

Research Article

National Institute of Rural Health for India: Need of the Hour

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A B S T R A C T

India being predominantly a rural country, striving hard to provide quality healthcare services to more than 890 million people who lives there. The importance given to rural health care by Govt. of India is visible through the implementation of dedicated submission under NHM, i.e., NRHM. However, there are still several rural health challenges, i.e., specific needs, belief/ superstition, scarcity of human resources in rural areas, lack of quality research/ coordination and collaboration between various sectors. The possible solutions to these challenges lie in strengthening research in rural health epidemiology, agricultural health, enhancing use of Information Technology & Telemedicine, designing specific clinical services, field practices, applying the biostatistics & mathematical modelling in decision making and mentoring the human resources in specific need of rural health. This article is an attempt to elucidate various rural health challenges and need for development of National Institute of Rural Health in India, to address the challenges of rural health and conduct before mentioned activities as an apex body.

Keywords: Rural Healthcare, Agricultural Health, Rural Epidemiology

Introduction

The rural health including nursing, midwifery, medical geography, sociology, economics, demography, preventive medicine, environmental health, telehealth and rural development. Where larger population lives in rural areas, those countries have made it a priority to increase funding for research on rural health.¹ These initiatives are welcomed step for achieving universal health coverage. Canadian government developed the Centre for Rural and Northern Health Research and United Kingdom developed Countryside Agency, and Australian New Zealand governments started the Institute of Rural Health.² These institutions are helping

the governments to identify the healthcare needs of rural communities and provide policy solutions and designing rural based health programs to ensure those needs are met. India is having huge rural based and urgently required such initiative to establish National Institute of Rural Health .

Rural Population: Demographic trend and present status in India

The historical demographic trend of India suggest that this country is predominantly rural in terms of population. The proportion of rural population is always been more than 50 percent of total population residing in the country. As per census conducted in 2011, the percentage of rural

population with respect to total population was 68.84% with absolute number of persons living in rural area as 833.1 million.³

It is also to be noted that the overall rural population in number is estimated to be increased to 895.3 million till 2019 (data source: World Bank). The graph indicating the trend of rural population absolute number from 2015 to 2019 is given in figure 1.⁴

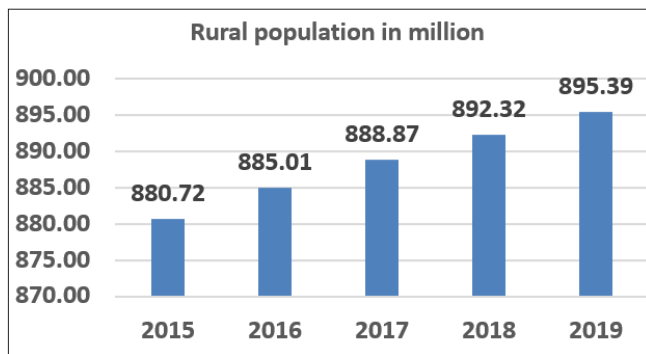


Figure 1. Graph indicating trend of rural population number from 2015 - 2019²

Challenges in the Path of Rural Health

Specific needs in healthcare: In Indian economy agriculture play a vital role and more than half of Indian population work in agriculture sector which includes the activities of agriculture, hunting, forestry and fishing. In 2020, agricultural workers alone were 41.5% out of all employed workers. It shows a significant proportion of population is still involved in agriculture for their livelihood.⁵

It is also noted that most of the population of rural areas engaged in agricultural & allied activities which is one of the most hazardous occupation in the world. The agriculture workers are exposed to various hazards i.e., environmental, biological, physical, respiratory, safety due to their daily manual work routine.⁶

The specific health conditions (7) occur in the agriculture workers are as below:

- Dehydration, heat exhaustion, heat cramps, heat stroke, skin cancer caused by weather/ climate
- Respiratory hazards such as excessive cough, congestion, exaggeration in the symptoms of chronic bronchitis, COPD, Organic Dust Toxic Syndrome (ODTS), occupational asthma etc
- Fatalities or injuries due to bites and stings caused by animal, snakes and insects
- Injuries including cuts to deaths, hearing impairment caused by sharp tools and loud farm machinery
- Several types of musculoskeletal disorders caused by excessive physical labour and loads lifting
- Acute poisonings and chronic effects in the form of

neurotoxicity, cancer, and reproductive system caused by pesticides and fertilizers

- Allergic reactions, Irritation of the eyes, dizziness, headache, and restlessness dusts, particulates, gases, fumes etc
- Various skin diseases, parasitic diseases, zoonoses and cancers etc. caused by biological agents, vectors of diseases
- Prolonged exposure to excessive noise, such as that produced by tractors, combines, choppers, grain dryers, and chainsaws, can cause permanent hearing loss unless noise-control measures are taken

In addition to the above, rural areas are facing the burden of diseases caused by unsafe and unhygienic conditions of households, living areas, sanitation and drinking water. These factors promote several communicable, parasitic and respiratory diseases in rural areas.⁸ Further, the emergence & re-emergence of communicable and non-communicable diseases combined with the uninhibited mobility has made the situation worrisome and expanded the realm of diseases/ health conditions to be addressed in rural areas.

