

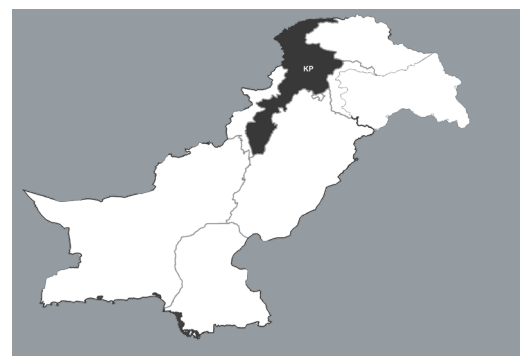


POLICY BRIEF

# REDUCING MATERNAL AND CHILD MORTALITY IN KHYBER PAKHTUNKHWA

## The Untapped Potential of Family Planning

Family planning is recognized as a necessary tool for faster fertility decline leading to accelerated economic development. However, its unique and potent role in preserving mother and child health is less well understood. This brief explains why family planning must be prioritized in Khyber Pakhtunkhwa’s health strategy as a key intervention for reducing maternal, infant and under-five mortality in the province.



## RETHINKING THE ROLE OF FAMILY PLANNING IN KHYBER PAKHTUNKHWA'S HEALTH STRATEGY

Khyber Pakhtunkhwa (KP) confronts a high incidence of preventable deaths among mothers, infants, and young children. Maternal deaths account for 27 percent of mortality among women of reproductive age (PDHS 2007). In 2012, the maternal mortality ratio (MMR) was estimated at 206 per 100,000 births (Sathar, Wazir and Sadiq 2014); the infant mortality ratio (IMR) was 58 per 1,000 births; and the under-five mortality ratio (U5MR) was 70 per 1,000 births (PDHS 2013). These ratios currently translate into an annual death toll of nearly 1,700 women, 47,400 infants, primarily due to conditions that could easily be prevented with basic healthcare.

Until recently, the health system's response to lowering maternal and child mortality has focused on increasing women's access to antenatal, postnatal and obstetric care; improving nutrition; expanding immunization; and ensuring treatment for the two major child killers, diarrhea and pneumonia. In recent years, important improvements in MCH indicators have been achieved in KP. Between 1990-91 and 2012-13, it is estimated that skilled birth attendance rose from 12 to 48 percent, and the proportion of women receiving antenatal care went up from 18 to 61 percent (PDHS 1990-91 and 2012-13). Since 2001, complete immunization among children aged 12 to 23 months has also increased from 57 to 75 percent (PIHS/PSLM 2001-02 and 2013-14).

While these are important and necessary elements of the arsenal for improving maternal and child health (MCH), the potential role of family planning has remained underutilized. In the past 15 years, the contraceptive prevalence rate (CPR) in KP has inched forward by less than half a percentage point a year from 24 percent in 2000-01 to only 28 percent in 2012-13 (Fig. 1).

Yet, there is strong evidence to warrant a repositioning of family planning in national and provincial health strategies as a central MCH intervention (Box 1). It is internationally recognized that women face significantly heightened risks of pregnancy-related death when they are too young (less than 18 years) or too old (more than 34 years) at the time of birth; when the birth interval is less than 33 months; and when parity exceeds three children. In addition, every unintended pregnancy represents an unnecessary risk, which escalates

### BOX 1

#### IGNORED AT PERIL

*Evidence for family planning's massive potential to reduce maternal and child mortality*

It is estimated that between 1990 and 2010, contraceptive use has accounted for about 40 percent of the reduction in maternal deaths in developing countries; if all the unmet need for contraception in the world were fulfilled, a further 30 percent reduction in maternal deaths would be achieved (Cleland et al. 2012). Moreover, voluntary family planning could eliminate the 13 percent of maternal deaths that occur due to unsafe abortions and 36 percent of maternal deaths caused by unintended pregnancies (Bongaarts et al. 2012).

