

Original Article

Assessment of Training Need for National Program for Palliative Care and Digital Legacy Planning among Medical Officers of an Eastern State of India

Satabdi Mitra¹, Amit Kanti Sarkar²

¹Department of Community Medicine, KPC Medical College and Hospital, Kolkata, ²Oncolink Palliative Care Hospital, Nadia, West Bengal, India.

ABSTRACT

Objectives: The objective of the study is to assess training needs and the status of digital legacy and advanced care planning amongst participants. Following the World Health Assembly resolution, the Government of India launched National Programme for Palliative Care (NPPC) for a continuum of physical, psychosocial, and spiritual care of those suffering from life-threatening and life-limiting illnesses and their caregivers. As a process of implementation, capacity building with a nationwide cascade model training has been started with medical officers (M.O.s) at the district levels.

Materials and Methods: A cross-sectional study was conducted from February to April 2024 amongst 260 M.O.s of four randomly selected districts of West Bengal. A semi-structured and validated questionnaire containing single-answer multiple-choice questions with a maximum score of 30 was used for pre- and post-training assessment. Digital death survey 2024 (open) was used for assessing digital legacy and end-of-life care planning.

Results: Paired t-test showed a significant difference ($P < 0.05$) in mean scores of pre- and post-training. The univariate general linear model showed 69% of unmet training need. 202 (77.7%), 241 (92.7%), 217 (83.5%), and 258 (99.2%) expressed their unfamiliarity with digital legacy, assets, death and immortality, respectively. None was found to document wishes for end-of-life medical and/or social care in advance or an anticipatory care plan.

Conclusion: Periodic training of M.O.s is an exigency for smooth running of NPPC and integration of palliative care in primary health care.

Keywords: Capacity building, End-of-life care, Palliative care, Questionnaire

INTRODUCTION

Palliative care is defined by the World Health Organisation as ‘an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illnesses, through the prevention and relief of suffering by means of early identification, impeccable assessment and treatment of pain and other problems, physical, psychological and spiritual.’^[1] In the last few decades, palliative care has been more relevant in the context of the worldwide increase of ageing population and steady upsurge of non-communicable diseases, which have been a major global burden of disease accounting for 74% annual deaths, huge disability adjusted life years (DALY) loss, draining

resources and stifling national development.^[2,3] It has now been well recognised that palliative care is a continuum of care through diagnosis, management, death and bereavement support, and it is not only limited to cancer but also to chronic debilitating illnesses.

Globally, about 40 million people yearly remain in need of palliative care; out of which 14% get access to it.^[4] Out of non-communicable diseases, 93% of adults and 98% children suffering from various life-limiting illnesses have an unmet need for palliative care, and 80% of this is from low and middle-income countries.^[5,6] Global Burden of Disease estimated 9,795,344 deaths in India in 2016, and 7.5 million had need of palliative care, before or during end-of-life.

*Corresponding author: Dr. Satabdi Mitra, Assistant Professor, Department of Community Medicine, KPC Medical College and Hospital, Kolkata, West Bengal, India. stbdimtr111@gmail.com

Received: 15 March 2025 Accepted: 05 September 2025 Epub ahead of print: 04 December 2025 Published: 10 February 2026 DOI: 10.25259/IJPC_86_2025

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

©2026 Published by Scientific Scholar on behalf of Indian Journal of Palliative Care

Amongst them, 2.7% is for children aged below 15 years and 97.3% for those above 15 years of age.^[7] Since 2019, nine countries of the European continent have incorporated palliative care training as a compulsory in their medical schools.^[8,9] Following the resolution of the 67th World Health Assembly, member states are committed to integrating palliative care into national health policies tailored to the socio-cultural contexts.^[10] In addition to that, specialist palliative care services alone cannot meet the enormous need in the background of long-lasting care, scarcity of resources and so on. Besides these, home is often preferred for spending the last days by many people and being intubated through every possible orifice is not always welcomed with respect to an individual's autonomy and dignity. Availability of simple, effective measures for symptom relief with minimal assistance from technology can bring about good quality 'total care,' and this is the basis of palliative care to be an integral component of primary health care.

