



## **Utilizing Non-Physician Health Workers (NPHWs) To Prevent and Control Non-Communicable Diseases (NCDs): A Review of Facilitators and Barriers**

**Bharti Sachdeva<sup>1\*</sup>, Keerti Phalswal<sup>1</sup>**

<sup>1</sup>Department of Medical-Surgical Nursing, SGT University, Gurugram-122505, India

**\*Corresponding author E.mail:** [bharti.nursing@sgtuniversity.org](mailto:bharti.nursing@sgtuniversity.org)

### **ABSTRACT**

*The burden of non-communicable diseases (NCDs) is increasing, hence there is a greater emphasis on job sharing and transferring the provision of NCDs-related healthcare to non-physicians, particularly nursing staff and community health workers. In order to prevent and control several NCDs in India, this narrative review summarizes the function of non-physician health professionals, highlights numerous facilitators, and discusses the challenges that might occur. The databases of Proquest, J-gate and Google Scholar were searched with a variety of keywords and Mesh terminologies using Boolean operators. Additionally, reference lists for chosen articles were checked and the desired data was retrieved through snowballing. It is concluded that these employees can effectively provide preventative, curative, promotive, and rehabilitative healthcare services related to NCDs to the underprivileged. Although involving this workforce in the prevention of NCDs is a cost-effective concept, it also has its own problems and difficulties that need to be addressed if this human resource is to be used to its fullest.*

**KEYWORDS:** non-communicable diseases, Proquest, promotive, rehabilitative

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### **INTRODUCTION**

Non-communicable diseases (NCDs) are on the rise globally. According to the World Health Organization, NCDs including diabetes, hypertension, cancer and cardiovascular diseases (CVDs) are the main causes of death; accounting for 70% of all fatalities worldwide.<sup>1</sup> In most of the South-East Asia Region, the prevalence of NCD-related deaths has increased across all socioeconomic strata, proving that they are no longer limited to "predominantly affluent strata of society". In the last decade, nearly half of all NCD deaths were caused by cardiovascular illnesses alone. More than 20% of the population in India is known to have at least one chronic illness, and NCDs account for approximately 60% of all fatalities. These concerning figures highlight a double load on a nation's healthcare system which is already debilitated due to communicable diseases and starvation. All aspects of the health system must be significantly improved, especially primary healthcare, in order to reduce the burden of NCDs. In this direction, more resources must be trained and put to use. This work is incredibly difficult given the existing shortage of healthcare experts at all levels. The World Health Organization projects a probable shortfall of 18 million healthcare professionals by 2030 as a result of an anticipated 17% rise in the worldwide burden of NCDs during the ensuing five years.<sup>2</sup> Finding affordable ways to provide healthcare for every person is urgently needed. The use of NPHWs to provide fundamental NCD-related health care services is the best solution to the current situation.

### **MATERIAL AND METHODS**

The contribution of NPHWs to India's prevention and management of several NCDs is summarized in this narrative review. Using the keywords "Female health worker," "Community Health Worker," "Non-physician health worker," "Nurses," "Non-communicable diseases," "India," "Task sharing," "Task shifting," "Challenges," and "Facilitators," we searched Proquest, J-gate and Google Scholar databases. All of the chosen papers' reference lists were checked to identify additional pertinent studies. Included were studies that used a quantitative or qualitative research approach, were evidence-based, had full texts in English, were published within the last six years and had an emphasis on India. Databases yielded a total of 66 pertinent articles. 39 of these 66 items were screened, and the remaining 27 duplicate pieces were

