



Assessment of the Quality of Training Programs and the Demand for Continuous Training in Nutrition and Food Safety in Vietnam for the Period 2025–2030

Tran Thanh Duong, Lam Quoc Hung* and Hoang Thi Hong Nhung

National Institute of Nutrition, Vietnam

*Corresponding Author: Lam Quoc Hung, National Institute of Nutrition, Vietnam.

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Abstract

Continuing training in nutrition and food in Vietnam consists of short-term courses aimed at updating knowledge, skills, and improving capacity for healthcare staff, nutrition personnel, and food safety workers, including contents such as clinical nutrition, community nutrition, dietetics, and the latest regulations on food safety. Continuing training in nutrition and food is a mandatory requirement to improve the capacity of healthcare staff in accordance with the Law on Food Safety 2010, the Law on Medical Examination and Treatment 2023, and the Law on Disease Prevention 2025. However, in practice, there is a lack of synchronization between the demand for continuing training at the local level and the training capacity of the National Institute of Nutrition – Ministry of Health in implementing current legal regulations.

Research Objectives: To describe the demand for continuing training in the period 2024–2030; and to evaluate learners' feedback on the quality of the training program and training materials at the National Institute of Nutrition.

Methods: A cross-sectional descriptive study on continuing training conducted in 2024 in 42/63 provinces/cities and a survey of 250 learners who completed the course (2022–2023) using a questionnaire (5-point Likert scale).

Results: A total of 1,441 personnel were nominated for continuing training continuing training in 2024 at the National Institute of Nutrition, but the actual participation rate of local healthcare staff was only 5.3%. The demand for continuing training in the period 2025–2030 is mainly concentrated at the district level (accounting for 71.5%). Learners rated the practicality of the program very highly (agreement rate from 88–96%). However, 40% of learners suggested increasing the duration of practical sessions and 30% wished to add new topics such as sports nutrition and oncology nutrition.

Conclusion: There is a large gap in access to continuing training at the grassroots level between the demand and the actual participation of local healthcare staff. Therefore, it is necessary to implement blended learning models and decentralize training to meet the human resource needs of the health sector by 2030.

Keywords: Continuing Education; Nutrition; Food Safety; Healthcare Workers; Vietnam

Introduction

Nutrition and food safety are key pillars in public health strategies and clinical care. In Vietnam, the rising burden of nutrition-

related non-communicable diseases requires healthcare workers to possess in-depth knowledge and accurate practical skills. The 2023 Law on Medical Examination and Treatment mandates that healthcare professionals must continuously update their medical

knowledge (CME – Continuing Medical Education) to maintain their practice licenses; the 2010 Law on Food Safety and the 2025 Law on Disease Prevention also require updating knowledge on nutrition and food to support professional duties. Decree No. 155/2018/ND-CP further imposes stringent competency requirements for food safety management personnel. The National Institute of Nutrition, as the top-tier institute in this field, has implemented numerous continuing education programs. However, in order to develop a training roadmap for the period 2024–2030, assessing needs based on local realities and learner feedback is essential. This study was conducted with two objectives: (1) To describe the current status of training programs and training materials for continuing education in nutrition and food for healthcare workers in Vietnam in 2024 and the 2025–2030 period. (2) To describe learners’ evaluations of continuing education programs and training materials in nutrition and food at the National Institute of Nutrition. The findings of this study provide a scientific basis for optimizing resources and modernizing continuing education content in nutrition and food in Vietnam.

Methods

A cross-sectional descriptive study was conducted to survey training managers/education officers in 63 provinces/cities in 2024 and to forecast training needs for the 2025–2030 period (42 units responded), using an official dispatch system sent to relevant institutions. A total of 250 participants (physicians, nutritionists, and nurses) who had completed key continuing education (CE) courses (Clinical Nutrition and Dietetics, Community Nutrition, and Food Testing) were surveyed to assess learner feedback on training objectives and programs. Data were collected via Google Forms. Satisfaction was measured using a 5-point Likert scale (from 1: Strongly disagree to 5: Strongly agree). Evaluation criteria included: objectives, program content, and teaching methods. Data were analyzed using Stata version 17.0. The study was approved by the Ethics Committee of the National Institute of Nutrition under Approval Certificate No. 541/QLKH-VDD dated June 17, 2024.

Results

Current status of continuing education in nutrition and food in 2024 at the National Institute of Nutrition and training needs for healthcare workers at the local level for the 2025–2030 period.

