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Benefits of Meeting the Contraceptive Needs of Ugandan Women

Some Ugandan women are able to have the number of children they want when they want to have them. However, the majority lack full access to reproductive health services, including quality contraceptive services. As a result, many women bear children before they are ready to and have more than they can care for. Others resort to unsafe abortion, which can have dire health consequences.

Contraceptive use promotes the health and well-being of women and infants, their families and Ugandan society as a whole. By enabling more women to have only the number of children they want, increased use of modern contraceptives* will contribute directly to attaining three Millennium Development Goals (MDGs): promoting women's empowerment and equality, reducing child mortality and improving maternal health.[1] Increased contraceptive use will also make meeting three other MDGs—achieving universal primary education, ensuring environmental sustainability and combating HIV/AIDS—more affordable.

This brief describes current patterns of contraceptive use in Uganda and documents the high costs associated with persistently high unmet need for modern contraceptives. Building on prior work[2,3] and using national data sets to project estimates for 2008 (see box, page 2), we outline the net benefits to women and society of averting unintended pregnancies with current levels of use and under two scenarios of increased investment in modern contraception. Although enabling women to meet their childbearing preferences leads to an array of benefits—such as enhancing women's ability to go to school, enter the workforce and participate politically—we focus exclusively on the health and monetary savings from averting unintended pregnancy.

We hope that the findings will motivate the Ugandan government and international donors to increase their investment in contraception to reap the dual benefits of improved reproductive health and monetary savings from avoiding the costs of medical care associated with unintended pregnancy. This process will need to include increasing funding, decreasing wasteful spending and allocating funds more appropriately. Unless otherwise specified, all data presented are special calculations based on the sources listed in the methods box, using the methodology

*By modern contraceptives, we mean sterilization (male or female), pills, IUDs, injectables, implants and male condoms.

Key Points

- As of 2008, an estimated 56% of all pregnancies in Uganda are unintended. Unintended pregnancy is highest in the West Nile region (64%) and lowest in the Southwest (49%).
- Seven in 10 women who want to avoid pregnancy either do not practice contraception or use an ineffective (traditional) method. These women have an unmet need for a modern method of family planning.
- Meeting just half of this unmet need would result in 519,000 fewer unintended pregnancies each year, which would lead to 152,000 fewer induced abortions and 1,600 fewer maternal deaths. Women in disadvantaged households and regions currently experience the worst maternal health outcomes and would benefit the most from reducing unmet need.
- If all unmet need for modern methods were satisfied, maternal mortality would drop by 40%, and unplanned births and induced abortions would decline by 84–85%.
- Investing in contraceptive commodities and services to fill all unmet need would result in a net savings of US$112 million (194 billion Ugandan shillings) over what would otherwise be spent on costs associated with unplanned pregnancies and births. For every dollar spent, more than three dollars would be saved.
- All stakeholders, including the Ugandan government, should increase their investment in modern contraceptive services. Particular attention should be paid to meeting the needs of poor Ugandan women to reduce inequalities in access.

Methods

The 2008 estimates in this report are based on the most recent available data. Unless otherwise noted, the data were calculated using the following methods. Sources and more details on methodology are available online at <http://www.guttmacher.org/pubs/appendices/IB-2009-4.pdf> or from the authors.

The numbers of women in each region, by marital status, risk for unintended pregnancy and contraceptive method use in 2008, were estimated using the 2006 Uganda Demographic and Health Survey (UDHS) and regional estimates of the number of women aged 15–49 from the 2002 Uganda Census, and were projected forward to 2008.

The numbers of unintended pregnancies in 2008 under current contraceptive use patterns and alternative scenarios were based on contraceptive use–failure rates and pregnancy rates for nonusers from the UDHS and other sources, adjusted to the estimated number of unintended pregnancies in each region in 2008.

Pregnancies, by intention status and outcome, were estimated from regional data from the 2006 UDHS, regional estimates of induced abortion rates in 2003 and estimates of the number of miscarriages.

Pregnancy-related deaths among women were estimated using national-level maternal mortality estimates provided by the World Health Organization (WHO) for 2005. Regional estimates of induced abortions for 2003 were provided by the Guttmacher Institute. Regional infant death rates were estimated from the 2006 UDHS.

National-level estimates for 2008 of pregnancy-related disability-adjusted life years (DALYs) among women and of DALYs among newborns were obtained from the 2004 revision of DALYs estimates by the WHO Global Burden of Disease project. This formed the basis for rates used to estimate pregnancy-related and newborn DALYs in 2008.

