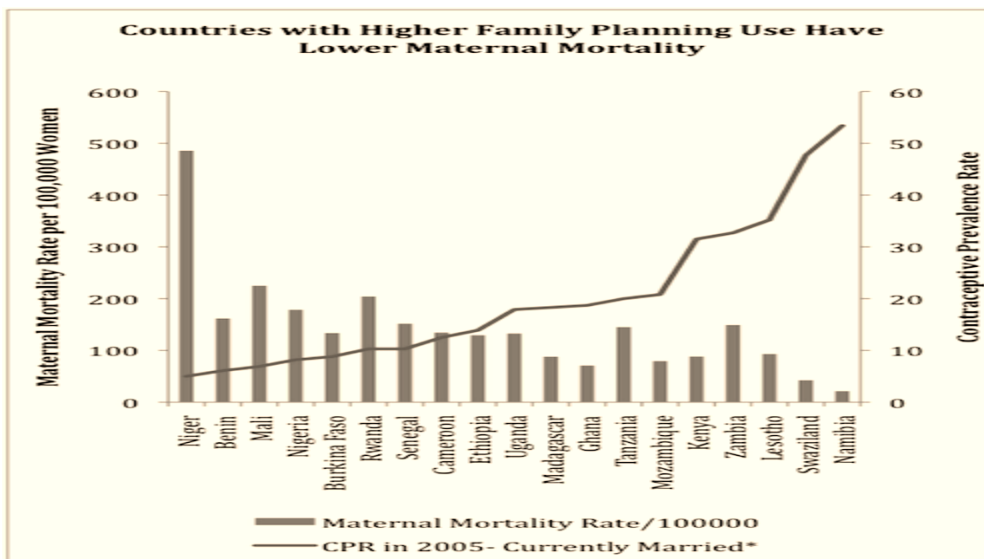
**Figure 8:** Improved Pregnancy Spacing is Associated with Reduced Maternal Mortality



**Figure 9:** Young Women under the Age of 18 Are at Higher Risk for Morbidity and Mortality

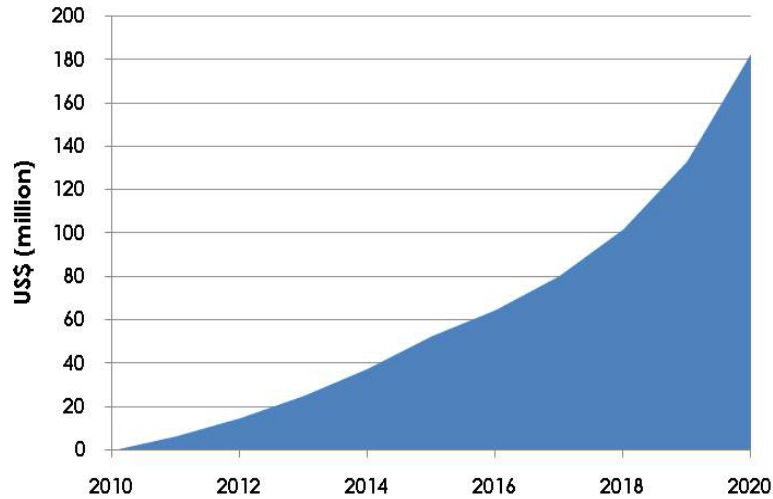


**Figure10:** Countries with Higher family planning use have lower maternal mortality

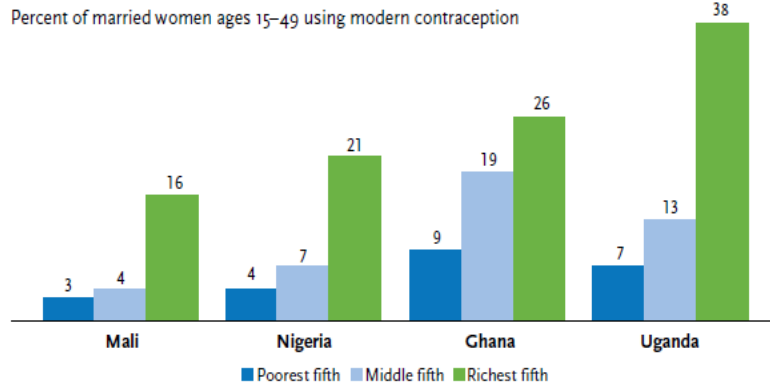


Source: Policy Initiative/USAID Jan 2011

**Figure 11:** MATERNAL and child health cost SAVINGS IF Unmet needs for FP are met add up to \$182 million for francophone West Africa, 2010–2020

