Achieving MDGs 4 and 5 in Balochistan: The Role of Family Planning

This briefing paper focuses on the policy options available to the Balochistan government in affecting just how much the province’s population will grow by 2050 and its potential to achieve MDGs 4 and 5.

THE STATE OF MATERNAL HEALTH IN BALOCHISTAN

Maternal mortality is a leading cause of death among women of reproductive age in Balochistan — about 35% of the deaths in this age group were pregnancy-related (PDHS 2006/07).

Approximately, 3,000 women die each year in Balochistan alone due to pregnancy-related factors. Pregnancies that occur too early, too late, or too frequently increase the risk of maternal death. Lowering fertility rates by increasing the use of family planning can help reduce pregnancy-related deaths.

![Figure 1: Trend in maternal mortality ratio and the MDG 5 target](image)

Current estimates reveal that the maternal mortality ratio (MMR) in Balochistan declined from an estimated 1,551 to 785 between 2001 and 2006 (Figure 1). By 2012, however, the MMR is estimated to have risen to 996 maternal deaths per 100,000 live births. This alarmingly high level of maternal mortality is an outcome of low levels of maternal healthcare in Balochistan.

Maternal health indicators have deteriorated over the last six years. About 31% of pregnant women in Balochistan received antenatal care (ANC) in 2012 — a decline from 41% in 2006. The proportion of pregnant women assisted by a skilled birth attendant during childbirth has also dropped significantly, from 23% in 2006 to 18% in 2012 (Figure 2). There are also wide urban-rural disparities since skilled birth attendance (SBA) is 34% in urban areas and 14% in rural parts of Balochistan (PDHS 2012/13).

![Figure 2: Maternal health indicators (in %)](image)

The proportion of SBA-assisted deliveries varies considerably by district — from only 4% in Dera Bugti to 77%, the highest level, in Quetta. Districts along the coastline and some districts in central Balochistan have moderate levels of SBA, ranging from 20% to 42% (Figure 3).

![Figure 3: Skill Birth Attendance by district in Balochistan](image)

Source: PSLMS 2010/11

3,000 women in Balochistan die annually due to pregnancy-related complications.
THE MISSED OPPORTUNITY IN MATERNAL HEALTH: LOW CONTRACEPTIVE PREVALENCE IN BALOCHISTAN

The contraceptive prevalence rate (CPR) among married women in Balochistan has risen from 14% in 2006/07 to 20% in 2012/13. This represents a 1 percentage point annual rise over the last six years. (Figure 4). The use of modern methods has increased from 13% in 2006 to 16% in 2012 (Figure 4). About 4% of women of reproductive age reported using traditional methods in 2012.

![Figure 4: Contraceptive use in Balochistan, 1991–2013
Source: PDHS and PRHFP 2000/01](image1)

Urban-rural differences in contraceptive use remain significant — the use of any method is 6 percentage points higher in urban areas than rural areas. The use of traditional methods of contraception is low both in urban and rural Balochistan — about 3 percentage points on average.

![Figure 5: Contraceptive use by place of residence in Balochistan
Source: PDHS 2012/13](image2)

There is considerable inter-district variation in the CPR (Figure 6). Districts along the coast in the south have higher levels of contraceptive prevalence than districts in northern Balochistan, where the CPR is particularly low (e.g., 0.3% in Dera Bugti) compared to southern districts (e.g., 36% in Kech) (MICS 2010).

Fertility preferences show that most women want to space or limit their next birth: 29% want no more children and 16% want to space their next child by at least two years. Only 21% want another child soon within the next two years (Figure 7). A substantial proportion of women (24%) are undecided. This figure is much larger than in other provinces.

![Figure 7: Fertility preferences of married women aged 15—49, Balochistan
Source: PDHS 2012/13](image3)

45% of women and 39% of men in Balochistan prefer smaller and better-spaced families.
INFANT AND UNDER-FIVE MORTALITY RATES

MDG 4 sets a target of reducing infant and under-five mortality by two thirds between 1990 and 2015. While these rates declined in Balochistan from 1990 to 2006, the last six years have seen both infant and under-five mortality rise. The infant mortality rate (IMR) has increased from 49 in 2006/07 to 97 per 1,000 live births in 2012/13 (Figure 8) and the under-five mortality rate has increased from 59 to 111 between 2006 and 2012. However, these estimates are subject to very large standard errors due to the small sample size from Balochistan in the PDHS. The province needs to bring its infant and under-five mortality rates down to 24 and 34, respectively, to achieve its MDG 4 targets.