Costs of contraceptive services and maternal and newborn health care were estimated from basic cost elements. For each contraceptive method or health care intervention, we combined the costs of drugs, supplies and materials; labor and hospitalization; and program and system costs to arrive at a cost per user per year of protection against unintended pregnancy or per woman receiving pregnancy-related medical care (in 2008 U.S. dollars). Program and system costs, which refer to indirect costs such as overhead and capital expenditure, were taken from the United Nations Economic and Social Council. Direct costs of drugs, supplies, materials and labor used for family planning and maternal and newborn health care interventions were taken from the United Nations Population Fund's Reproductive Health Costing Tool and from cost studies conducted in Uganda.

detailed in the Appendix at <http://www.guttmacher.org/pubs/appendices/IB-2009-4.pdf>.

Pregnancy and childbirth entail health risks for both women and their infants. Pregnancy and birth can be life-threatening to both mother and child, especially in the absence of adequate prenatal and delivery care. In Uganda, fewer than half (47%) of women make the recommended four or more prenatal visits, and a low proportion of births (42%) are attended by a trained provider.[4] The use of modern contraceptives enhances maternal and infant health by preventing high-risk births, such as those that are too closely spaced, those that occur among women younger than 18 or older than 35, and those that occur after a woman has already had many children.[5]

The first year of life is a risky one in Uganda: For every 1,000 live births, an estimated 84 infants die before their first birthday.[6] Since poor women face a host of obstacles to obtaining good prenatal and delivery care and are more likely than better-off women to have the high-risk births described above, the mortality rate is higher among infants born to women in the poorest households than among those born to the wealthiest (98 vs. 62 infant deaths per 1,000 live births).[6] Another way to quantify poor infant health is to use disability-adjusted life years, or DALYs—an internationally recognized measure used to express disease burden in terms of the number of healthy years of life lost to death and illness. In 2008, perinatal complications resulted in a projected loss of 1.4 million healthy years of life among Ugandan infants.

The status of maternal health is similarly grave: An estimated 550 Ugandan women die each year from pregnancy- and delivery-related causes for every 100,000 live births.*[7] This translates to an annual total of 8,100 deaths, the majority of which are likely preventable. Of these deaths, an estimated 3,800 are associated with unintended pregnancies. Global research suggests that preventing unintended pregnancy has the potential to substantially lower maternal mortality;[8] expanding contraceptive use is thus crucial to limiting women's exposure to the general risks inherent in pregnancy and childbearing and to enabling women to avoid high-risk births in particular.

Of course, deaths represent the worst-case scenario and research suggests that for each woman who dies, roughly 20 others suffer from poor health and disability resulting from complications from pregnancy and childbirth.[9] These negative outcomes prevent women from caring for their families and keep them out of the workforce. The DALYs lost to maternal conditions in Uganda reached an estimated 440,000 in 2008; 250,000 of these were lost as a result of unintended pregnancies.

Much of maternal ill health in Uganda can be traced to unsafe abortion. Although reliable country-level data are lacking, induced abortions are responsible for an estimated 17% of maternal deaths in Eastern Africa.[10] Abortion is highly legally restricted in Uganda—allowed only to save the life of the pregnant woman[11]—but that does not prevent 54 of every 1,000 Ugandan women of reproductive age from having an induced abortion each year.[12] This annual abortion rate is quite high compared with the average for Sub-Saharan Africa (31 per 1,000 women).[10] Since most abortions are performed outside the law in Uganda, they are highly likely to lead to complications that endanger women and use up scarce medical resources. Indeed, 15

*Maternal mortality is difficult to measure, and estimates range from 435 maternal deaths per 100,000 live births, according to the 2006 Ugandan Demographic and Health Survey (UDHS),[4] to 550, according to the World Health Organization (WHO).[7] We use the WHO estimate here for two reasons: First, unlike the UDHS figure, the WHO estimate has been adjusted for underreporting and misclassification of maternal deaths. Second, the 550 per 100,000 is very close to the Ugandan Ministry of Health estimate of 541 per 100,000, which is based on routine reporting of data from districts and health facilities (source: unpublished 2008 data from the Health Management Information System, Ugandan Ministry of Health).