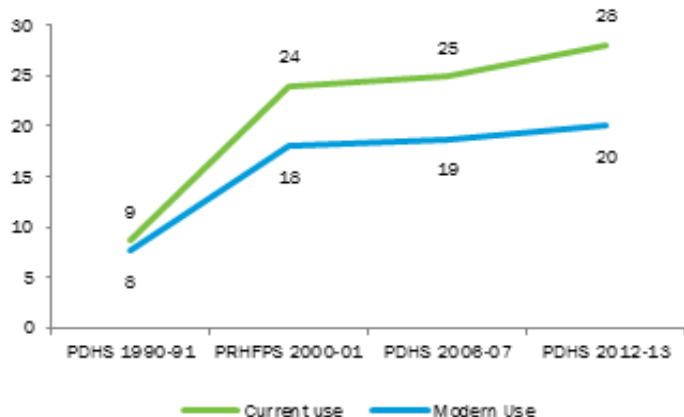
In the specific case of Pakistan, Ahmed et al. (2012) estimate that family planning averted 42 percent of maternal deaths in 2008 (with a CPR of 29.2 percent).

Birth spacing has also been recognized as one of the strongest interventions to improve child survival rates. According to Rutstein (2008), birth intervals of 33 months would reduce the U5MR by 13 percent, and, in Pakistan, neonatal, infant and child mortality are almost halved when birth intervals are 4 years or more, compared to when they are less than 2 years.

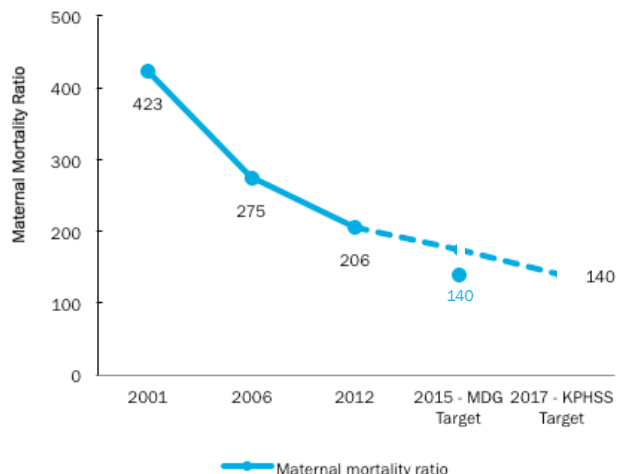
when a woman resorts to induced abortion—especially when the procedure is performed in unsafe settings, as is typically the case in Pakistan.

Furthermore, we now know that children's risk of dying in infancy or before the age of five is strongly correlated with the same high-risk fertility behaviors that endanger mothers' lives. The strong association between maternal health and infant survival, particularly for neonates, is the basis of the Healthy Spacing and Timing of Pregnancies (HSTP) initiative launched by the World Health Organization (WHO).

**FIGURE 1: CONTRACEPTIVE PREVALENCE IN KP (%)**



**FIGURE 2: MATERNAL MORTALITY RATE IN KP - TRENDS & TARGETS**

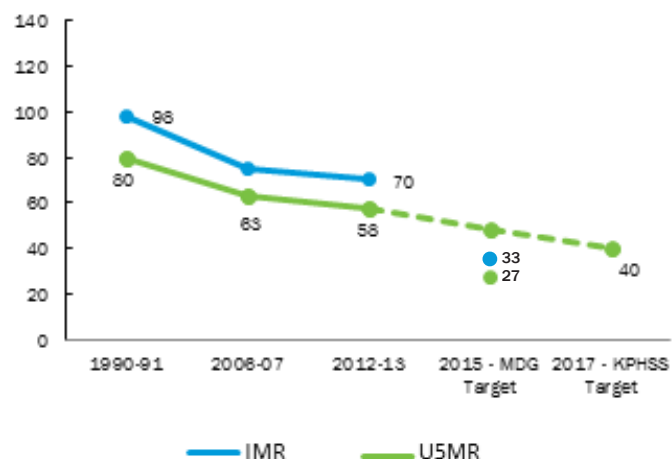


Note: Dotted as estimated/projected

Sources: PDHS 2013 and Khyber Pakhtunkhwa Sector Plan (KPHSS) 2010-2017

To meet its ambitious MMR, IMR and U5MR targets, the government must leverage every promising intervention at its disposal. Family planning offers an extremely effective but as yet underutilized route for achieving huge reductions in maternal and child mortality.