Balochistan has to bring its IMR down to 24 and under-five mortality down to 34 to achieve the MDG 4 targets by 2015.

The IMR in Balochistan has increased substantially in both urban and rural areas over the last six years: from 31 to 94 per 1,000 live births in urban areas and from 53 to 98 per 1,000 live births in rural areas (see Figure 10).

Averages tend to mask variations in the IMR across socioeconomic groups and regions within the province. Maternal education has a considerable impact on the IMR: children with mothers who have had no schooling have almost double the IMR of those whose mothers have attained secondary-plus education (Figure 9). Similarly, infants born in the poorest households have an IMR that is almost one-third higher than the IMR of those born in rich households.

The children of the poorest and least educated mothers have higher IMRs.

The persistent high levels of infant and under-five mortality in rural Balochistan are a cause for alarm.
THE MISSED OPPORTUNITY: BIRTH SPACING AND INFANT AND CHILD HEALTH

Balochistan’s persistently high levels of neonatal and post-neonatal mortality are cause for alarm. Neonatal mortality fell from 46 to 30 per 1,000 live births from 1990 to 2006 but has since increased in the last six years to 63 per 1,000 live births.

At the same time, post-neonatal mortality fell by almost a third during 1990 to 2006, from 26 to 18 per 1,000 live births. In the last six years, however, it has increased significantly from 18 to 34 per 1,000 live births (Figure 11).

![Figure 11: Neonatal and post-neonatal mortality rates in Balochistan](Source: PDHS)

The strong association between maternal health and infant survival, particularly for neonates, is the basis of the Healthy Spacing and Timing of Pregnancies initiative launched by the World Health Organization. A child’s risk of dying is strongly correlated with certain fertility behaviours. The risk of death is much higher among children born to mothers who are too young (under 18 years) or too old (over 35 years) and among those born after a short birth interval (less than 24 months) or to mothers with high parity (3+ children).

About three fifths of the births in Pakistan are characterized as high-risk due to short intervals and high parity. Other interventions such as immunization and ORS are applied to prevent post-neonatal deaths. However, the use of family planning to space births is an extremely effective but as yet untapped route to reducing infant and particularly neonatal mortality.

![Figure 12: Neonatal and post-neonatal mortality in Balochistan by birth interval](Source: PDHS 2012/13)

Women who practice family planning can avoid high-risk births and reduce their chances of having a baby who will die in the neonatal and infancy period.

Longer birth intervals will help reduce neonatal mortality.
UNWANTED FERTILITY AND THE UNMET NEED FOR FAMILY PLANNING

This brief presents a prescription for bringing about a significant decrease in the number of maternal deaths. It is well established internationally and in Pakistan that unintended pregnancies and unsafe abortions are leading causes of maternal deaths.

We also know that 45% of women in Balochistan want to prevent or delay their next pregnancy. Moreover, the recent PDHS 2012/13 indicates that, despite some gains, there is still a large unmet need for family planning — about 31% of women have indicated an unmet need for contraception to space and limit their childbearing (Figure 13). This is the highest rate across all four provinces. The unmet demand for spacing is higher than that for limiting, especially in rural Balochistan.

![Figure 13: Unmet need for spacing and limiting by urban-rural residence, Balochistan Source: PDHS 2012/13](image-url)

The unmet need for contraception to limit family size is higher in rural areas than in urban areas. This reflects greater scope for raising the CPR in rural Balochistan. *If the demand for family planning were satisfied, the CPR would rise to 51% in Balochistan.*

POST-ABORTION COMPLICATIONS IN BALOCHISTAN

Unwanted pregnancies can also lead to post-abortion complications (PAC), which result primarily from induced abortions.

![Figure 15: Number of PAC cases in Balochistan Source: Post-Abortion Care in Pakistan: A National Study, Population Council, 2013](image-url)

Balochistan accounts for almost 7% of the annual PAC caseload out of a total of 696,000 cases estimated nationally. It has an estimated 47,361 PAC cases per year — the lowest of the four provinces (Figure 15). Out of every 1,000 women of reproductive age (15–49), 20 sought treatment for PAC in 2012. PAC cases are treated predominantly in the public sector in Balochistan — about 67% (Figure 15).

Investing resources in family planning would help achieve MDGs 4 and 5 by preventing the nearly one third of a total of 500,000 pregnancies in Balochistan that are unintended.
POTENTIAL SCENARIOS FOR SAVING MOTHERS’ AND CHILDREN’S LIVES

MATERNAL MORTALITY

There is untapped potential for increasing the CPR by accelerating the use of family planning to eliminate unmet need. Below, we present the potential benefits of increased family planning and skilled birth attendance (Figure 16) — the two major drivers of change in reducing maternal deaths.

