Indian Journal of Forensic and Community Medicine 2023;10(2):57–59

Content available at: https://www.ipinnovative.com/open-access-journals

Indian Journal of Forensic and Community Medicine

Journal homepage: https://www.ijfcm.org/

Editorial

Building community capabilities to mitigate and respond to public health emergencies due to climate change

Pankaj Kumar Singh[1,*]

[1] *State Nodal Officer-Integrated Disease Surveillance Programme, Department of Medical Health and Family Welfare,, Dehradun, Uttarakhand, India*

ARTICLE INFO

Article history:
Received 25-06-2023
Accepted 04-07-2023
Available online 25-07-2023

1. Introduction

The community plays a crucial role to mitigate and respond to public health emergencies due to climate change. They are most vulnerable to impacts of climate change and they serve as the first shield against infectious diseases and other threats. Therefore, they must be equipped with the skills and knowledge needed to perform their responsibilities meticulously.

Community participation in public health is imperative because the community plays a vital role in the planning process of program development and the successful implementation of any health intervention because the community is the real sufferer and the first responder to any emergency or threat. Community empowerment is essential to build emergency resilient communities. Speaking of communities, one must recognise the role of Panchayati Raj Institutions (PRIs) as institutions of self-governance and not mere implementors of externally determined development programs.[1] PRIs comprise of elected members from the community. Their knowledge of the community, its challenges, its practices, its resources, its demography and its strengths are key to formulating community specific development programs.

One such development project to build emergency resilient communities – 'Public Health Preparedness and Response Capacity Development in a Community setting through Community Emergency Management Team (CEMT) and Community Emergency Response Team (CERT),' is being implemented at Nausar Gram Panchayat, Khatima Block, Udham Singh Nagar, Uttarakhand which intends to create awareness and support for developing a knowledge-sharing platform and tools for various public health issues. The Integrated Disease Surveillance Programme and State Climate Change Cell, National Health Mission, Directorate of Medical Health & Family Welfare Uttarakhand is implementing this pilot project at Nausar Gram Panchayat, Khatima Block, Udham Singh Nagar, Uttarakhand.

2. Project Implementation State and District

Uttarakhand is one of the most vulnerable states in India.[2] Situated in the Himalayas, the state's geographical area is 53483 sq. km and the terrain and topography of the state are largely hilly, with large areas under snow cover and steep slopes. Uttarakhand State comprises 02 regions, 13 districts, 78 Tehsils, and 95 community development blocks. The districts in Garhwal Region are Uttarkashi, Chamoli, Pauri, Rudraprayag, Tehri, Dehradun & Haridwar and the remaining 06 in Kumaon Region Udham Singh Nagar, Nainital, Almora, Pithoragarh, Champawat & Bageshwar.[3] The Himalayas are proven to be vulnerable to climate change. Here, the temperatures have increased at a faster

* *Corresponding author*.
E-mail address: drpankajmph@gmail.com (P. K. Singh).

https://doi.org/10.18231/j.ijfcm.2023.010

rate than the global average. In 2013, the cloud bursts in Uttarakhand and Nepal, in 2015 the heavy rainfall in Jammu and Kashmir are signs of climate change in the Himalayas. Therefore, Uttarakhand is naturally susceptible to the harms of climate change that have a spillover effect on the public health of the state.

Nausar Gram Panchayat in Udham Singh Nagar district has a total population of about 4,896. The village has a male population of 2,213 and a female population of 2,683. The literacy rate is 78.9%. The total area of Gram Panchayat is around 2 acres. The types of houses are Kachcha, Pakka, and Semi Pakka and the major religious groups are Hindu, Muslim, Sikh, and Christianity. The gram panchayat shares its boundaries with districts Pilibhit and Bareilly (State- Uttar Pradesh). The languages spoken are Hindi, Bhojpuri, and Punjabi; the critical economic activities are labour and agriculture. The mobile communication network is accessible to the entire community. The community is served by one subcentre and five Anganwadi Kendras.

3. Capacity Building Programme under the Project

The capacity-building of community were carried out under the project at Nausar Gram Panchayat, Khatima Block, Udham Singh Nagar, Uttarakhand. The details are given below:

1. Capacity building programme on "Impacts of Public Health Emergencies: Preparedness, Mitigation and Response" in 2022.

The local workforce requires knowledge and skills for effective planning, preparedness, and response against public health emergencies and disasters. The capacity building programme was conducted to enhance the capacity of the community workers to deal with any public health emergency using a muti-hazard approach. Front Line Workers were sensitized on pre-requisites and causes of poor health, schemes running under the National Health Mission and social determinants of health. They were also apprised of their roles in implementing preventive measures, preparedness, and management of infectious diseases like water-borne diseases (Typhoid, Cholera, Hepatitis, Amebiasis), Respiratory illnesses (Influenza, TB), Vector-borne diseases (Dengue, Malaria, JE), Climate related issues, extreme weather and pandemic like COVID-19. The knowledge of preparedness and response to climate change-related public health emergencies was also imparted.

The training programme benefited 41 participants (Table 1), including Gram Pradhan, Ward Members, Community Leaders/Influencers, ASHA Workers, Anganwadi Workers, ANMs, Community Health Officers, Red Cross Volunteers, and local NGOs etc.

Pre and post-training assessment was done to elicit the gain from the training. The average post-test score was 74%, with the highest score of 96%, compared to average pre-test score of 56% and highest score of 86% in the pre-test (Figure 1).