Table 1

Unmet Need and Unintended Pregnancy

Unmet need for modern contraceptives among Ugandan women aged 15–49 who want to avoid pregnancy, intendedness of pregnancies and outcomes of unintended pregnancies, by region and wealth status, 2008

Region and wealth quintile	No. women aged 15–49 (000s)	Women who want to avoid pregnancy*				Pregnancies, by intendedness				Outcomes of unintended pregnancies as percentages of all pregnancies§		
		No. (000s)	% using no method	% using a traditional method†	% with unmet need for modern method‡	No. (000s)	% intended	% unintended	Total	% ending in mistimed births**	% ending in unwanted births††	% ending in induced abortions
Total	6,640	3,240	61	8	69	2,180	44	56	100	22	9	17
Central 1	720	360	46	12	59	220	40	60	100	22	9	20
Central 2	690	370	48	8	56	220	40	60	100	20	12	19
Kampala	330	160	32	9	42	70	47	53	100	13	6	29
East Central	760	400	62	9	71	260	44	56	100	23	12	13
Eastern	970	500	69	5	74	330	47	53	100	25	8	12
North	990	440	79	5	84	370	42	58	100	24	7	19
West Nile	500	220	76	5	80	180	36	64	100	25	9	20
Western	1,020	490	62	10	72	330	45	55	100	23	11	14
Southwest	670	290	56	13	69	200	51	49	100	19	8	15
First quintile (poorest)	1,200	510	82	4	86	460	45	55	100	24	8	14
Second quintile	1,270	580	75	5	80	480	44	56	100	24	10	15
Third quintile	1,260	600	69	8	77	430	44	56	100	22	10	16
Fourth quintile	1,260	640	59	10	69	430	43	57	100	22	11	16
Fifth quintile (wealthiest)	1,650	920	37	11	48	390	41	59	100	19	9	23

Note: The Demographic and Health Surveys rank individuals according to their household assets and divide the population into five groups of equal size (quintiles) to capture relative differences in wealth. *Women who were married or were unmarried and sexually active (within the past three months), were able to become pregnant, and did not want any more children or did not want a child in the next two years. †Rhythm, withdrawal and folk methods. ‡Includes nonusers and users of traditional methods. By modern methods, we mean the pill, IUD, injectable, implant, male condom, and male and female sterilization. §Because we do not present miscarriages here, these three columns that break down unintended pregnancies do not sum to the total of unintended pregnancies (56%). **A birth is considered mistimed if the woman did not intend to have a child in the next two years when she became pregnant. ††A birth is considered unwanted if the woman wanted no more children when she became pregnant. *Source:* Data were calculated using a range of sources. See Appendix <http://www.guttmacher.org/pubs/appendices/IB-2009-4.pdf> for details.

of every 1,000 Ugandan women of reproductive age were treated for abortion complications in 2003.[12] Moreover, just over an estimated one-fifth of those who had an induced abortion developed complications that went untreated, which put their lives and future fertility at great risk.[13]

Current contraceptive use in Uganda is low.

In 2008, about 3.2 million Ugandan women—or 49% of women of reproductive age—fit the following criteria: They were either married or unmarried and sexually active in the past three months, were able to become pregnant, and wanted to delay having a child for at least two years or wanted no more children at all (Table 1). These women form the basis for our analysis. Among currently married women, 64% (2.7 million women) wanted to avoid pregnancy. In addition, 540,000 unmarried sexually active women wished to avoid pregnancy; however, because nonmarital sexual activity is stigmatized in Uganda and thus is usually underreported,[14] this number is likely an underestimate.

Of all women who want to avoid pregnancy, 57% desire to wait at least two years before having a child (or another child), and 43% want to stop childbearing altogether. Yet despite their desire to avoid pregnancy, only 31% use an effective, modern method of contraception. Eight percent use a traditional method, mostly withdrawal and periodic abstinence, and 61% use no contraceptive method at all. We consider the 69% of women who want to avoid pregnancy but who are not using a modern method to have an unmet need for effective contraceptives.*

The proportion of women with unmet need is highest in the North (84%), a socioeconomically disadvantaged region where women are likely to encounter obstacles to obtaining family planning services. Unmet need is lowest (42%) in the only highly urbanized region, Kampala, where services are likely to be much more accessible. The proportion of women wanting to avoid pregnancy who nonetheless use no method or a traditional one rises uniformly with declining wealth, ranging from 48% among the wealthiest women to 86% among the poorest.

In Uganda, the preferred family size is relatively high. As a result, more women want to space births than stop childbearing altogether, and there is a greater need for reversible contraceptive methods than for permanent methods. Ugandan

*This definition of unmet need differs from the standard definition used in DHS surveys in two ways. First, our denominator is narrowed to women who are sexually active, are able to become pregnant, and want to limit or postpone childbearing, but the DHS denominator encompasses all married women (and, for some countries, sexually active unmarried women as well) regardless of their childbearing intentions; likewise, we restrict the denominator for contraceptive prevalence to just women who want to avoid pregnancy. Second, we include women using traditional methods in our definition of those with unmet need, because traditional methods have relatively high failure rates,[16] leaving women vulnerable to unintended pregnancy and its negative consequences.