**FIGURE 3: INFANT AND UNDER-FIVE MORTALITY RATIO IN KP - TRENDS & TARGETS**



Note: Dotted as estimated/projected

Sources: PDHS 2013 and Khyber Pakhtunkhwa Sector Plan (KPHSS) 2010-2017

The good news is that the Khyber Pakhtunkhwa Health Sector Strategy 2010-2017 and the Draft Population Policy 2014 both recognize the important links between raising contraceptive use in KP and improving survival among mothers, infants and children under the age of five. However, for a faster uptake of family planning in KP, the draft population policy emphasizes a need for “strong leadership support and open commitment at the highest level for continued and enhanced social acceptability of birth spacing, with a mechanism to foster inter-sectoral linkages and support.”

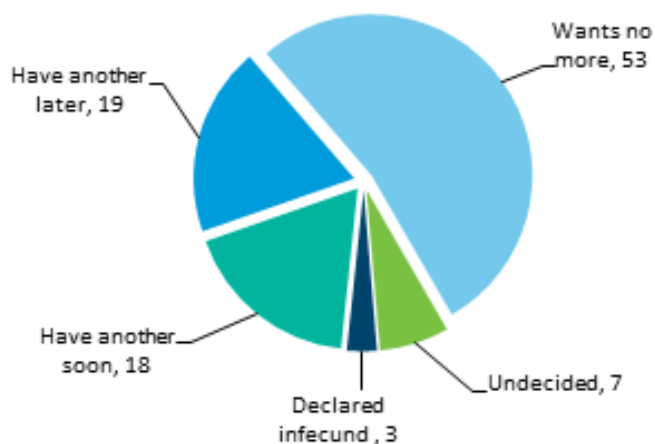
This renewed emphasis on family planning must be achieved soon given the important difference it can make in current trends in maternal and infant mortality. KP’s estimated MMR dropped steeply between 2001 and 2006, but the decline became much slower thereafter (Fig. 2). Similarly, a decline in the province’s infant and child (under 5 years of age) mortality ratios has almost plateaued since 2006-07 (Fig. 3). Regrettably, like the other provinces, KP was unable to achieve its Millennium Development Goals for MMR, IMR, and U5MR in 2015.

Under Vision 2025, reducing maternal and infant mortality has been declared a national priority. Encouragingly, the Government of KP, in its Health Sector Strategy, aims to lower the MMR to 140 per 100,000 births and the IMR to 40 per 1,000 by 2017. However, in order to meet these difficult targets, the government will need to leverage every promising intervention at its disposal. Family planning offers an extremely effective but as yet under-exploited route for getting there.

## IMPROVING MATERNAL AND CHILD SURVIVAL IN KP THROUGH FAMILY PLANNING

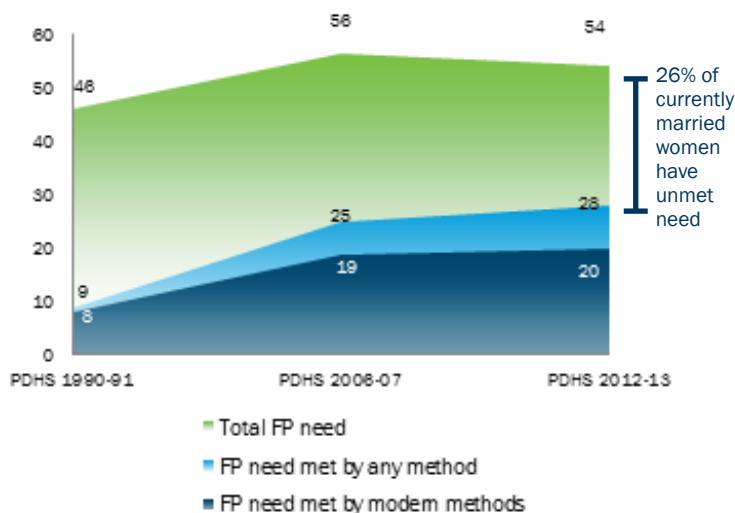
Among men and women in KP, there is a growing preference for avoiding the high-risk fertility behaviors that threaten maternal and child health. It is estimated that 72 percent of women wish to limit or delay births by two years (Fig. 4), and this desire is shared by 61 percent of men (PDHS 2013).

