

## PROJECT REPORT

# Community-university partnership: key elements for improving field teaching in medical schools in Vietnam

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LN Hoat<sup>1</sup>, EP Wright<sup>2</sup>

<sup>1</sup>Hanoi Medical University, Hanoi, Vietnam

<sup>2</sup>Medical Committee Netherlands Vietnam, Hanoi, Vietnam

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Hoat LN, Wright EP

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## ABSTRACT

**Introduction:** Medical education in many countries includes periods that students spend in the community. In Vietnam, a move towards more community-oriented teaching has increased the need for rural community-based education for medical students during recent years. At the same time, new policies and social changes have created difficulties for community-based education. The eight main medical schools have worked together since 1999 to improve their curriculum, including sharing and adopting new approaches in their field teaching programs. Objective: To establish more systematic, integrated and participatory field teaching in rural communities in the curricula of eight medical schools, based on community–university partnerships.

**Methods:** Eight medical schools together analyzed their field teaching programs and identified issues still needing attention. A pilot intervention explored how to involve community and local health staff actively in field teaching programs. From the results of the workshop and the pilot intervention, plans were made for sets of activities to improve weaknesses. Feedback and evaluation surveys among local health staff and students who participated in field training were performed after 3 years' intervention, to check the appropriateness of the field teaching programs and methods.

**Results:** All eight schools had made improvements in selected aspects of their community-based education programs. There was still considerable variation in the programs but all were more systematic and better integrated into the revised curriculum.



Stakeholders' concerns and interests related to field teaching were analyzed and taken into consideration when they were involved in field teaching. The community–university partnership has become a key element for field teaching in these medical schools.

**Conclusions:** In the new social context of Vietnam, along with more community-based education periods, more active participation of all stakeholders is increasingly necessary to work towards more effective community-oriented training in Vietnamese medical schools.

**Key words:** community-based medical education, community–university partnership, curriculum development, rural stakeholder involvement, Vietnam, Vietnamese medical schools.

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## Introduction

Medical schools around the world include a range of programs that expose their students to practice situations outside the classroom and teaching hospital. Community-based medical education gives students opportunities to learn about the health needs and demands of the people they will later serve while, at the same time, learning from practising health workers<sup>1,2</sup>. The training for doctors who will work in rural communities should include time spent in such communities during their period of study<sup>3-6</sup>. Rural training sites are appropriate for students to learn more about the range of social, political and economic forces that affect health in every society<sup>3,7</sup>. In Vietnam, the time and quality of study periods in the community were limited until the 1990s for several reasons. The curriculum was then still hospital-based, teachers lacked experience in organizing and conducting field teaching (FT) in the new social context, and extramural teaching was (and is) more costly than teaching in classrooms. In addition, most of the FT was aimed at serving the needs of the students, with little regard to the needs of the teachers, the local health services and especially the communities.

In 1990, the Vietnamese Government established a policy aimed at training medical doctors in a more community-oriented fashion (Decision 58/TTg of the Vietnam Government, dated 03/02/1994). They planned that by the year 2000 medical doctors would be available in 40% of the more than 10 000 commune health centers (CHC) in

Vietnam (Resolution no. 37/CP of the Vietnam Government dated 20/06/1996). This target was met because more than 45% of CHC had doctors at the end of 2000 (Decision no. 35/2001/QD-TTg of the Vietnam Government dated 19/03/2001). A new target was set for 2010: 100% of the CHC in lowland and midland areas would have doctors, as well as 50% of the remaining CHC in mountainous and remote areas (Master Plan for the Domestic Health Care System between 2006 and 2010). Medical schools were asked to increase their attention to both community needs and practice, by making classroom teaching more community oriented, and by improving the teaching in the communities (FT or community-based education, CBE).

However, at the same time the introduction of the market economy and private enterprise in Vietnam began to create barriers to the community accepting large numbers of students, especially if community members could see no benefit for themselves. The market economy and the rise of private practice also reduced the enthusiasm of teaching staff for spending time in rural areas with the students. These changes presented the schools with serious challenges in implementing FT. However, from 1999 the eight main medical schools received support from a Dutch project that provided technical and financial assistance to strengthen community-oriented teaching, including FT.

