

Strengthening Primary Level Health Service Delivery: Lessons from a State in India

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ABSTRACT

The main aim of the study was to assess primary health centers (PHCs) in terms of availability of assured services, facility of primary management of selected cases, surgeries, maternal and newborn health care services, and child health care services with respect to Indian Public Health Standards (IPHS). Data were collected from service providers (medical officer-in-charge) at PHCs through well-structured questionnaire developed by referring the IPHS for PHCs prescribed by the Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. The study was conducted at five districts (i.e. Bundi, SawaiMadhopur, Kota, Tonk, and Karauli) of Rajasthan state of India. All 148 PHCs of these five districts were included in the study. Findings depict that more than 90% of the study PHCs showed availability of services such as outpatient department (OPD), antenatal check up (ANC), postnatal check up (PNC), management of reproductive tract infections/sexual transmitted infection (RTI/STI), immunization, and treatment of diarrhea. However, services such as emergency services (24 h), primary management of fractures, surgery of cataract, medical termination of pregnancy (MTP) services, management of low-birth-weight babies, facility for tubectomy and vasectomy, and facility for internal examination for gynecological conditions were poor at PHCs of the study districts, which need to be addressed for further strengthening of primary health centers.

Keywords: Healthcare services, Indian public health standards, primary health centers

Introduction

Primary healthcare is the vital strategy that remains the backbone of health service delivery. It was understood as universal health care that is acceptable and affordable to all, comprising the preventive, promotive, curative, and rehabilitative aspects of health and an integrated and comprehensive approach to development of health services. There is widespread and growing demand for primary health care in developing countries, especially in India. India was one of the first countries to recognize the merits of primary health care approach. Primary health care was conceptualized in 1946, three decades before the Alma-Ata declaration. This demand in turn displays a growing eagerness among policymakers and program managers for knowledge related to how health systems can become more equitable, inclusive, and fair. The Declaration of Alma-Ata on Primary Health Care in 1978 guided and directed path for establishing effective primary health care in member countries, especially in

India.^[1] Alma-Ata Declaration viewed health as an integral part of the socioeconomic development of a country. It provided the most holistic understanding to health and the framework that states needed to pursue to achieve the goals of development. The declaration recommended that primary health care should include at least: Education concerning prevailing health problems and methods of identifying, preventing, and controlling them; promotion of food supply and proper nutrition, and adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and promotion of mental health and provision of essential drugs.

Further, the Bore Committee (1946) strongly proposed the primary health care approach for effective and equitable health care services.^[2] Yet, despite enormous progress in health service delivery in terms of infrastructure, human resources, and service provision, our collective failures to deliver in line with primary health care values deserve greatest attention. In rural areas, mothers suffering complications of labor without

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access to qualified support and children missing out on essential vaccinations required serious efforts to rectify the problems associated with these health outcomes. In moving forward, it is important to learn from the past and, on looking back, it is clear that we can do better in the future. Recognizing the importance of health in the process of economic and social development of India, the Government of India has launched the National Rural Health Mission (NRHM) to carry out necessary architectural correction in the basic health care delivery system in India. The plan of action of NRHM included apart from many other sector reforms, upgrading health centers as per the Indian Public Health Standards (IPHS).^[3] Ministry of Health and Family Welfare, Government of India, formulated the IPHS and streamlined the requirements of physical infrastructure based on population and human resource requirements for health facilities ranging from the grassroots level subcenters (SCs), primary health centers (PHCs), community health centers (CHCs), as well as hospitals with bed strengths of 31–50, 51–100, 101–200, 201–300, and 301–500 beds, respectively.^[4-19]

Health care delivery in India has been envisaged at three levels, namely, primary, secondary, and tertiary. The primary level of health care essentially includes PHCs and SCs. PHCs are public health facility designed to provide curative and preventive health care to the rural population with emphasis on preventive and promotive aspects of health care. A PHC is established for every 30,000 rural population in the plains and 20,000 population in the hilly areas.^[6] According to Rural Health Statistics Bulletin 2010 of Ministry of Health and Family Welfare, Government of India, there are 23,673 PHCs functioning in India.^[20] PHCs are the cornerstone of rural health services and a first port of call to a qualified doctor of the public sector in rural areas for the sick and those who directly report or are referred from SCs for curative, preventive, and promotive health care.