Figure 1

Fertility Levels

Ugandan women, especially the poor, are having more children than they want.

Note: See Table 1 for definition of wealth quintiles. *Source:* reference 4.

women use a limited range of contraceptives: The injectable, which is used by roughly 16% of women who wish to avoid pregnancy, accounts for roughly half of all modern use. The condom is used by 6% of women who want to avoid pregnancy, the pill by 4% and female sterilization by 4%. Women who wish to delay a birth are less likely to be using a modern method than are those who want to stop childbearing (27% vs. 36%, respectively).

Multiple cultural and logistic barriers, including cost, fear of side effects, inconvenience and the belief that using contraceptives—or even discussing their use—may imply infidelity, explain Ugandan women's low use of modern contraceptives.[15] Indeed, the single most common reason cited by nonusers in 2006 was a fear of side effects.[4] Overcoming these barriers will involve giving Ugandan women and couples accurate and complete information about contraceptive methods, improving their access to quality services and encouraging dialogue between partners about planning pregnancies.

*We estimate that an additional 8% end in miscarriages. To calculate the proportion of all pregnancies that end in miscarriages (a total of 16%), we used a model-based approach based on clinical studies, whereby miscarriages (which include any spontaneous fetal losses, including still births) are estimated to be 20% of births plus 10% of induced abortions.

Nonusers account for the vast majority of unintended pregnancies.

The likelihood of experiencing an unintended pregnancy varies greatly depending on whether contraceptives are used and how effectively they are used. The risk is lowest with sterilization and long-acting reversible methods (such as IUDs and injectables), and it is highest when no method is used.[16] Among reversible modern contraceptive methods, the pill is more effective than the condom, and both are more effective than traditional methods, such as periodic abstinence and withdrawal.

In Uganda, contraceptive failure (of both modern and traditional methods) accounts for an estimated 12% of all unintended pregnancies. Unsurprisingly, the vast majority of unintended pregnancies—88%—occur among the women who do not practice contraception at all.

Many women currently have more children than they want.

The limited use of modern contraceptives in Uganda has led to high levels of unplanned births—births that occurred too soon or after a woman wanted no more children. Indeed, the proportion of recent births (i.e., births in the three years prior to the survey) that are reported as unplanned have been steadily increasing, from 29% in 1995[17] to 38% in 2001[18] to 45% in 2006.[19]

At the same time, Uganda's average family size has experienced a slow decline: Women have gone from having 7.3 children in 1989,[20] to 6.9 in 1995[21] and 2001,[22] to 6.7 in 2006.[4] Yet the number of children women actually have is still considerably higher than the number they want to have. Currently, if women had only the number of children they ideally want, Ugandan women would have an average of only 5.1 children, instead of 6.7 (Figure 1);[4] this differential of 1.6 children is among the largest in Sub-Saharan Africa.[23]

Poor women have an especially hard time having only the number of children they want. Although their desired family size is larger than that of their better-off counterparts, the gap between wanted and actual fertility is larger among poorer women than among wealthier women. For instance, in 2006, the poorest women had two children more than they wanted, whereas the wealthiest, who are more likely to have access to contraceptives to prevent unplanned births, had about one child more than they wanted.[4]

The gap between wanted and actual fertility also varies by region. That gap is smallest (0.8 children) in Kampala, where women have the fewest children.[4] (Women in Kampala are also the most likely to practice contraception and to resort to induced abortion.) The gap is largest—2.2 children—in the Eastern region of the country, which is far poorer.

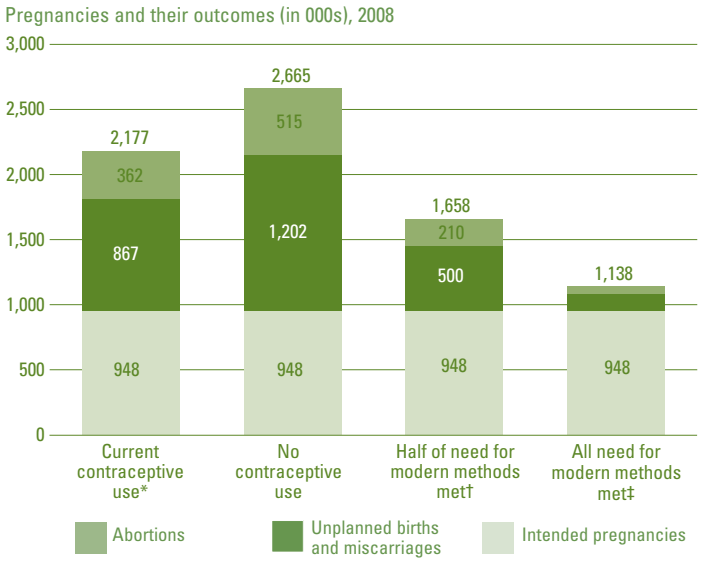
These gaps between wanted and actual fertility reflect high levels of unintended pregnancy among Ugandan women. Of the estimated 2.2 million pregnancies in 2008, 56% were unintended (Table 1). This 56% is made up primarily of mistimed births (22%), followed by induced abortions (17%) and unwanted births (9%).* The proportion unintended was highest in the West Nile region and lowest in the Southwest (64% and 49%, respectively).

