District level coverage gap in Maternal, Newborn and Child Health care services in India

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Abstract India has the highest number of maternal (2010) and child (2009) deaths in the world suggesting a poor coverage in Maternal, Newborn and Child Health (MNCH) care services. This study assessed the coverage gap in MNCH care across districts in India using a robust aggregate Coverage Gap Index (CGI) developed by the 'Countdown 2008 Equity Analysis Group'. The north–south divide in MNCH care coverage gap is apparent. The results derived from this study emphasise the need for focused intervention in 210 districts which have a coverage gap of ⩾50%.
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India has the highest number of maternal (2010) and child (2009) deaths in the world suggesting a poor coverage in Maternal, Newborn and Child Health (MNCH) care services [1]. 'Coverage' is defined as the percentage of people receiving a specific intervention and is often discussed as having both a supply side and demand side component [2]. This study assessed the coverage gap in MNCH care across districts in India using a robust aggregate coverage gap index (CGI) developed by the 'Countdown 2008 Equity Analysis Group' [2].

To construct the CGI, data from the third wave of the District Level Household and Facility Survey, 2007–2008 (DLHS-3) [3] were analysed. The main focus and objective of DLHS-3 was to provide MNCH indicators that followed a standard protocol. This survey was conducted by the International Institute for Population Sciences (IIPS) under the aegis of the Ministry of Health and Family Welfare (MoHFW), Government of India. The survey data were made available in the public domain. The DLHS-3 procedures were approved by the IIPS ethics review board, and the Technical Advisory Committee (TAC) appointed by the MoHFW. All individuals selected in the DLHS-3 were asked to provide informed voluntary and written consent. The study was exempted from any institutional review board approval due to the use of secondary analysis of data with no identifiers. A detailed description of sampling and data collection protocol is given in the DLHS-3 final report [3].

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Table 1 Definition of indicators by intervention area used to construct the coverage gap index.

Indicators for coverage gap index	Definitions
Indicators for family planning	
Contraceptive prevalence rate (CPR)	Percentage of women aged 15—49 years currently married or in a union who are using (or whose partner is using) a modern contraceptive method
Indicators for maternal and newborn care	
Skilled birth attendants (SBA)	Percentage of live births in the 3 years before the survey attended by skilled health personnel (doctor, nurse, midwife, or auxiliary midwife)
Antenatal care (ANC)	Percentage of women attended at least thrice during pregnancy by skilled health personnel for reasons related to pregnancy in the 3 years preceding the survey
Indicators for immunisation	
Measles vaccination (MSL)	Percentage of children aged 12—23 months who are immunised against measles
Diphtheria, pertussis and tetanus vaccination (DPT3)	Percentage of children aged 12—23 months who received three doses of diphtheria, pertussis, and tetanus vaccine
BCG vaccination (BCG)	Percentage of children aged 12—23 months currently vaccinated against BCG
Indicators for treatment of sick children	
Oral rehydration therapy (ORT)	Percentage of children under-5 with diarrhoea in the preceding 2 weeks who received oral rehydration therapy (packets of oral rehydration salts, recommended home solution, or increased fluids) and continued feeding
Treatment of acute respiratory infection (ARI)	Percentage of children aged 0—59 months with suspected pneumonia (cough and dyspnoea) who sought care from a health provider
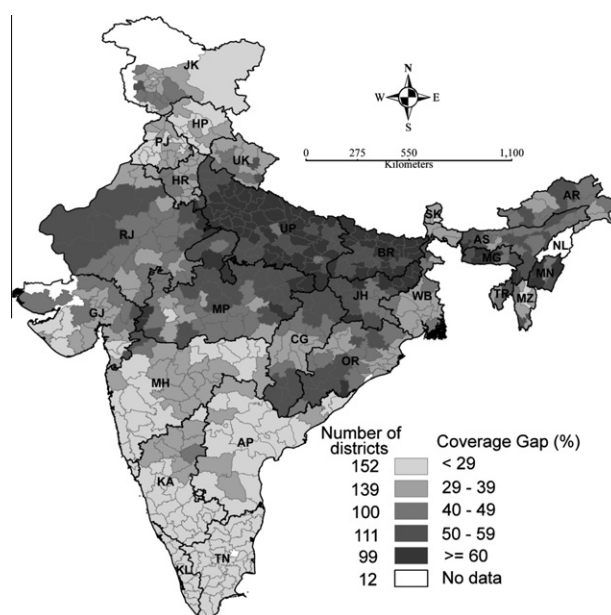
Figure 1 Coverage gap in MNCH care across 601 districts in India, 2007—2008. *Note*: District level estimates for Delhi are not shown on the map, but it shows the state level estimate. Abbreviations shown for the states are as follows: Andhra Pradesh (AP); Arunachal Pradesh (AR); Assam (AS); Bihar (BR); Chhattisgarh (CG); Gujarat (GJ); Haryana (HR); Himachal Pradesh (HP); Jammu and Kashmir (JK); Jharkhand (JH); Karnataka (KA); Kerala (KL); Maharashtra (MH); Manipur (MN); Meghalaya (MG); Mizoram (MZ); Nagaland (NL); Orissa (OR); Punjab (PB); Rajasthan (RJ); Sikkim (SK); Tamil Nadu (TN); Tripura (TR); Uttarakhand (UK); Uttar Pradesh (UP); and West Bengal (WB).