

Evidence-based modelling suggests improved maternal and child health through increased access to family planning

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Objectives: In 2009, with assistance from the US Agency for International Development (USAID), the Government of Pakistan introduced advanced contraceptive supply chain interventions to improve maternal health. The interventions were aimed at strengthening supply chain performance throughout the system and improving contraceptive commodity availability, including activities to sustainably improve capacity in procurement and logistics management, as well as warehouse rehabilitation. Additionally, a web-based logistics management information system (LMIS) was launched in 2011 to improve data visibility and commodity availability at the last mile, where clients can access them. The LMIS has been capturing consumption data on a monthly basis in the public sector, two major NGOs, plus sales data from social marketing.

From 2001 to 2009, the Pakistani government spent on average \$5 to 6 million per year on contraceptive procurement. To drastically increase these inputs, USAID supported in-kind contraceptive commodity donations worth \$32 million for 2010 and 2011 based on the projected needs of the population. This analysis endeavoured to determine the impact of these supply chain interventions and the drastic increase in contraceptive availability in Pakistan on maternal and child health outcomes.

Method: Using logistics data on contraceptive distribution, this analysis mapped the significant increase in contraceptive availability to the entire population across Pakistan. This data was used to calculate couple-years of protection. Evidence-based conversion factors were then applied to estimate the impact of contraceptive commodity availability on key maternal and child health outcomes, including unplanned pregnancies prevented, maternal and infant deaths averted, and other health outcomes.

Results: Findings suggest that the quantities of contraceptives distributed to clients through the supply chain from 2010–2011 represent approximately 11 million couples served, which in turn translates into an estimated 3.2 million unintended pregnancies prevented and more than 81,000 infant deaths and 3300 maternal deaths potentially averted. Approximately a 14% increase in contraceptive use from 2010 to 2011 can be attributed to the level of support provided for family planning commodities.

Conclusions: This analysis suggests that increasing product availability through improved supply chain performance is rapidly meeting the needs of Pakistani couples. Ensuring access to reproductive health commodities has a profound impact on the health of individual women, as well as the social and economic well-being of families and communities.