What do we know about barriers to access to family planning services?

Limited knowledge of contraception is still a more prominent barrier in some parts of Sub-Saharan Africa, and in all regions it is more common in rural areas and among poor and uneducated women. Many survey-based and in-depth qualitative studies suggest that women's fears about perceived health risks and side effects associated with modern contraceptives are a major barrier to adoption or reason for discontinuation.

The evidence also indicates that fear of social disapproval and lack of social acceptability of family planning is another potential barrier to contraceptive use. Women often face real or perceived opposition from their husband or families, reflecting culturally prescribed gender roles. Where the status of women is low, social barriers to accessing family planning methods can be very high.

Definitive evidence on financial and geographical barriers to access to services is mixed. In particular the influence of price on use of different contraceptive methods is not clear and we need a better understanding of the potential equity impacts.

Many interventions have been developed to reduce barriers to access for adolescents, but surprisingly few have been systematically evaluated, especially in developing countries. WHO is currently undertaking a systematic review of the literature that should be available by early 2011.

What do we know about raising awareness for family planning?

There is good country case study evidence demonstrating the important role of political leadership and support for family planning. Experiences from Rwanda and Kenya emphasise the importance of stimulating demand for family planning at the level of national policy and budgets. For instance in Kenya family planning champions used national survey evidence to advocate for a renewed commitment to contraceptive services. By reframing family planning as an important issue for the nation's economic growth and social development, their efforts ultimately led to government funds being allocated to contraceptive commodities in the 2005 national budget, a first for Kenya. At the same time, this evidence review clearly shows that there is no evidence supporting coercive government population policies.

At the programme level, awareness raising and demand creation interventions have moved from traditional "Information, Education Communication" activities to include elements that explicitly motivate a behaviour change through specific actions. This recognises that individual and family decisions are usually influenced by social and gender norms. There is now strong evidence from systematic reviews to suggest that so-called "Social and Behaviour Change Communication" (S/BCC) interventions can be effective in changing behaviour in settings with higher than socially desired levels of wanted and unwanted fertility. There is a need to further develop and rigorously test S/BCC interventions in settings or among populations with high wanted fertility

What do we know about delivery mechanisms for family planning?

Many of the original large scale family planning programmes in developing countries were organized around a vertical structure with central management and logistics. More recently, there has been renewed attention on strengthening existing models and developing new models for integrating services. At a minimum, integration requires regular access to and availability of contraceptive supplies and strong links between different levels of the health system. A key point in the continuum of care is the extended post partum period and throughout the first 12 months after child birth. However rigorous evidence on different approaches is limited.

Mobile outreach service delivery has potential for meeting the unmet need for a range of contraceptive methods. Evidence from a recent systematic review suggests that outreach and

community based distribution are effective and acceptable ways of increasing access to contraceptives, particularly injectables and long acting and permanent methods.

Engaging the private sector is important for delivering quality products and services. There is increasing evidence to suggest that social marketing and social franchising can be effective approaches to increasing the coverage of affordable family planning services and commodities by both increasing demand and making produces more affordable and accessible. However it is less clear whether they can reach the very poorest.

Meeting the needs of adolescents requires specific interventions to reduce the additional barriers they face in accessing information and services. Yet to date, surprisingly few youth-friendly interventions have been rigorously evaluated in developing countries. A number of promising practices are emerging from quasi-experimental studies of interventions for both *unmarried and married* adolescents. These point to the need for context-specific combinations of interventions, including comprehensive BCC, community sensitisation, evidence-based sex education and life skills curricula, youth-friendly clinical services, referral networks between schools and health centres. Plus there is promising evidence for broader interventions to delay age of marriage, such as support for girls to remain in school, group formation and community awareness. There is an urgent need for more rigorous evaluations of such interventions.

Family planning interventions compare favourably with the cost-effectiveness of other health interventions in terms of cost per DALY. However, while there is a growing evidence base on the cost per unit output of different contraceptive technologies (measured by couple years of protection) there is far less evidence on how cost-effectiveness varies between different delivery models.

What is the rationale for providing safe abortion services?

Unsafe abortion is one of the major causes of maternal mortality globally. It is estimated that 47,000 (out of 358,000 maternal deaths) women died in 2008 as a result of unsafe abortions, many more suffer severe health consequences. According to the WHO, the risk of dying of an unsafe abortion is higher in Africa than anywhere else in the world.

There is evidence that providing safe abortion services has contributed to improvements in maternal health by preventing unsafe abortion. For instance, evidence from Bangladesh shows that part of the reduction in maternal mortality was due to a fall in abortion related deaths through the provision of safe abortion.