This analysis includes three different scenarios to present the case for family planning and fertility decline as an effective way of reducing maternal deaths*.

Scenario 1: Increase the coverage of SBA to 60%. This will lower the number of maternal deaths from 2,945 to 1,803.

Scenario 2: Focus solely on increasing family planning and increase the CPR to 51% by eliminating the unmet need for family planning (31%). This will reduce maternal deaths by 41% — from 2,945 to 1,727 — saving 1,218 maternal lives.

Scenario 3: If the CPR is increased to 51% and SBA to 60%, then the number of maternal deaths will drop to 955 — about a third of the current number of maternal deaths — saving 1,990 maternal lives.

Just increasing contraceptive prevalence to 51% will reduce the current number of maternal deaths by almost 41%.

INFANT AND CHILD MORTALITY

Using the established relationship between contraceptive use, high-risk fertility behaviour, and infant and child mortality, we have run simulations for two contraceptive-use scenarios that capture the effect of increased contraceptive use on infant and child mortality*.

Scenario 1: If contraceptive use increases to 36%, the number of infant deaths will decrease from 28,678 to 23,640, saving 5,038 infant lives. Child deaths (children aged 1–4) will fall from 4,139 to 2,120, saving an additional 2,019 child (aged 1–4) lives.

Scenario 2: By eliminating the entire unmet need for family planning in Balochistan and increasing contraceptive use to 51%, there would be 10,076 fewer infant deaths and 3,080 fewer child deaths (ages 1–4).

Figure 17: Impact of family planning on infant and child (age 1-4yr) deaths
Source: PDHS 2012-13; simulation based on FAMPLAN model

Figure 16: Impact of family planning on maternal deaths in Balochistan

10,076 infant and 3,080 child (ages 1–4) deaths could be averted by eliminating the unmet need for family planning.
BALOCHISTAN’S DEMOGRAPHIC PROSPECTS

The population of Balochistan has increased fivefold in the last 60 years since independence. However, the pace of growth accelerated during the 1980s and 1990s as mortality rates declined and fertility rates remained high. Its population increased three times from 2.4 million to 6.6 million between 1972 and 1998, and is close to 9 million today. The current annual population growth rate is around 2.3%.

BALOCHISTAN’S DEMOGRAPHIC TRANSITION

Figure 18 shows population pyramids for 1972, 2013, and 2050, which depict the province’s transition in terms of age structure.

Balochistan is currently passing through the middle phase of the demographic transition, although it still has a large youth population: 67% of its population was under the age of 30 in 2013. If fertility rates continue to decline at a moderate pace, by 2050 the proportion of the population under 30 years of age will have decreased to 48%. Falling dependency ratios, resulting from a rising working-age population and declining numbers of children and the elderly, offer the opportunity of a demographic dividend in Balochistan.

FERTILITY DECLINE: SLOW AND UNEVEN

Although the population continues to grow, fertility rates have declined significantly throughout the province since the 1980s (Figure 19). Fertility dropped from 7.5 children per woman in 1984 to 5.8 in 1991. The total fertility rate (TFR) in 2012 was 4.2 children per woman.

![Figure 19: TFRs in Balochistan, 1984–2013](image)

Balochistan has the chance to benefit from a fertility decline that could result in improved maternal and child health as well as economic development through the demographic dividend.
Despite overall gains in fertility reduction, the change has not been uniform across the province. There are significant differences in fertility rates by place of residence and socioeconomic status. Women in rural Balochistan continue to have almost 0.7 children more than their urban counterparts, while poor families have approximately two children more than rich families (Figure 20).

Fertility rates are also lower for women with higher levels of education: the TFR is 4.6 children for those with no education, 3.5 for women with primary schooling, 3.0 for those with secondary education, and 2.6 for those with tertiary education.

The district-level data indicate geographical variations in fertility (FALAH Baseline Survey 2008), with fertility rates varying from about 6 children per woman to 4 (data not shown here). Parts of the province are experiencing a more rapid fertility decline than others, which have a predominantly high level of fertility.

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Figure 20: Fertility rates by place of residence and socioeconomic status, Balochistan
Source: PDHS 2012/13

Balochistan’s population will continue to grow over the next few decades, largely due to continuing high levels of fertility and the momentum built into population growth, given the province’s youth population. Future growth will be driven by three main demographic factors:

- The persistently high levels of fertility
- A very young age structure due to high fertility in the past
- The large number of women entering childbearing age.

