

Evaluation of the Cambodia Field Epidemiology Training Program, 2019–2024: public health response and stakeholder perspectives

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Objective: Field epidemiology training programmes (FETPs) are designed to develop a competent public health workforce to effectively detect and respond to diseases. In Cambodia, five FETP cohorts had graduated by 2024, yet no formal evaluation had taken place. This study aimed to describe the characteristics of these FETP graduates, assess their involvement in public health responses, and explore the perspectives of stakeholders and graduates.

Methods: A mixed-methods cross-sectional study was conducted among Cambodia's FETP–Frontline and FETP–Intermediate graduates and key informants. Participants consisted of 81 graduates from five cohorts (2019–2024) and four leaders from the Ministry of Health and provincial health departments. Quantitative data were collected using a structured online questionnaire, and qualitative data through key informant interviews. Descriptive statistics summarized quantitative findings, while thematic analysis was applied to qualitative data.

Results: Of the graduates surveyed, most were Frontline level (80.2%, 65/81) and male (64.2%, 52/81). The median age was 34 years; 60.5% (49/81) had a bachelor's degree. Overall, 79.0% (64/81) reported participating in public health responses and 65.4% (53/81) in surveillance evaluations. The key informants attested to graduates' continued active involvement in public health responses.

Discussion: Cambodia's FETP appears to have strengthened the public health workforce, with most graduates contributing to outbreak response and surveillance. However, the number of FETP–Intermediate graduates was small, and their limited use of epidemiological skills highlighted the need for expanded training and improved skill development. Stakeholders emphasized the programme's importance but noted that sustainability requires stronger domestic investment and funding. Overall, the FETP has enhanced epidemiological capacity, yet greater customization, domestic investment and expanded training are essential for long-term impact.

Field epidemiology training programmes (FETPs) are designed to strengthen the capacity of the public health workforce to detect, investigate and respond to health threats in alignment with the International Health Regulations (IHR, 2005).^{1–3} FETP core competencies include surveillance, outbreak investigation, data analysis, scientific communication, leadership and the ability to use epidemiological tools.⁴ The programme is structured into three tiers – Frontline, Intermediate and Advanced – each tailored to specific levels of responsibility and skill.^{1,4} Globally, FETPs operate in more than 150 countries and areas,⁵ with more than 22 000 FETP alumni contributing to surveillance and responses to

outbreaks or other health events.⁶ Evaluations of FETPs across countries have demonstrated their critical role in strengthening health systems. Studies from Jordan, Yemen and the World Health Organization's (WHO) Eastern Mediterranean and Western Pacific Regions have demonstrated that FETP graduates play critical roles in emergency responses, improving surveillance system performance, and supporting evidence-based decision-making within ministries of health.^{7–9} These findings underscore the importance of sustained financial support, expansion of programmes to countries without FETPs, adoption of preparatory self-paced online courses, and institutionalization to ensure long-term sustainability and national ownership.^{7–10}

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Published: 29 September 2026

doi: 10.5365/wpsar.2026.17.3.1354

In 1951, the United States Centers for Disease Control and Prevention (US CDC) established the Epidemic Intelligence Service, an in-service training programme that later became the foundational model for FETPs. From 1980 onward, the US CDC partnered with countries to support the development of national FETPs.¹ Cambodia's Department of Communicable Disease Control (CCDC) established a nationwide network of rapid response teams (RRTs) to enhance capacities for surveillance and outbreak response.¹¹ With technical and financial assistance from WHO and the US CDC, the CCDC launched the Applied Epidemiology Training (AET) programme in 2011.¹² The AET comprised two components: a 6-week introductory course on surveillance principles and outbreak investigation, and a 6-month foundation course emphasizing surveillance, field investigation, epidemiological methods and scientific communication.

In 2019, the AET evolved into an FETP, comprising two levels: FETP–Frontline and FETP–Intermediate. Both focus on four key domains: public health surveillance, field investigation, epidemiological methods and scientific communication. The Frontline curriculum emphasizes essential skills such as summarizing surveillance data, monitoring reporting systems, interpreting findings and preparing timely reports. The Intermediate curriculum builds upon these competencies, training participants to evaluate surveillance systems, investigate outbreaks, design and analyse studies, and produce evidence-based reports for policy and programme decision-making.

A total of 139 individuals completed the AET in 2011–2018, and by the end of 2024, 96 had completed the FETP, comprising 76 Frontline and 20 Intermediate graduates in five cohorts (there was no cohort in 2021 due to the COVID-19 pandemic). Participants were Ministry of Health (MOH) staff working at all levels, serving as RRT members or public health officers directly involved in surveillance and outbreak response. Despite 5 years of FETP implementation, Cambodia's FETP had not yet been evaluated. This evaluation aimed to generate evidence and insight into the Cambodia FETP by describing its graduates' characteristics and contributions to public health responses in Cambodia.