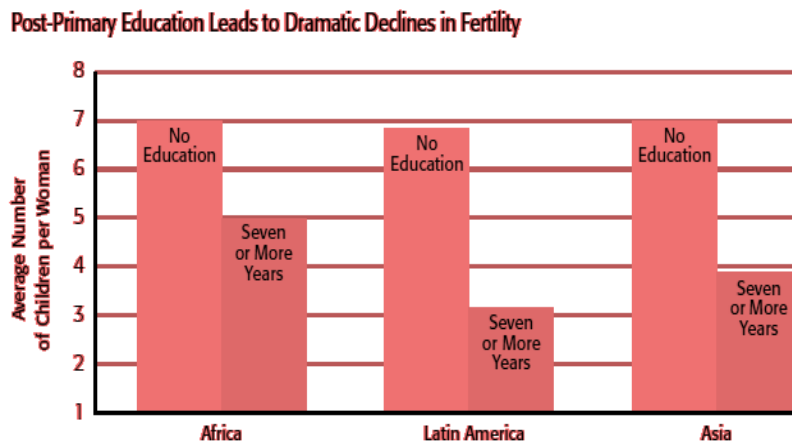


**Figure 4: Contraceptive Use Is Lowest Among the Poor and Highest Among the Rich**



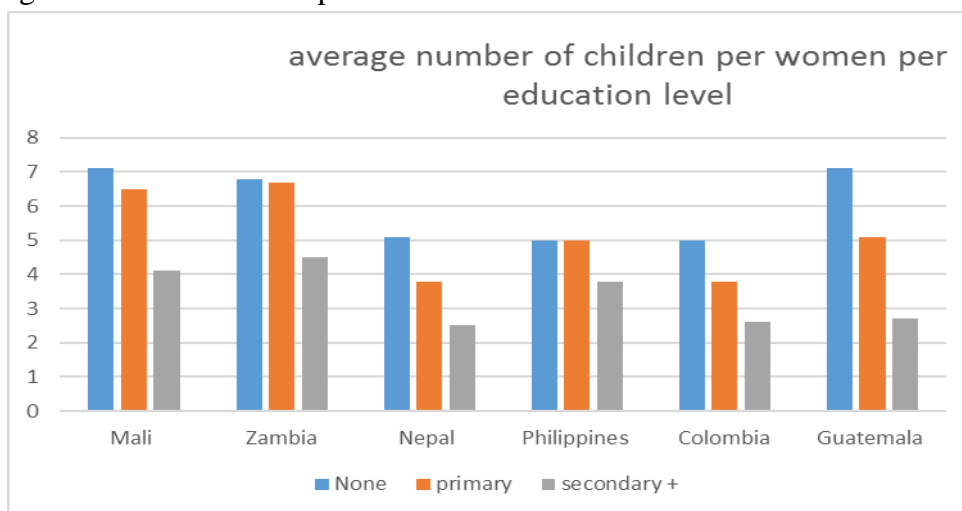
Note: Using the DHS survey data, researchers divided the population into five groups of equal size (or quintiles) based on an index of household assets. The first, third, and fifth quintiles are shown here.  
Source: Macro International, Demographic and Health Surveys, 2003-2006.

**Figure 12:** Female Education Impacts on her Fertility  
Women with more than seven years of education have on average fewer children in Africa than women with no education (Hobcraft 1993)

