

## SHORT ARTICLE

## knowledge and attitude of peripheral health workers regarding Non-Communicable diseases in a Rural area of Rajasthan

Sadhana Meena<sup>1</sup>, Monika Rathore<sup>2</sup>, Ajay Gupta<sup>3</sup>, Pragya Kumawat<sup>4</sup>, Arpit Singh<sup>5</sup>

<sup>1</sup>Senior Resident, Department of community medicine, RUHS College of Medical science, Jaipur, Rajasthan, India; <sup>2</sup>Senior professor, Department of Community Medicine, SMS Medical College, Jaipur, Rajasthan, India; <sup>3</sup>Resident Doctor, Department of Community Medicine, SMS Medical College, Jaipur, Rajasthan, India; <sup>4</sup>Senior Resident, Department of community medicine, SMS Medical College, Jaipur, Rajasthan, India; <sup>5</sup>Associate Professor, Department of Orthopaedics, King George Medical University, Lucknow, India

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### Corresponding Author

Dr Pragya kumawat; Senior Resident, Department of community medicine, RUHS College of Medical science, Jaipur, Rajasthan, India  
E Mail ID: [psmorthoresearch@gmail.com](mailto:psmorthoresearch@gmail.com)



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### Abstract

**Background:** Mortality due to Non communicable disease (NCD) has increased from 50% to 60% in India from 2004 to 2014. Increasing mortality due to NCD has compelled Government of India to launch a national program (NPCDCS). This program has involved peripheral health workers hence this study was conducted to assess level of knowledge and attitude of peripheral health workers working in rural area of CHC Naila regarding NCDs. **Methods:** Present study was conducted at CHC Naila, Rajasthan, during June to Dec 2019. All (38) peripheral health staff working under CHC Naila were assessed and categorised regarding NCD and NPCDCS program. **Results:** Majority (77%) peripheral health workers had more than ten years of field experience. All have heard about NPCDCS program and type of NCDs covered under it. they were aware of sign & symptoms of common NCDs, however 18.42% of these were not aware of their role of community awareness about risk factors of NCDs and conducting regular screening. **Conclusion:** Though the level of awareness of health workers regarding type of NCDs, its consequences and risk factors was good however skill development training is needed so that they can screen people effectively and motivate them for healthy life style for optimum result.

### Keywords

Noncommunicable Diseases; Rural; ASHA; ANM; Knowledge; Prevention

### Introduction

Noncommunicable diseases (NCDs) are one of the major health and development challenges of the 21st century. Main types of NCDs are Cardiovascular diseases, Chronic respiratory disease, Cancers and Diabetes. (1) Since last five decade, NCDs are the leading cause of mortality in high-income countries, and emerging as a leading cause of death in low and middle income world as well. (2,3) Mortality because of NCDs in India raised from 50% of total deaths in 2004 to 60% by 2014. Similarly, Hospitalisation due to NCDs increased from 29% of total hospitalisation in 2004 to 38% by 2014. (2) Government of India has launched an National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) in 2010 with the objectives to

prevent and control common NCDs through early diagnosis and management, Behaviour and lifestyle changes and Build capacity at various health institution levels. The program has involved peripheral health workers for complete and effective reach in the community. Accredited Social Health Activists (ASHA) in collaboration with Auxiliary Nurse Midwife (ANM) is involved & trained for the community level screening because early detection of NCDs are an most important component (4). Awareness and training of peripheral staff (ANM and ASHA) regarding activities done under NPCDCS is vital for health workers.

## Aims & Objectives

To assess level of knowledge and attitude of peripheral health workers working under CHC Naila regarding NCDs and NPCDCS programme.

## Material & Methods

**Study Type-** Observational study.

**Study Population and Area-** This study was conducted at all eight sub centres of field practice area of Department of community medicine of tertiary care centre, Jaipur. All 38 peripheral health workers i.e Two LHV, 12 ANM and 24 ASHA, serving 37,462 population under CHC Naila were included in the study.

**Study Duration-** Seven months

**Sample Size-** All the peripheral health workers working in the study area were included in the study.

**Data Collection Tool-** A semi structured questionnaire based on Ojo et al study 2017 (5) was used. There were six closed ended questions regarding NCDs, six questions regarding modifiable risk factors of common NCDs and five questions related to awareness or knowledge of NPCDCS program among health workers. Categorization was done on the basis of score (maximum-17) in three category, poor (0-6), fair (7-15) and good (more than 15).

**Strategy for collection-** After taking approval from institutional ethics committee and written informed consent by participant, semi structured questionnaire for NCD & NPCDCS activities and In-depth interview were conducted to find out the constraints and their solution suggested by peripheral health workers to run NPCDCS program smoothly.