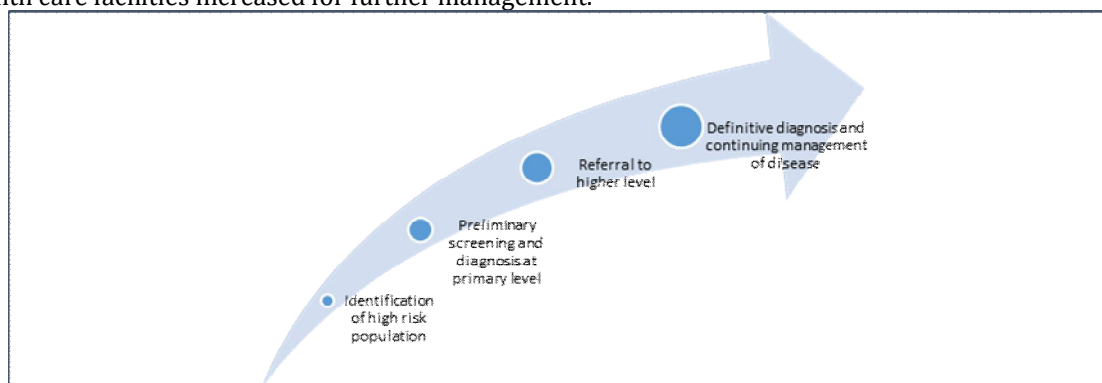
removed. 10 further items were removed after additional screening because of the lack of full text and a few of them included conference minutes. The review's final findings included 29 publications. All of these articles have been carefully read and analyzed. The narrative review is organized around four main themes: involving NPHWs in NCD prevention and control, motivations to do so (enablers), roles and duties, and difficulties encountered throughout the entire process.

## RESULT

Non-physician health workers' involvement in NCD prevention and management:

The health system is adversely affected by the staggering health implications of the number of NCDs. The ongoing shortage of human resources, particularly at the community level, makes the issue worse. Nearly 600,000 physicians and 2 million nurses with training are in short supply in India.<sup>3</sup> There is a significant gap in the workforce distribution in rural and distant areas, according to the National Health Profile 2019 study.<sup>4</sup> In this situation, it is necessary to create an alternative human resource that is designed to meet the community's present demands for healthcare connected to NCDs. due to an increase in cases

Due to the increase in NCD incidence, there is purposeful motivation on the part of nations to mobilize NPHWs to combat NCDs. Increased involvement of nursing staff, multi-purpose health workers, ASHA employees and community health workers etc. could result in the annual saving of 2.5 million lives or more. The duties carried out by NPHW inherently result in improved health outcomes, according to a comprehensive review on task-shifting responsibilities connected to NCD management in poor countries undertaken by Joshi R. and academics.<sup>5</sup> This workforce can effectively provide primary health care services for NCDs, especially in areas with a shortage of staff and resources. At the level of these workers, many health disorders like hypertension, diabetes, different malignancies, and mental health problems can be successfully controlled. Sankaran S. conducted a study on the long-term implementation of a care intervention by a community health worker for hypertensive people in rural South India.<sup>6</sup> Results revealed that the involvement and training of CHWs for screening and management of chronic hypertension is an exceptional prospect to induce system-wide change in the hypertension-related burden of disease.<sup>7</sup> The study also quoted that the number of referrals to higher secondary and tertiary health care facilities increased for further management.



**Figure-1: Role of NPHWs in NCD management**

### Why NPHWs should be involved in NCD prevention and control.

A fairly well-known idea that has been used for a long time in the delivery of healthcare is task sharing. It is a significant piece of policy that has the potential to significantly alter and improve the delivery of primary care healthcare. Task sharing has been used to address several medical diseases, including malaria, HIV, TB, and issues with mother and child health. The participation of NPHWs in various national programs is well known and backed up by evidence. In a similar vein, the World Health Organization and other international and national health agencies have promoted the inclusion of these workers in the management of various NCDs to provide access to crucial medical care.<sup>8,9,10</sup>

In response to the burden of NCDs, the Indian government launched the National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS), which aims to integrate primary-level NCD services rendered by NPHWs such as nurses, auxiliary nurse midwives, male health workers, ASHA workers and community health workers.<sup>11</sup> These employees are the front-line healthcare professionals who are largely in charge of giving healthcare to the underprivileged.<sup>12</sup> These health professionals have a distinct advantage in that they are specially prepared to serve as community connectors because they are close to the general population. These employees are chosen from the target group because they are familiar with the customs, dialect, and culture. Charanthimath U. et al did a study in Karnataka to evaluate task-sharing obligations linked to hypertension management for pregnant

women.<sup>13</sup> The findings showed that these employees were well-liked and accepted in the community. These professionals could help with early diagnosis and support emergency care.