METHODS

Study design and setting

This mixed-methods study used an explanatory, sequential, cross-sectional design to collect data from October 2024 to January 2025. An online questionnaire was used to quantitatively evaluate FETP graduates' involvement in public health responses. Qualitative data were collected through interviews with key informants to explore the perspectives of programme representatives and Provincial Health Department policy-makers who sent their officers to attend the FETP. The Kirkpatrick model was applied to assess the impact of the FETP.¹² This model has been widely used for training evaluations, including in FETP assessments globally.^{9,13–16} In this study, Level 3 (behaviour) was assessed by examining how FETP graduates applied their acquired skills in the workplace, while Level 4 (results) evaluated the benefits of the training to the organization and its impacts on the health system by collecting stakeholder feedback on programme outcomes and alumni contributions.

Sampling strategy

The FETP maintains a database of the 96 individuals who graduated between January 2019 and December 2024, along with contact information for stakeholders, including management at the national and provincial levels who sent their staff to attend the FETP. For the quantitative study, all 96 FETP graduates were invited to participate in the online questionnaire using the census sampling approach. For the qualitative study, purposive sampling was used to select key informants, including senior MOH policy-makers overseeing the FETP and representatives from provincial health departments that had nominated staff to the programme. Four stakeholders were interviewed: one national-level policy-maker responsible for the FETP, one provincial RRT manager and two deputy directors of provincial health departments.

Questionnaire development and validation

The questionnaire was developed based on the core competencies of the FETP and was adapted from a previous questionnaire used to evaluate the AET

programme in Cambodia in 2019 (Ministry of Health, unpublished data, 2020). To ensure clarity and accuracy, the researchers piloted the questionnaire among AET alumni and revised it based on their feedback. In addition, the questionnaire was shared with Cambodian senior epidemiologists and FETP mentors, who reviewed the validity of the questionnaire's content to ensure its relevance and alignment with public health response activities and evaluation needs.

Data collection

The online questionnaire was administered using Google Forms. The survey URL was shared via the Telegram group for FETP graduates in Cambodia. All participants received a brief explanation of the study, the questionnaire and study objectives before starting the survey. The first of the survey's three sections covered demographics (age, sex, education, current position and employer). The second was a self-assessment that used structured questions to evaluate key public health activities engaged in after graduation, with a question included to capture the types of public health events (e.g. the COVID-19 pandemic, dengue outbreaks and foodborne disease outbreaks). Participants then assessed their engagement in public health activities using a 4-point frequency scale (from 1 = never to 4 = often) across 20 field epidemiology tasks. In the third section, participants were asked to rate their perceptions of training effectiveness using Likert-type scales (from not effective to very effective; no change to much better; and poor to excellent). Participants were also asked whether they agreed or disagreed with a series of statements about the programme, to identify its strengths and weaknesses.

Qualitative data were collected through face-to-face interviews with stakeholders using a semi-structured interview guide, with topics including the stakeholders' perspectives on the programme, its impact on public health responses and considerations about the programme's sustainability, and human resources and financial commitments. Interviews were audio-recorded using a mobile phone application and supplemented with written notes for transcription.

Data analysis

Quantitative data were analysed using STATA version 14 (StataCorp, College Station, TX, USA) and Microsoft Excel version 16.1 (Redmond, WA, USA). Categorical variables

were summarized using frequencies and percentages. Continuous variables were reported as median and interquartile range (Q1–Q3). Qualitative data were extracted from recordings and written notes, transcribed, and then coded within Excel spreadsheets. A thematic analysis was conducted after categorizing the information into cross-cutting themes, which were defined based on the content of the interviews.

RESULTS

Characteristics of FETP participants

Of the 96 FETP graduates, 81 (84.4%) completed the questionnaire. Of these respondents, 65 (80.2%) were FETP–Frontline graduates, and 16 (19.8%) were FETP–Intermediate graduates. The median age was 34 years (interquartile range: 31–37 years), and 52 (64.2%) were male. Most held a bachelor's degree (49, 60.5%) at the time of the survey. The most common professional backgrounds were nursing (35, 43.2%), medicine (13, 16.0%) and midwifery (11, 13.6%). Graduates were most frequently employed at the operational district level (36, 44.4%) or provincial health department level (26, 32.1%) (**Table 1**). The graduates were deployed across most provinces, with higher concentrations observed in the central and southern regions. However, no FETP graduates from two provinces – Pailin and Koh Kong – responded to the survey. Fourteen of 25 provinces (56.0%) had at least one Intermediate respondent **Fig. 1**.

Public health involvement

Overall, 64 (79.0%) respondents reported involvement in public health responses: 49 (75.4%) Frontline and 15 (93.8%) Intermediate graduates. Surveillance evaluation activities were reported by 53 (65.4%) graduates: 40 (61.5%) Frontline and 13 (81.3%) Intermediate. Research activities were less common, with 33 (40.7%) graduates reporting involvement: 23 (35.4%) Frontline and 10 (62.5%) Intermediate (**Table 1**).