The project aim was to enhance the capacity of the eight medical schools in community-oriented curriculum development and to improve the quality of the teaching. To be systematic, the program commenced with identifying the



knowledge, attitude and skills (KAS) that a general medical doctor graduating from any medical school in Vietnam should have<sup>8</sup>. The KAS were first identified by teachers from the eight schools, then checked with newly practising doctors<sup>9</sup> and final year students about to graduate from the eight schools<sup>10</sup>. From the agreed KAS came curriculum renovation, teaching/learning material development, then updating teaching/learning methods and student assessment tools to fit with the identified community-oriented KAS. One important aspect was to improve FT so that it would contribute more to the training of community-oriented doctors, who would then have a better understanding of the rural community's health needs, and better skills to meet those needs.

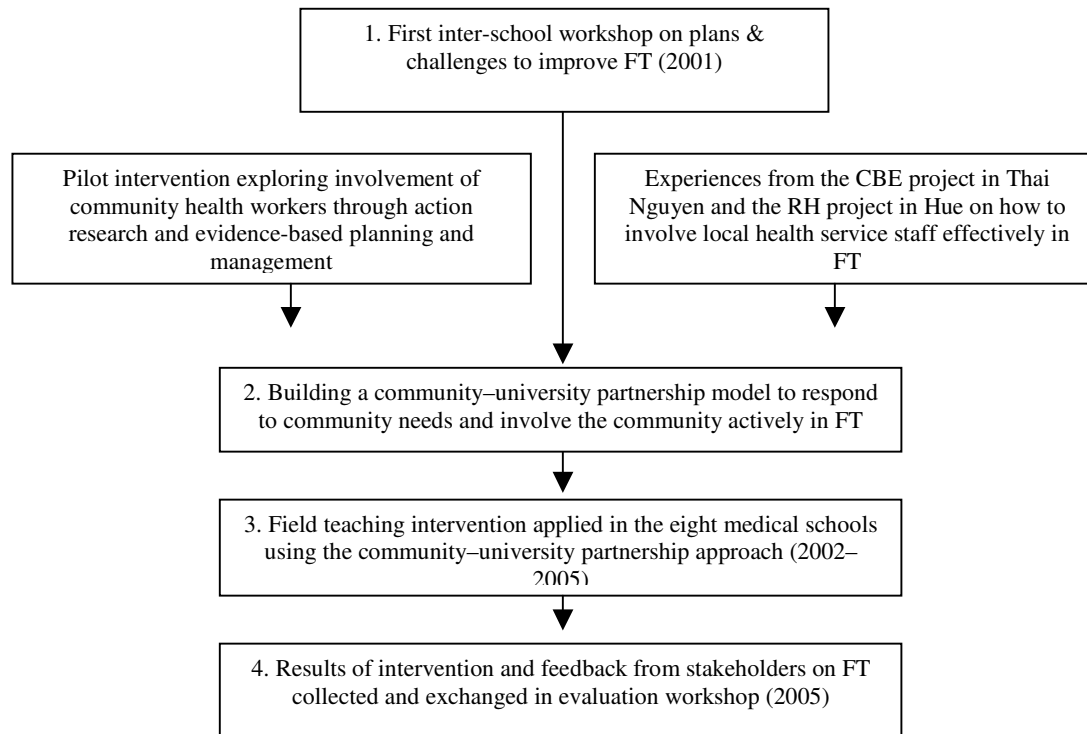
The method of curriculum evaluation designed by Coles and Grant<sup>11</sup> includes three phases: first the written plan, then the actual teaching process and last the results, checking the latter two against the first. This approach has also been used to evaluate a community-based period in the medical curriculum by Kristina, Majoor and van der Vleuten<sup>12,13</sup>. In the present study a similar approach was used, but an additional phase was added to the preparation: a trial phase in which we explored the building of a community–university partnership model to identify appropriate ways to involve the community in FT. Finally, feedback from local health staff, communities and the students who participated in FT were collected to evaluate the program. Looking at the inputs and outputs through these phases, the eight medical schools could clearly recognize the benefits of involving all stakeholders actively and of working on the basis of commitment to an approach of mutual benefit. The factors affecting participation by all stakeholders are discussed here, based on theories of motivation. This approach produced more appropriate and effective FT programs in the context of the change in Vietnam.

