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The role of basic laboratory services in strengthening primary health centres

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Abstract

Several proposals have been initiated under the National Rural Health Mission (NRHM) to strengthen public health services in the country. Primary health centres (PHCs) are the basic structure for implementing primary healthcare, and basic laboratory services are essential not only for strengthening PHCs but also for their sustainability. In order to accomplish these, possibilities within NRHM are discussed.

Introduction

As the National Rural Health Mission (NRHM) completes half a decade, it is important to examine the ways in which the mission has been able to strengthen primary healthcare in rural settings. This will help explore avenues for further improvement. Though evaluations were not part of the mission during the early phases, several such initiatives were carried out, most by civil society organisations (1) and some by academic institutions. The evaluations were largely concerned with the extent to which the programme could accomplish communitisation and decentralisation, through Accredited Social Health Activists (ASHAs), Rogi Kalyan Samitis (RKSs) and Village Health and Sanitation Committees (VHSCs). Another core area, the strengthening of public health services - especially primary health centres - was discussed primarily in the context of improving quality by attaining Indian Public Health Standards (IPHS). Here the final goal to be achieved is clearly stated but the focus of the processes involved in accomplishing it is not sufficiently clear.

Against this background, the present article examines the scope for strengthening primary health centres (PHCs) by introducing basic laboratory services, and the various options by which this end can be achieved through NRHM.

Strengthening PHCs through the NRHM

As per the commitment of the NRHM to improve public health services, one of the core strategies has been to strengthen PHCs and community health centres (CHCs) to meet the level of Indian Public Health Standards (2). The Mission envisages strengthening PHCs by allotting a second doctor to address the shortage of humanpower, and by providing for adequate drug supply and equipment through the RKS or other resources. Further, a component in the NRHM on strengthening disease control programmes not only focuses on infectious diseases like malaria, tuberculosis, kala azar and filaria but also calls for new initiatives for control of non-communicable diseases (2). The disease control programmes are presented as justifications for the need to improve functioning of PHCs in the country, though very little is mentioned about how to accomplish this.

The recent performance audit report by the Comptroller and Auditor General (CAG) on the implementation of the NRHM exposes the condition of PHCs, thereby reaffirming the need to strengthen them. As per the report, which is based on PHCs' performance during 2008, there are 8,613 PHCs fewer in the country than planned under NRHM with states like West Bengal, Jharkhand and Bihar having a shortfall of more than 1,000 PHCs. Further, of the total 687 PHCs selected for the audit, 120 (17.5%) were found to have inadequate water supply and 93 (13.5%) did not have electricity. Regarding support services within the PHC, 52% of them have a shortage of laboratory technicians (3). In comparison, there is a 11% shortage of medical doctors and 29% shortage of pharmacists. This highlights the need to examine, in detail, the role of laboratory services in PHCs.

The low priority given to improving support services like laboratory services can also be due to the perceived functions of PHCs. In some communities, PHCs are viewed only as centres to carry out preventive care activities with or without the support of national health programmes; sometimes they are seen as mere dispensaries. In the process, the core function of PHCs, namely medical care, has been sidelined. This is despite the fact that medical care was considered the primary function since the conception of the PHC in the Bhore committee report, as well as subsequently when PHCs were established for the first time in 1952 under the community development programme. Even six decades later, and even under the recent initiatives of the NRHM, the PHC's core function, medical care, is not adequately addressed.

Medical care as PHCs' major function

Any attempt to improve the functioning of PHCs should aim at improving their primary function of medical care. Medical care implies diagnosis, prognosis and treatment. Early diagnosis and treatment are essential not only as curative interventions but also for effective control of communicable diseases. This was demonstrated for TB (4), leprosy (5) and malaria (6). Thus, any initiative to strengthen medical care in PHCs will only add to their preventive component.

However, if one examines the history of various control programmes in our country, it becomes obvious that vertical approaches to disease control programmes have weakened, rather than strengthened, the medical care component of the PHC (7). Laboratory services in the PHC are the worst affected in this process. This is evident from the facilities in many PHCs; some can only examine for malaria parasites and others can test only for mycobacterium TB. This could also be due to inadequate training of lab technicians, the reasons for which can be traced back to the vertical approaches in disease control programmes.

In order to address the problem of inadequate laboratory facilities at PHCs, states like Bihar and West Bengal have entered into public private partnerships to provide laboratory services (8). However, any kind of public private partnership for core services like laboratory services defeats the very purpose of strengthening medical care in PHCs and thus strengthening public health services. One of the basic assumptions for entering into partnership is the explicit acknowledgement of the inability of the public sector to render those services.