Most graduates (63/81, 77.8%) took part in responses to COVID-19, and many took part in responses to foodborne illnesses (35/81, 43.2%), influenza (29/81, 35.8%) and dengue (29/81, 35.8%), with a higher proportion of Intermediate graduates engaged in responses compared with Frontline graduates (**Fig. 2**). **Table 2** shows that FETP graduates at both levels were frequently

Table 1. Demographic characteristics and participation in public health activities, by type of FETP graduate, Cambodia, 2019–2024

Characteristic	Total (<i>N</i> = 81)	Frontline (<i>n</i> = 65)	Intermediate (<i>n</i> = 16)
Age group, years			
24–33	35 (43.2)	25 (38.5)	10 (62.5)
34–44	43 (53.1)	38 (58.5)	5 (31.3)
≥45	3 (3.7)	2 (3.1)	1 (6.3)
Median (interquartile range, Q1–Q3) age, years	34 (31–37)		
Sex			
Male	52 (64.2)	41 (63.1)	11 (68.8)
Female	29 (35.8)	24 (36.9)	5 (31.3)
FETP graduates by cohort year^a			
2019	18 (22.2)	18 (27.7)	0 (0)
2020	15 (18.5)	15 (23.1)	0 (0)
2021	0 (0)	0 (0)	0 (0)
2022	29 (35.8)	29 (44.6)	0 (0)
2023	16 (19.8)	7 (10.8)	9 (56.3)
2024	19 (23.5)	12 (18.5)	7 (43.8)
Highest educational background			
Associate's degree	18 (22.2)	14 (21.5)	4 (25.0)
Bachelor's degree	49 (60.5)	41 (63.1)	8 (50.0)
Master's degree	14 (17.3)	10 (15.4)	4 (25.0)
Professional background			
Nursing	35 (43.2)	29 (44.6)	6 (37.5)
Doctor of medicine	13 (16.0)	11 (16.9)	2 (12.5)
Midwifery	11 (13.6)	9 (13.8)	2 (12.5)
Medical laboratory	7 (8.6)	4 (6.2)	3 (18.8)
Public health or epidemiology	5 (6.2)	2 (3.1)	3 (18.8)
Pharmacy	4 (4.9)	4 (6.2)	0 (0)
Medical or dental	3 (3.7)	3 (4.6)	0 (0)
Information technology	3 (3.7)	3 (4.6)	0 (0)
Current position			
Health officer	38 (46.9)	31 (47.7)	7 (43.8)
Head or deputy of unit	22 (27.2)	18 (27.7)	4 (25.0)
Programme or deputy manager	5 (6.2)	3 (4.6)	4 (25.0)
Administrative officer	5 (6.2)	5 (7.7)	0 (0)
Chief or vice chief of office	4 (4.9)	4 (6.2)	0 (0)
Laboratory manager	3 (3.7)	3 (4.6)	0 (0)
Physician or health consultant	2 (2.5)	1 (1.5)	1 (6.3)
Median (Q1–Q3) years in current position	5 (2–8)		