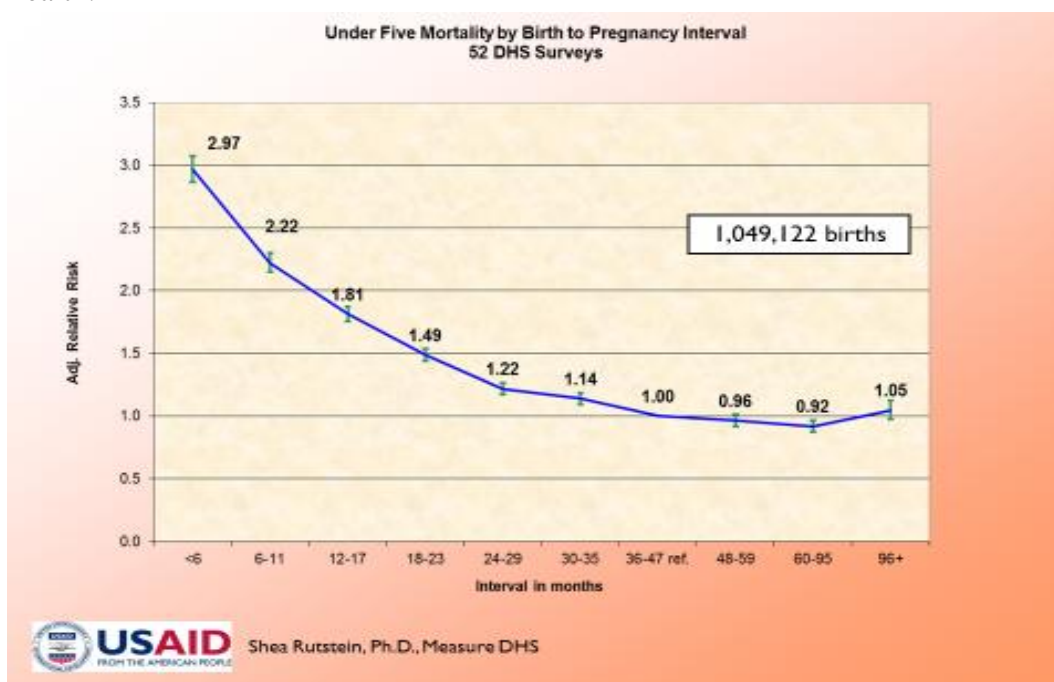


Source: Schultz 1993.

**Figure 13:** Average Number of children per Educational Level



The World Bank calls women’s education the “single most influential investment that can be made in the developing world.” Many governments now support women’s education not only to foster economic growth, but also to promote smaller families, increase modern contraceptive use, and improve child health. Educating women is an important end in and of itself. But is education the best short-term strategy for advancing women’s reproductive choice in low-resource settings? The United Nations, the U.S. National Academy of Sciences, the Population Council, and others have examined the linkages between education and childbearing to provide a greater understanding of these issues. This policy brief highlights key findings from their investigations. The evidence suggests that a number of factors influence childbearing decisions, and that both short-term and long-term policy options need to be considered to improve women’s reproductive health.



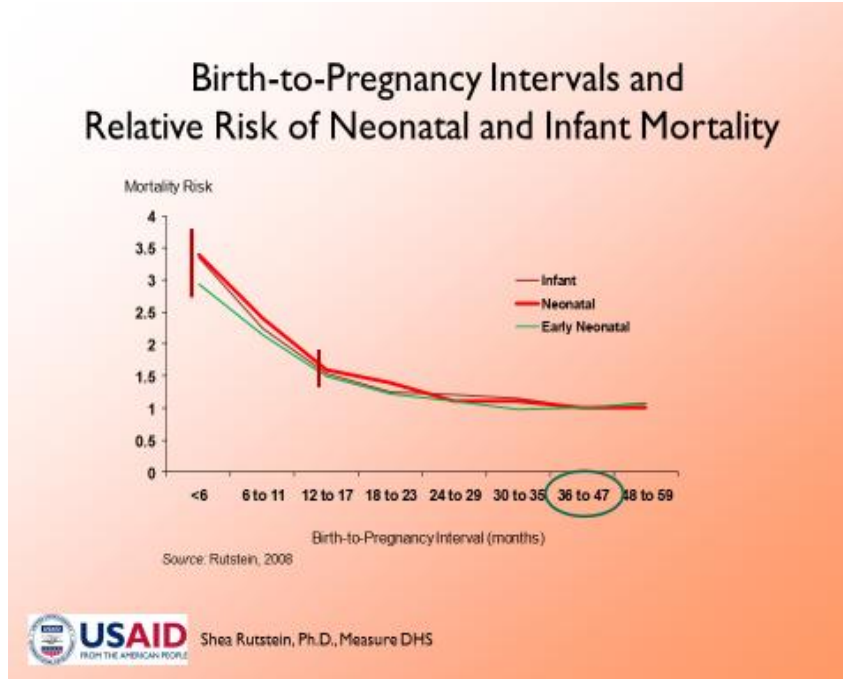
Infants conceived within 6 months of a previous birth are 42% more likely to have low birth weight than those conceived during the 36 – 47 month interval.