The economic case for action on unsafe abortion is also strong, with several studies now documenting the huge economic burden of unsafe abortion. Estimates of the cost of unsafe abortion and related morbidity and mortality in developing countries lie somewhere between $375 and $838 million a year.

What do we know about safe abortion interventions?

The availability and delivery modality of safe abortion services in a country depend to a large degree on its legal status. Unsafe abortion is most common in countries where abortion is highly restricted. Observational evidence shows that death from unsafe abortion is rare in countries where abortion is permitted and quality services are available.

In countries where abortion has fewer legal restrictions, provider and delivery systems vary substantially. In many developed countries, abortion is often part of the basic health services available. Compared with childbirth and other surgical procedures, and when performed by properly trained health personnel in well equipped facilities, abortion is a relatively safe procedure. There are virtually no maternal deaths associated with safe abortion in the developed world.

What do we know about barriers to access to safe abortion services?

Barriers to access to safe abortion include its legal status, lack of information and knowledge (even where it is legal), shame and secrecy around clandestine abortion and lack of donor funding. Due to the small sector, the limited number of actors working in the area and the presence of legal restrictions in many countries, much of the evidence on how to remove barriers and improve access to safe abortion care is generated by NGOs in the form of country case studies and programme evaluations.

Evidence from case study analysis in many countries demonstrates that increasing legal access to safe abortion is associated with improved sexual and reproductive health. Conversely, unsafe abortion and related mortality are both highest in countries with the most restrictive abortion laws.

As more developing countries have reformed their abortion laws, new evidence is emerging to suggest that legal abortion can save lives. For instance in South Africa, six years after liberalising its abortion law, deaths due to unsafe abortion dropped by at least 50% and the number and severity of post abortion complications also fell.

Qualitative evidence on how to reduce the impact of restrictive abortion laws or broaden the conditions under which abortion can be legally performed suggests that a combination of research, coalition building and communication strategies can be effective.

What do we know about improving the delivery of safe abortion services?

Based on country case study evidence, effective interventions to improve the quality of safe abortion services are likely to include the training of health personnel in safe abortion techniques, including medical abortion and counselling, for comprehensive abortion care. Interventions targeting life saving post-abortion care, improving the provision of drugs and equipment for health facilities and developing service protocols are also important.

Overall, however there is still limited evidence on interventions to improve the quality and delivery of safe abortion services in different settings and for different populations, including adolescents. More research is needed to monitor progress in improving health outcomes. Important unknowns include how to reach the poorest and most vulnerable groups and what are the best interventions to reduce delays and its effect on the safety of abortion. Similarly, more comparative evidence is needed on the relative cost-effectiveness of different service delivery models.

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Any errors or omissions remain those of the authors.

Acroynms

ART	Antiretroviral therapy
BCC	Behaviour Change Communication
CBD	Community based distribution
CPI	Client-provider interactions
CSM	Contraceptive social marketing
CYP	Couple years of protection
CHW	Community Health Workers
DALY	Disability Adjusted Life Year
D&E	Dilatation and Evacuation
CP	Contraceptive prevalence
DFID	Department for International Development
DHS	Demographic and Health Surveys
DMT	Decision-Making Tool
DSF	Demand side financing
FP	Family Planning
ICT	Information and Communication Technologies
IEC	Information, Education, Communication
IPPF	International Planned Parenthood Federation
IUD	Intrauterine device
LAM	Lactational amenorrhea method
LAPM	long acting and permanent
LHW	Lay health workers
MA	Medical Abortion
MDG	Millennium Development Goals
MSI	Marie Stopes International
MVA	manual vacuum aspiration
NGO	Non-government organisation
PAC	Post abortion care
PEPFAR	US President's Emergency Plan for AIDS Relief
PITC	Provider Initiated Testing and Counselling
PMTCT	Preventing mother-to-child transmission
PMNCH	Partnership for Maternal, Newborn and Child Health
RCT	Randomised Control Trial
RMNH	Reproductive, Maternal and Newborn Health
RH	Reproductive Health
S/BCC	‘Social and Behavioural Change Communication
SBA	Skilled birth attendant
SDIP	Safe Delivery Incentive Programme
SRH	Sexual and Reproductive Health
STIs	Sexually Transmitted Infections
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization
WLHA	Women living with HIV