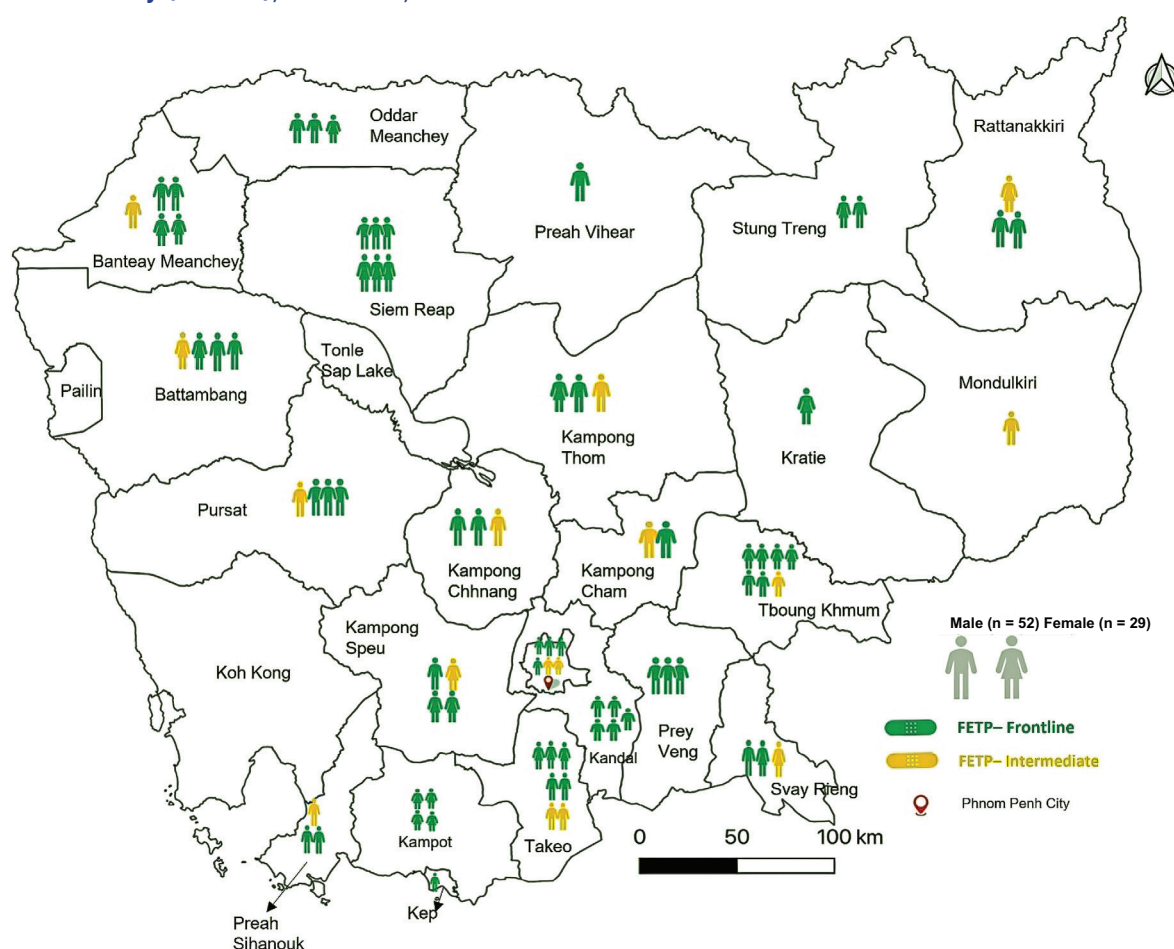
Characteristic	Total (<i>N</i> = 81)	Frontline (<i>n</i> = 65)	Intermediate (<i>n</i> = 16)
Employer			
National level (Ministry of Health)	5 (6.2)	4 (6.2)	1 (6.3)
Provincial health department level	26 (32.1)	19 (29.2)	7 (43.8)
Operational district level	36 (44.4)	29 (44.6)	7 (43.8)
Referral hospital level	9 (11.1)	9 (13.8)	0 (0)
Health centre level	3 (3.7)	3 (4.6)	0 (0)
Other (nongovernmental and non-health-related government sectors)	2 (2.4)	1 (1.5)	1 (6.3)
Median (Q1–Q3) years of experience in health sector	10 (7–12)		
Type of public health activity			
Public health response (disease outbreak, public health emergency)	64 (79.0)	49 (75.4)	15 (93.8)
Surveillance evaluation (data quality audit, surveillance evaluation)	53 (65.4)	40 (61.5)	13 (81.3)
Research studies (survey, assessment)	33 (40.7)	23 (35.4)	10 (62.5)

FETP: field epidemiology training programme; Q1: first quartile; Q3: third quartile.

Values are *n* (%) unless otherwise indicated.

^a FETP–Intermediate cohorts are selected from previous cohorts of FETP–Frontline graduates.

Fig. 1. Geographical distribution of FETP–Frontline and FETP–Intermediate graduates who responded to the survey (*N* = 81), Cambodia, 2024–2025^a



FETP: field epidemiology training programme.

^a The data reflect graduate placements by province as part of efforts to strengthen the national public health workforce.

Table 2. **Involvement of FETP–Frontline and FETP–Intermediate graduates (*N* = 81) in public health activities, Cambodia, 2019–2024**

Categorical variables	No. (%) involved			
	Often	Sometimes	Rarely	Never
Training for public health professionals	9 (11.1)	20 (24.7)	15 (18.5)	37 (45.7)
Mentorship for public health professionals	8 (9.8)	22 (27.2)	14 (17.3)	37 (45.7)
Surveillance evaluations	20 (24.7)	27 (33.3)	16 (19.8)	18 (22.2)
Data quality audits	13 (16.0)	32 (39.5)	19 (23.5)	17 (21.0)
Surveillance data analysis and reporting	16 (19.8)	33 (40.7)	15 (18.5)	17 (21.0)
Case investigations	14 (17.3)	39 (48.2)	16 (19.7)	12 (14.8)
Outbreak investigations	18 (22.2)	37 (45.7)	14 (17.3)	12 (14.8)
Collection, handling and transport of specimens	9 (11.1)	32 (39.5)	23 (28.4)	17 (21.0)
Use of computer software (e.g. Microsoft Excel, PowerPoint, Word)	50 (61.7)	17 (21.0)	5 (6.2)	9 (11.1)
Staff and resource management	9 (11.1)	31 (38.3)	15 (18.5)	26 (32.1)
Descriptive statistical analysis	9 (11.1)	24 (29.6)	22 (27.2)	26 (32.1)
Inferential statistical analysis	2 (2.5)	14 (17.3)	27 (33.3)	38 (46.9)
Public health research	7 (8.6)	31 (38.3)	13 (16.1)	30 (37.0)
Health policy, strategy or guideline development	5 (6.2)	23 (28.4)	23 (28.4)	30 (37.0)
Scientific reports and presentations for conferences	5 (6.2)	24 (29.6)	18 (22.2)	34 (42.0)
Publications	1 (1.2)	13 (16.0)	19 (23.5)	48 (59.3)

involved in public health activities, with 18 (22.2%) often involved in conducting outbreak investigations, but only 5 (6.2%) often involved in developing health policies, strategies or guidelines. Self-reported participation by FETP level is shown in **Supplementary Fig. 1**.