The Government of India launched National Programme for Palliative Care (NPPC) in 2012. Since then, its implementation is facing challenges mainly due to the lack of resources, infrastructure, trained health professionals, funding and social support towards patients and their families.^[11] Therefore, except for a few states like Kerala, the overall progress of NPPC is dismal. NPPC started in a phase-wise manner in West Bengal since 2017–2018, starting with 19 palliative care centres and inclusion of the rest by 2020–2021.^[12] In 2022, in collaboration with Pallium India, an orientation training for 100 people from 22 institutions was organised by the Government of West Bengal on palliative care and pain relief. Factors such as a lack of designated and motivated manpower, poor access to opioids because of the absence of the state's policy on its availability, unawareness in part of almost all stakeholders, create hurdles in the proper rolling out of NPPC despite its overarching scope of community and home-based care beyond institutional and speciality services.^[9,13] These all mandate training of medical officers (M.O.s) on palliative care who will further work for capacity building amongst designated staff for palliative care and deliver services right from the primary health care level. Experiences over the years from various regions have proven that these simple trainings can impart/improve knowledge and skill of participants, and they can easily master various facets of palliative care, as symptom relief, emotional support and so on.^[6,9] They can also sensitise community members to give meaningful companionship, social and spiritual support to the patients and their families, especially during crisis and thus the 'compassionate community' can be built and developed.^[11] Along with all these, it is of utmost importance to have death literacy, which can bring about people's attitude and behaviour towards planning for care, including advanced and end-of-life care, death and bereavement preparedness in a more meaningful way. In this era of advanced technology

and the intrusion of artificial intelligence in almost every arena, digital legacy planning might empower people if stakeholders are educated in planning themselves and guiding community members regarding insightful planning for intertwined 'physical death' and 'digital death' in a common thread.^[14]

Objectives

1. To assess the training needs of M.O.s on palliative care, especially in regard to NPPC
2. To assess the status of digital legacy and care planning amongst participants

MATERIALS AND METHODS

A descriptive study was conducted over 3 months (February–April, 2024) in 4 randomly selected districts out of a total of 28, including health districts of West Bengal. The M.O.s and block M.O.s of health, having at least 1 year of work experience posted anywhere and serving under the state government health sector, were selected with the idea in back of mind that these doctors are mostly accustomed to the ongoing system itself. After 12 years of launch, NPPC is still far beyond any progress in the majority of Indian states and needs catalytic efforts, which might be brought about by cascade-level training. From a similar study, the average improvement of knowledge after training was found as 58.7%.^[6] Assuming a standardised normal deviate $Z_{(1-\alpha/2)} = 1.96$ ($\alpha = 0.05$ and confidence limit = 95%) and absolute precision 5%, the sample size was calculated as 373. Following Cochran's finite population correction formula, out of 600 M.O.s required sample size came as 231, considering a 10% drop-out and/or incomplete questionnaire, the total participants were calculated as a minimum of 254. In each of the 4 districts, health and family welfare headquarters were requested to select M.O.s so that at least 2–3 will come from each of the Primary Health Centre (PHC) or Community Health Centre (CHC) for ease of next-level training and smooth running of the programme. Selecting this representative number was expected not to interfere smooth running of the health facilities. However, the total number of participants was 260. A self-administered, pre-tested, structured, validated questionnaire was used, containing participants' demographics, work experience (in years) and 30 single-answer multiple choice questions (MCQ) without any negative marking pertaining to three domains, namely physical symptom management, psychological support, and socio-emotional care covered in training. A 1-day 4-h training was delivered at each of the district headquarters by the principal investigator, who received state-level training of trainers (ToT) and has a fellowship in palliative care. Over these three domains, the areas covered extensively were the basics of palliative care with its principles, goals and needs, communication skills, symptomatic, especially

pain management, nursing care and issues in home and community-based care, ethical, spiritual and psychosocial issues, grief and bereavement support. The maximum obtainable score in the questionnaire was 30. In the post-training assessment, only MCQs were given. A Digital Death Survey questionnaire (open) 2024 version was shared with participants to assess their literacy and familiarity with end-of-life care, laws and legacy planning and preparedness. In consideration of the potentiality of negative mental impact, filling this out was kept optional and anonymous. It consisted of queries related to familiarity with digital legacy, assets, death and user policies with options.^[14] IBM SPSS version 22.0 was used for descriptive and inferential statistical analysis. Kolmogorov–Smirnov test was done and *P* value was found as >0.05, indicating normal distribution of data. A paired t-test was done to compare the means of before and after training scores.

RESULTS

Out of the total 260 study participants, 200 (76.9%) were males and 60 (23.1%) were females. Age of the participants was 36 ± 3.92 (mean \pm standard deviation [SD]) years. Amongst them, 156 (60.0%) were from rural backgrounds and the rest from urban backgrounds. Average work experience was 5.2 ± 1.4 years. The majority, 206 (79.2%), were MBBS, 47 (18.1%) had post-graduate diplomas, and 7 (2.7%) were post-graduate degree holders [Table 1]. None were found to have undertaken any online and/or onsite course or attended any webinar or seminar on palliative care before.