1. Introduction

Today, a woman living in the United Kingdom is likely to plan and have around two children and faces a risk of dying during pregnancy and childbirth of just 1 in 5000.2 The comparison with a woman living in, say, Sierra Leone is stark: she is likely to have 6 children if she completes her reproductive life but also has a risk of 1 in 21 of dying of maternal causes. The contrast for neonatal mortality is equally alarming: respectively 3.1 and 38.6 deaths in the first month of life per 1000 live births.3 The current low levels both of unintended pregnancies and of maternal and newborn mortality in high income countries are the hallmark of functioning health systems, achieving high and equitable coverage of efficacious clinical interventions and good quality services for women, for mothers and for babies, supported by broader socioeconomic development.4 This success story, combined with more recent others from lower and middle-income countries, is reflected in the common phrase among the global health community – 'we know what works.'5

1.1 Scope of this paper

This paper represents the fourth in a series of reviews summarising the current state of evidence on 'what works' to improve reproductive, maternal and newborn health (RMNH). The primary audience for the series is policy and programme decision-makers in DFID country offices and in partner organisations, and aimed at informing the implementation of the UK Government's RMNH Business Plan (2011–2015). Each paper in the series acts a resource to support practical decisions. The intention is to present the evidence rather than to draw conclusions or recommendations for policy or programmes, important further steps which are taken in other DFID documents. The papers rely heavily on existing evidence summaries and syntheses, with some providing comprehensive structured overviews and others undertaken as full systematic reviews. The structure and content of the evidence series was driven by a simple conceptual framework which sets out the pathways and levels of interventions to improve RMNH, as described below.

This forth paper in the series provides an overview of the evidence on interventions to reduce the burden from unintended pregnancies.

1.2. Conceptual Framework for Evidence Series

The health of women, newborns, children and adolescent girls is inextricably linked across life cycles and across generations.[6] This synergy is captured in the Continuum of Care framework first promoted by the World Health Organization (WHO)[7] in 2005 and now depicted as in Figure 1.[8] There are two dimensions implied in this continuum framework: across time and target group – from pre-pregnancy to childhood, and across place – from home to referral hospital. In terms of the former dimension, this evidence series focuses on a sub-set of the life cycle continuum which covers the period from before pregnancy through to the end of the postnatal period at six weeks for mothers and at 28 days for the newborn. This interval of time captures the extreme negative outcomes – maternal and neonatal deaths and stillbirths, as well as positive outcomes as defined by the WHO: 'complete physical, mental and social wellbeing and not the mere absence of disease'. (See Annex for key terms).

Figure 1 The RMNCH Continuum of Care

Source: www.pmnch.org 7

In practical terms, the need to consider the evidence both on interventions to assure positive health outcomes and to prevent negative ones increases the scope and complexity of this evidence series beyond that found in a more disease-focused set of reviews.[9] As with other outcomes, RMNH and avoidance of death can be achieved through both preventive and curative strategies. However, given that pregnancy is the conditionality, by definition, for pregnancy-related health and death, then avoidance of unintended pregnancy is clearly also an important primary preventive strategy. Once pregnant, a woman's health and that of her baby can be assured by routine maternity care – during and after childbirth, and should complications arise – by time access to effective curative care.[10] Avoidance of unintended pregnancy – the focus of this paper – and safe childbirth are thus the two main intermediate outcomes affecting the health and survival of women who are of reproductive age and of newborns that are considered in the evidence series.

Interventions to avoid unintended pregnancy or to achieve safe childbirth operate at different levels of abstraction and are delivered at different points on the continuum of care from home to referral hospital.[6] In this evidence series, a distinction is made between clinical interventions which directly intervene to avoid pregnancy, such as hormonal contraception, or to prevent death from severe newborn sepsis, such as antibiotics, versus those interventions that affect the availability and quality of services, versus those affecting the demand for care, versus those which involve more distal determinants, such as female education.

This hierarchy of levels of interventions has implications not only for the type of evidence available but also its generalisability.[9] For example, magnesium sulphate as the drug of first choice for the management of eclamptic convulsions in pregnant woman has been proven to be efficacious through high quality RCTs and is evidence of wide relevance and applicability. On the other hand, interventions to improve emergency transport for obstetric or newborn complications include a diverse range of options often specific to a particular context and with varying effectiveness, so making their relevance and applicability more limited, and this is often further compromised by the use of weak evaluation designs by scientific standards.