Perspectives of graduates towards the FETP

Graduates reported a positive perception of the FETP, with most rating the training as effective or very effective, agreeing that it had improved their work performance and rating the quality of training as good overall (**Supplementary Fig. 2**).

Strengths and weaknesses of the FETP

The key strengths identified by the graduates were in disease surveillance (Frontline 84.6% vs Intermediate 100%), outbreak investigations (Frontline 89.2% vs Intermediate 93.7%) and endemic infection control and emergency response (Frontline 89.2% vs Intermediate 100%). The most frequently identified weaknesses were creating public health leaders (Frontline 41.5% vs Intermediate 68.7%), encouraging cross-agency collaboration (Frontline 33.8% vs Intermediate 37.5%) and creating a basic understanding of public health

among members of the medical profession (Frontline 29.2% vs Intermediate 43.7%). Only 29.2% (19/65) of Frontline and 25.0% (4/16) of Intermediate graduates viewed publication as a programme strength (**Fig. 3**).

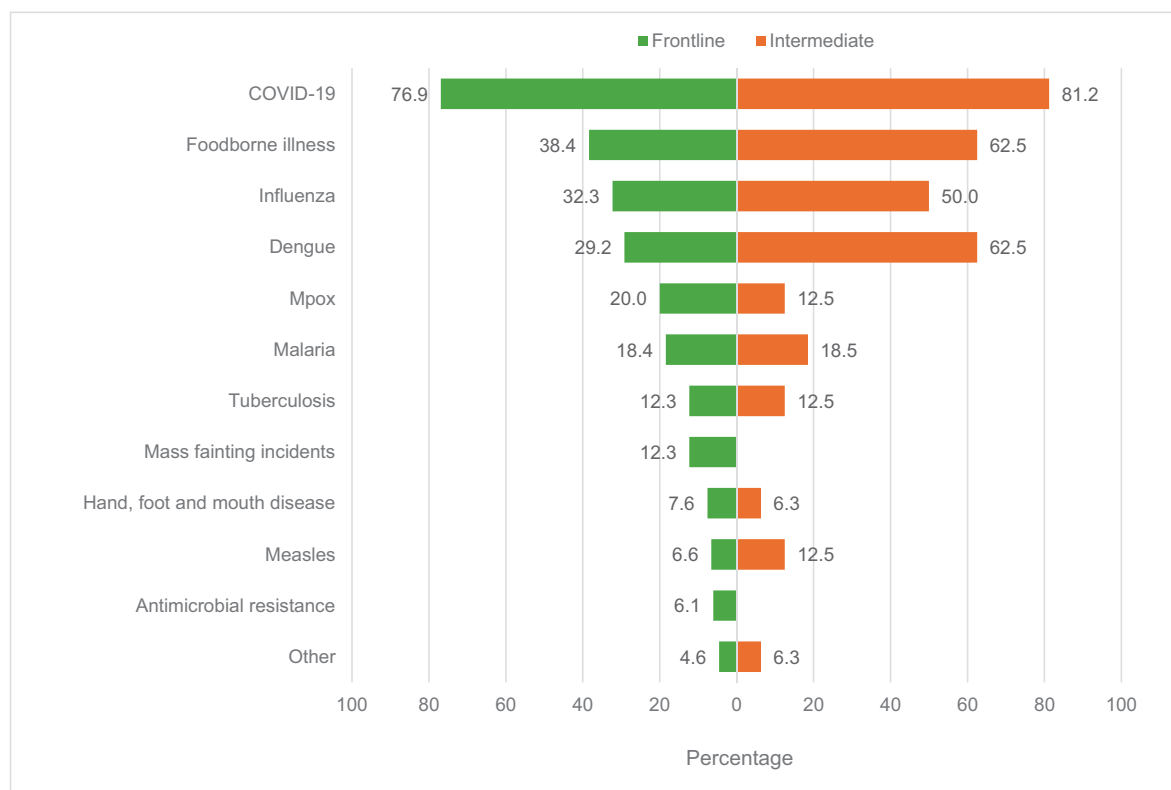
Stakeholders' perspectives of the FETP

The four interviewed stakeholders reported that Cambodia's FETP has strengthened public health responses by improving surveillance and outbreak responses, building capacity and skills, developing the workforce, contributing to professional growth, and improving networking and collaboration. Thematic analysis identified two main cross-cutting themes: 1) the programme's impact on public health responses and 2) concerns about the programme's sustainability and resource commitments (i.e. stable funding from the government).