In a rural area of India, a pilot project done by Basu P. et al on home-based screening for common NCDs by a designated community health worker shows that such services are both highly practicable and well-accepted by the local people.<sup>14</sup> These people are in a good position to give healthcare since they are connected to the community. They have the desire, information, and abilities to support health prevention and promotion initiatives that can be used to lower the risk of NCDs. A pilot study on the knowledge and skills of female health workers regarding reducing the risk of NCDs in an Indian community setting of western Rajasthan found that female health workers posted at various health centers had average to good knowledge regarding high blood pressure, diabetes, and mental health.<sup>15</sup> These employees were also known to have adequate skills to measure BP and RBS. These workers can actively contribute in the screening, identification, and treatment of hypertension, diabetes, and other important chronic illnesses with the right instruction, direction, and logistical support. The advantages of such integration might be huge: Through increased coordination and more effective use of resources, it can enable client-driven treatment that is more effective. Additionally, the frequent encounters and visits made by these workers foster trust and confidence in the community, resulting in more effective health services, the ability to address a wider range of conditions, and behavior change through IEC programs. A randomized controlled trial by Gamage et al among hypertensive population in three rural Southern Indian districts revealed that trained CHW-led group-based health education and monitoring significantly improved the control of hypertension.<sup>16</sup> These employees assisted people in controlling their blood pressure through ongoing monitoring, health education, and awareness campaigns. Shastri SS et al. conducted a cluster-randomized controlled study and evaluated the effectiveness of visual inspection with acetic acid (VIA) performed by primary care workers in Mumbai, India.<sup>17</sup> The results showed that primary health workers' participation in VIA significantly decreased the morbidity and mortality related to cervical cancer through health education and information sharing. Sharma K.K. et al noted the benefit of increased knowledge sharing and awareness among cardiac patients by NPHWs on enhancing lifestyle parameters, medication compliance, and compliance behaviour. In addition to all of these benefits, the logical shift of NCD tasks to these professionals lessens the current workload on doctors, particularly at the primary care level.

### **CHALLENGES**

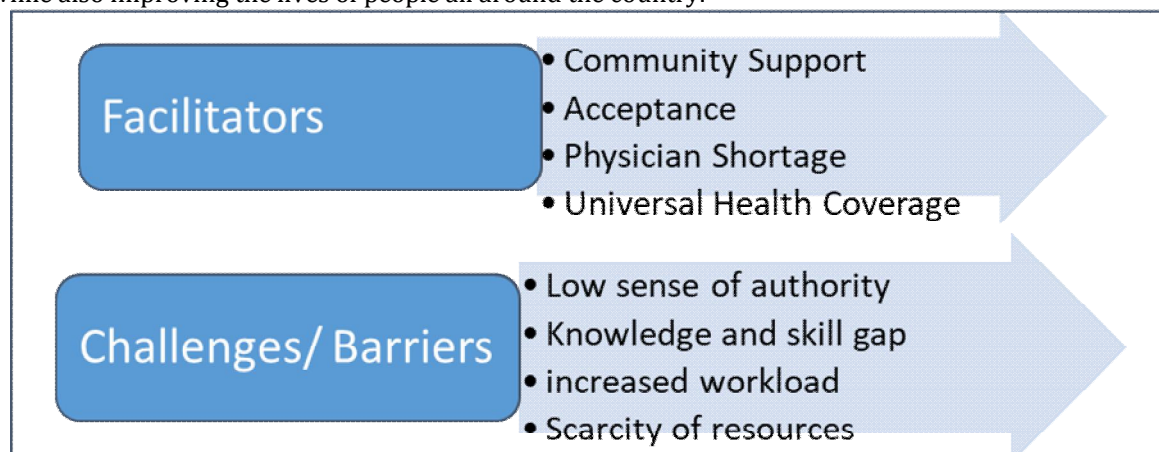
The idea of mobilizing human health resources as a whole represents a significant departure from conventional delivery approaches. Delivering NCD care to NPHWs through task sharing and task shifting is a difficult endeavor. Although beneficial and valuable in reducing the load of various NCDs that is growing throughout the nation, the revolutionary idea has its own difficulties to face. The cadre of NPHWs in India is made up of a variety of healthcare professionals, including nurses, FHWs, MPHs, ASHAs, community health workers, etc. All of these employees were given various tasks and priorities to complete. These employees are already physically and mentally exhausted from carrying out numerous national health initiatives and schemes.<sup>18</sup> They provide normal day-to-day health care.