**FIGURE 4: FERTILITY PREFERENCES OF WOMEN IN KP (%) 2012-2013**



Source: PDHS 2013

**FIGURE 5: THE GAP BETWEEN FAMILY PLANNING DEMAND AND USE IN KP (%)**



Source: PDHS 2013

Worryingly, however, these healthier fertility preferences are not translating into practice. Surveys show that 54 percent of married women of reproductive age (MWRA) in KP would like to use contraceptives to space or limit births. However, only 28 percent are using any family planning method (Fig. 5). The proportion of women using reliable modern methods is even smaller, i.e., 20 percent. Therefore, nearly half of family planning need in KP is currently unmet—26 percent of MWRA are not using any method, modern or traditional, even though they wish to space or limit births. This gap indicates that a significant increase in contraceptive prevalence can be achieved capitalizing on this group even without extensive demand generation efforts.

The gap between family planning demand and need also means, however, that a large proportion of MWRA in KP are unable to practice healthy spacing and timing of pregnancies, which exposes them and their young children to the following sources of mortality risks:

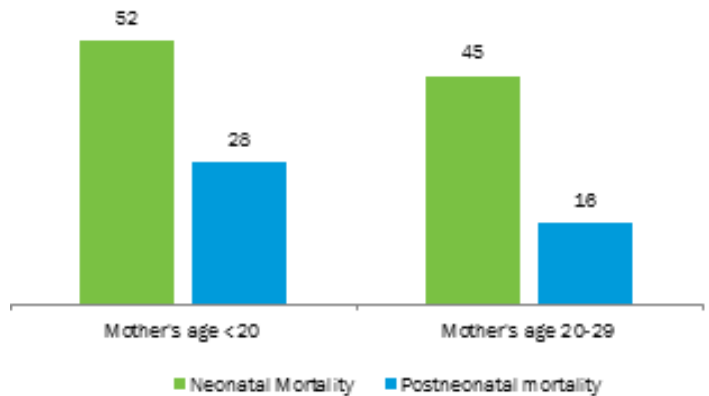
1. **Unintended pregnancies** – The province’s total fertility rate (TFR) is 3.9 while the estimated average number of children wanted by women is 2.6 (PDHS 2012-13). This means a third of the 1.3 million pregnancies that occur in the province every year are unintended and, on average, every woman of reproductive age faces the unnecessary risk and physical burden of more than one unintended pregnancy.
2. **Unsafe induced abortions** – Due to unwanted pregnancies, there were slightly over 224,000 induced abortions in KP in 2012, resulting in nearly 68,500 cases of post-abortion complications (PAC). With 9 out of every 1,000 women of reproductive age seeking treatment, the province accounted for 8 percent of the PAC caseload for the entire country (Population Council 2014).
3. **Adolescent pregnancy** – At the time of the 2012-13 PDHS, 10.9 percent of women (aged 15-19) had begun childbearing. Among every 1,000 women in this age group, 37 had given birth in urban areas and 56 in rural areas. These young women face special health risks that are further aggravated by poverty and relatively lower access to MCH services.
4. **Infants of teenaged mothers** – Moreover, as shown in Fig. 6, neonatal mortality among children of teenaged mothers is significantly higher than the level

found among women aged 20-29, and there are similar significant differentials in the post-neonatal mortality rate by mother's age.