The aim of this article is to identify strategies and approaches that were successful in involving different stakeholders effectively to improve FT in the eight medical schools. It is hoped that this case study will be useful to others developing similar initiatives in other settings.

## Methods

The four steps in the intervention are outlined (Fig1). The baseline data were obtained during the first inter-school FT workshop in 2001 (before the intervention), from the pilot intervention and from experience as the project was implemented. Before the first workshop, a representative team from each school prepared a report on their existing situation, challenges and plans for FT. The reports also served for comparison among the schools. Stakeholder analysis identified the roles and needs of each stakeholder in each location, which lead to a plan to improve the FT programs in the eight medical schools.

One large challenge was to involve the local health staff and rural community effectively and in a way that motivated and satisfied them. Therefore, a pilot intervention was performed by Hanoi Medical University (HMU) at three communes in a rural district to explore a model of community–university partnership. At the same time, experiences from a project on CBE in Thai Nguyen Medical School and another project on FT for reproductive health (RH) in Hue Medical School (both with international financial and technical support) were also taken into consideration in completing the community–university partnership model. The interventions were then carried out in all eight medical schools from 2002 to 2005. To check the achievements and lessons learnt from the FT intervention, in 2005 the eight schools collaborated in a multi-centre survey. They interviewed 144 rural health staff involved in their FT programs as preceptors as well as 300 community members. They also conducted 12 focus group discussions (FGD) among local authorities at rural FT sites to obtain their opinions. Additional information came from a feedback survey performed by the HMU team using a structured questionnaire among 240 students who had just returned from their FT period in rural districts of nearby provinces.



**Figure 1: Four steps to improving field teaching in medical schools in Vietnam. CBE, Community-based education; FT, field teaching; RH, reproductive health.**

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group discussions (FGD) among local authorities at rural FT sites to obtain their opinions. Additional information came from a feedback survey performed by the HMU team using a structured questionnaire among 240 students who had just returned from their FT period in rural districts of nearby provinces.

### *Data collection and analysis*

The research method used in this study is case study evaluation, in which data were collected from different sources (participatory stakeholder workshops, surveys, pilot interventions, project documents and reports) using different methods (semi-structured questionnaires, informal interviews, structured interviews using checklists, focus group discussions and participant observation), before and after interventions with experimental steps. The results and



lessons were summarized, screened for frequently occurring or repeated terms and concepts as well as associations, then presented and compared in diagrams and matrices. The Herzberg motivation theory<sup>14</sup> was also applied to identify factors that would motivate stakeholders' effective involvement in the FT program. Data from different sources and obtained by different methods were used to triangulate, in combination with participant observation and data from feedback surveys, to maximize the validity of the results.

## Results

### *Challenges to field teaching before the intervention*

Before 1986 (ie before the market economy was introduced in Vietnam), when all the training activities of medical schools were centrally subsidized and private practice by teaching staff was not allowed, it was relatively easy to carry out FT. Teachers in both preventive medicine and clinical departments had time and the willingness to go into the field with students; while people in the rural community at the FT sites were happy to receive both teachers and students, because it would offer them access to a higher quality of medical care. Since market mechanisms were introduced in 1986 and the private sector started to develop, budget allocation to medical schools became more decentralized, and teachers started to set up private practices and so were less willing to take the time to go with students for FT. Rural residents at the FT sites were also influenced by the market mechanism, having greater access to medical care on the one hand, and paying more attention to other kinds of benefits on the other. These changes made FT more difficult to organize. At the same time, the Ministry of Health (MOH) requested that the schools provide doctors with a more community-oriented background to prepare them better for service in the community.