Impact on responses to public health events

Stakeholders described FETP graduates as essential contributors to surveillance and outbreak investigations across all levels of the health system. During the COVID-19 pandemic and influenza A(H5N1) outbreaks, FETP graduates were regarded as vital personnel. One FETP

Fig. 2. Distribution of FETP–Frontline ($n = 65$) and FETP–Intermediate ($n = 16$) graduates' self-reported participation in responses to public health events (%), Cambodia, 2019–2024



FETP: field epidemiology training programme.

management representative noted, “FETP graduates were integral in investigations and response activities at both national and subnational levels.” One management representative from a provincial health department stated, “FETP graduates have significantly improved our outbreak response and surveillance capacity.”

Programme sustainability and resource commitment

Stakeholders highlighted that resource constraints were a significant challenge to sustaining the FETP; they also highlighted the importance of the MOH’s plan to co-fund the FETP by 2026 as a step towards reducing dependence on international partners. One FETP management representative stated, “Co-funding and collaboration will be crucial for ensuring that staff at all levels can be trained and equipped to respond to public health threats.” An FETP management representative explained, “There is a clear commitment to ensuring the programme’s financial sustainability, with a phased transition toward national funding supported by both domestic and international partners.” The strategy

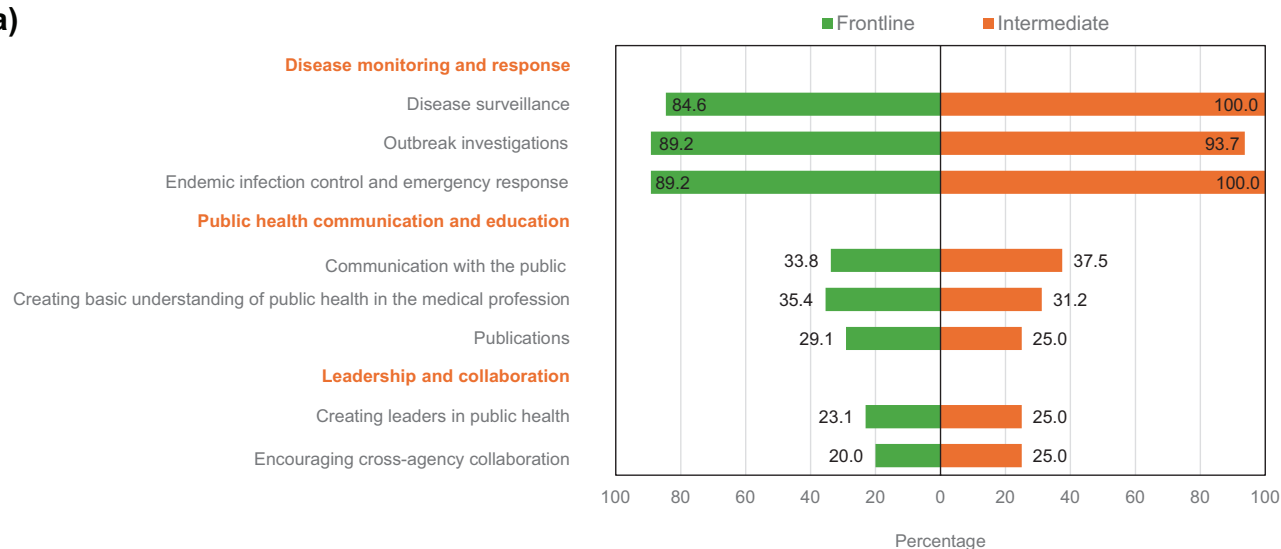
includes securing co-funding to support training for provincial-level staff and aims to gradually expand the programme’s reach while ensuring long-term viability.