The estimated proportions of all pregnancies ending in abortion vary notably by region, reflecting differences

Figure 2

Benefits of Reducing Unmet Need

The use of modern contraceptive methods reduces abortions and unplanned births.



*Method mix among women wanting to avoid pregnancy is 31% modern, 8% traditional, 61% none. †Method mix among women wanting to avoid pregnancy is 65% modern, 4% traditional, 31% none. ‡100% modern method use among women wanting to avoid pregnancy. *Source:* See Appendix at <http://www. guttmacher.org/pubs/appendices/IB-2009-4.pdf>.

in desired family size, levels of unintended pregnancy, and access to contraceptive services and abortion providers. Kampala has the highest proportion of pregnancies ending in abortion (29%), and the Eastern and East Central regions have the lowest (12–13%). The proportion of pregnancies that end in abortion is above the national average of 17% in the relatively better-off Central I region (20%) but also in the more disadvantaged region of West Nile (20%).

Contraceptive use promotes health and saves lives. Given that unsafe abortion and other maternity-related risks can be reduced drastically by preventing unintended pregnancy, what is the quantifiable contribution of family planning to women's—and the nation's—health and well-being? The impact of incrementally higher levels of modern contraceptive use is apparent in the declining numbers of unintended pregnancies and their negative outcomes.

Compared with no use, for example, the current level of use has clearly made a positive impact on maternal and newborn health: Ugandan women now experience roughly 1.2 million unintended pregnancies, which lead to 867,000 unplanned births and miscarriages and 362,000 induced abortions (Figure 2). If there were no contraceptive use at all, however, the country would have to contend with 1.7 million unintended pregnancies, 1.2 million of which would likely end in unplanned births and miscarriages and 515,000 in induced abortions. Thus, the current level of use already averts around 490,000 unintended pregnancies and 150,000 induced abortions annually. (Here and elsewhere in this report, different components may not add up to totals because of rounding.)

Because childbirth remains dangerous for many women and unsafe abortions result in high rates of complications, these averted pregnancies and abortions already prevent 1,500 maternal deaths and the loss of almost 100,000 healthy years of women's lives (see Appendix). Overall, the current level of contraceptive practice reduces these negative outcomes by 15–18% from what would occur in the absence of any use (Table 2).

Enabling all nonusers and traditional method users who want to postpone or stop childbearing to use modern methods would greatly increase the benefits to Ugandan women and their families. Under this scenario, there would be 85% fewer unintended pregnancies each year (189,000 vs. the current 1.2 million), which translates into 84% fewer induced abortions and 40% fewer maternal deaths than currently occur in Uganda. This improvement would yield incalculable gains for the physical and emotional health of women and their families.

Yet meeting all need for modern contraceptives may be difficult to achieve in the short term. Not only must current services be ramped up,

Table 2

Scenarios for Fulfilling Unmet Need

Impacts of method use in reducing the numbers of pregnancies and negative outcomes, by outcome, 2008