Standards are being introduced in order to improve the quality of services in these health care centers. Although there are standards as prescribed by the Bureau of Indian Standards (BIS), these are at present not achievable as they are very resource intensive. Hence, a less resource-intensive standard suited to the requirement of the system has been developed.

Draft guidelines for “Indian Public Health Standards for Primary Health Centers” were published in 2006, which were then modified as “Indian Public Health Standards (Revised Draft) for Primary Health Centers” (2010). But no changes have been made in the availability of services at PHCs.^[6,7] The IPHS are a set of standards formed to provide optimal level of quality health care, with the aim to deliver high-quality services which are fair and responsive to the client’s needs, which should provide equitably, and which delivers improvements in the health and well-being of the population.

The IPHS for PHCs are designed to provide comprehensive primary health care to the community through these centers, to achieve and maintain an acceptable standard of quality of care,

to make the services more responsive and sensitive to the needs of the community. IPHS is a novel concept to fix benchmarks of infrastructure, including building, manpower, equipments, drugs, and quality, through introduction of treatment protocols, and accountability to the public, through the concept of citizen’s charter enforced through the hospital management society at the health facility level and quality assurance committee at state and district levels.

There are very few studies to evaluate PHCs with respect to IPHS, especially for service provision. The IPHS have been applied to evaluate PHCs of an empowered action group (EAG) and non-EAG states in India.^[21] In this study, quality of care and service provided at the PHCs as per IPHS were assessed using the standard perform and compared with the checklist prescribed by the Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. The study considered the following components for evaluation – the services provided, monitoring and supervision of activities conducted by PHCs, availability of manpower and infrastructure, laboratory facilities in the PHCs. Also, another study focused on analyzing gaps in infrastructure and service delivery at PHCs in Bihar state and focused on to evaluate the PHCs in terms of availability of services, infrastructure, equipment, drugs, staffing.^[22] To assess IPHS for newborn care facility, a study was conducted in Bharatpur district of Rajasthan state of India.^[23]

An effort has been made in this study to assess the availability of services such as assured services, primary management of selected cases, surgeries, maternal and newborn health care services, child health care services, and specific services at PHCs, and compare these with the IPHS for PHCs. This study was conducted at PHCs in the five districts of Rajasthan state, namely, Kota, Tonk, SawaiMadhopur, Karauli, and Bundi.

Materials and Methods

India lies in Southeast Asia. The country is the seventh largest and the second most populous country in the world. It covers land area of 3,287,590 km² and its population is 1.21 billion. India is divided into 28 states and 6 union territories and a National Capital Territory.^[24,25] Rajasthan is one of the states in India, located at the northwest. The state of Rajasthan has an area of 342,239 km² and a population of 68,621,012 (census 2011). There are 33 districts, 237 blocks, and 41,353 villages. The state has a population density of 165 per km² (as against the national average of 312). The decadal growth rate of the state is 28.41% (against 21.54% for the country) and the population of the state continues to grow at a much faster rate than the national rate.^[25,26] As we know, Rajasthan is one of the 18 special focused states identified by the NRHM to provide effective healthcare because of weak public health indicators as well as public health infrastructure.^[3] The present paper is based on a study conducted in the five districts of Rajasthan, namely, Kota, Tonk, SawaiMadhopur, Karauli, and Bundi. The population of the study districts, number of PHCs, and population PHC ratio is given in Table 1.