No	Continuing education course	Training needs and actual status of continuing education in 2024		
		Training needs at the National Institute of Nutrition (Persons)	Local healthcare workers (Persons)	%
1.	1-month course			
	Community nutrition	388	16	4.1
	Clinical nutrition and dietetics	125	0	0
	Food safety and hygiene	265	0	0
2.	3-month course			
	Community nutrition	116	10	8.6
	Clinical nutrition and dietetics	171	20	11.7
	Food safety and hygiene	58	0	0
3.	6-month course			
	Community nutrition	69	5	7.2
	Clinical nutrition and dietetics	194	25	12.9
	Food safety and hygiene	55	0	0
	Total	1441	76	5.3

Table 1: Current status of continuing education in nutrition and food for provinces/cities at the National Institute of Nutrition in 2024.

Table 1 shows that the actual participation of provincial healthcare workers in continuing education at the National Institute of Nutrition in 2024 remained very low: 76 out of 1,441 local healthcare workers participated (5.3%).

No	Continuing education course	Demand for continuing education in the 2025–2030 period					
		Total		Provincial		District	
		Persons	%	Persons	%	Persons	%
1.	1-month course						
	Community nutrition	1938	100	521	26.9	1417	73.1
	Clinical nutrition and dietetics	488	100	145	29.7	343	70.3
	Food safety and hygiene	954	100	188	19.7	766	80.3
2.	3-month course						
	Community nutrition	557	100	135	24.2	422	75.8
	Clinical nutrition and dietetics	728	100	298	40.9	430	59.1
	Food safety and hygiene	357	100	69	19.3	288	80.7
3.	6-month course						
	Community nutrition	275	100	77	28.0	198	72.0
	Clinical nutrition and dietetics	781	100	301	38.5	480	61.5
	Food safety and hygiene	316	100	91	28.8	225	71.2
	Total	6394	100	1825	28.5	4569	71.5

Table 2: Demand for sending healthcare staff to participate in continuing education on nutrition and food by provinces/cities for the 2025–2030 period.

Table 2 shows that in the 2025–2030 period, the total number of healthcare workers requiring continuing education is expected to increase to 6,394, with a marked rise in specialized courses such as Clinical Nutrition and Dietetics and Food Safety and Hygiene.

For the 1-month courses: Community Nutrition has 1,938 registered participants, of whom 73.1% are from the district level and 26.9% from the provincial level. Clinical Nutrition and Dietetics has 488 participants, with 70.3% from the district level and 29.7% from the provincial level. Food Safety and Hygiene has 954 participants, including 80.3% from the district level and 19.7% from the provincial level. For the 3-month courses: Community Nutrition has 557 participants, with 75.8% from the district level and 24.2% from the provincial level. Clinical Nutrition and Dietetics has 728 participants, including 59.1% from the district level and 40.9% from the provincial level. Food Safety and Hygiene has 357 participants, of whom 80.7% are from the district level and 19.3% from the provincial level. For the 6-month courses: Community

Nutrition has 275 participants, with 72.0% from the district level and 28.0% from the provincial level. Clinical Nutrition and Dietetics has 781 participants, including 61.5% from the district level and 38.5% from the provincial level. Food Safety and Hygiene has 316 participants, with 71.2% from the district level and 28.8% from the provincial level.

Evaluation of program and training material quality

The evaluation results from feedback provided by 250 learners who completed the courses (2022–2023) on the objectives and content of the training programs in continuing education on nutrition and food at the National Institute of Nutrition, as presented in Table 3, indicate overall positive assessments. Median scores ranged from 4.0 to 5.0, with agreement rates (levels 4 + 5) between 88% and 96%. The aspect of objectives being appropriate to job requirements achieved the highest median score (5.0) and the highest agreement rate (96%, with 54% at level 5), demonstrating

No	Evaluation content	Level of assessment using the Likert scale					Median
		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)	
1.	The course objectives align with professional requirements (n = 250)	0 (0%)	0 (0%)	10 (4.0%)	105 (42.0%)	135 (54.0%)	5.0
2.	The course provides learning materials and reference documents (n = 250)	0 (0%)	0 (0%)	15 (6.0%)	130 (52.0%)	105 (42.0%)	4.0
3.	The lecture content aligns with the learning objectives (n = 250)	0 (0%)	0 (0%)	20 (8.0%)	155 (62.0%)	75 (30.0%)	4.0
4.	The lecture content is up-to-date and applicable to practice (n = 250)	0 (0%)	0 (0%)	25 (10.0%)	180 (72.0%)	45 (18.0%)	4.0
5.	The course includes clear and relevant illustrative examples (n = 250)	0 (0%)	0 (0%)	30 (12.0%)	205 (82.0%)	15 (6.0%)	4.0

Table 3: Learners’ feedback on the objectives and content of the training program.

that the programs effectively met learners’ professional needs in nutrition-related fields. Other aspects, including learning materials (median 4.0, 94% agreement), alignment of content with learning objectives (median 4.0, 92% agreement), and updated and applicable content (median 4.0, 90% agreement), were also positively evaluated, with level 4 responses predominating (52%–72%). However, the lower proportion of level 5 responses (18%–42%) and the increasing proportion of neutral responses

(6%–10%) suggest a need to further improve the timeliness and practical applicability of the content. The aspect of illustrative examples being clear and appropriate recorded a median of 4.0, the lowest agreement rate (88%, including 82% at level 4 and 6% at level 5), and the highest proportion of neutral responses (12%), indicating limitations in the relevance and engagement of the illustrative materials.