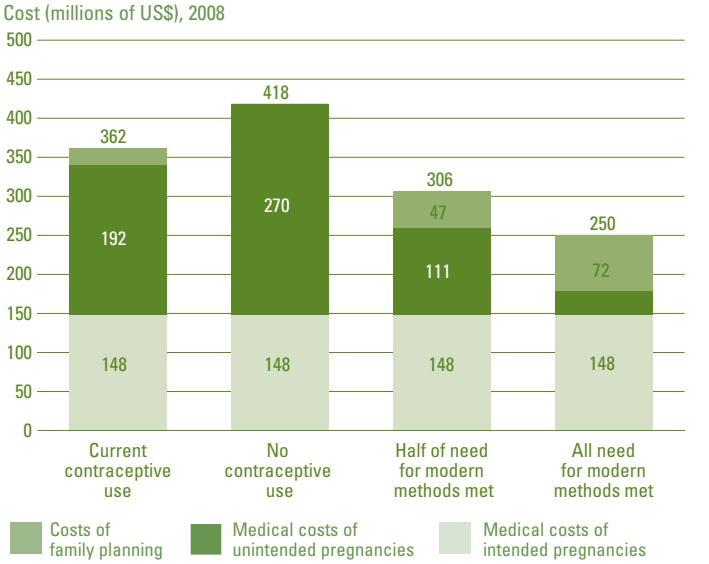
Outcome	Scenarios of use and extent of unmet need				Percentage reduction in outcomes by scenario		
	No contraceptive use	Current contraceptive use*	Half of need for modern methods met†	All need for modern methods met‡	Current use vs. no use	Half of need met vs. current use	All need met vs. current use
Unintended pregnancies	1,717,000	1,229,000	709,000	189,000	28	42	85
Unplanned births	959,000	692,000	399,000	105,000	28	42	85
Induced abortions	515,000	362,000	210,000	58,000	30	42	84
Miscarriages	243,000	175,000	101,000	27,000	28	42	85
Maternal deaths	9,600	8,200	6,500	4,900	15	21	40
Infant deaths	144,600	123,100	98,700	74,200	15	20	40
Maternal DALYs lost	541,000	442,000	336,000	231,000	18	24	48
Perinatal DALYs lost	1,725,000	1,409,000	1,073,000	736,000	18	24	48

Note: The differences calculated from these data do not exactly match the differences presented in the text because of rounding. *Method mix among women wanting to avoid pregnancy is 31% modern, 8% traditional, 61% none. †Method mix among women wanting to avoid pregnancy is 65% modern, 4% traditional, 31% none. ‡100% modern method use among women wanting to avoid pregnancy. *Source:* See Appendix at <http://www.guttmacher.org/pubs/appendices/IB-2009-4.pdf>.

Figure 3

Cost Savings

Investing in contraception could greatly reduce costs associated with unintended pregnancy.



Notes: Cost components may not sum to totals because of rounding. Medical costs include costs for prenatal care, routine newborn care, professional delivery care, obstetric emergency care and, for unintended pregnancies, treatment of complications from unsafe abortion. *Source:* See Appendix at <http://www.guttmacher.org/pubs/appendices/IB-2009-4.pdf>.

but expanding access will require broader improvements, including training family planning personnel, improving logistics systems and adding infrastructure. A more readily attainable goal would be to fulfill half of the unmet need for modern contraceptives, whereby 65% of women who want to avoid pregnancy would use a modern method.

Even though not all need would be met, this scenario would still result in considerable gains: Unintended pregnancies, unplanned births and abortions would be reduced by more than two-fifths from current levels. Specifically, there would be 519,000 fewer unintended pregnancies each year, which means 152,000 fewer induced abortions and 1,600 fewer maternal deaths. (These figures may not exactly match data presented in Table 2 because of rounding.) Satisfying half of current unmet need would also prevent the loss of more than 100,000 years of healthy life to maternal death and disability.

*We present all costs in 2008 U.S. dollars. Net savings are also presented in Ugandan shillings, using the average exchange rate for the period: 1,735.67 Ugandan shillings per dollar.

Family planning saves money.

Overall, every dollar* spent on family planning—in any scenario—saves more than three dollars that would otherwise be spent on maternal, newborn and postabortion care associated with unintended pregnancies. The cost of providing modern contraceptive services and supplies varies according to the mix of methods used. For example, modern method use in Uganda currently costs an estimated $22 million annually (see Appendix for an explanation of how costs were calculated). It would cost $47 million to fulfill half of unmet need for modern contraceptives and $72 million to supply all women in need of a modern method. It should be kept in mind that these are total contraceptive costs—and that 75% of medical expenses are paid for by private sources (including patients themselves).[24] Furthermore, the costs cover not just contraceptive commodities but the substantial overhead and capital costs needed to upgrade the country's health infrastructure (see Appendix) that would be needed to provide quality modern contraceptive services to the women who need them.

These costs, which may seem high at first glance, are more than compensated for by savings to the health system that accrue from avoiding medical care related to unintended pregnancies. For example, the estimated cost of treating postabortion complications, providing prenatal, delivery and routine newborn care, and covering all obstetric emergencies is $148 million for intended pregnancies and $192 million for unintended pregnancies, a total of $340 million (Figure 3). These costs would be substantially higher—$418 million—without any contraceptive use, because of the resulting higher numbers of unintended pregnancies.

