

Strengthening of Primary Health Care Facilities of Uttarakhand through IT initiatives: an Innovative approach in Uttarakhand

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Abstract

Importance of primary health care services can be felt by those families, whose members were deprived of the essential services at the time of need and were unable to survive. Availability of primary health care services on time, some time saves life, time along with the reducing catastrophic out of pocket expenditure. Strengthening of Primary Healthcare Services is imperative to avoid huge overload of people wanting secondary and tertiary care that will create the hindrance in achieve the objective of affordable and accessible healthcare services for all. Primary Health Care has the essential potential to reduce morbidity and mortality significantly at lower cost vis-a-vis secondary and tertiary care.

The National Rural Health Mission launched in April 2005 was conceptualized with the objective of providing essential health services to the rural people. It was based on the principle of decentralization and engagement of community. The main objective of the NRHM was to revitalize the rural primary healthcare system. In order to comply with the pronounced objective of primary health care services, use of IT application and small innovative medical device will help in augmenting dilapidated primary health care services in Uttarakhand. Essential implementation of Teleradiology, Telemedicine, Telepathology and other state specific IT programme will plug the gap of requisite health services, as Uttarakhand consists of complex and highly vulnerable region because of difficult terrain, far flung small villages, which are difficult to approach. The institutional framework is not very much supportive in terms of providing the necessary health services at the remote areas as and when it required. State topography poses immense challenge in strengthening or outsourcing the requisite health services.

KEYWORDS: Primary Health Care System, Information Technology, Health Infrastructure, Health cost, Diagnostic Services

This article is a literature review of strengthening of Primary Health Care System through innovative IT (Information Technology) solutions.

Introduction

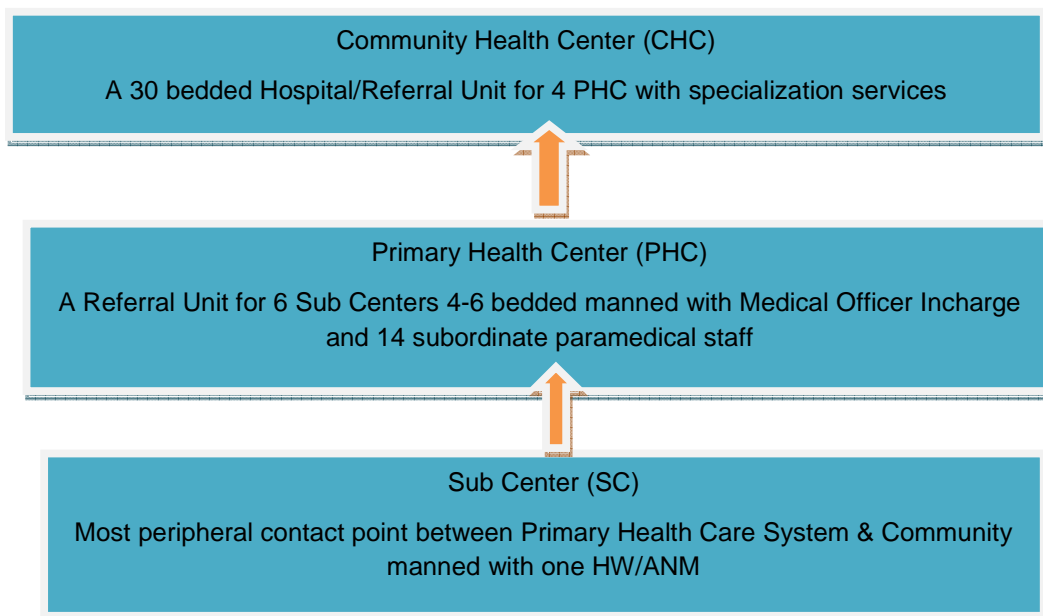
Information Technologies in Healthcare services plugs the gap by using real life cases. Information technology systems have been used in an innovative and applied manner to solve the types of problems faced every day in healthcare. It encompasses Electronic Health Record (EHR), Telemedicine, Teleradiology, Telepathology and other health IT experiences, in which brilliant and innovative uses of healthcare IT have improved quality, efficiency and value of the health services. Recent healthcare reform and its

provisions have pushed health information technology (HIT) into the forefront. Higher life expectancies, fewer medical errors, lower costs, and improved transparency are all possible through.

Strengthening of Primary Healthcare Services is imperative to avoid huge overload of people wanting secondary and tertiary care that will create the hindrance in achieve the objective of affordable and accessible healthcare services for all. Primary Health Care is value for money, enabling better health outcomes at lower per capita total health expenditure. Effectively delivered Primary Health Care has the potential to reduce morbidity and mortality greatly at lower cost to the system and the individual than any

This article is a literature review of strengthening of Diagnostic services in Primary Health Care facilities through innovative IT (Information Technology) solutions.

