

## Towards equitable healthcare provision

### OP-31 FACTORS INFLUENCING THE PERFORMANCE OF PRIMARY HEALTH CENTRES IN SELECT DISTRICTS OF NORTH KARNATAKA

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**Background** Typically, public health systems at lower levels (district and below) do not have the required authority and/or resources to substantially improve the local health systems. Understanding factors that explain differential health outcomes allows them to improve system's effectiveness within their limited authority and resources. This paper presents an analysis of the health care provided by 24×7 primary health centres (PHCs). It provides evidence of how different components of the local health system affect PHC performance leading to differential health outcomes. Recommendations are made to improve performance of 24×7 PHCs in the study area.

**Methods** This study was conducted in 37 24×7 PHCs in the 7C districts of North-Karnataka (Bagalkote, Bidar, Bijapur, Gulbarga, Koppal, Raicur and Yadgir). Performance of 24×7 PHCs was measured using the keystone indicator 'live deliveries per thousand population'. A modified version of WHO's health systems framework (to accommodate for local contextual factors with other systemic factors) was used to analyse factors influencing performance. PHCs were grouped into high performance (H-PHCs: 15), medium performance (M-PHCs: 9) and low performance (L-PHCs: 12). The WHO's six building blocks (service delivery, human resource, medicine availability, financing, information and governance) were contrasted among the three groups.

**Findings** Our study found systematic differences in the quantity and quality of human resource, services provided and the overall effectiveness between the three groups of PHCs. The average monthly deliveries in the three groups were: 48.5 (H-PHCs), 18.2 (M-PHCs) and 6.4 (L-PHCs). As reported by the mothers, 80% of deliveries were conducted by staff nurses. Infrastructure, availability of medicines (both generic as well as delivery-specific) and availability of funds did not differ substantially across the three groups. The location parameters of H-PHCs do not suggest specific reasons for high patient loads or higher birth rates. H-PHCs were prompt in providing benefits like *Janani Suraksha Yojana* and *Madilu* kits. They also provided higher numbers of out- and in-patient services, emergency services and other services like laboratory tests in comparison to other groups.

PHCs with women doctors had considerably higher average deliveries per thousand per year (15) compared to those without women doctors (8). 73% of H-PHCs had women doctors whereas the proportion was about 30% in L-PHCs. 80% of the H-PHCs had two or more doctors, whereas this proportion was about 30% in L-PHCs. 86% of H-PHCs had three or more staff nurses whereas the proportion was about 61.5% for L-PHCs. Staff nurses in H-PHCs were better trained. The duration of continuous service of staff nurses in H-PHCs was greater in comparison to that of M-PHCs and L-PHCs. Only five out of the 37 PHCs had staff nurses trained in basic emergency obstetric care.

**Discussion & conclusions** PHCs in backward districts of Karnataka face systemic and contextual challenges. These include: (1) high patient density; (2) absence of basic

infrastructure like clean toilets and running water; (3) vacancies and job insecurity in key positions; (4) lack of training in basic emergency obstetric care; (5) rampant prescription of steroids by registered medical practitioners; (6) bias against the female child; (7) high fertility rates; (8) malnutrition; and (9) poverty. Even in the presence of these challenges, H-PHCs are able to provide greater levels of services in comparison to other groups. They have greater proportion of women doctors, presence of two or more doctors, doctors staying in the headquarter villages and greater number of staff nurses. These factors positively influence the performance of these PHCs substantially even though the status of fund availability is same as other PHCs. An important conclusion is that in these generally backward districts, the rationing and selective provisioning of human resources in reference to patient density is short sighted.

Staff nurses conduct a majority of deliveries. Investing on capacity building and provision of stable career paths for staff nurses could yield better returns in the short term. Exploring policies for attracting women medical officers for rural services is another issue that has proportionately greater impact on improving effectiveness of 24×7 PHCs. While larger systemic challenges exist in public health care in India, not all policy changes need to happen at the national and state levels. This study provides an example of a micro-level analysis of a health system that provides evidence to authorities at lower levels in the system, to respond to local contextual issues for improving service delivery within their jurisdiction. Together with larger policy reforms, these evidence based implementation level adaptations of existing policies could be crucial for rapid improvement of health status in India.

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