Belief/ Superstition: In a comparative study to assess the difference of superstition in rural and urban area it was found that the same was more prevalent in people of rural areas than in urban areas.⁸ In the rural area especially in tribal population of India beliefs that magic can cure the diseases are still persisting. This belief led to various superstitions and hinder the progression of modern medicine in rural areas. As an effect to this superstition the tribal population usually resort to indigenous magic-based medication instead of modern health institution even if those are available.⁹

Inadequate Human Resources in Health System in rural area: As per the report published by World Health Organisation under Human Resources for Health (HRH) observer series no. 16 during year 2016, it was found that out of all health workers only 40.8% were engaged in rural areas. Gross imbalance in health workers between urban and rural areas is visible by the fact that there are 42 health workers in urban areas as compared to 11.8 in rural areas per 10,000 population. This imbalance is even more (three times) when we consider allopathic doctors (13.3 in urban areas versus 3.9 in rural areas), nurses and midwives (15.9 in urban areas versus 4.1 in rural areas) and AYUSH practitioners (3.6 in urban areas versus 1.0 in rural areas) per 10,000 population.⁸ The ratio of urban density to rural density for doctors, nurses & midwives and dentists was 3.8, 4.0 and 9.9,¹⁰ which is highly skewed towards urban areas. In addition, rural primary level health institutions like Community Health Centres (CHC), Primary Health Centres (PHC) and Sub-Centre (SC) having HRH face a problem of absenteeism by them. Due to inadequate incentives and

infrastructure, health workers especially the doctors refrain from services in the rural areas.⁸

Lack of evidence and quality research on rural health: It is necessary to understand the local issues with special consideration to Indian rural culture, belief, practices and indigenous approaches for effective planning and implementation of various health initiatives & programmes in rural India. However, there is scarcity of research and evidence in specific areas of rural health, i.e., rural health epidemiology, agricultural health, etc. Hence, there is a requirement of national think tank to provide specific evidence-based recommendations in respect to local rural context after conducting research.

Lack of coordination/ collaboration: There is no national level agency for technical collaboration between the departments/ sectors which act as major determinants in designing rural health. Technological and technical collaboration with various sector such as agriculture, animal husbandry, forestry, veterinary science, environmental science and rural development is required to find the solution of specific healthcare needs of rural India.

National Rural Health Mission: How far we Reach

In order to provide quality health care services which are accessible and affordable to the rural population including vulnerable groups, National Rural Health Mission (NRHM) was launched in year 2005 (12) with following objectives (13) as given below:

- To reduce child and maternal mortality
- To ensure universal access to public services for food and nutrition, sanitation and hygiene and universal access to public health care services with emphasis on services addressing women's and children's health and universal immunization
- To prevent and control communicable and non-communicable diseases, including locally endemic diseases
- To provide access to integrated comprehensive primary health care
- To achieve population stabilization, gender and demographic balance
- To revitalize local health traditions & mainstream AYUSH
- To promote healthy life styles

At present, NRHM is being implemented as sub-mission under National Health Mission with vision of formulation of specific goals for the States/ UTs on the basis of existing levels of health, and its capacity and context. It is also mentioned that targets regarding communicable/ non-communicable diseases to be framed at State/ UT level based on local epidemiological patterns considering the financing conditions.¹⁴

In order to achieve the above-mentioned objectives and

to set the State/ UT specific targets the extensive research to generate evidence is needed. It is already stated in the NRHM framework for implementation that there is a huge requirement for technical support to NRHM & National Health System Resource Centre (NHSRC) would not be able to cater all the demands. It is also recommended that other national institution/s for technical support in planning and implementation of programmes, should be enabled.¹³

Way Forward

Research in Rural Health Epidemiology/ Agricultural Health: In order to design the interventions specific to determinants of rural health, the extensive applied and implementation research in rural health is required. The outcome of these research is to plan policy and program for rural health.

Application of Biostatistics and Mathematical modelling: The science of biostatistics may be applied in the projection of various disease trends through mathematical modelling. This will help in making decision regarding disease to be targeted.

Specific Clinical services/ Field practice: Rural area in India also diverse in its characteristics which required specific intervention according to its problem. To design specific intervention particularly standardized treatment protocols, diagnostic algorithm and community awareness package, many field trials are required. Field visits of workers could be utilized for data collection and effective implementation of public health intervention.

Field requirement-based Laboratory research: Specific tests for diagnosis and confirmation of various communicable and non-communicable diseases to be developed in laboratory which will help in confirmation of a disease/infirmity by health care providers in field visits itself. Many mobile laboratory technologies have emerged to provide screening and diagnostic service at door step which can reduce patient visits to higher healthcare institutions.

Use of Information Technology and Telemedicine: The information technology and telemedicine should be utilized to reach unreached areas for healthcare delivery. The distribution of health workforce is already skewed towards the urban areas. Therefore, this gap can be addressed by utilising the telemedicine wherein the healthcare professional can provide diagnosis and treatment of sick persons living in far reach rural areas, without the compulsion of physically being there.

Capacity Building: The training of human resources for rural health needs to be addressed on urgent basis. Therefore, the capacity building in rural health epidemiology, agricultural health, rural information technology, telemedicine, application of biostatistics & mathematical modelling is required.

Conclusion

In the view of the present lacunae and obstacles in the way for achieving accessible, affordable, accountable, acceptable and equitable rural health services, a need for the hour is to establish National Institute of Rural Health (NIRH) in India. It is envisaged that this institute should act as an apex technical body for development of technological, strategic, local and operational solutions for various issues of rural health.

The role of National Institute of Rural Health in research, training, and education is immense. The NIRH would be providing technical and professional support to NHM for improvement of planning and programming of rural health. In addition, this institute may help in building capacity of various personnel working in the field of public health in India.

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Conflict of Interest: None

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