Rural Health Care System in India



Primary Healthcare Facilities in Uttarakhand

SN	Health Facilities	Total No.
1	Sub Centers (SC)	1,848
2	Primary Health Centers (PHC)	257
3	Community Health Centers (CHC)	59

Source: Rural Health Statistics (RHS) 2017, Ministry of Health & Family, Government of India

Current Status of Primary Healthcare in India

- 1- Identification of pregnant women for ANC
- 2- Promoting institutional deliveries
- 3- Preparing birth plans and escorting to higher facility
- 4- Nutrition counseling and listing of children with medium and severe malnutrition
- 5- Listing of eligible couples: contraception/birth spacing, different methods, vector control measures
- 6- STI Treatment
- 7- HIV and TB Control programmes
- 8- HIV and TB Control programmes
- 9- Immunization of children
- 10- Surveillance programmes
- 11- Provision of curative care

Provision of service: negligible or requiring substantial strengthening

- i. Identification of high risk pregnancies
- ii. Natal services
- iii. Early identification of post-natal complications and escorted referral and follow-up
- iv. Health Education and menstrual hygiene and RTI
- v. Identification of adolescents and counseling on personal hygiene/health promotion
- vi. Promoting use of safe water and toilets
- vii. School health programme
- viii. Advocacy against tobacco, alcohol, and substance abuse
- ix. Active surveillance, early detection, referral of NCDs: heart cancers, diabetes, hypertension
- x. IEC for education relating to rabies and snake bites
- xi. Surveillance and early detection of blindness and refractory errors
- xii. Surveillance and early detection of congenital deafness
- xiii. Oral hygiene education
- xiv. Identification of elderly and escorting for treatment
- xv. Mental health
- xvi. Promoting wellness and counseling

Health Information Technology Initiative for augmenting Diagnostic health services

Diagnostic are an integral part of the health care system and provide information needed by service providers to make informed decisions about care provision related to prevention, screening, detection, treatment and management. It is envisaging that primary screening/ diagnostic services will help in strengthen health services of the state as limited availability and access to quality laboratory and radiology services are among the major challenges contributing to delayed or inappropriate responses to disease control and patient management. This also results in continued reliance on empirical patient care of irrational diagnostic prescription, practices that waste scarce resources. Out of pocket expenditure on diagnostic tests are high and rising, sometimes even overtaking the cost of

medicines. Diagnostics therefore play a useful role in influencing the quality of patient care, and health outcomes. The ready availability of affordable diagnostic tools enables accurate detection of health risks and disease at an early stage, thereby improving disease management, and also diminishing subsequent health problems and associated costs.

Information technology initiatives and compact electronic diagnostic device can help in facilitating requisite diagnostic service at primary health care facilities. Moreover, it will help in filtering patient data, thus reducing the existing patient load in secondary and tertiary care centers. In the current era of information technology, Aadhar card can play a major role in shaping the future of Primary Health Care units. All the patients coming to the primary health center can be enrolled by their Aadhar number. Significant medical and surgical history can be updated in the database. Investigation done through government laboratories also can be tracked through Aadhar number. This not only will reduce the expenditure but also will make the health care delivery faster. The Remote regions with limited health facilities need portable diagnostic equipment to cater the essential diagnostic services demand. Small diagnostic equipments, having facility of connecting it with smart phones and laptops, will certainly help in early disease diagnosing. It is proposed to equip all the primary health care facilities of with the small and easy to use electronic devices. These diagnostic equipments are easy to operate and can be operated by non technical person, on providing the requisite set of instruction. Monitoring has been imperative for the medical procedure but patients are not aware of the benefits of it. With the boom of technology, information comes handy and people are more receptive as well as curious to learn about new technologies. Small size devices makes patients cognizant of their vital stats, transmit the same data to their mobile and stay down the number of visits to the clinic

In compliance to the Government of India's mandate of Free Diagnostic Services, Medical Health & Family Welfare Department can rope in EMRI, Hyderabad organization to provide the requisite diagnostic services with the necessary support of KUSHIYON KI SAWARI vans. These vans, running across the state will be having diagnostic equipment along with necessary diagnostic kits. KUSHIYON KI SAWARI consists of a pool of 95 vans, deployed at 95 locations of the blocks. It significantly encompasses the majority of areas of the state, thus reaching to the remotest. The diagnostic equipment is quiet user friendly and easy to operate.

Conclusion

The NITI Ayog data for the year 2015-16 has depicted Uttarakhand's poor performance in certain health indicators. Data pertaining to MMR, U5MR and Sex ratio have comparatively come down from the base year 2014-15. Out of pocket expenditure is catastrophically creeping up among the communities. The geographical terrain of Uttarakhand state prohibits the deployment of doctors and specialist doctors in the remote areas. There is a need to create an inbuilt, sustainable and innovative quality for Primary Health Care Facilities which do not only delivers good quality but is also perceived by the clients. Uttarakhand is witnessing the pugmarks of Health Information Technology, subsequently improving the health facilities with the implementation of HMIS (Health Management Information System), MCTS (Mother and Child Tracking System),

DVDMS (Drug and Vaccine Distribution Management System). Moreover, Teleradiology services have been implemented in 35 health facilities of Uttarakhand. Telemedicine services have been launched in requisite facilities on CSR mode. Thus, in order to plug the requisite health services gap, exhibiting in health facilities, Uttarakhand requires the requisite innovative IT initiative to augment health services along with electronic monitoring of ongoing health programs by the State and Centre governments.

Footnotes

Source of support - Nil

Conflict of interest - Nil

References:

- 1- Government of India, National Health Policy, Ministry of Health & Family Welfare, Govt. of India, New Delhi :2017 (PubMed)
- 2- Do you Care? India's Health System
- 3- www.nrhm-mis.nic.in
- 4- Ministry of Health & Family Welfare, New Delhi
- 5- Healthcare Information System: A practical approval for the healthcare management (Karen A Wager, Franies W Lee)
- 6- Impact of Healthcare Informatics on Quality of patient care and health services- Divya Srinivasan
- 7- Rural Health Statistics 2017, Ministry of Health & Family Welfare, Government of India, New Delhi
- 8- Operational Guidelines for Quality Assurance in Public Health Facilities 2013, Ministry of Health & Family Wefare, New Delhi
- 9- The NITI Ayog's State Health Index (Executive Summary) 2017