**Data Analysis-** Data was collected and entered in spreadsheet of Microsoft Excel same day to avoid error and analyzed using primer software. Qualitative data was expressed in the form of percentages & proportions and Quantitative data was expressed in the form of mean  $\pm$  SD.

## Results

All peripheral health workers were female, most (97%,37/38) were married except one (2.6%) who was widow. Majority (94.7%, 36) were Hindu however two (5.6%) were Christian. Mean Age of workers was 38.21 (+9.11) with range of 25 to 60 years. Almost half (44.7%) of them were from general category followed by other backward class (23.70%), Scheduled tribe (18.4%) and Scheduled caste (13.2%). More than one third (39.3%) were educated up to senior secondary level followed by graduation or more (26.3%), Secondary level (23.7%) and only four (10.5%) studied up to eight class level. Around 60% of them had 10 to 20 years of field experience. There were around 20% of workers who had less than ten year of work experience however 20% had more than 20 year of experience. There were only two peripheral health workers who had less than five years work experience.

All peripheral health workers were aware of all common Non communicable diseases under NPCDCS ([Table-1](#)). All

Health workers were well aware of common modifiable risk factors of Non communicable diseases. ([Table-2](#)) Majority 31 (81.58%) regularly talk to community members about these risk factors and remaining seven (18.42%) health workers do not put efforts to make community aware of these risk factors, stated that people are adamant not to change their lifestyle hence they do not motivate them. ([Figure-1](#))

Majority 90% (34/38) health workers knew about NPCDCS program, beneficiary group, disease covered under program and timing of monthly reporting. Ninety percentage (90%) of peripheral health workers got NPCDCS training only once that too recently in the month of June-July 2019, hence none had refresher training ([Table-3](#)). All health workers belonged to good category (more than 15 score). In depth interview of health workers was done to assess constraint to run NPCDCS activities smoothly in field level, revealed some common challenges faced by health workers and they have also given few suggestion against all constraints reported by them. ([Table-4](#)).

## Discussion

In present study all peripheral health workers well aware of Non Communicable Diseases and their modifiable risk factors. Whereas Ojo et al (5) study revealed that only 50-70% of health workers were aware of NCDs and modifiable risk factors, that is much lesser than present study. Similarly, Gopal Chauhan et al study (6) 2016 also reported that only 61% of peripheral health workers were aware of NCDs. In present study, 81.58% communicate to people about NCDs and its behavioural risk factors. Similarly Ojo et al study (5) also observed that 89.47% of health workers were aware of NPCDCS program and their activities in field. Around 90% of health workers received training once in last two years while 10.53% have not received any training under NPCDCS program in present study. While Ojo et al (5) study and Marwa abdel et al (7) study 2019 reported none of health workers received any training for common NCDs examination. In present study 89.47% of health workers were aware of NPCDCS program which is lesser than many studies (7). Srivastava RK et al study 2011 reported that Poor implementation of NPCDCS has not been able to bring considerable change in the burden of NCDs so far. Our study observed that those peripheral health workers who got training knew about program activities more than those who did not receive any training, similar was observed by various studies who demonstrated that trained and supervised peripheral health workers can effectively screen individuals at high risk of cardiovascular disease (8), for cardiovascular risk factors (8-9), and promote healthy lifestyles for primary prevention of NCDs (10). In this study 89.47% of health workers had done screening in last one year in their respective area which is much higher (27%) than Jasani et al (11) 2013 study. In present study 89.47% health workers

were aware of timing of reporting. Data monitoring was 100% in present study but supervision and monitoring of screening day by medical officer/LHV was not as per NPCDCS guidelines<sup>2</sup>. Similar finding were reported by others studies also (5,6,11-14).

In present study despite training of health workers under NPCDCS program, more than three fourth workers unable to contribute for reducing the NCDs risk factors through information education communication (IEC) and behaviour change communication (BCC) and reasons stated by them was non availability of regular supply of IEC and inability for behaviour change communication. They stated that BCC was not adequately covered under training. Similar finding were reported by others studies also (6,11,14).

All the ASHAs of current study stated that they do not find adequate time to complete existing work because in addition to their own assigned work, ANM pressurize them to fulfil some of their services targets (15). This makes them over loaded. Similar was also reported in marwa abel-All et al (7) study. They also mentioned that we have to rush to the CHC for 6-7 days in a month for submitting reports and trainings or meetings.

Lack of services would hinder preventive efforts at community level. Lack of facilities and ignorance of referred patient at CHC level produces trust deficit. Trust is the most important motivators for health workers. This finding is also supported by ojo et al (5) study.

Investigators observed that opportunistic screening was doing on MCHN (mother and child nutrition) day as it is difficult to do in limited space of sub centre where it is difficult to manage the gathering<sup>94</sup> and maintain social distancing as per state COVID 19 guidelines. (16)

### Conclusion

The peripheral health workers under present study belonged to good category in knowledge regarding the prevention and control of NCDs however few workers had negative attitude. Training of health workers with emphasis on behavior change communication (BCC) with IEC is necessary to modify beneficiary attitude towards healthy lifestyle for prevention and control of NCDs.