Thus, considering overall costs (contraceptive services and medical care associated with all pregnancies and births), current use of contraceptives results in a net savings of $56 million, or 97 billion Ugandan shillings (UGS), annually over what would be spent on care associated with pregnancy and childbearing in the absence of any family planning use. We are only considering short-term savings on postabortion, maternal and newborn health care here; longer-term savings would accrue in many areas, such as the provision of education, water and sanitation, immunization and malaria prevention.[1]

If modern method use were increased, even more unintended pregnancies would be averted, and savings on medical care for unintended pregnancies would be even more dramatic. The total cost of pregnancy-related medical care would fall by $81 million if half of unmet need for modern contraceptives were fulfilled and by $162 million if all women who wanted to delay or limit childbearing used modern methods.

Although reducing unmet need would incur higher contraceptive costs, considerable net savings would result. Compared with current costs for contraceptive, maternal, newborn and postabortion care, meeting half of the need for modern contraceptives could result in a net savings of $56 million (UGS 97 billion). Fulfilling all unmet need (providing modern contraceptives to all women wanting to avoid pregnancy) could generate a net savings of $112 million (UGS 194 billion).

Expanded contraceptive use especially benefits the disadvantaged.
Currently, well-off women have better access than poor women to contraceptive services, and thus benefit more from the advantages conferred by contraceptive use. Thus, as use expands throughout the population, poor women stand to benefit the most. For example, because poor women have far higher fertility than wealthier women, full use of modern methods will reduce unintended pregnancy roughly 2.3 times more for the poorest women than for the richest women (that is, it would avert 437 pregnancies per 1,000 women who wish to avoid pregnancy among the poorest, but 186 per 1,000 among the wealthiest). Similarly, the poorest women have the most to gain in terms of maternal deaths averted: Fulfilling all unmet need for modern contraceptives translates to averting 142 maternal deaths per 100,000 women wanting to avoid pregnancy among the poorest, but 48 per 100,000 among the wealthiest.

Because regional differences echo socioeconomic differences, the benefits of improved contraceptive use would result in far higher rates of averted pregnancies in the less developed and poorer regions of the North and West Nile, compared with Kampala (430–446 vs. 160 pregnancies averted per 1,000 women wanting to avoid pregnancy). With full modern contraceptive use, especially disadvantaged regions would also benefit greatly in terms of maternal deaths averted: Some 127–134 such deaths would be prevented per 100,000 women wishing to avoid pregnancy in the North and West Nile vs. 30 in Kampala.

The case for improving funding is compelling.
The Ugandan government has committed itself to the Road Map for Reducing Maternal and Neonatal Mortality and Morbidity, which calls for both improving emergency obstetric services and revitalizing the country's family planning program.[25] However, progress toward maintaining a reliable stock of contraceptive commodities has been limited by insufficient funds and ongoing challenges in managing the supply chain. Implementing the government's commendable policy will require increasing investments in the contraceptive delivery system, including information provision, which will have the added benefit of strengthening the health system overall. Much of the needed increase in spending is likely to come from international donors, who are expected to account for 40% of total health expenditures for fiscal year 2008–2009.[25]

Increased contraceptive use will enable the country to attain the MDGs more quickly and more affordably than would otherwise be possible. This report focuses exclusively on the benefits of family planning in preventing unintended pregnancy, but the effects of increasing contraceptive services would extend well beyond preventing unsafe abortions and unplanned births. For example, in countries with generalized HIV epidemics (including Uganda, where 5.4% of adults were infected as of 2007[26]), promoting condom use through the integration of contraceptive and HIV services presents an invaluable opportunity to prevent both pregnancy and HIV, thereby saving lives and maximizing resources.[27]

One of the surest ways to reduce maternal deaths and disability is to lower women's exposure to the risks of pregnancy and childbirth in the first place. There could be 85% fewer unintended pregnancies annually in Uganda if all couples with unmet need could reap the benefits of modern contraception. As women and couples want increasingly smaller families, the demand will only increase. The responsibility for meeting this growing demand for contraceptives will have to be shared by a variety of stakeholders, including the Ugandan government, the private sector and international donors. Improving publicly funded contraceptive services—by committing additional resources, reducing waste and improving the allocation of funds—is especially important for poor women who experience disproportionately high levels of unmet need. To maximize benefits, resources will need to be directed to areas of the country where unmet need is greatest.

Improving investment in contraceptive services not only promotes health among mothers and babies, it also saves money. Overall, every dollar spent on contraceptive services saves at least three dollars on maternal and newborn care. Higher levels of contraceptive use also strengthen the labor force by improving the health of working women of childbearing age and the well-being of future generations. Taking on the cost of such services now enables Uganda to avoid much greater expenses down the road. Moreover, the monetary savings from averting unintended pregnancy and its negative outcomes could be redirected toward economic development and a variety of public services. The benefits of improvements in quality of life and lives saved would be incalculable to Ugandan families.