This example also highlights the crucial distinction between single interventions, such as insecticide treated bed nets versus composites or packages of interventions (or care) which are typically delivered as services.[11] A further important distinction is between *content interventions*, such as drugs or clinical procedures, versus *implementation interventions, which* improve the delivery of proven interventions. Defining 'what works' under these circumstances must take into account these issues and complexities, as discussed in the Methods section below. Given the main target

audience for this evidence series, the main focus is on evidence on interventions to improve the implementation of packages of care.

1.3 Methods

As mentioned earlier, the full evidence series includes some papers which are structured literature reviews and others which are systematic reviews (see Forward); this third paper falls into the former category. The methods for finding evidence thus vary somewhat between the papers, although all employ formal search applied to the main literature database. Additionally, snowball searching was also used, along with contacting experts and agencies working on RMNH and reviewing abstracts published in recent relevant conferences. Expert panel reviewers for the evidence series also suggested further key materials.

Identified reports and studies were included in the following categories:

1. Published research summary papers and reports, including systematic and synthetic reviews, providing evidence from primary studies
2. Published reports from international organisations
3. Peer-reviewed publications on relevant historical, ecologic or programmatic experiences across multiple countries
4. Published research paper on major primary studies of high grade, where no systematic or synthetic review was available.

For those papers in the evidence series which are not formal systematic reviews, reliance is placed on strength of evidence according primarily to design and source, and no further grading of quality is undertaken.[12] Given the diversity of types and levels of interventions include in this overview, a scheme was developed, adapted from the National Institute for Clinical Excellence (NICE), SIGN[13] and others[14], for gauging the strength of the evidence (see Table 2). This combines the standard classification of evidence which is based on study design, with an assessment of the strength of non-research evidence on implementation interventions based on plausibility, since evaluation by experimental design may not be realistic for some of these.[15] The aim is to bring findings together to create 'evidence statements' on interventions, and then group these into three categories to differentiate what is known reliably, what looks promising and what are the important unknowns (see Table 3). This synthesis process is ongoing and will be completed in subsequent updates of this working paper.

Table 2: Strengthening of evidence grading

Narrative used	Specification
Very strong plausibility	Very strong logical or theoretical basis, substantial multi-country programme experience, very strong consensus from respected authorities.
Strong plausibility	Strong logical or theoretical basis, some multi-country experience, strong consensus from respected authorities.
Very strong evidence	Evidence from at least one systematic review of multiple, well-designed RCTs.
Strong evidence	Evidence from at least one properly designed RCT of adequate size.
Moderate evidence	Evidence from well-designed trials without randomisation.
Other evidence	Evidence from well-designed observational studies from more than one centre or group.

Table 3: Categorisation of 'What is known'

Category	Basis
What do we know reliably?	Very strong to moderate evidence from studies across multiple (N>3) countries (i.e. generalisable) that an intervention/package is effective, or strong plausibility of benefit.
What looks promising?	Very strong to moderate evidence that an intervention/package is effective but only from 3 or less countries, **or** moderate plausibility of benefit.

1.4 Structure of this paper

This forth paper in the series provides an overview of the evidence on reducing the burden of unintended pregnancies in terms of two main packages of care: family planning and safe abortion. For each of these packages, the scope and magnitude of benefits to women and to broader society is reviewed, and the component interventions and delivery modalities outlined. The main body of the paper then synthesises the evidence on interventions to reduce barriers to the supply of and demand for these services, including estimates of cost-effectiveness.

2. Family planning

2.1 The rationale for family planning

Each year 75 million unintended pregnancies occur in the developing world (out of a total 186 million).[16] Most of these end in abortions or unintended births, with sometimes catastrophic health and economic effects for women and their families. Unintended pregnancies occur because some 215 million women have an unmet need for contraception. In other words, they don't want to get pregnant but are not using contraception.

The reasons for this unmet need are lack of knowledge, difficult access to supplies and services, financial costs, fear of side effects and opposition from spouses, other family members and often the wider cultural or legal environment. These reasons are discussed further below. Family planning programmes have been shown to be effective in reducing these obstacles, the evidence for this is also discussed later on.

