

Abstract
**Achieving Millennium Development Goals for Maternal and Child Health in India –
The Role of Human Resources in Health**

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Background and Objective

India continues to perform poorly in achieving MDGs especially for maternal and child health, ranking 128 among 177 countries¹. Recent cross-country studies have indicated such health outcomes and related service utilization to be associated with the size, distribution and composition of the health workforce². However, there is scarce empirical analysis on this association in the Indian context. This study examines the effect of the availability and composition of health workers on key maternal and child health and service utilization outcomes in India.

Data and Methods

Data from the 2001 Census of India is used to estimate the number of health workers, their density and composition across 593 districts in India. Multiple linear regression is used to examine the association between key child health (infant mortality) and service utilization (immunization, antenatal care, institutional deliveries) indicators after controlling for socioeconomic factors such as female literacy and economic well-being.

Results

Greater health worker density is positively and significantly associated with lower infant mortality, higher institutional deliveries, greater receipt of ante-natal care and better immunization coverage. The availability of the health workforce was found to be as important as its composition, with doctors and nurses having a different impact on these health outcomes. Further, higher density of female health workers is significantly associated with greater use of ante-natal care and attended deliveries.

Conclusion

The size of the health workforce is intimately associated with key health and service utilization outcomes in India. Importantly, the availability of female health workers is critical for improving use of maternal health services. These findings highlight the importance of addressing health workforce issues for achieving MDGs in India.

¹ Human Development Report, 2007-08

² Anand and Barnighausen, 2004; Joint Learning Initiative, 2004