Low birth weight contributes to infant mortality (heart problems, respiratory distress, anemia) and childhood handicaps (permanent cognitive impairment)

20% of all pregnancies begin less than 12 months after the previous birth

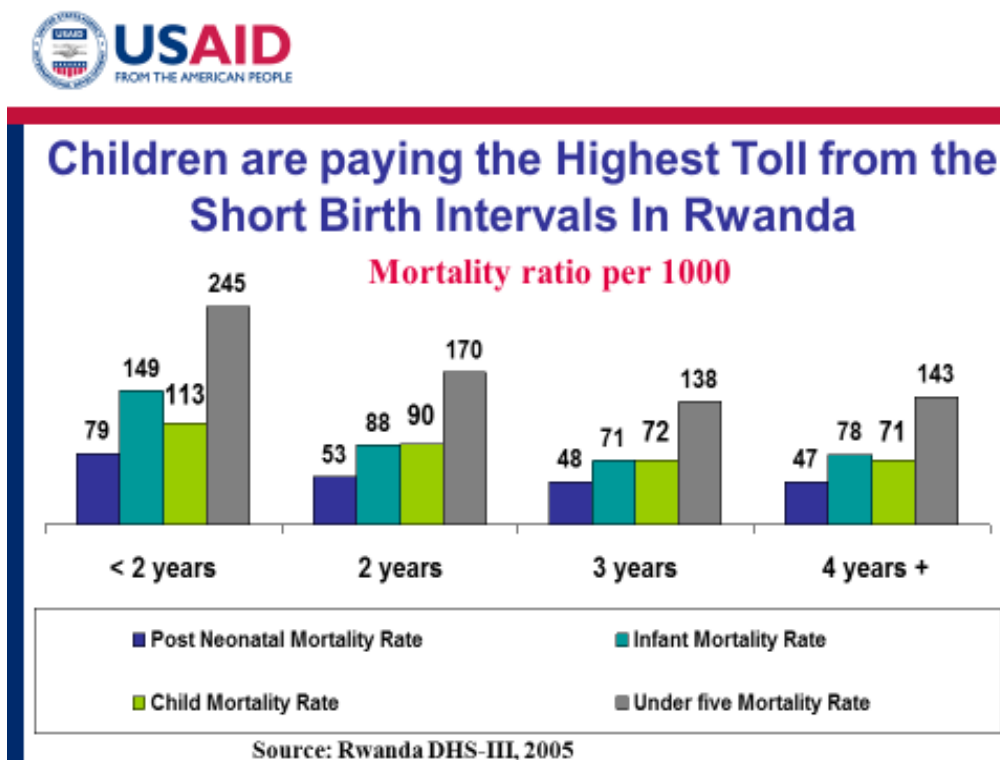
38% occur less than 18 months after the previous birth