No	Evaluation content	Level of assessment using the Likert scale					Median
		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)	
1.	Appropriate use of teaching aids and instructional tools	0 (0%)	0 (0%)	35 (14.0%)	170 (68.0%)	45 (18.0%)	4.0
2.	Encourages learners to actively participate in the sessions	0 (0%)	0 (0%)	50 (20.0%)	175 (70.0%)	25 (10.0%)	4.0
3.	Teaching is engaging, dynamic, and problem-solving oriented	0 (0%)	0 (0%)	65 (26.0%)	175 (70.0%)	10 (4.0%)	4.0
4.	Encourages learners to provide feedback on the content and teaching methods	0 (0%)	0 (0%)	50 (20.0%)	175 (70.0%)	25 (10.0%)	4.0
5.	Delivers sessions on time and in accordance with the scheduled duration	0 (0%)	0 (0%)	45 (18.0%)	170 (68.0%)	35 (14.0%)	4.0
6.	The instructor’s attitude is appropriate toward learners	0 (0%)	0 (0%)	45 (18.0%)	170 (68.0%)	35 (14.0%)	4.0
7.	The instructor is enthusiastic and demonstrates a high sense of responsibility	0 (0%)	0 (0%)	65 (26.0%)	175 (70.0%)	10 (4.0%)	4.0

Table 4: Learners’ feedback on teaching methods in the course.

Table 3 presents the satisfaction levels of 250 learners regarding teaching methods in the continuing education program on nutrition at the National Institute of Nutrition. The results show that all aspects achieved a median score of 4.0, with agreement rates (levels 4 + 5) ranging from 74% to 86%, indicating that teaching methods were positively evaluated but not yet optimal. The use of appropriate teaching tools and instructional media recorded the highest agreement rate (86%, including 68% at level 4 and 18% at level 5), with the lowest proportion of neutral responses (14%), suggesting effective utilization of learning support tools by instructors. Similarly, punctuality and appropriate attitude (82% agreement, 14% at level 5, 18% at level 3) were positively rated, reflecting professionalism in teaching. In contrast, teaching that is engaging, dynamic, and enthusiastic/responsible had the lowest agreement rate (74%, including 70% at level 4 and 4% at level 5), along with the highest proportion of neutral responses (26%), indicating limitations in engagement and inspiration. Aspects related to encouraging participation and feedback (80% agreement, 10% at level 5, 20% at level 3) also suggest that interaction levels need improvement. The Kruskal–Wallis test ($p < 0.05$) confirmed statistically significant differences among aspects, highlighting variability in satisfaction across teaching methods. These findings indicate that while the program has a solid teaching foundation, improvements are needed in enhancing engagement, interaction, and instructor enthusiasm. Recommendations include strengthening interactive teaching approaches, utilizing modern instructional tools, and providing faculty development to improve instructor engagement and enthusiasm, thereby enhancing learning effectiveness and learner satisfaction.

The results in Figure 1 show that up to 40% of learners expressed a desire to increase hands-on training time in counseling clinics and teaching hospitals; 30% of learners suggested expanding modules on elderly nutrition, sports nutrition, and functional foods.

Discussion

In the context of increasingly significant public health challenges, particularly the growing burden of non-communicable diseases, continuous training in nutrition and food has become an essential need for healthcare workers in Vietnam. Nationwide survey results indicate that the demand for continuous training in this field is very high across all levels, with a particular concentration at the district level. However, the proportion of healthcare workers who have actually participated in training remains very low (5.3%), indicating a substantial “training gap”. This low training coverage reflects important barriers related to geography, financial constraints, and time limitations, which hinder healthcare workers at the grassroots level from accessing continuous professional development. Notably, the high demand for training at the district level (71.5%) highlights a shortage of nutrition-related expertise within primary healthcare settings, where national nutrition programs and community health interventions are directly implemented. Learners’ feedback on the training programs and materials in continuous nutrition and food training courses at the National Institute of Nutrition was collected to assess satisfaction levels and identify differences among courses, thereby providing a scientific basis for improving training content. Overall, components related to course objectives and content were highly rated, particularly their relevance to practical work (median score 4.0–5.0; satisfaction rate 88%–96%). This clearly reflects the Institute’s efforts to design programs that closely align with learners’ occupational requirements. However, aspects such as the updating of learning materials, the practicality of illustrative examples, and the applicability of knowledge to real-world work still received neutral responses from approximately 10–12% of participants. This suggests that there remains a certain gap between training content and clinical practice or community-based work. Some materials may not yet be fully updated in accordance with Ministry of Health standards, or may lack locally relevant examples, making it more difficult for learners to apply the knowledge in practice. In addition, teaching methods were generally evaluated positively (median score 4.0), with agreement rates ranging from 74% to 86%. Learners appreciated the use of teaching tools, punctuality,