### RECOMMENDATION:

Regular supportive supervision by LHV/Medical officer is needed to improving the quality of field activities related to NCD and on service training should be organized regularly with feedback from PHW regarding training and field problems.

### Limitation of the study

Only one centre is included in the present study. Further studies with larger sample size are required to generalized results.

### Relevance of the study

Presently very few studies have been conducted to assess knowledge and attitude of PHW regarding NCD and

NPCDCS activities. This study will help government and primary health care providers to implement program successfully at grassroot level.

### Authors Contribution

All authors contributed equally.

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**Tables**

**TABLE 1: KNOWLEDGE OF HEALTH WORKERS REGARDING NON COMMUNICABLE DISEASES**

S. No	Awareness regarding NCDs	Response (n=38)	
		Yes	No
1	NCDs is one that cannot be spread between people	38 (100)	0
2	Do you think NCDs are important health issues that should be taken care of in your communities?	38 (100)	0
4	Do you think NCD creates more financial loss than communicable disease?	38 (1000)	0
5	Do you think health promotion and awareness can reduce NCD?	38 (100)	0
6	NCDs are getting common amongst Indians (specially Rajasthan)	Agree 38 (100)	Do not agree 0

**TABLE 2: AWARENESS REGARDING MODIFIABLE RISK FACTORS OF NCDs:**

S.No	Variable	Response (n=38)	
		Agree N (%)	Do not agree N (%)
	Modifiable risk factors		
1	Tobacco consumption in any form	38 (100)	0
4	Passive smoking	38 (100)	0
3	Excess alcohol consumption	38 (100)	0
4	Less or inadequate physical activity	38 (100)	0
5	Unhealthy diet	38 (100)	0

**TABLE 3: KNOWLEDGE OF NPCDCS PROGRAM AMONG PERIPHERAL HEALTH WORKERS:**

S. No	Awareness of NPCDCS program	Response (n=38) (%)
1	Do you know about NPCDCS	
	Yes	34 (89.47)
	No	04 (10.53)
2	Which population age group has been covered under NPCDCS	
	Know correct age (>30 yrs)	34 (89.47)
	Do not know	04 (10.53)
3	How many disease covered under NPCDCS	
	Know all four NCDs covered	34 (89.47)
	Do not know	04 (10.53)
4	When do you have to send NPCDCS reporting to CHC/PHC?	
	Last day of month	34 (89.47)
	Do not know	4 (10.53)
5	NPCDCS Training in last 2 year	
	Nil	4 (10.53)
	Once	34 (89.47)
	More than once	0

**TABLE 4: CONSTRAINT AND PRAGMATIC SOLUTIONS STATED BY PERIPHERAL HEALTH WORKERS (PHW) FOR SMOOTH IMPLEMENTATION OF NPCDCS ACTIVITIES**

S.No	Constraint	Pragmatic solution suggested by PHW
1	All ASHAs stated that ANM pressurize them to fulfill some of their own service targets.	Medical officer or lady health visitor explaining different job responsibility of ASHA and ANM.
2	Lack of support from medical officer, often led to low morale of Peripheral health worker.	NPCDCS monthly review meeting could be utilized to discuss every small issue related to NPCDCS.

S.No	Constraint	Pragmatic solution suggested by PHW
3	Non functional instrument or equipment (Reported by health workers of three sub centre)	Untied fund of sub centre could be utilized for this.
4	Performance based incentive are very less as compared to allocated work	Performance based incentive should revise time to time as per increasing work load day by day and it will also build confidence and increase efficiency of work.
5	Suspected NCD cases referred to CHC by ANM are not seen on priority basis that reduces the trust between cases and peripheral health workers.	Patient referred by ANM to higher centre should get priority as they should get diagnosed and put on treatment as soon as possible. Ignorance by staff produces negative impact about NCD services provided by PHW. Medical officers of CHC should be sensitized for this.
6	Due to less facility available at CHC, people prefer to go directly to tertiary care centre, Jaipur	Improving infrastructure or equipment availability might reduce over burden of tertiary health centre.
7	PHW are not sufficiently trained to bring behavioral communication change (BCC) in target population therefore It is hard to convince old age population to change their life style.	Training under NPCDCS must incorporate BCC along with IEC. Special emphasis must be given on BCC.
8	Lack of IEC (information education communication) at health centre creates problems to generate visual awareness.	Mass campaign, brand ambassador and IEC availability can improve health awareness and health promotion.

**Figures**

**FIGURE 1 ATTITUDE OF HEALTH WORKERS IN COMMUNITY REGARDING MODIFIABLE RISK FACTORS OF COMMON NCDs.**