Mean \pm SD of pre-training and post-training scores were 12 ± 2.4 and 26 ± 2.6 in domain 1, 09 ± 1.9 and 21 ± 2.0 in domain 2 and 06 ± 2.2 and 13 ± 1.3 in domain 3. In all three domains, mean scores were higher after training and differences were found to be statistically significant in a paired t-test [Table 2]. Univariate general linear modelling was done with pre-training score as baseline, and it was found as significant. The partial eta square value came as

0.691, indicating 69% of unmet training needs for palliative care. As the post-training score was also lower than the optimum, multivariate analysis of variance for both scores was significant in Pillai-Barlett trace against time over the horizontal axis. This indicates the need for re-training for the study participants. Hub and spoke model has been developed for cascade training of health care workers on level wise service palliative care service provisions [Figure 1].

Regarding digital planning on end-of-life and literacy, 202 (77.7%), 241 (92.7%), 217 (83.5%) and 258 (99.2%) expressed their unfamiliarity with terms as digital legacy, assets, death and immortality, respectively. Regarding the question ‘does anyone other than yourself know your passwords for e-mail, computer/laptop, mobile phone and online bank account’, it was found that for bank account 176 (67.9%) and for computer, only 98 (37.7%), for e-mail, 120 (46.1%), and 23 (8.8%) have shared it. Everyone marked as ‘very unfamiliar’ with deceased used policies, that is, policies, laws and regulations that apply to the online account when the user dies. None was found to complete a ‘social media will’ or ‘digital will’. Still, it is very encouraging that 104 (40.0%) opted that after knowing, they are willing to do a digital will, though they expressed hesitancy about informing password to others. 156 (60.0%) of participants have already purchased or have a plan to purchase digital assets, and 19 (7.3%) have their own website/blog (s), but none possess any cryptocurrency. Regarding writing a will and testament, 16 (6.1%) have written it, and 56 (21.5%) have it in their future plan. No one was found to document wishes for end-of-life medical and/or social care in advance or an anticipatory care plan or directive, even in the context of the COVID-19 pandemic; still, 29 (11.1%) have spoken to friends or families about it. 201 (77.3%) expressed their wishes for family or friends to get access to their digital assets following their death. Following the death of a loved person or friend, 26 (10.0%) admitted to create a memorial page, usage of digital media was by 168 (64.6%) to communicate death news only and by 38 (14.6%) for ‘survivor advocacy’,

Table 1: Distribution of baseline characteristics of participants (*n*=260).

Age (in years) [mean \pm SD]	36 \pm 3.92	
Sex	Male	200 (76.9%)
	Female	60 (23.1%)
Background	Rural	156 (60.0%)
	Urban	104 (40.0%)
Qualifications	MBBS	206 (79.2%)
	PG diploma	47 (18.1%)
	PG degree	7 (2.7%)
Work experience (in years) [mean \pm SD]	5.2 \pm 1.4	
SD: Standard deviation		

Table 2: Comparison of scores by paired t-test before and after training.

Variable (s)	Mean \pm standard deviation	<i>P</i> -value*
Domain 1		
Pre-training	12 \pm 2.4	0.01
Post-training	26 \pm 2.6	
Domain 2		
Pre-training	09 \pm 1.9	0.001
Post-training	16 \pm 2.0	
Domain 3		
Pre-training	06 \pm 2.2	0.04
Post-training	13 \pm 1.3	
*: Statistical significant p-value		

which is enabling bereaved ones in coping with the loss. All the participants expressed interest in getting information about planning for digital legacy and assets.