The unmet need for family planning is greatest in Africa and Asia. Unmet need for modern contraceptives ranges from 28% of married women aged 15–49 in sub-Saharan Africa and 23% in Asia (excluding East Asia) to 18% in Latin America and the Caribbean.[17]

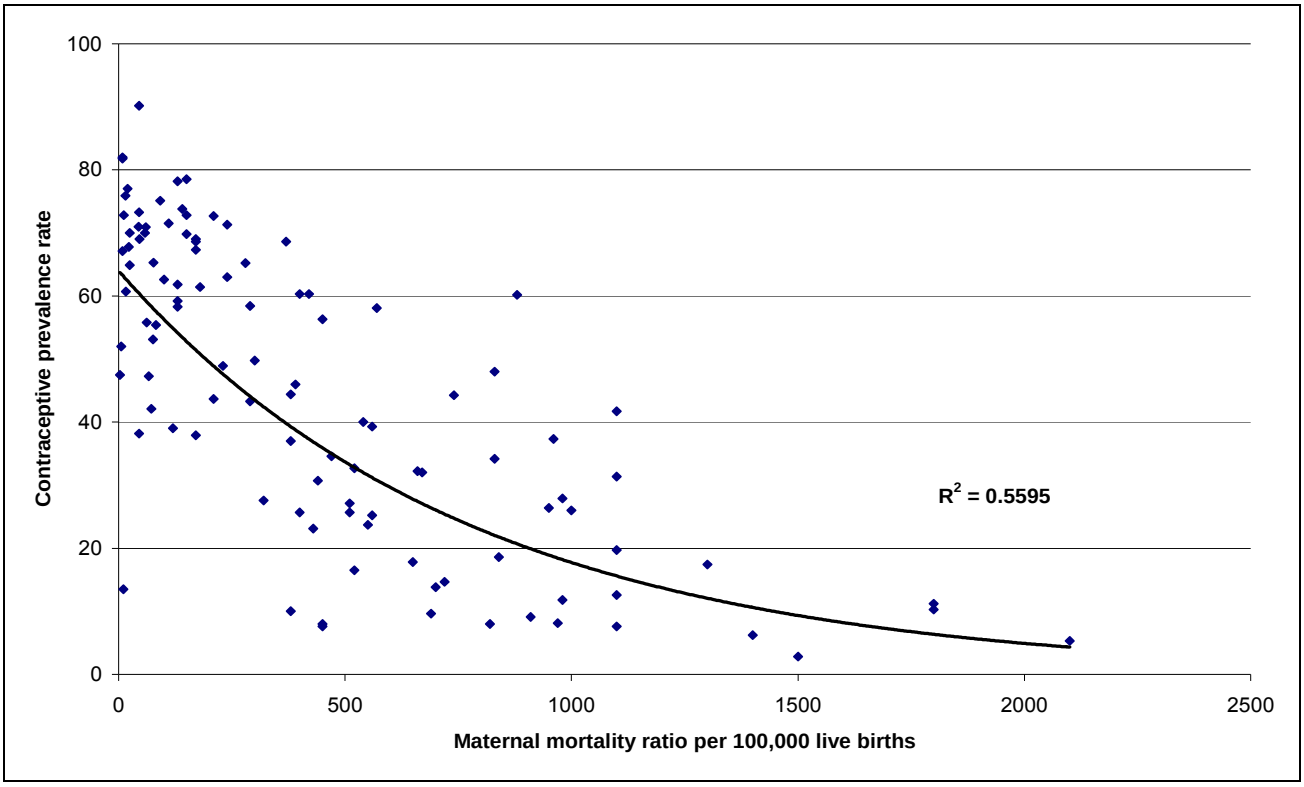
Failing to prevent unwanted pregnancy leads some women and girls to induce abortion: every year, 42 million or 20% of all pregnancies end in induced abortion.[18] In 2008, an estimated 22 million unsafe abortions took place, resulting in about 70,000 deaths of women and girls.[19,20] This is equivalent to one unsafe abortion for every seven live births. More than 97% of all unsafe abortions were in developing countries. An estimated five million are hospitalised for the treatment of serious complications such as bleeding or infection.[9] The following sections outline in more detail the potential benefits from investment in family planning programmes.

2.1.1 Maternal health

Reducing the number of births, reduces the number of times a woman is exposed to the risk of mortality. Although it is difficult to attribute change in the maternal mortality ratio to a particular cause, evidence exists to support the link between meeting the unmet need for family planning and reducing maternal mortality. According to recent analysis of DHS data from 68 countries, Stover and Ross estimate that the drop in observed total fertility rates from 1990 to 2005, due primarily to increased contraceptive use, resulted in 1.2 million fewer maternal deaths – 15% fewer than would have occurred with no fertility decline.[21] Overall, it has been estimated that one third of the total maternal deaths can be attributed to non-use or lack of availability of contraception – or 150,000 deaths per year.[22]

Just meeting unmet need for contraception could reduce current unintended pregnancies by 71%, the equivalent of a reduction from 75 million pregnancies in 2008 to 22 million (preventing 53 million unintended pregnancies per year).[23] If family planning is focused on women in the highest risk categories for pregnancy and birth (for example older or younger women, women who have had a birth or abortion in the past two years, women of short stature, or high parity women) then both the maternal mortality ratio and the lifetime risk of death can be reduced, although to a lesser extent.[24] Figure 2 shows the strong association between the contraceptive prevalence rate and the maternal mortality ratio.

