This analysis is based on the 2005–06 Demographic and Health Survey (DHS) data from Uttarakhand, India. It summarizes key findings related to pregnancy spacing, unmet need, fertility return, family planning (FP) use and contact with key services for women during the period from the last birth through two years postpartum.

**PREGNANCY SPACING IN UTTARAKHAND**

Figure 1 presents data from women experiencing births in the past five years. In this analysis, the pregnancy duration is calculated at nine months and only women with pregnancies that resulted in a live birth are included. Of these pregnancies, 7% occur within very short intervals of less than six months, 12% occur within short intervals of 6–11 months and another 32% occur within intervals of 12–23 months. Thus, over half (51%) of all pregnancies in Uttarakhand occur within short intervals of less than 24 months after the preceding birth.

Figure 1: Birth-to-pregnancy spacing among all women aged 15–49, all non-first births in the last five years

Because research findings demonstrate improved perinatal outcomes for infants born 36–59 months after a preceding birth, experts made recommendations to a World Health Organization (WHO) Technical Committee to advise *an interval of at least 24 months before couples attempt to become pregnant* (birth-to-pregnancy interval) in order to reduce the risk of adverse maternal, perinatal and infant outcomes. In addition, an analysis of DHS data from 52 developing countries, which studied over one million births, found that birth-to-pregnancy intervals that are too short are associated with adverse pregnancy outcomes, increased morbidity in pregnancy, and increased infant and child mortality.

**UNMET NEED FOR FAMILY PLANNING AMONG WOMEN 0–24 MONTHS POSTPARTUM**

Data from 494 women within two years of a birth were used to examine unmet need, as illustrated below in Figure 2. In this analysis, unmet need is defined prospectively regarding the woman’s desired timing for her next pregnancy. Prospective analysis yields higher rates of unmet need than are observed if the woman is asked about the last birth.

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3 Based on a series of questions regarding desire for future pregnancies, family planning use and/or fecundity status among women within one year post-delivery.
Among women within two years postpartum, 52% have an unmet need for FP; 37% are using a method of FP; and only 10% of women during this 24-month postpartum period desire another pregnancy within two years.

**Figure 2: Unmet need among women within two years postpartum**

<table>
<thead>
<tr>
<th>Unmet need</th>
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<td>52%</td>
<td>37%</td>
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**UNMET NEED FOR SPACING AND LIMITING**

**Figure 3** demonstrates the prospective unmet need for spacing and limiting births compared to FP use during this period. Total unmet need decreases as the number of months post-delivery increases. From 0–5.9 months postpartum, overall unmet need is 77%. At the end of one year postpartum, overall unmet need has decreased to 44%, and then to 41% by the end of the second year postpartum. With regard to components of overall unmet need, the levels of unmet need for limiting decrease throughout the 24-month postpartum period, from 49% (0–5.9 months) to 31% (6–11.9 months) to 27% (12–23.9 months). The unmet need for spacing decreases from 28% (0–5.9 months) to 13% (6–11.9 months), but then increases again slightly to 14% (12–23.9 months). It is noteworthy that at the end of the 24-month postpartum period, unmet need for limiting is almost double that for spacing.

**Figure 3: Prospective unmet need across postpartum periods**

**RETURN TO FERTILITY AND RISK OF PREGNANCY**

**Figure 4** illustrates key factors related to return to fertility and the risk of pregnancy among women during the first two years postpartum. More than half (53%) of women are sexually active by six months postpartum and 28% of women have experienced menses return during the same period. From 12–24 months postpartum, 96% of postpartum women are sexually active and 86% have menses return, yet only 43% of sexually active postpartum women are using a modern method of FP during this time.
CONTRACEPTIVE USE BY PLACE OF DELIVERY

According to the 2005–06 DHS, among postpartum women in Uttarakhand, 37% of births occurred at a health facility, while over 62% occurred at home. Figure 5 shows that overall, 48% of postpartum women who delivered at a health facility are using a modern method of FP, compared with only 26% of women who delivered at home.

METHOD MIX AND CONTRACEPTIVE USE BY URBAN-RURAL RESIDENCE

With regard to uptake of FP, only 13% of postpartum women begin using a FP method during the first six months postpartum. This increases to 44% between 6–12 months postpartum, and to 47% for women 12–24 months postpartum. Among women 0–24 months postpartum, 54% are using condoms, 24% are using sterilization, 10% are using pills and 3% are using IUDs.

Figure 6 shows the uptake of FP during the 24-month postpartum period by urban and rural residence. Sixty-nine percent of rural women do not use any method of FP, compared with 42% of urban women. Additionally, only 28% of rural women are using a modern method of FP, compared with 56% of urban women.
CONCLUSION

Over half (51%) of all non-first births in Uttarakhand, India, are spaced less than 24 months apart, putting women and their infants at increased risk for poor maternal and perinatal outcomes. This analysis demonstrates that women in Uttarakhand have a significant unmet need for FP during the two years after a birth. Even though unmet need decreases during this period (from 77% to 41%), the overall unmet need is still high. Notably, unmet need for limiting remains high at 27% at 24-months postpartum.

While 96% of women 12–24 months postpartum are sexually active and 86% have menses return, only 43% of sexually active postpartum women are using FP during this period, leaving them at increased risk for unintended pregnancy. Perhaps reflective of access to services, the majority of women (71%), who delivered at home, were not using any method of FP, while 48% of women who delivered in a health facility were using a modern FP method. Similarly, findings demonstrate the need for increased community-based services in rural settings because rural women are much less likely to use a modern FP method than urban women (28% and 56% respectively).

Ensuring that all women with infants and small children have access to high-quality FP services through existing maternal and child health services, in both urban and rural settings, is an important strategy for reducing both maternal and childhood mortality. Program evidence indicates that offering postpartum family planning (PPFP) services that begin during antenatal care and are offered during all maternal and child health contacts can be effective for increasing awareness of, demand for and use of FP in this critical period.

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