It is difficult to bring everyone under one roof because of their diverse backgrounds, capacities, and skill sets.<sup>19</sup> The performance of these professionals is hampered by the large gap between theory and practice. Chauhan G and Thakur JS made it their mission to evaluate the capacity of health workers to prevent and control NCDs in the Haroli health block, Una, Himachal Pradesh, India. The study found a significant knowledge and competence gap.<sup>20</sup> The ability of health professionals to mitigate NCDs was lacking. One survey among 15 secondary care hospitals in Delhi revealed a significant knowledge and self-rated competency gap among nurses about the management of cancer and stroke.

The success of the task-shifting paradigm is hampered by NPHWs' lack of authority to provide NCD curative services, their inability to prescribe drugs supported by evidence, their inability to do prescribing tests, etc.<sup>21</sup> Concerns about inadequate training, a lack of drug availability, and the ability of community health workers to accurately diagnose and intervene was noted as the biggest obstacles to shifting hypertension care services in pregnancy to community health workers by Charanthimath U. et al.<sup>22</sup>

Researchers Moola S. and others synthesized data on midlevel healthcare providers' involvement in primary care in India and found that inequitable workforce distribution, a lack of incentives, and limited career advancement opportunities are the main barriers to their participation in NCD and mental health services. Poor infrastructure support, a lack of an appraisal system, and a lack of time were identified as the main issues in qualitative analysis to investigate barriers to nurses participating in CVD risk assessment. Role conflict, worker turnover, and low motivation were all cited as important problems in numerous additional research investigations.<sup>23,24</sup> The lack of compensation and appreciation for NPHWs for tasks given is linked to more recent NCDs. The ever-increasing burden of major NCDs can be

significantly reduced by investing in NPHW participation in the delivery of NCD health care. Integrating these health professionals into the workforce is a viable way to alleviate the lack of human resources while also improving the lives of people all around the country.



**Figure-2: Summary of facilitators and barriers to utilizing NPHWs for NCD management**

### SUMMARY AND CONCLUSION

This narrative study paints a complete picture of the non-physician health professionals' contribution to the prevention and management of several NCDs in India. The increasing numbers of various NCDs at the state and federal levels demand affordable treatments. The best practical option to address the current situation is the active participation of nursing staff, ANMs/Female health workers (FHWs), ASHA workers, Community Health workers (CHWs) etc. in the delivery of NCD care. These professionals can play roles in NCD mitigation at different levels of health care delivery thanks to their connections to the community, acceptability by the local population, and knowledge of community health practices.

The biggest challenge is to make sure that there is an adequate number of well-trained, motivated, and actively involved skilled health workforce members. The effective use of these health professionals in the implementation of grassroots NCD prevention and control programs requires that policymakers and other stakeholders address these concerns to establish complete and integrated public health strategies.

### CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest. The research received no specific grant from any funding agency in the public, community, or non-for profit sectors.

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