DISCUSSION

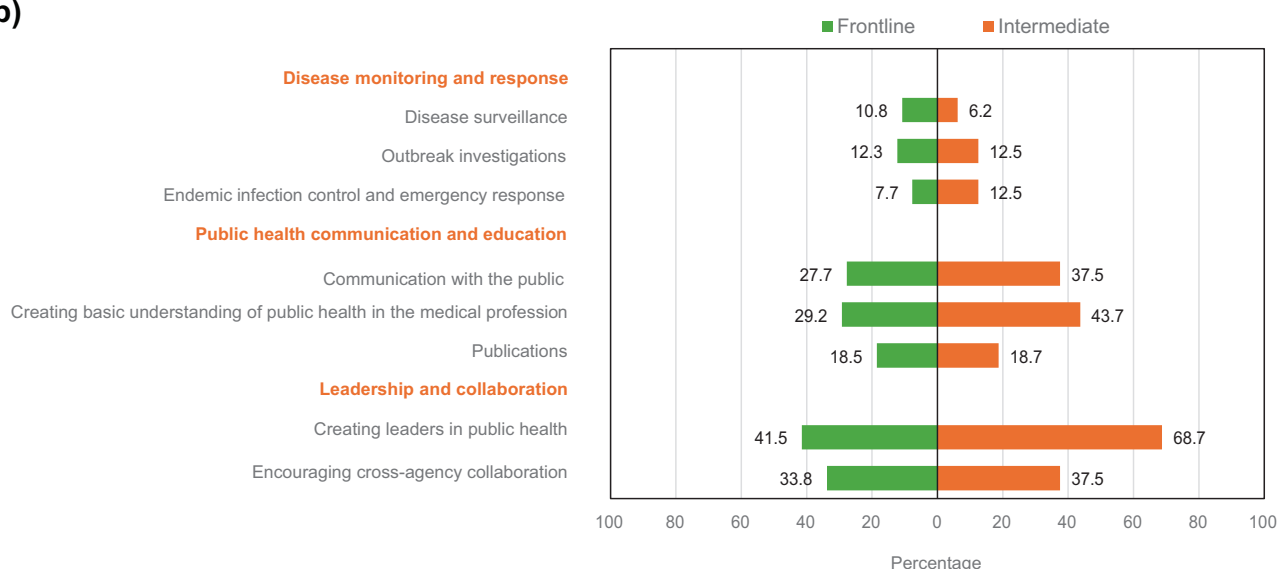
This evaluation provides evidence of the contribution of FETP graduates to public health responses in Cambodia, highlighting their level of engagement in core public health functions after graduation, and exploring their perceptions of the programme’s strengths, weaknesses and overall effectiveness. The findings demonstrate that FETP graduates have been involved in public health activities across all levels of the health system, aligning with the programme’s primary objective of enhancing national epidemiological capacity. Most respondents were Frontline graduates, reflecting the larger number of graduates from that programme ($n = 96$), of whom 20 had also completed the Intermediate programme and had been deployed at the district and provincial levels, which demonstrates the effective integration of the FETP within Cambodia’s decentralized health

Fig. 3. Perceived (a) strengths and (b) weaknesses of the FETP (% who agreed with statements) among Frontline ($n = 65$) and Intermediate ($n = 16$) graduates, Cambodia, 2019–2024

(a)



(b)



FETP: field epidemiology training programme.

system and its role in training primary responders for community disease outbreaks. FETP graduates were shown to be frequently responsible for surveillance and outbreak response in their provinces.

The capacities of FETP graduates enable them to conduct timely and effective responses, reducing the need to rely on national response teams. Notably, no respondents were from Pailin and Koh Kong provinces, suggesting potential geographical gaps in programme reach or follow-up engagement that need addressing. At the time of the survey, about half of all FETP graduates held positions at the supervisor level or higher, despite

the lack of a directive aimed at promoting FETP fellows after graduation. Further investigation using comparative methods would be needed to assess whether FETP participation is associated with career advancement. The study's findings are consistent with the qualitative evidence from supervisors at the national and subnational levels: FETP graduates were more knowledgeable about responding to public health threats in their provinces, and they were promoted based on their performance. Other studies indicated that FETP graduates had a more favourable career path after graduation.^{13,14,17} This suggests that the training acquired through the FETP enhances epidemiological

skills, leading to improved decision-making and leadership capabilities in addressing public health challenges.¹⁸

The institutionalization and sustainability of FETPs within national health frameworks are crucial for leveraging these enhanced capacities to meet national health priorities and ensure ongoing public health emergency preparedness.¹⁹ However, the absence of dedicated career progression pathways after graduation can lead to underutilization of these advanced epidemiological skills, posing a challenge for ministries of health, despite the growing evidence that FETPs contribute to surveillance and response capacity.²⁰ This gap underscores the necessity for formal guidance about recognizing and incentivizing FETP graduates, thereby maximizing their contributions to national health security.¹⁷

Overall, 79.0% of FETP graduates reported involvement in outbreak response and 65.4% in surveillance activities. This indicates that many graduates used their new skills at the workplace. FETP graduates were active in responding to public health events, including the COVID-19 pandemic, dengue, zoonoses and foodborne illnesses, by staffing emergency operations centres and leading outbreak responses.²¹ Other studies have demonstrated that FETPs played a significant role in the global preparedness response to the COVID-19 pandemic.^{21,22} Feedback from trainees and implementers indicated that FETP–Frontline graduates have contributed to improvements in surveillance systems, outbreak detection, timely responses, reporting and staff engagement.^{15,23} Intermediate graduates consistently demonstrated participation across all public health domains. This aligns with global findings indicating that FETP–Intermediate graduates contribute to field investigations and surveillance evaluations based on the course competencies.^{16,24}

Despite strong participation in outbreak response and surveillance, FETP graduates had limited engagement with core epidemiological analysis and dissemination activities, with fewer than 10% frequently presenting at meetings or conferences or publishing their findings. Skills in inferential and descriptive statistical analysis were also reported to be used infrequently (**Table 2**). The results also emphasize the importance of strengthening the FETP curriculum to include leadership and communication, data analysis, research and scientific publication, as well as

expanding opportunities for higher levels of FETP training (e.g. through an advanced programme) and offering specific courses for those who require it, including in skills such as epidemiological methods, data analysis and scientific writing. The findings also suggest a need for continuous curriculum improvement to further strengthen the core competencies and technical knowledge of trainees.