DISCUSSION

Over the years, palliative care has expanded its horizon through providing compassionate, holistic care, maintaining dignity, autonomy and aiming towards quality of life. National Medical Commission brought about a revised, refined curriculum for medical education where there is ample scope for training in palliative care besides preventive, promotive, curative and rehabilitative approaches.^[15] Yet, there is a palpable gap in care giving as healthcare providers who are already working have not received any formal education or training in aspects like breaking bad news, communication with people in need of end-of-life care and developing plans for care giving collectively with their family members, addressing psychosocial and spiritual issues and managing accordingly and most importantly, holistic pain relief. The National Programme for Palliative Care aims at the orientation and sensitisation of healthcare providers so as to deliver comprehensive, need-based care with the inclusion of staff at health and wellness centres. There was a comparative study conducted by Damani *et al.* by interviewing family physicians working in Mumbai who work in collaboration with the palliative care team (PC) team to provide home-based care.^[6] Artioli *et al.* conducted a palliative care training evaluation in a 900-bedded hospital, but their study participants were healthcare professionals of various strata, such as physicians, nurses and para-medical staff.^[9] While providing community and home-based palliative care, besides physicians, nurses have an important role. A study was conducted by Dehghani *et al.* from Iran on perceived self-efficiency of nursing staff after receiving palliative care training.^[16] Ingleton *et al.* undertook a large two-phase study amongst various levels of healthcare providers to assess the need for education and training on palliative care.^[17] A study by Chang *et al.* was among resident physicians randomised to receive palliative care and education.^[18] Bhatnagar and Patel also conducted a study on the effectiveness of a certificate course on palliative care amongst specialist physicians.^[19] Suija *et al.* conducted a survey in Estonia amongst faculty members to assess the status of palliative care training at their university.^[20] This is utterly important because if the palliative care education and training are given from the beginning of medical graduation level, there would be smooth integration of it in regular healthcare provision. White *et al.* also undertook a survey under an NHS trust to assess palliative care training.^[21] In accordance with the current study, the majority of study participants were in a comparative age group, work experience and qualification level overall, especially those who are in-service. Improvement of knowledge, as tested mostly by post-training

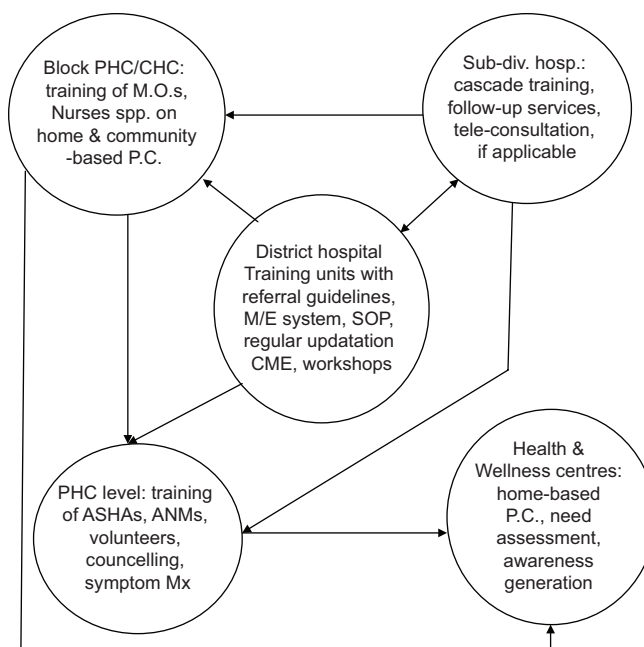


Figure 1: Hub and spoke model for cascade training on palliative care at various tiers of healthcare. PHC: Primary health centre, CHC: Community health centre

scores, was found to be significantly high in studies by Bhatnagar and Patel^[19] Dehghani *et al.*^[16] and Elayaperumal *et al.*^[15] The systematic review by Pamela Turrillas *et al.* also showed pooled data evidence of significant improvement of post-training knowledge.^[22] In accordance with the findings of the current study and evidence from the literature, a hub and spoke model addressing training cascade and holistic support in regard to palliative care has been framed. [Figure 1] Unmet training need and necessity for re-training as found in the current study have some similarities with the study by Ingleton *et al.*, but they assessed need from potential beneficiaries, and the caregivers' perspective was explored qualitatively.^[17]

CONCLUSION

The current study has been limited by its duration of training, as in 4-h training with before-and-after assessment, only basic knowledge gain can be found and that too reflects rote memory, which has less applicability unless it is reinforced and supplemented periodically by field training. Still, the work has a huge span, though it has a tremendous scope of acting as a springboard for future exploration. This brief training can be called sensitisation, but it is true that physicians, despite their tremendous role, are denied palliative care learning through their graduation curriculum. As a result, there remains a huge gap in this field, reflected in awareness and obviously in practice. Still, it has been evident that training in palliative care is a necessitous for physicians in improving their efficacy and diffusing this knowledge to healthcare providers working at various levels. Entwining

palliative care into healthcare delivery needs sensitisation of professionals beyond the cure-centric mode of management. It would be beneficial in planning and implementation of advanced care, end-of-life care by means of prevention and relief of symptoms, including pain and psychological, social and spiritual commiseration for patients and their families.

Ethical approval: The research/study was approved by the Institutional Ethics Committee, approval number ME/MISC--225/2023/M, dated 15th December 2023.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship: Nil.

Conflicts of interest: There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation: The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript, and no images were manipulated using AI.