Figure 2: Relationship between contraceptive prevalence rate and maternal mortality ratio



Source: WHO World Health Statistics data. 2008.

The evidence regarding the effect of shorter birth intervals on maternal health (as opposed to infant health which is detailed below) is more limited although it is likely that there is an effect of maternal nutritional depletion, for example increased anaemia, which increases the fatality rate from postpartum haemorrhage.[25]

Contraceptive use can also impact on women's risk of maternal mortality at either end of the reproductive age span. Adolescence, older reproductive age, and parity greater than 4 births elevate the risk of maternal mortality. Providing contraceptive services to these groups can reduce the maternal mortality ratio by up to 58%.[26]

Indirect evidence on the impact of family planning on maternal health comes from Bangladesh where the maternal mortality ratio declined from 850 deaths per 100,000 live births in 1990 to 380 per 100,000 in 2000 – even though only 12% of births were attended by a skilled birth attendant in 2002.[27] The decline has been attributed to Bangladesh's great success in expanding family planning access and reducing fertility rates.

2.1.2 Reducing unsafe abortion

Family planning means that unwanted pregnancies, and the resultant abortions, can potentially be avoided.[28,29] The main causes of mortality and morbidity associated with unsafe abortion are sepsis, following incomplete removal of the foetus, and perforation of the uterus.[30] The legality and safety of abortion are strongly correlated.[31] In the developed world where abortion is generally legal, abortion mortality is as low as 0.2 to 1.2 deaths per 100,000 procedures.

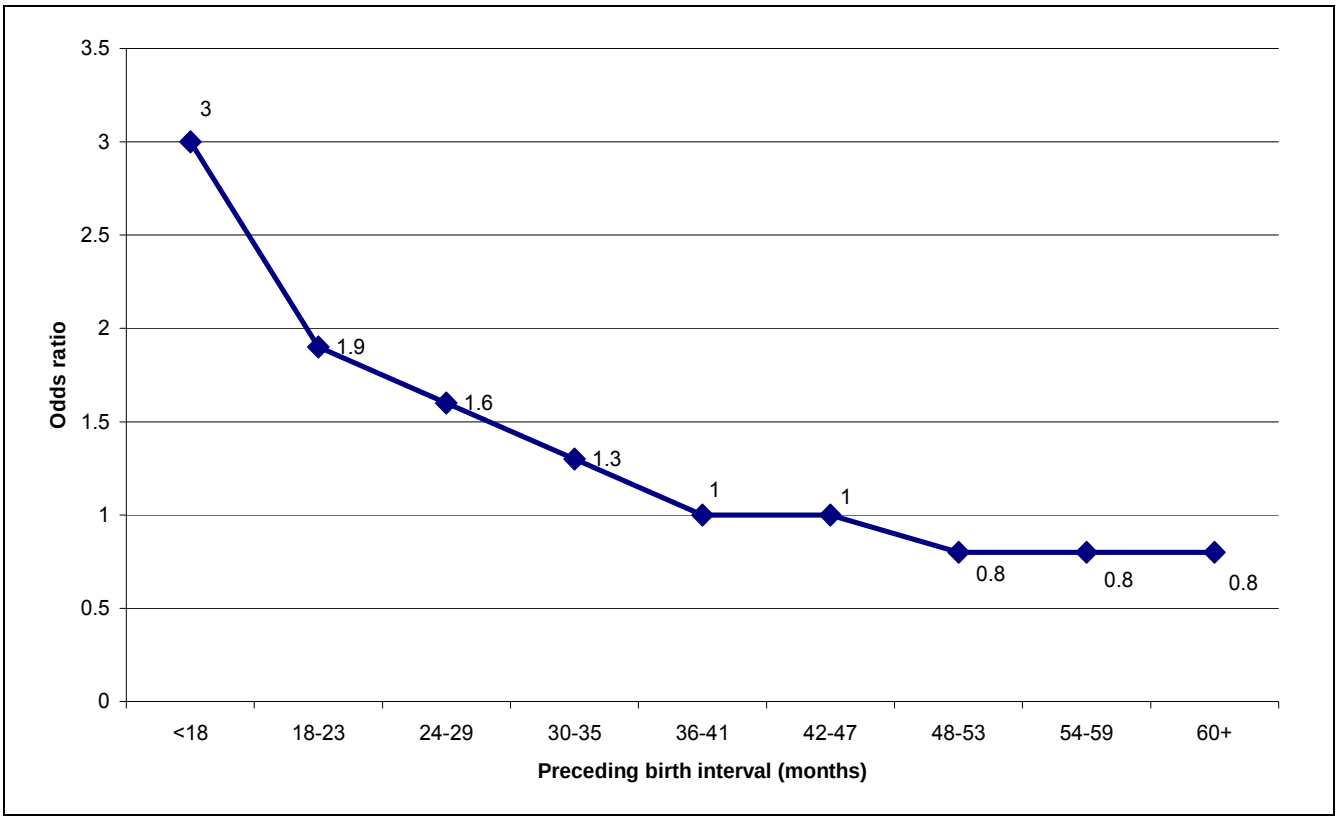
The WHO estimates that unsafe abortion rates are over 30 per 1000 women in Eastern and Middle Africa.[32] In particular, young women in sub-Saharan Africa are at particular risk from unsafe abortion – they account for 25% of all unsafe abortions compared with 16% of births.[33]