**Figure 14:** Birth to pregnancy Intervals and relative risk of neonatal and infant mortality

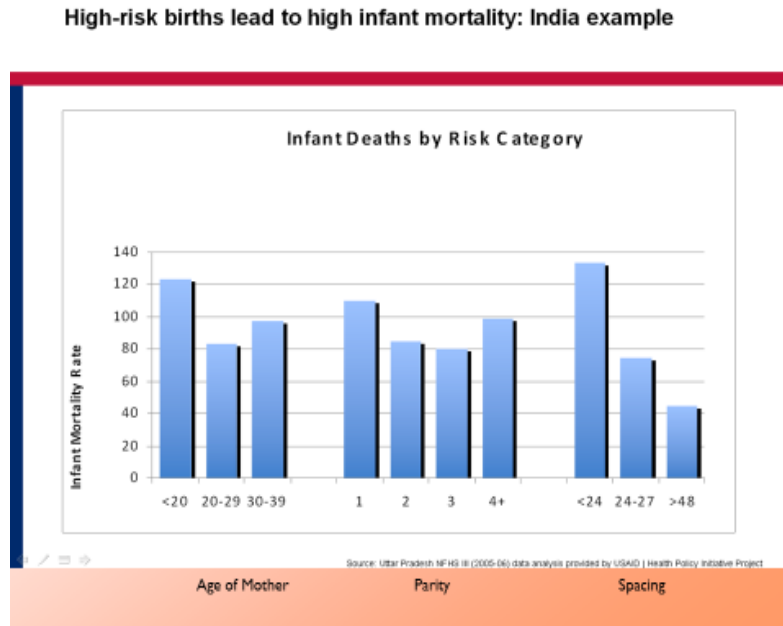


The chart above shows the impact of timing and spacing on infant, child and maternal mortality: Here you see the data related to “BTP Intervals and Relative Risk of Neonatal and Infant Mortality.” -The red line shows neonatal mortality. Compared to longer BTP intervals of 36-47 months (reference group), the risk for neonatal mortality increase starting from shorter intervals < 24 months. -And at intervals < 18 months, risks for all three adverse outcomes increase. And finally, at intervals of less than 6 months, the risk of neonatal and infant mortality for a baby born to a woman who waited less than 6 months after her last birth more than tripled, compared to a baby born to a woman who waited at least 36 months or longer before getting pregnant again

Example: Rwanda case

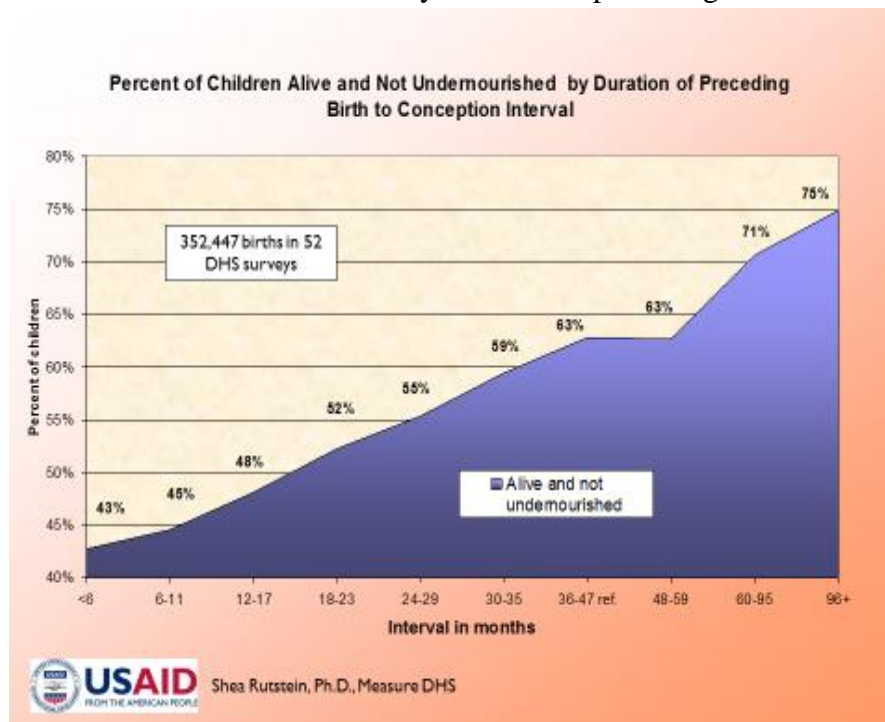


**Figure 1:** High risk births lead to high infant mortality



What has the greatest impact on infant mortality? Age of the mother, parity – the number of children she has had, or spacing, the interval between births? We have seen the data on all three. Here, we compare the impact of age, parity and spacing on infant mortality in India. Infant mortality is highest when mothers are less than 20 years old. (We have seen this earlier.) On parity, we see that the first birth has a higher infant mortality rate than the second or third – and that the IMR rises again at the fourth birth onward. (We saw that on the last slide.) Finally, we see that the infant mortality rate is more than three times as high for births that are less than 24 months apart compared to births that are 48 months or more apart. And which of the three has the greatest impact on infant mortality? Spacing. That’s why USAID now recognizes Healthy Timing and Spacing of Pregnancies as a High Impact Practice (HIP) (Source: Uttar Pradesh NF HS III (2005-2006) data analysis provided by USAID/health policy initiative project).