5. **Late childbearing** – According to PDHS 2013, some 17 percent of women in KP had given birth after the age of 35. Late childbearing is associated with heightened risks of maternal and infant health issues.
6. **High parity** – PDHS 2013 found 50 percent of women in KP had given birth to four or more children. This situation exposes mothers as well as infants and young children to heightened risks of malnutrition and health complications.
7. **Short birth intervals** – To give mothers the best chance to maintain sound health while delivering and raising healthy children, WHO recommends an interval of at least 33 months between births. Birth spacing is also known to play an important role in the nutritional status of children under 5 years of age, with shorter birth intervals increasing the risk of low weight, at birth and beyond, as well as stunting. However, about 28 percent of women in KP gave birth less than 24 months after a previous birth, while 60 percent gave birth less than 36 months after the previous birth (PDHS 2013). Fig. 7 illustrates the great differences in mortality ratios among infants born after short and adequate birth intervals.

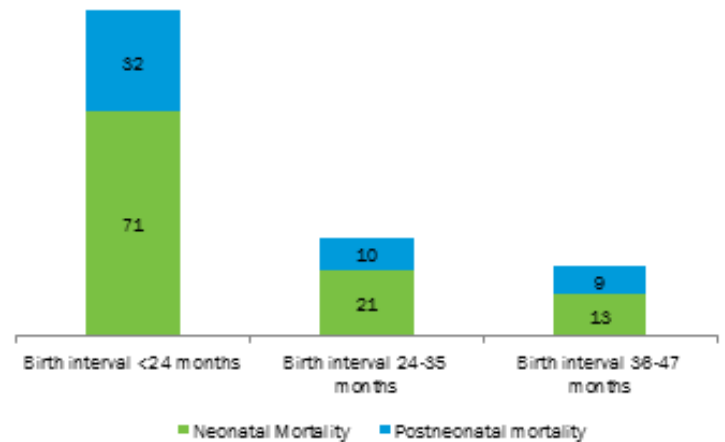
The above-outlined risks, which lead to maternal, infant and young child mortality, can be addressed through family planning. To prevent the mortality associated with high-risk fertility behavior, the existing demand for family planning must be fulfilled at the earliest by eliminating current unmet need. In the longer run, the public and provincial stakeholders must be educated about the necessity of healthy spacing and timing of pregnancies so that demand for contraception increases to cover the complete family planning needs of all MWRA. Increased use of family planning would not only prevent the mortality and sickness caused by high-risk fertility behavior, it would also reduce the pressure of unintended pregnancies and births, and associated maternal and child morbidity on the health system.

**FIGURE 6: NEONATAL AND POST-NEONATAL MORTALITY RATIOS IN KP BY MOTHERS' AGE AT BIRTH (DEATHS PER 1,000 LIVE BIRTHS)**



Source: PDHS 2013

**FIGURE 7: NEONATAL AND POST-NEONATAL MORTALITY RATIOS IN KP BY BIRTH INTERVAL (DEATHS PER 1,000 LIVE BIRTHS)**



Source: PDHS 2013

## MEASURING THE POWERFUL LIFE-SAVING POTENTIAL OF FAMILY PLANNING IN KP

In 2014, the Population Council, Pakistan conducted a study to estimate the size of reductions achievable in maternal, infant, and child mortality in KP through increased family planning (Sathar, Wazir and Sadiq 2014). Simulations were conducted to gauge the change in maternal, infant and child mortality when existing unmet need for family planning (26 percent) is reduced or eliminated by raising the CPR.

In the case of maternal mortality, the study examined the effect of eliminating unmet need by raising the CPR from its existing level of 28 percent to 54 percent (Scenario 1 in Fig. 8). For comparison purposes, the effect of increasing skilled birth attendance from its past level of 48 percent to 80 percent was also examined (Scenario 2) (Sathar, Wazir and Sadiq 2014).