REFERENCES

1. U.S. Agency for International Development Health Policy Initiative, *Achieving the MDGs: The Contribution of Family Planning, Uganda,* Washington, DC: Consella Futures, 2009.

2. Singh S et al., *Adding It Up: The Benefits of Investing in Sexual and Reproductive Health Care,* New York: The Alan Guttmacher Institute, 2003.

3. Darroch J, Singh S and Ball H, Meeting women's contraceptive needs in the Philippines, *In Brief*, New York: Guttmacher Institute, 2009, No. 1.

4. Uganda Bureau of Statistics (UBOS) and Macro International, *Uganda Demographic and Health Survey, 2006,* Kampala, Uganda: UBOS; and Calverton, MD, USA: Macro International, 2007.

5. Govindasamy P et al., High-risk births and maternity care, *Demographic and Health Surveys Comparative Studies,* Columbia, MD, USA: Macro International, 1993, No. 8.

6. Measure DHS, Measure DHS online tools: Stat Compiler, 2009, <http://www.statcompiler.com/>, accessed Sept. 15, 2009.

7. World Health Organization (WHO), *Maternal Mortality in 2005:*

Estimates Developed by WHO, UNICEF, UNFPA and the World Bank, Geneva: WHO, 2007.

8. Graham W et al., Maternal and perinatal conditions, in: Jamison D et al., eds., *Disease Control Priorities in Developing Countries,* second ed., Washington, DC: World Bank; and New York: Oxford University Press, 2006, pp. 499–529.

9. UNICEF, *The State of the World's Children, 2009: Maternal and Newborn Health,* New York: UNICEF, 2008.

10. WHO, *Unsafe Abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion and Associated Mortality in 2003,* fifth ed., Geneva: WHO, 2007.

11. Republic of Uganda, *The Penal Code Act*, no date, <http://www.hsph.harvard.edu/population/abortion/Uganda.abo.htm>, accessed June 25, 2009.

12. Singh S et al., The incidence of induced abortion in Uganda, *International Family Planning Perspectives,* 2005, 31(4):183–191.

13. Singh S et al., *Unintended Pregnancy and Induced Abortion in Uganda: Causes and Consequences,* New York: Guttmacher Institute, 2006.

14. Darabi L et al., *Protecting the Next Generation in Uganda: New Evidence on Adolescent Sexual and Reproductive Health Needs,* New York: Guttmacher Institute, 2008.

15. Blank A et al., *Negotiating Reproductive Outcomes in Uganda,* Calverton, MD, USA: Macro International; and Kampala, Uganda: Institute of Statistics and Applied Economics, 1996.

16. Trussell J, Contraceptive efficacy, in: Hatcher RA et al., *Contraceptive Technology,* 19th revised ed., New York: Ardent Media, 2007.

17. Special tabulations of data from the 1995 Uganda Demographic and Health Survey.

18. Special tabulations of data from the 2000–2001 Uganda Demographic and Health Survey.

19. Special tabulations of data from the 2006 Uganda Demographic and Health Survey.

20. Kaijuka E et al., *Uganda Demographic and Health Survey, 1988/1989,* Entebbe, Uganda: Ministry of Health; and Columbia, MD, USA: Institute for Resource Development/Macro Systems, 1989.

21. UBOS, *Uganda Demographic and Health Survey, 1995,* Kampala, Uganda: Ministry of Finance and Economic Planning; and Calverton, MD, USA: Macro International, 1996.

22. UBOS and ORC Macro, *Uganda Demographic and Health Survey, 2000–2001,* Kampala, Uganda: UBOS; and Calverton, MD, USA: ORC Macro, 2001.

23. Singh S et al., *Abortion Worldwide: A Decade of Uneven Progress,* New York: Guttmacher Institute, 2009, Appendix Table 4.

24. World Bank, *2009 World Development Indicators,* Washington, DC: World Bank, 2009.

25. Ministry of Health, *Annual Health Sector Performance Report: Financial Year 2007/2008,* Kampala: Uganda, 2008.

26. UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance, *Epidemiological Fact Sheet on HIV and AIDS: Core Data on Epidemiology and Response, Uganda*, 2008, <http://apps.who.int/globalatlas/predefinedReports/EFS2008/full/EFS2008_UG.pdf>, accessed Sept. 15, 2009.

27. Rickey C and Salem R, Elements of success in family planning, *Population Reports,* 2008, Series J, No. 57.

CREDITS

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