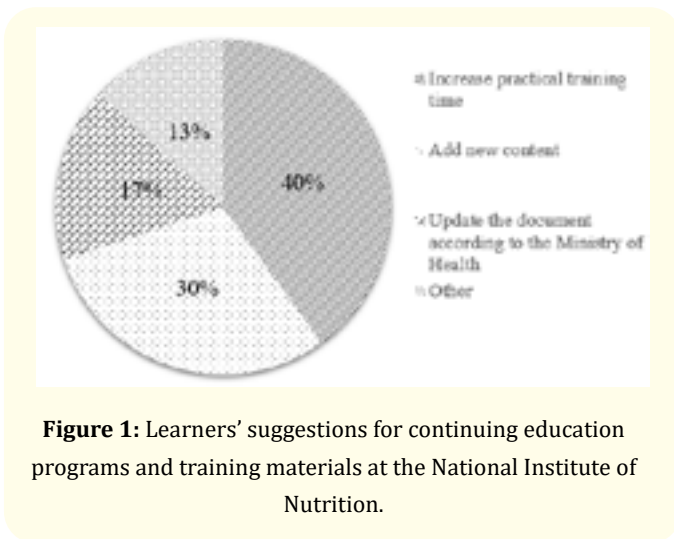


Figure 1: Learners’ suggestions for continuing education programs and training materials at the National Institute of Nutrition.

and the professional attitude of lecturers. However, the proportion of highest-level ratings (score 5) remained relatively low (only 4–14%), while neutral responses were relatively high (20–26%) for aspects such as “engaging teaching style” and “learner interaction.” This indicates that although lecturers possess strong professional expertise, their pedagogical skills and interactive teaching methods may not yet be fully optimized. According to adult learning theory, adult learners tend to acquire knowledge more effectively through discussion, critical engagement, and hands-on practice. Therefore, the application of active learning methods, real-case simulations, and group-based learning would likely enhance engagement and teaching effectiveness. Regarding training quality, learners’ demand for increased practical training time is entirely consistent with the global trend toward competency-based training. Training materials should also be digitized and enriched with more visual content to support self-directed learning. Furthermore, learners’ interest in emerging topics such as “sports nutrition” indicates a growing trend toward specialization among healthcare workers, aiming to meet the increasingly diverse nutritional needs of the population in modern society [1-5].

Conclusion

The demand for continuous training in nutrition and food among healthcare workers in 42 provinces and cities of Vietnam shows a substantial gap between actual training participation and training needs, as well as the implementation capacity of continuous training programs at the National Institute of Nutrition. In 2024, the number of healthcare workers nominated by health facilities to participate in training at the Institute was 1,441; however, the actual number of participants from provinces and cities was only 76, accounting for 5.3%. The projected demand for continuous training in nutrition and food among healthcare workers in 42 provinces and cities of Vietnam for the period 2025–2030 is estimated at 6,394 individuals, with a higher demand at the district level compared to the provincial level, corresponding to 71.5% and 28.5%, respectively. This reflects a shortage of human resources with expertise in nutrition and food safety at lower-level healthcare facilities.

The survey results from 250 trainees participating in continuous training courses on nutrition and food at the National Institute of Nutrition in 2024 showed a high level of satisfaction with the training objectives and curriculum, with satisfaction rates ranging

from 88% to 96%. Satisfaction with teaching methods was also positive, with agreement rates ranging from 74% to 86%. Overall, the training programs at the Institute have met the learning needs of participants. However, in order to achieve the healthcare workforce development goals toward 2030, the National Institute of Nutrition should implement several improvements. First, it is necessary to diversify training modalities by developing e-learning courses combined with on-site practical training to better support healthcare workers at district and commune levels. Second, the curriculum framework should be updated, with the proportion of practical training increased to at least 60% of the total course duration. Third, learning materials should be modernized through digitization of textbooks, the development of a clinical image database, and the inclusion of advanced nutrition topics such as cancer, sports nutrition, and geriatric nutrition. Finally, supportive mechanisms should be established, including locally coordinated training policies and diversified training models to reduce the financial burden on trainees from disadvantaged areas.

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