Stakeholders highlighted the pivotal role played by FETP graduates during responses to significant disease outbreaks and in improving surveillance at their workplace. Other studies demonstrate the wide-ranging utility of FETPs in strengthening a country's emergency response capacity.²³ Currently, Cambodia's FETP is funded by donors, rendering it unsustainable in the long term if donors' priorities change or funding declines.⁶ Therefore, government investment and strategic partnerships will be important to ensure the programme's sustainability. Sustainability could also be aided by contributions of domestic funding and by developing local and international partnerships.^{2,6}

Limitations

This study has several limitations. First, it relied on self-reported responses from FETP graduates, which are subject to recall bias and social desirability bias. Respondents may have overestimated their level of engagement or underreported challenges and weaknesses. In addition, the survey used frequency categories (e.g. often, sometimes, rarely, never) to assess engagement in public health activities, which are subjective and may be interpreted differently by respondents. The survey was conducted with participants who had been enrolled across five annual cohorts, which may introduce information bias, as participants' recollections and responses might not accurately reflect their actual experiences or contributions.

Second, the study was cross-sectional, capturing data from participants at a single point in time. Only FETP graduates were included in this study; data from those who enrolled but did not finish the programme were not gathered. The viewpoints of non-completers may offer insights about obstacles to programme completion. This limits the study's ability to assess the long-term effects of FETP training, such as bringing about sustained improvements in practice, encouraging professional

development or strengthening institutional capacity. The study cannot measure the programme's actual impact on improvements in surveillance and outbreak response, but the findings describe graduates' self-reported engagement in public health activities. Future evaluations using stronger study designs and more comprehensive data collection will be important to better assess the programme's impact and to provide actionable evidence for optimizing national health security and surveillance efficiency. However, research should take a health system-level approach to assess broader institutional impacts, including national and provincial evaluations, to determine whether and how FETP graduates have strengthened the quality of surveillance and the efficiency of outbreak responses, and also to identify systemic bottlenecks and illuminate potential areas for future improvement. Strengthening data collection allows evaluations to move beyond confirming success, offering instead an evidence-based roadmap for national health security.

Third, while the study included valuable input from key stakeholders, their perspectives may not fully represent the views of all relevant actors involved in public health responses. Although semi-structured interviews were conducted, the structure of the questionnaire may have limited the depth of open-ended responses. Furthermore, the study mostly used quantitative survey data from FETP graduates, which might not fully represent the variety of viewpoints and experiences.

Lastly, the study was specifically designed to assess the contributions of FETP graduates to public health response efforts and to understand their experiences upon returning to their workplace after training. Thus, it may not capture broader aspects of training effectiveness or institutional impact.

Conclusion

FETP graduates in Cambodia have been placed throughout the country's public health system, especially at the provincial and district levels, where they contribute to surveillance and outbreak responses. Findings suggest that FETP graduates are involved in a broad range of public health functions; however, frequent engagement was reported for relatively few activities. Nonetheless,

stakeholders emphasized that FETP graduates have played an important role in key public health response efforts, particularly in conducting outbreak investigations and improving surveillance systems. This reflects both the ongoing contributions of the programme and the need to further strengthen engagement and capacity across all levels of training. Importantly, increased domestic funding would help to support the programme's long-term sustainability and reinforce government ownership of field epidemiology capacity in Cambodia.

Acknowledgements

The authors would like to express their sincere gratitude to the Cambodia FETP management team (Dr Sengdoeurn Yi, Mr Hay Puthik Long and Dr Sopheavy Seng), as well as to Dr Sovann Ly, Director of the CCDC, for granting permission and support to conduct this study. The authors also extend their thanks to the US CDC and the South Asian Field Epidemiology and Technology Network (SAFETYNET Inc.) for their financial support of the 2-year regional International FETP in Thailand. Deep appreciation goes to Dr Chhuleeporn Jiraphongsa (FETP–Thailand), Dr Louise Coole (United Kingdom FETP), Dr Giuseppina Ortu (United Kingdom FETP) and Mr Joseph Pett (United Kingdom Health Security Agency) for their critical review of the final draft, insightful feedback and valuable suggestions, which greatly enhanced the quality of this manuscript.

During the preparation of this manuscript, the authors used ChatGPT (version 4.0/OpenAI) for language editing and improving clarity. The authors reviewed, validated and edited every piece of content altered by ChatGPT. The work's originality, accuracy and integrity are entirely the authors' responsibility.

Conflicts of interest

The authors have no conflicts of interest to declare.

Ethics statement

The study received ethical approval from the National Ethical Committee for Health Research, MOH Cambodia (approval no. 380NECHR, November 2024). Written informed consent was obtained from all participants.

Funding

This work was supported by SAFETYNET Inc., Philippines, through the CCDC, MOH Cambodia, to support the first author in conducting this research.

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