Table 1: List of the participants

Category	Participants Breakdown	No. of Participants
Health Department	LHV	1
	ANM	1
	ASHA workers	3
	ASHA Facilitator	1
	Community Health Officer	1
Women & Child Development Department	Anganwadi Supervisor	1
	Anganwadi workers	5
	Anganwadi Helper	5
Panchayati Raj Institution	Gram Pradhan	1
	Deputy Gram Pradhan	1
	Ward members	6
Self-Help Group (SHG)	Representatives	8
Yukti Yuva Mandal Dal	Representatives	4
Red Cross	Representatives	1
Nehru Yuvak Kendra (NYK)	Representatives	1
Post Office	Post Man (Participated Volunteer)	1
Total		**41**

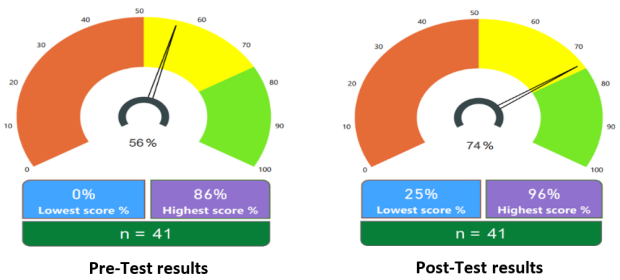

Fig. 1: Overall results of pre & post-test

Similarly, another capacity building programme was conducted on "Flood Preparedness, Risk Reduction, and Response" at Nausar Gram Panchayat, Khatima Block, Udham Singh Nagar, Uttarakhand in 2022.

The capacity building programme was conducted to enhance the capacity and capabilities of the local community for preparedness, risk reduction and response to floods and floods-related public health emergencies such as water-borne diseases, vector borne diseases and snake bite.

The capacity building programme benefited about 113 participants (Figure 2), including Gram Secretary, Gram Pradhan, Ward Members, Community Leaders/Influencers, Community Members, ASHA Workers, ANMs, Community Health Officers, Anganwadi, Aapda Mitra, Mahila Mandal, Nehru Yuva Kendra, Nehru Mukti Kendra, local NGOs etc.

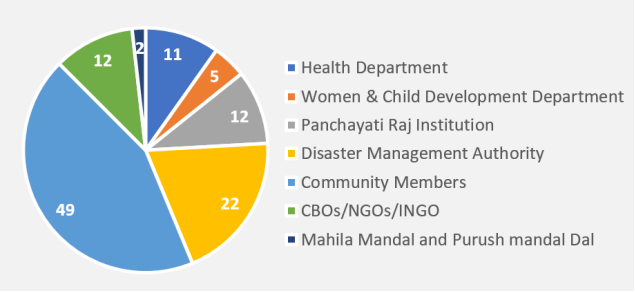

Fig. 2: Number of participants from different sector

4. Outcomes of Capacity Building Programme

The participant's overall knowledge and awareness level regarding the causes, mode of transmission, seasonal spread and preventive aspects of various communicable and non-communicable diseases has increased after training. The CEMT and CERT understood their roles and responsibilities in outbreak management and climate change-related public health emergency (PHE) or disaster. The training gave a clear message to the participants of the essential helpline numbers and authorities to be contacted during a PHE or Disaster and the importance of intersectoral coordination. They also learnt the concept of utilizing available resources at the community level. The long-term impact of the training will also be assessed via an After-Action Review.

5. Way Forward

The capacity building programme played a crucial role in accelerating the capacities of the local community in Public Health Emergencies and Climate change related issues. This demonstrated the integration of public health intervention for response at the level of first responders. It highlighted disaster-related (induced by Climate Change) service uptake at the community level and thrusting grass-root level implementation of post-disaster response measures. It necessitated building community capacity by developing CEMT and CERT framework at village level to make community resilient and self-reliant for climate change and public health emergency preparedness and response. Involving the local community in reporting and management has long been suggested as a strategy to curb climate change-related events and inculcate a greater sense of ownership among community members.

Acknowledgments

I would like to acknowledge the support of Central Surveillance Unit (CSU), Integrated Disease Surveillance Programme (IDSP) and National Programme on Climate Change & Human Health (NPCCHH) Division, National Centre for Disease Control (NCDC), Government of India for the capacity building programme at the community level. I would also like to acknowledge Centers for Disease Control and Prevention (CDC)-Country office India for extending support in the capacity building programmes.

References

1. Micro Planning for Self-Governance: A Framework for Action. New Delhi: Participatory Research in Asia; 2013. Available from: https://www.pria.org/knowledge_resource/1556695316_Micro%20Planning%20for%20Self-Governance%20A%20Framework%20for%20Action-The%20Perspective.pdf.
2. Thadani R, Singh V, Chauhan DS, Dwivedi V, Pandey A. Climate Change in Uttarakhand: Current State of Knowledge and Way Forward. Uttarakhand; 2015. Available from: https://www.cedarhimalaya.org/pdf/Climate-Change-in-Uttarakhand.pdf.
3. Biodiversity Profile of Uttarakhand. Available from: https://sbb.uk.gov.in/pages/view/25-the-state.

Author biography

Pankaj Kumar Singh, State Nodal Officer-Integrated Disease Surveillance Programme

Cite this article: Singh PK. Building community capabilities to mitigate and respond to public health emergencies due to climate change. *Indian J Forensic Community Med* 2023;10(2):57-59.