The role of basic laboratory services in medical care

The debate about the role of technology and its utility in medical practice is an old one, whether it is the use of the stethoscope or the use of laboratory investigations. The role of any medical technology should be supplementary and contextual rather than a substitute for medical consultation. In the current situation, it has been found that patients also demand laboratory investigations as part of medical care. In other words, in the current age of 'laboratory medicine', medical care becomes comprehensive only with the support of basic laboratory facilities. Moreover, studies have also found that facilities like laboratory support along with other infrastructural facilities are an important determinant influencing the utilisation of health services (9).

One should be cautious while developing laboratory facilities at the PHC level. Here one of the basic principles of primary healthcare, namely, appropriate technology, becomes relevant. The kind of laboratory facilities to be developed should be 'basic', and not high-tech, and meant to equip the health facility to render effective medical care. Here, the reference point can be the IPHS which identifies facilities for routine blood and urine tests, basic tests for haemoglobin, TB, malaria and typhoid, along with those for reproductive tract infections, pregnancy, syphilis, faecal contamination of water and so on (10). Further, the increasing contribution of non-communicable diseases to total mortality, in some states, justifies the laboratory requirements for some of those diseases. These requirements include facilities for routine blood and urine tests for diabetes, and lipid profile and electrocardiogram for coronary heart disease.

Ensuring basic laboratory services at PHCs not only improves the quality of medical care but is also capable of creating a greater demand for essential drugs at the facility. This in turn can improve the potential of the PHC as a centre providing primary healthcare. This was evident from the experiences of a rural laboratory in Chattisgarh, which has demonstrated that a trained technician with a microscope is able to support the efforts of the physician by systematically distinguishing between a range of diseases like TB, malaria, typhoid, upper respiratory tract infection, and pneumonia with better specificity. A proper diagnosis of these and other common acute illnesses can not only improve the treatment modalities but also can bring down the cost of treatment by minimising the use of the syndromic approach to treat minor ailments (11). Moreover, this can also be a starting point for setting standard treatment guidelines and protocols for medical care, again mentioned under strengthening of PHCs under the NRHM (2). Thus, we must devise specific strategies for strengthening PHCs by giving due consideration to the components of medical care. Improvement of medical care can influence the ambit of PHCs which in turn influences public opinion about PHCs.

Options within the NRHM for strengthening PHCs

Several evaluations of the NRHM have identified the strength of the Rogi Kalyan Samiti (RKS) as a means to empower PHCs; less has been said on its scope for operation. One of the major strengths of RKS is its ability to generate funds. Inevitably, this has led to the criticism that these funds are inadequate and sometimes used irrationally. It was found that during the initial years, the funds were not adequately utilised (12). In recent years, as well as earlier, the majority of funds were not used specifically to improve the care component in PHCs. The initial response also suggests that the utilisation of funds under the RKS was diverse, as is expected of any untied funds, but very little has gone into improving the quality of care in terms of providing drugs and so on. This led to a call for streamlining annual maintenance grants and untied funds through proper administrative mechanisms and procedures. When it comes to RKS funds and their utility, it is shocking to find that funds are not properly used as per the Accountant General's instructions; further, the amount spent under the RKS has contributed little to improve healthcare delivery in PHCs. Instead, most of the funds were used to 'beautify' the institution even when the physician is absent or drugs are inadequate (1, 11). Moreover, an analysis of fund utilisation between 2005 and 2008 found that almost 50% of the funds remained unutilised in many of the sample districts (11). The rate varied from 98 % in Bihar to 31 % in Karnataka (3). When the reasons for inadequate utilisation were examined, the initial responses were "fear to use the funds", "inadequate knowledge" and "delays" (1). On further inquiry, it was found that the diverse circumstances of PHCs also prevented policy makers from coming out with a common prescription for PHCs regarding areas in which one should spend RKS funds. This also comes from the fact there is inadequate knowledge on how exactly to strengthen PHC functioning.