To assess the PHC in terms of availability of assured services such as out-door patients department, 24-h emergency services, referral services, and in-patients department; primary management of selected cases such as wounds, fractures, poisoning, and burns; surgeries such as surgery for cataract and minor surgeries; maternal and newborn health care services such as antenatal care, intranatal care, postnatal care, newborn care, medical termination of pregnancy (MTP), and management of reproductive tract infections/sexual transmitted infections (RTI/STI); and child health care services such as management of low-birth-weight (LBW) babies, immunization, fixed immunization days, treatment of children from pneumonia, and management of children suffering from diarrhea and severe dehydration, etc. with respect to IPHS, a facility assessment tool was developed referring the IPHS for PHCs developed by the Ministry of Health and Family Welfare (MoHFW), Government of India. To collect data from PHCs, a competent and committed team of investigators was hired. All the investigators were post-graduates in social sciences and had adequate experience of conducting health and demographic surveys and health facility surveys. The investigators had undergone training to collect the data. Data were collected from all 148 PHCs of the study district during the year 2006. The data were collected by investigators visiting all the PHCs of the study district. The investigators requested medical officer in-charge at the PHCs to provide the required data on services. To avoid any bias in the information gathered, the investigators reviewed respective records and registers as well as made observation at the PHCs.

Results

Table 2 depicts availability of services at the PHCs from five districts of Rajasthan state in India. Findings shows that OPD services were provided by all the PHCs. Regarding 24-h emergency services, the data depict that only 75% of PHCs were providing emergency services. It was found that 86.5% (128) PHCs were equipped for providing referral services. Findings depict that indoor patient department (IPD) services were available at 80.4% (119) PHCs in the study state. Findings on availability of primary management of selected cases show that 89.2% (132) of studied PHCs had the facility of primary management of wounds. However, only 69.6% (103) of PHCs were equipped to provide the facility of primary management of fractures. Regarding the facility for primary management of poisoning cases, it was found

that 77.7% (115) of PHCs showed availability of such facility. Almost 90% (132) of the PHCs showed availability of services for primary management of burn cases. It is clear from the table that only 8.1% (12) of the PHCs were equipped to provide surgery service for cataract. Regarding minor surgeries (draining of abscess, etc.), data show that 83.8% (124) had availability of such services.

As far as maternal health care services are concerned, findings show that antenatal check up (ANC) and postnatal check up (PNC) services were available in 98.6% (146) and 94.6% (140) of the PHCs, respectively. However, intra-natal services were

Table 2: Availability of services at PHCs in the study districts in Rajasthan

Services	Total of PHCs	
	Number (148)	Percentage
Assured services		
Out-door patient	148	100.0
Emergency (24 h)	111	75.0
Referral system	128	86.5
In-door patient	119	80.4
Primary management of		
Wounds	132	89.2
Fracture	103	69.6
Cases of poisoning	115	77.7
Burns	132	89.2
Types of surgery		
Surgery for cataract	12	8.1
Minor surgeries (draining of abscess, etc.)	124	83.8
Maternal health care services		
Ante-natal care	146	98.6
Intra-natal care	115	77.7
Post-natal care	140	94.6
MTP	16	10.8
Management of RTI/STI	147	99.3
Child and newborn health care Services		
Newborn care	118	79.7
Low-birth-weight babies managed	64	43.2
Child care including immunization	148	100.0
BCG and measles vaccine given regularly in the PHC	139	93.9
Treatment of children with pneumonia	136	91.9
Management of children suffering from diarrhea with severe dehydration	139	93.9
Specific services		
Facility for normal delivery (24 h)	116	78.4
Facility for tubectomy and vasectomy	59	39.9
Facility for internal examination for gynecological conditions	76	51.3
Treatment for leukorrhoea and menstrual disorders	134	90.5
Treatment for anemia (pregnant and non-pregnant women)	140	94.6

Table 1: Distribution of primary health centers in study districts

Study districts	Population (census 2011) (A)	Number of primary health centers (PHCs) covered (B)	Population covered by one PHC (A:B)
Bundi	1,113,725	26	42,836
Sawai Madhopur	1,338,114	23	58,179
Kota	1,950,491	29	67,258
Tonk	1,421,711	45	31,594
Karauli	1,458,459	25	58,338

provided by 77.7% (115) of the PHCs only. It is clear from the table that only 10.8% (16) PHCs were providing services of MTP. Services for management of RTI/STI were found available in 99.3% (147) of the PHCs. Nearly 80% of the studied PHCs showed availability of newborn care services. As far as other child health care services are concerned, findings show that immunization facilities were available at all the studied centers, but BCG and measles vaccines were regularly provided by 93.9% (139) PHCs only. More than 90% of the PHCs were equipped to provide treatment for pneumonia and management of children suffering from diarrhea with severe dehydration.