**Figure 16:** Children alive and not undernourished by duration of preceding birth to conception interval



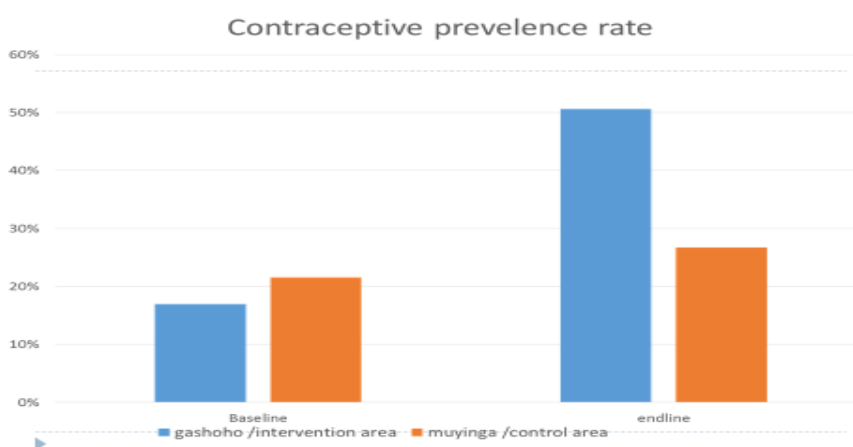


Under nutrition / stunting is an indicator that a child’s development has faltered, leading to impaired brain functioning which is essentially irreversible.

Stunting indicates that a child’s IQ may never exceed 85, limiting a child’s potential to learn. In 10 African countries, 60% of more of under 5’s are stunted, dimming economic and development potential. The window of opportunity for improving nutrition is the first 1,000 days, from conception through the first 2 years of life.

Hence, a sustainable approach is needed to help women and families make informed decisions about delaying, spacing, or limiting their pregnancies to achieve the healthiest outcomes for the whole family. Research shows that HTSP helps save the lives of mothers and babies and it (HTSP) is well understood and implemented when men are involved and when it is taught by people sharing the same problems (source: World vision ANCP ALARM Project performance report 2014).

**Healthy timing and spacing of pregnancy Knowledge, Practice and Coverage  
Summary Results**

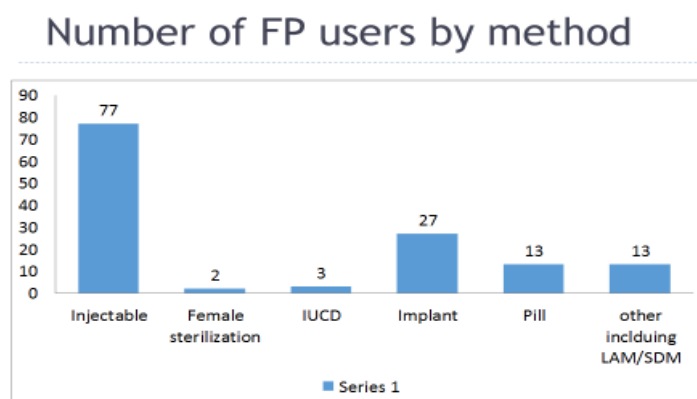


The results show that the contraceptive prevalence rate increased from 17% up to 50.6% (increase of 33.6%) at the end of one year of implementation of PPC approach whereas in comparison area there is an increase of 5.19%. Moreover, women aged 15-49 years who can name at least three modern methods of family planning. Increased from 23.4% to 99.7%.

The percent of women aged 15-49 who can name at least one long-acting reversible contraceptive (LARC) or permanent method (LAPM) of contraception.

Is increase from 21.7% up 99%.

**Figure 17:** Number of FP users by Method



The study showed that the injectables (77%) are more preferred followed by implants (27%) when considering the number of clients interviewed during antenatal care consultations .

The results show us that the percentage of women aged 15-49 who report at least one place or person where she can obtain a modern family planning method.

Increased from 53.6%(baseline)and 100%(endline).In addition, among the women interviewed,96.75% reported/knowing that a woman should wait at least 24 months after the woman gave birth before attempting to become pregnant again.This percentage increased from 46.62% (baseline)

The proportion of women aged 15-49 reporting having received counselling on both maternal, infant and young child nutrition (MIYCN) and family planning (FP) during immunisation ,postnatal care and antenatal care services in the last 6 months increased from 17.46%(Baseline) up to 62%(Endline).

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