At the first inter-school workshop in 2001, a number of key challenges and barriers were identified for all stakeholders (Fig 2).

For schools, FT was complicated and costly to organize because schools had to identify and prepare the rural FT sites, pay for transport, accommodation and mission allowances for teaching staff and organizers, and supervise students more carefully than in the university environment.

These difficulties had considerable influence on the practice of FT in Vietnam's medical schools. The quality of FT no longer met the needs and requirements of the MOH policy or of society (Fig3).

During the first workshop it became clear that improving partnerships among the stakeholders, respecting each one's need for benefits and motivating them would be the main approach to improve FT in the eight schools. The community–university partnership was especially targeted for improvement. Because most of the teachers in the medical schools were still inexperienced in ensuring that communities were actively involved in FT, a pilot intervention was planned to test an approach that could motivate and involve local health staff and communities.

### *Building a community–university partnership model*

Senior and junior teaching staff of HMU worked with three communes in a densely-populated, urbanizing rural area near Hanoi to build a model that supported health staff and volunteers at community level in solving local health problems using an evidence-based planning approach.

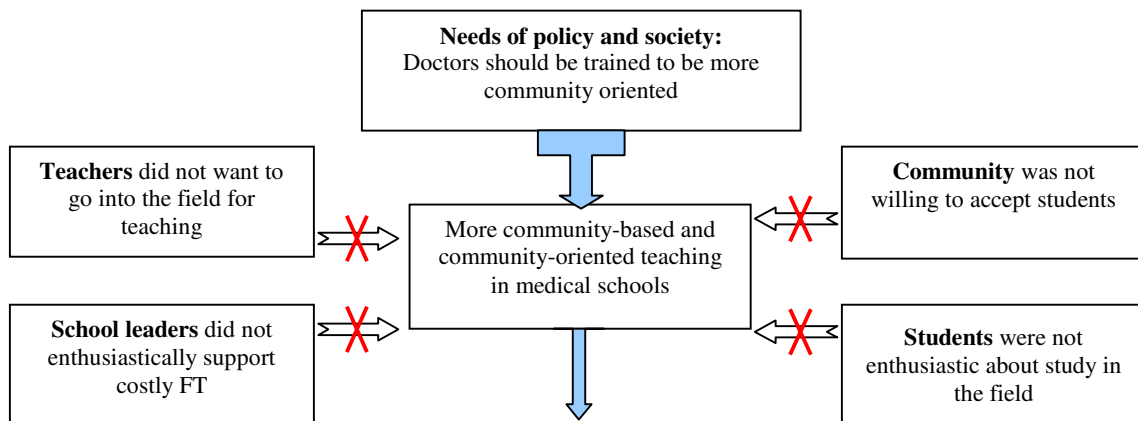
First, the HMU and MOH staff visited the district and the three communes to discuss with them what they needed and what the university could provide. They agreed that the local people needed to be better able to analyze their own problems and find solutions for them, using the skills of action research. That was something the university could provide.





1. **For schools:** Field training was complicated and costly to organize because schools had to identify and prepare the rural FT sites, pay for transport, accommodation and mission allowances for teaching staff and organizers, and supervise students more carefully than in the university environment.
2. **For teaching staff:** Because of their low salaries from the university, most teachers needed additional jobs or a practice in private clinics to earn sufficient money. If they joined the FT at rural sites, they would lose that extra income. Also, many were still inexperienced in teaching students in the field.
3. **For students:** Because the quality of FT was not high and not easy to assess, some schools did not assign marks or credits for the field periods, which did not encourage students to take them seriously as a learning experience. The attitudes of the doctors supervising them may have strengthened this perception.
4. **For the community and local health staff:** The FT programs were designed mainly for the learning needs of students and availability of expertise and resources of the schools, but did not pay enough attention to needs and benefits of other stakeholders, such as teachers accompanying the students, the local health staff and services or the people in the rural communities where the FT took place. At the same time, due to the introduction of the market economy, the people in the community were often busy with activities to earn money, and had come to expect to receive some benefit for any service provided, so they were not always as willing to have students to stay and study in their community as they had been previously.
5. **For policy-makers:** Policies related to FT were formulated by education experts and did not encourage teachers to go to the field. For example, 4 hours' teaching in the field were weighted as equivalent to one hour's teaching in the classroom or 2 hours' practical teaching in hospitals or laboratories, while other incentives for teachers to go into the field did not compensate for this discrepancy.
6. **For all:** All eight schools had different periods and timing for FT, and the objectives not only varied but were often not clearly formulated. The approaches to involving local health workers and the communities also varied greatly, including them being given very little attention at all.