Findings on specific services show that only 78.4% (116) of the PHCs were properly equipped to provide 24-h normal delivery facility. Nearly 50% of the PHCs were providing facility of internal examination for gynecological conditions. However, 39.9% (59) of the studied PHCs showed availability of facility for tubectomy and vasectomy. It is clear from the table that 94.6% (140) of the PHCs were providing treatment for anemia to both pregnant and non-pregnant women. Treatment for leukorrhea and menstrual disorders was found to be available in 90.5% (134) of the studied PHCs.

The present study shows that services such as surgery of cataract, MTP, facility of tubectomy and vasectomy, management of LBW babies, and facility of internal examination for gynecological conditions are available in very few PHCs which are depicted in Figure 1.

Discussion

PHCs are expected to provide primary care to the community, especially in the rural areas. Findings show that assured services were available in more than 75% of the studied PHCs. Almost all studied PHCs were providing services for management of RTI/STI and more than 90% of the PHCs were providing child health care services (such as child immunization, treatment of pneumonia, and management of children suffering from diarrhea and severe dehydration), ANC and PNC services. Services for newborn were available in around 80% of the PHCs. Availability of services for the management of LBW babies was found to be poor as only 43% of the PHCs were providing such services

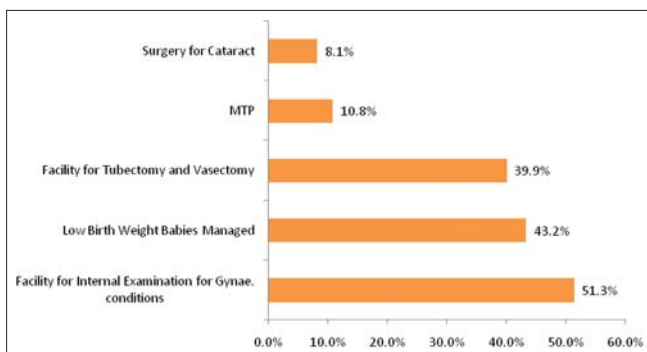


Figure 1: Percentage availability of services at PHCs in the study districts in Rajasthan

and 40–50% PHCs were providing services for tubectomy and vasectomy and internal examination for gynecological conditions. Findings depict that only 10.8% PHCs were offering MTP services.

One of the major reasons for the poor quality of services is the lack of capital investment for strengthening health services, especially at PHCs, for prolonged period of time. The NRHM made some efforts to strengthen the necessary service delivery in rural areas. This will require substantial plan assistance to the states for upgrading the existing PHCs to IPHS norms, which are critical to reducing maternal mortality and infant mortality. This would require not only infrastructural strengthening but also adequate human resource support and well-developed service delivery protocols.

Strengthening the primary health care in rural areas can over time reduce or delay the occurrence of many diseases and also decrease the referral load of secondary and tertiary care for complications that arise from delayed detection or absence of early care. Investment in primary health care could generate positive health that is likely to reduce the need for secondary and tertiary care facilities, reduce the cost of healthcare, and enhance health equity.^[27]

Limitations of the study and the way forward

Certain limitations of the study are: Only availability of services has been studied; outcome and health impact assessment has not been carried out. Outcome measures such as proportion of fully immunized children, proportion of deliveries conducted at institutions, unmet needs of cataract operations in the community, etc. can be suggested for more detailed studies/ ongoing surveillance. Similarly, health impact assessment can be built in as an ongoing evaluation system by monitoring the infant, perinatal, maternal mortality rates, and other relevant indicators.

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