To measure the impact of family planning on infant mortality, simulations of two scenarios were conducted—one in which unmet need was reduced by raising the CPR to 41 percent (Scenario 1 in Fig. 9) and the second in which unmet need was completely eliminated by raising the CPR to 54 percent (Scenario 2). The study arrived at the following eye-opening conclusions:

### Reduction Achievable in Maternal Mortality

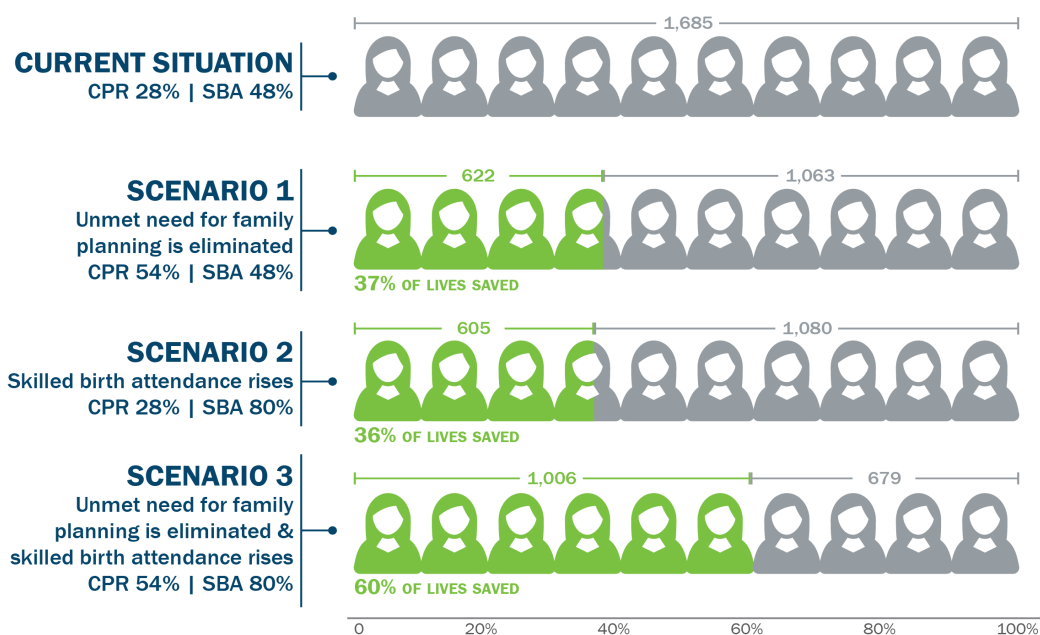
- Eliminating unmet need for family planning would prevent **37 percent** of maternal deaths (Fig. 8)
- Raising skilled birth attendance from 48 to 80 percent would prevent **36 percent** of maternal deaths (Fig. 8)
- Eliminating unmet need and simultaneously increasing skilled birth attendance to 80 percent would prevent **60 percent** of maternal deaths (Fig. 8)

### Reduction Achievable in Infant Mortality

- Reducing unmet need for family planning by increasing the CPR to **41 percent** would reduce infant mortality by 28 percent (Fig. 9)
- Eliminating unmet need altogether would reduce infant mortality by **57 percent** (Fig. 9)

These findings show that family planning programs should be an equally important component of improving maternal health and reducing maternal and infant mortality. The same reductions in maternal mortality can be achieved by eliminating unmet need for family planning as by increasing skilled birth attendance.

**FIGURE 8: MATERNAL LIVES THAT CAN BE SAVED ANNUALLY IN KP BY INCREASING CONTRACEPTIVE PREVALENCE AND SKILLED BIRTH ATTENDANCE**