Based on contraceptive use data from DHS surveys and WHO unsafe abortion rates, it is estimated that 89% of the disease burden in 2000 due to abortion complications was attributable to unprotected sex or use of less effective traditional contraceptive methods.[34] This amounted to 51,000 deaths and 4.4 million disability-adjusted life years (DALYs), with 82% of the burden falling on women aged <30 years.

2.1.3 Infant and child wellbeing

Family planning can help a woman space her births. A large literature now exists that demonstrates that increased birth intervals have a positive effect on outcomes for both the index child and the older sibling, with the optimal birth interval between two and five years[35], as shown in Figure 3, taken from DHS data. It should be noted that there is not an association between unmet need and the prevalence of short intervals, mainly because countries with high unmet need and high fertility levels often have traditional practices to space births such as postpartum breastfeeding and/or abstinence.[36]

Figure 3: Odds ratio of index child death by preceding birth interval



Source: Rutstein (2005)[37]

There is debate in the literature as to whether this is a spurious or causal relationship, since there are so many confounding factors, such as socioeconomic status, premature birth of the infant and breastfeeding behaviour. The majority of the literature does point to this relationship being causal with studies increasingly sophisticated and presenting increasingly compelling evidence to the causal relationship. What is less clear is the mechanism by which shorter birth intervals cause higher infant mortality.

Three main mechanisms are suggested:

- **Maternal depletion syndrome:** short birth intervals do not allow the mother to replete her nutritional status which puts the index infant at risk due to foetal malnutrition and a compromised intrauterine environment.[38]
- **Sibling rivalry:** when an additional child is born while his or her siblings still require a high level of parental resources, then there is increased rivalry for those resources. This rivalry for resources impacts upon the incidence of morbidity and the fatality rate from illness and accidents.[39,40]
- **Exposure to infectious disease:** short birth intervals lead to the index child having increased exposure to infectious diseases from siblings. The highest prevalence of infectious disease is at around two years. Where there has been a short birth interval, this time in the older sibling will coincide with decreasing immunity from the mother in the index child as the child is weaned from breast milk.[41]

There is also conflicting evidence about when short birth intervals have the greatest effect. Some researchers have found that the neonatal period has the greatest increased risk whereas other have pointed to the post-neonatal period as being more significant.[42,43] It is important to note that the shortest birth intervals may be short because of a premature birth (which may be compounded by maternal depletion) which means that the effect of the shortest birth intervals may be skewed if the confounding effect of premature birth is not controlled.[44,45]

Orphaned children have far worse health outcomes, especially maternal orphans. The youngest orphans, although making up a smaller percentage of all orphans (16%), are those most likely to be orphaned through maternal mortality but are the least resilient and have the greatest need for physical care and nurturing. As a result, the survival of young children under the age of three is at stake when their mothers have recently died.