REFERENCES

- World Health Organization. Cancer: WHO Definition of Palliative Care; 2019. Available from: <https://www.who.int/cancer/palliative/definition/en> [Last accessed on 2024 Dec 20].
- Global Burden of Disease Collaborative Network, Global Burden of Disease Study. Results (2020, Institute for Health Metrics and Evaluation-IHME); 2019. Available from: <https://vizhub.healthdata.org/gbd-results> [Last accessed on 2025 Mar 08].
- Knaul FM, Bhadelia A, Horton R. Health-related suffering: From lancet commission to declaration. *Lancet* 2018;391:2088-9.
- World Health Organization. Palliative Care. Available from: <https://www.who.int/news-room/fact-sheets/detail/palliative-care> [Last accessed on 2024 Dec 20].
- Sharkey L, Loring B, Cowan M, Riley L, Krakauer EL. National palliative care capacities around the world: results from the world health organization non-communicable disease country capacity survey. *Palliat Med* 2018;32:106-13.
- Damani A, Ghoshal A, Dighe M, Dhiliwal S, Muckaden M. Exploring education and training needs in palliative care among family physicians in Mumbai: A qualitative study. *Indian J Palliat Care* 2018;24:139-44.
- De Lima L, Pastrana T. Opportunities for palliative care in public health. *Annu Rev Public Health* 2016;37:357-74.
- Arias-Casais N, Garralda E, Rhee JY, De Lima L, Pons JJ, Clark D, *et al.* EAPC atlas of palliative care in Europe. EAPC Press: Vilvoorde; 2019.
- Artioli G, Bedini G, Bertocchi E, Ghirotto L, Cavuto S, Massimo Costantini M, *et al.* Palliative care training addressed to hospital healthcare professionals by palliative care specialists: A mixed-method evaluation. *BMC Palliat Care* 2024;23:19.
- World Health Assembly. Strengthening of palliative care as a component of integrated treatment throughout the life course: report by the secretariat. Geneva: Institutional Repository for Information Sharing, World Health Organization; 2014. Available from: https://www.who.int/iris/handle/10665/158962a67_31-en.pdf?sequence=1&isallowed=y [Last accessed on 2024 Dec 12].
- Ministry of Health and Family Welfare, Government of India. National Health Mission. Operational Guidelines for Palliative Care at Health and Wellness Centres; 2012. Available from: <https://nhsrcindia.org> [Last accessed on 2025 Mar 08].
- Government of West Bengal. State Health and Family Welfare. Implementation of NPPC in the newly approved districts; 2020.
- Hawley P. Barriers to access to palliative care. *Palliat Care* 2017;10:1-7.
- Norris J, Sofka CJ. Digital Death Survey; 2024. Available from: https://qualtricsxm8hsdjxfoxn.qualtrics.com/jfe/form/sv_7p5ijqn6r4shj8a [Last accessed on 2025 Mar 08].
- Elayaperumal S, Venugopal V, Adinarayanan S, Dongre AR. Evaluation of palliative care training program for medical interns in a tertiary care teaching hospital, South India. *Indian J Community Fam Med* 2022;8:23-7.
- Dehghani F, Barkhordari-Sharifabad M, Sedaghati-Kasbakh M, Fallahzadeh H. Effect of palliative care training on perceived self-efficacy of the nurses. *BMC Palliat Care* 2020;19:63.
- Ingleton C, Gardiner C, Seymour JE, Richards M, Gott M. Exploring education and training needs among the palliative care workforce. *NMJ Support Palliat Care* 2013;3:207-12.
- Chang J, Zhuron Q, Jiang S, Sun Q. The impact of palliative care education and training program on the resident physicians. *Ann Palliat Med* 2021;10:2758-65.
- Bhatnagar S, Patel A. Effectiveness of the certificate course in essentials of palliative care program on the knowledge in palliative care among the participants: A cross-sectional interventional study. *Indian J Palliat Care* 2018;24:86-92.
- Suija K, Stephen R, Mason SR, Elsner F, Paal P. Palliative care training in medical undergraduate education: A survey among the faculty. *BMC Palliat Care* 2024;23:19.
- White N, Oostendorp LJ, Minton O, Yardley S, Stone P. Palliative care training in undergraduate medical, nursing and allied health: A survey. *BMJ Support Palliat Care* 2019;12:e489-92.
- Pamela Turrillas P, Teixeira MJ, Maddocks M. A systematic review of training in symptom management in palliative care within postgraduate medical curriculums. *J Pain Symptom Manage* 2019;57:156-70.

How to cite this article: Mitra S, Sarkar AK. Assessment of Training Need for National Program for Palliative Care and Digital Legacy Planning among Medical Officers of an Eastern State of India. *Indian J Palliat Care*. 2026;32:60-4. doi: 10.25259/IJPC_86_2025