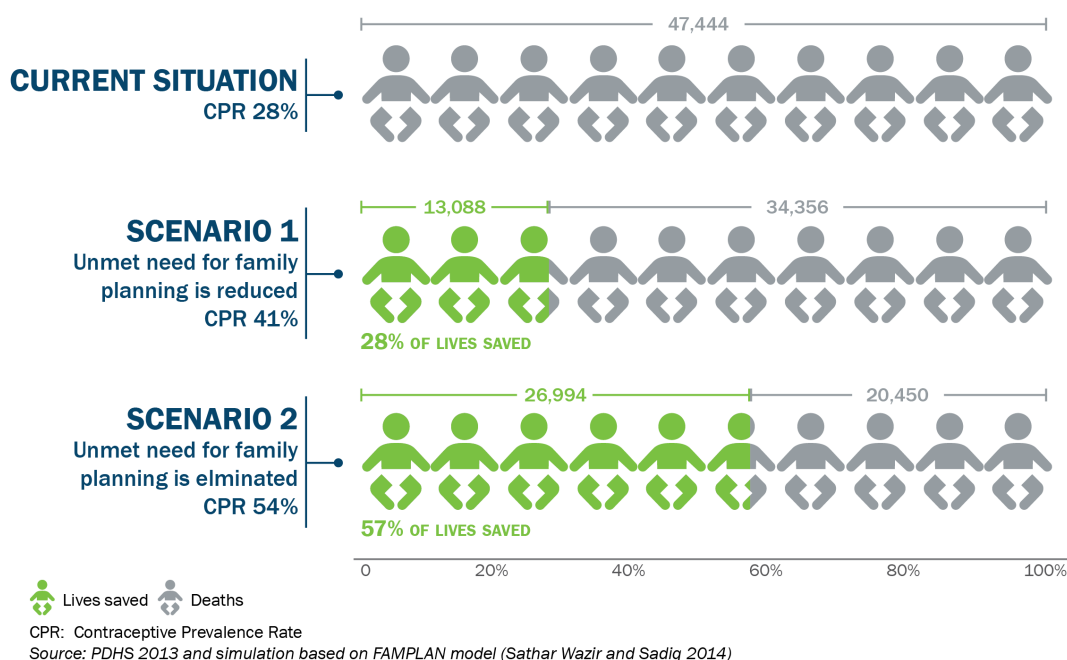


Lives saved Deaths

CPR: Contraceptive Prevalence Rate  
SBA: Skilled Birth Attendance

Source: PDHS 2013 and simulation based on WHO 2000 and Lie et al. 2008 (Sathar Wazir and Sadiq 2014)

**FIGURE 9: INFANT LIVES THAT CAN BE SAVED ANNUALLY IN KP BY INCREASING CONTRACEPTIVE PREVALENCE**



## POLICY IMPLICATIONS

For a rapid reduction in maternal, infant, and child mortality to the levels targeted for 2017 and onwards, the most effective strategies for improving MCH need to be galvanized in KP. The evidence shows that family planning is one of the most powerful tools at the government’s disposal. Simply by fulfilling the existing unmet need for birth spacing and limiting—which would mean raising the CPR to 54 percent—it is possible to prevent 37 percent of maternal deaths, 57 percent of infant deaths. This will lead to proportionate declines in the maternal, infant and child mortality ratios of the province. Notably, more women’s lives can be saved in this manner than by increasing skilled birth attendance from 48 to 80 percent.

Family planning’s wider health benefits further justify its immediate prioritization. These include, for example, reduced anemia among women; lower numbers of underweight, wasted, and stunted children; and reduced burden on antenatal, obstetric, postnatal and post-abortion services.

Moreover, family planning is highly cost-effective: every dollar spent on this intervention saves nearly four dollars that would otherwise be spent on maternal health, immunization, malaria, water and sanitation, and education (Bongaarts 2012).

In view of its immediate and significant health benefits, fam-

ily planning must be swiftly repositioned in provincial policy as a key mother and child health intervention. In this regard, it is highly laudable that the Department of Health plans to revitalize the delivery of family planning services and, in particular, ensure uninterrupted supply of contraceptives to facilities and community-based health workers, under a Minimum Health Service Package (MHSP) for primary and secondary healthcare that will be accessible to 70 percent of the population by 2017. This intent must be supported with commitment from the highest level of government; synergistic cooperation with other partners, especially the Population Welfare and Planning & Development Departments; and adequate financial allocation.