Research in both sub-Saharan Africa and Asia found that the youngest maternal orphans have much higher chances of dying than non-orphaned children.[46,47] In particular, infants who survive the death of their mother during childbirth are at extreme risk; recent research in Bangladesh confirms that babies and children up to 10 years of ages are less likely to survive if they have lost their mother than those whose mothers are alive.[48]

One important concern is that orphans, especially maternal, will acquire less education. There are different types of missed opportunities in education, including lack of enrolment, interrupted schooling and poor performance while in school. Longitudinal evidence from South Africa shows that maternal orphans are at lower education levels than other children of the same age and also compared to other non-orphans with whom they live.[49]

2.1.4 Adolescent girls

The potential benefits of family planning to adolescent girls are especially high. In 2008, adolescents aged 15–19 in the developing world had an estimated 14.3 million births, about one eighth of all developing world births. An estimated 44% of married adolescents aged 15–19 in developing countries want to avoid pregnancy. Adolescents aged 15–19 account for 14% of all unsafe abortions.[50]

Adolescents are particularly vulnerable to unintended pregnancy because most are poor or lack money of their own because they are still in school, married with little or no control of household

Method	Description	Pregnancy rates per 100 women (perfect-actual use)
Spermicides & Diaphragm	• Sperm-killing substances inserted deep in the vagina, near the cervix, before sex. • Nonoxynol-9 is most widely used. • Others include benzalkonium chloride, chlorhexidine, menfegol, octoxynol-9, and sodium docusate. • Available in foaming tablets, melting or foaming suppositories, cans of pressurized foam, melting film, jelly, and cream. • Jellies, creams, and foam from cans can be used alone, with a diaphragm, or with condoms. • Films, suppositories, foaming tablets, or foaming suppositories can be used alone or with condoms. • Work by causing the membrane of sperm cells to break, killing them or slowing their movement. This keeps sperm from meeting an egg.	18-29
Cervical cap	• A soft, deep, latex or plastic rubber cup that snugly covers the cervix. • Comes in different sizes; requires fitting by a specifically trained provider. • The cervical cap works by blocking sperm from entering the cervix; spermicides kill or disable sperm. Both keep sperm from meeting an egg	9-16 (never given birth) 26-32 (given birth)

ii. Natural methods

Method	Description	Pregnancy rates per 100 women (perfect-actual use)
Fertility Awareness Methods	• "Fertility awareness" means that a woman knows how to tell when the fertile time of her menstrual cycle starts and ends. (The fertile time is when she can become pregnant.) • Sometimes called periodic abstinence or natural family planning. • A woman can use several ways, alone or in combination, to tell when her fertile time begins and ends. • Calendar-based methods involve keeping track of days of the menstrual cycle to identify the start and end of the fertile time. • Examples: Standard Days Method and calendar rhythm method. • Symptoms-based methods depend on observing signs of fertility. • Cervical secretions: When a woman sees or feels cervical secretions, she may be fertile. She may feel just a little vaginal wetness. • Basal body temperature (BBT): A woman's resting body temperature goes up slightly after the release of an egg (ovulation), when she could become pregnant. Her temperature stays higher until the beginning of her next monthly bleeding. • Examples: TwoDay Method, BBT method, ovulation method (also known as Billings method or cervical mucus method), and the symptothermal method. • Work primarily by helping a woman know when she could become pregnant. The couple prevents pregnancy by avoiding unprotected vaginal sex during these fertile days—usually by abstaining or by using condoms or a diaphragm. Some couples use spermicides or withdrawal, but these are among the least effective methods.	25
Withdrawal	• The man withdraws his penis from his partner's vagina and ejaculates outside the vagina, keeping his semen away from her external genitalia. • Also known as coitus interruptus and "pulling out." • Works by keeping sperm out of the woman's body.	4-27

Lactational Amenorrhea Method	• A temporary family planning method based on the natural effect of breastfeeding on fertility. ("Lactational" means related to breastfeeding. "Amenorrhea" means not having monthly bleeding.)
	• The lactational amenorrhea method (LAM) requires 3 conditions. All 3 must be met:
	  o The mother's monthly bleeding has not returned
	  o The baby is fully or nearly fully breastfed and is fed often, day and night
	  o The baby is less than 6 months old
	• "Fully breastfeeding" includes both exclusive breastfeeding (the infant receives no other liquid or food, not even water, in addition to breast milk) and almost-exclusive breastfeeding (the infant receives vitamins, water, juice, or other nutrients once in a while in addition to breast milk).
		0.9-2

Method	Description	Pregnancy rates per 100 women (perfect-actual use)
	• "Nearly fully breastfeeding" means that the infant receives some liquid or food in addition to breast milk, but the majority of feedings (more than three-fourths of all feeds) are breast milk. • Works primarily by preventing the release of eggs from the ovaries (ovulation). Frequent breastfeeding temporarily prevents the release of the natural hormones that cause ovulation.	
No method		85

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