![Population projections for Balochistan, 1951–2050](image)

Source: Population Council

Future fertility levels will determine whether the population of Balochistan will rise to 15 million or 19 million by 2050 (Figure 21). The decision to invest in a rapid fertility decline through a strong family planning program could make the difference of 4 million more people in Balochistan by 2050.
BRINGING IT ALL TOGETHER: THE BENEFITS OF MEETING THE UNMET NEED FOR FAMILY PLANNING AND ACCELERATING THE FERTILITY DECLINE

Reducing the unmet need for family planning offers the opportunity to lower infant, child, and maternal mortality through the provision of good-quality family planning services in Balochistan. Expanding family planning services and increasing contraceptive use will have a direct impact on the birth rate and on maternal mortality.

Clearly, investing resources in family planning would help achieve MDGs 4 and 5 by preventing the nearly one third of 0.5 million pregnancies in Balochistan that are unintended.

Decreasing the number of unwanted pregnancies will reduce recourse to unsafe abortions as well as the number of post-abortion care clients. It would also reduce the number of deliveries significantly, allowing the Balochistan government to utilize its already overburdened resources and facilities to improve the quality of maternal care.

THE KEY TO EXPANDING ACCESS TO FAMILY PLANNING SERVICE DELIVERY

Access to family planning services will increase substantially if the entire public health system delivers these services. In particular, lady health workers (LHWs) are needed to facilitate the outreach of family planning services. Figure 22 shows how access to family planning services is limited if they are provided solely by the Population Welfare Department through family welfare centers (FWCs) in Lasbela, Balochistan. The GIS maps are based on a census of reproductive health facilities and show how family planning services can be enhanced dramatically for this district if Department of Health (DOH) static outlets and LHWs are effectively involved.

Figure 22: Map of Lasbela district: a) FWCs, b) FWCs with MOH static clinics, and c) FWCs, static clinics, and LHWs.
Source: EALAH GIS Mapping Survey 2008

Access to family planning services will increase substantially if DOH static outlets and LHWs are effectively involved.
CONCLUSIONS

This briefing paper combines a wide range of data sources, such as several rounds of the PDHS 2012/13, PSLMS 2010/11, FAALAH 2008/12, and MICS 2010, to make the case for prioritizing family planning to meet MDGs 4 and 5.

Although fertility rates have declined in Balochistan, wide differentials persist. Progress in the stages of the fertility transition across districts is uneven. Greater efforts are required to establish parity in the fertility decline, especially in rural Balochistan.

Infant and child mortality remain very high. Neonatal mortality rates in Balochistan remained the same between 1990 and 2006, and have increased in the last six years. Among the major factors behind the persistently high infant and particularly neonatal mortality rates are high fertility and short birth spacing. It is now well established that longer intervals between births decrease neonatal and infant mortality. Family planning offers a route to lowering both neonatal and infant mortality.

While wanted fertility has declined in Balochistan, unwanted fertility has increased. The unmet need for family planning has also declined, but remains the highest across all the provinces, especially in rural Balochistan.

The data establishes a strong connection between family planning and maternal mortality. Given the uneven geographical patterns across Balochistan, policymakers need to focus on particularly vulnerable regions and segments of the population to improve the province’s indicators. There is an opportunity here to bring the health and population welfare sectors together to expand access to family planning services. Addressing the unmet need for family planning in Balochistan will not only lead to marked reductions in both maternal and infant mortality, but also spur improved outcomes in education, employment, and economic growth. Balochistan is reasonably well positioned to benefit from a demographic dividend, but accelerating the fertility decline is a necessary precondition.

SOME RECOMMENDATIONS TO ACCELERATE FAMILY PLANNING EFFORTS

- Increase provincial political support and resource allocation for family planning efforts.
- Promote family planning as a health intervention.
- Include birth spacing services as part of the health policy.
- Ensure the availability of contraceptive supplies by strengthening procurement and logistics systems for all public health and private service outlets.
- Improve the technical and communication skills of service providers through client-centered family planning training for better service quality.
- Utilize the Population Welfare Department’s training facilities to train health providers.
- Focus on vulnerable regions and segments of the population.
- Increase access through public-private partnerships and by contracting out mechanisms already being promoted by the provincial government to improve service delivery.

* A more detailed report titled “Prioritizing Family Planning for Achieving Provincial Maternal Child Health and Development Goals” elaborates on the data and methods presented in this briefing paper.

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