The cost-benefit analysis of investing in family planning should further take into account the profound links of this intervention with the government’s socioeconomic and population aims and policies. The benefits of family planning in terms of increased women’s empowerment, female participation in the workforce, household savings, poverty reduction, and school enrollment are well-documented (Sathar, Wazir and Sadiq 2014) and, to a considerable extent, acknowledged in KP’s Comprehensive Development Strategy. These gains will be most visible when family planning interventions are targeted at the segments of KP’s population that need them most: the less developed and northern districts; the rural areas; poor communities; and young, uneducated women.

## REFERENCES

- Ahmed, S., Li, Q., F., Liu, L., & Tsui, A. 2012. Maternal deaths averted by contraceptive use: An analysis of 172 countries. *The Lancet*, 380, 111-125.
- Cleland, J., Conde-Agudelo, A., Peterson, H., Ross, J., & Tsui, A. 2012. Contraception and health. *The Lancet*, 380, 149-156.
- Government of Khyber Pakhtunkhwa. 2014. Population Policy 2014 – Khyber Pakhtunkhwa. Peshawar: Population Welfare Department.
- Government of Khyber Pakhtunkhwa. 2010. Khyber Pakhtunkhwa Health Sector Strategy 2010-2017. Peshawar: Department of Health.
- National Institute of Population Studies (NIPS) [Pakistan] and ICF International. 2013. Pakistan Demographic and Health Survey 2012-13. Islamabad, Pakistan, and Calverton, Maryland, USA: NIPS and ICF International.
- Pakistan Bureau of Statistics. 2002. Pakistan Integrated Household Survey (PIHS) 2001-02. Statistics Division, Government of Pakistan, Islamabad.
- Pakistan Bureau of Statistics. 2014. Pakistan Social & Living Standards Measurement Survey (PSLM) 2013-14. Statistics Division, Government of Pakistan, Islamabad.
- Population Council. 2014. Induced Abortions and Unintended Pregnancies in Pakistan, 2012. Islamabad.
- Rutstein, S. O. 2008. Further evidence of the effects of preceding intervals on neonatal, infant and under-five-years mortality and nutritional status in developing countries: Evidence from demographic and health surveys (Demographic and Health Surveys Working Paper No, 41). Calverton, MD: Macro International Inc.
- Sathar Z.A., Wazir, M.A., and Sadiq, M. 2014. Prioritizing family planning for achieving provincial maternal child health and development goals. Islamabad: Population Council.
- WHO. 2000. Maternal Mortality 2000: Estimates developed by WHO, UNICEF and UNFPA. Retrieved from <http://whqlibdoc.who.int/publications/2004/9241562706.pdf?ua=1> (accessed March 2014).

### THE EVIDENCE PROJECT

Population Council  
House No. 7, Street No. 62  
Section F-6/3  
Islamabad, Pakistan  
tel +92 51 844 5566  
[evidenceproject.popcouncil.org](http://evidenceproject.popcouncil.org)

### CONTRIBUTORS

Dr. Zeba A Sathar (T.I.)  
Maqsood Sadiq  
Seemin Ashfaq



Council and do not necessarily reflect the views of USAID or the United States Government.



The Evidence Project is led by the Population Council in partnership with INDEPTH Network, International Planned Parenthood Federation, Management Sciences for Health, PATH, Population Reference Bureau, and a University Research Network.

© 2015 The Population Council, Inc.

Suggested Citation: Sathar, Zeba A., Maqsood Sadiq, and Seemin Ashfaq. "Reducing maternal and child mortality in Punjab: The untapped potential of family planning," Policy Brief. Islamabad, Pakistan: Population Council, Evidence Project. 2015.

The Evidence Project is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the terms of cooperative agreement no. AID-OAA-A-13-00087. The contents of this document are the sole responsibility of the Evidence Project and Population Council and do not necessarily reflect the views of USAID or the United States Government.

The Evidence Project uses implementation science—the strategic generation, translation, and use of evidence—to strengthen and scale up family planning and reproductive health programs to reduce unintended pregnancies worldwide. The