Thus in order to strengthen the primary function of the PHC, namely medical care, the starting point is the development of a support system. To improve medical care in places where physicians and drugs are available, developing basic laboratory

facilities becomes a priority. This improvement could be procuring a microscope, training a lab technician, and so on. Here the issue is the diversity of situations in which PHCs operate in the country. In states where communicable diseases are predominant, laboratory facilities should be developed accordingly, whereas in states where non-communicable diseases take the greatest toll, facilities to address those needs should be given priority. In addition to the resources from the RKS, funds allocated under the NRHM for non communicable diseases can also be used. As mentioned earlier, the current scenario is such that 13-17% of PHCs still lack adequate water supply and electricity facilities, drugs are inadequate in some, and there are no laboratory facilities in others. In this situation, members of RKS, viz. panchayat raj institutions members and medical officers, would benefit from a priority- based flowchart on how much to spend and for what purpose. Such a flowchart can be the tool to identify the needs of PHCs, giving due consideration to the prevalent scenario. For example, in those PHCs that lack water supply and electricity, priority should be given to address these lacunae first and not necessarily through the RKS but also through infrastructure building under the NRHM. Once these two facilities are established, priority should be given to providing for doctors, drugs and then laboratory facilities. This kind of priority list will not only improve RKS functioning but can also be used as a guideline for monitoring RKS fund utilisation.

Conclusion

The present article is an attempt to enquire into the possibilities of the NRHM to strengthen the core functions of PHCs, namely medical care. The need for strengthening the role of laboratory facilities in PHCs becomes important in the current context of medical care where basic laboratory services deserve an important place. This is because not only are laboratory services found to influence the preference for health services, they can also improve public opinion about PHCs, which in turn can affect the overall strengthening initiative. It must be noted that any strengthening of support services within PHCs should be in tune with the context of PHCs and their current state of affairs. This could be by focussing on the strengthening of laboratory services for communicable or non-communicable diseases, depending on their prevalence in the community. This is where the need arises for appropriate prioritisation of the possibilities in resource mobilisation. The RKS in the context of the NRHM opens up possibilities for resource provisioning along with other sources within the NRHM. Thus, a proper prioritisation plan for strengthening medical care along with flexibility in the use of resources can be a starting point to strengthen the core public health services. This can also be a monitoring tool for both the strengthening initiative as well as for RKS fund utilisation.

References

1. Centre for Health and Social Justice. *Reviewing two years of NRHM -- citizens' report.* New Delhi: CHSJ. 2007.
2. National Rural Health Mission, Government of India. *Mission document.* [Internet]. New Delhi: GOI; 2005. [cited 2009 Nov 9]. Available from: www.mohfw.nic.in/NRHM/Documents/Mission_Document.pdf
3. Comptroller and Auditor General of India. *Report of the performance audit of the implementation of the National Rural Health Mission.* Report No. 8 of 2009-10. New Delhi: Comptroller and Auditor General of India; 2009.
4. Nagpaul DR. District tuberculosis control programme in concept and outline, *Indian J Tuber*. 1967; 14(4): 186-98.
5. Pandey A., Patel R, Jamaluddin M. Leprosy control activities in India: integration into general health system. *Leprosy Rev*. 2006; 77: 210-8.
6. Kamat V R. Private practitioners and their role in the resurgence of malaria in Mumbai (Bombay) and Navi Mumbai (New Bombay), India: serving the affected or aiding an epidemic? *Soc Sci Med*. 2001; 52 (6):885-909.
7. Unger J. P., De Paepe P., Green Andrew. A code of best practice for disease control programmes to avoid damaging healthcare services in developing countries, *Int J Health Planning Management*.2003; 18: S27-S39.
8. Ministry of Health and Family Welfare, Government of India. *NRHM: Meeting people's health needs in partnership with states, the journey so far, 2005-10.* New Delhi: MoHFW, GOI; 2010.
9. Dacombe, RJ, Squire SB, Ramsay ARC, Banda HT, Bates I. Essential medical laboratory services: their role in delivering equitable healthcare in Malawi. *Malawi Medical Journal.* 2006; 18(2): 77-9.
10. Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India *Draft guidelines for Indian Public Health Standards (IPHS) for primary health centres*. [Internet]. New Delhi: Government of India; 2006 [cited 2009 Mar 9]. Available from: mohfw.nic.in/nrhm/Documents/IPHS_for_PHC.pdf
11. Jan Swasthya Sahayog. Impressions from a rural laboratory. *MFC Bull.* 2006; 316, 317: 1-4.
12. Gill K. *A primary evaluation of service delivery under the National Rural Health Mission (NRHM): findings from a study in Andhra Pradesh, Uttar Pradesh, Bihar and Rajasthan,* Working Paper 1/2009 - PEO. [Internet]. New Delhi: Planning Commission of India; 2009. [cited on 2010 Sep 10]. Available from: http://planningcommission.gov.in/reports/wrkpapers/wrkp_1_09.pdf