**Figure 2: Barriers to field teaching in medical schools before 2001: results of stakeholder analysis. FT: Field teaching.**



- Field teaching was mostly done by teachers in the faculty of public health, because many schools considered 'community' to be the business of public health teachers → missed opportunities for community-oriented clinical practice.
- Topics for FT were mostly in public health and preventive medicine and were selected on the basis of ease of organization, rather than the learning needs of students working in the field → missed opportunities for learning about clinical and basic medicine in the community.
- Local health staff were involved only as guides, and did not have the chance to share their medical experience with students. They were not involved in supervising or assessing students, but schools did not have enough teachers in the field → students lacked support and supervision → student behavior in learning and working with community was often inappropriate → low quality of FT and low level of partnership with community.
- Because FT quality was low, several schools did not assign marks to these sessions → students were not very motivated to learn during FT.

**Figure 3: Barriers to field teaching and their effects on community-oriented learning before 2001. FT, Field teaching.**



A pool of trainers was established, including HMU staff and staff from the Department of Science and Training, MOH, and a few experienced staff at provincial and district levels. The pool included both experienced and junior staff, to provide opportunities for learning and sharing experiences and to ensure supervision during action research and implementation of interventions. Together, the staff trained and supervised six staff of the CHC and 27 village health workers in three communes. The participants learned to identify problems and to collect data (existing and new) to describe and prioritize the problems and then look for solutions. They learned by participating in a series of training courses alternating with practice periods, as presented (Fig4). The participants selected three topics for action research and intervention: malnutrition in children under five; pesticide abuse by farmers; and traffic accidents in an urbanizing area. By participating in all project activities, staff from HMU learned how to work with community health workers and others in a participatory way. They also learned how to teach evidence-based planning and management for health workers at grassroots level. A pilot model for a community–university partnership was established that respected the needs of, and ensured benefits for, all partners<sup>15</sup>.

At the same time, experience from the other projects supporting community-based teaching in other medical schools was reviewed. In the Thai Nguyen Medical Faculty, for example, students were assigned to follow at least 10 households in their catchment area during their 6 years in the medical school; they helped the families improve their health, both in preventive and curative aspects. That project also shared the experience of how to guide learning for students at district hospitals and commune health centers, and how to ensure that local health staff had clear roles in the FT. In Hue Medical College, experience from the RH project and another project focused on FT contributed ideas about how to recruit, assess, train and reward district health staff for participation in training, supervising and assessing students. With all of these inputs, a model for community–

university partnership was developed and adopted for intervention at all eight medical schools.

### ***Main strategies and activities to improve field teaching in the eight schools***

An important question as we developed new strategies and activities for FT was how to involve and motivate all stakeholders so that they could and would continue to contribute after the end of the project. Using the theories of motivation proposed by Herzberg<sup>14</sup> and our experiences during the pilot intervention and from other projects, we analyzed the motivation of the four main stakeholders whose involvement was needed in the FT. Figure 5 shows the areas and activities identified for improvement of FT, and the roles of the different stakeholders.

The selection of the most appropriate strategies and activities for each stakeholder was based on the application of Herzberg's motivation theory<sup>14</sup> as presented (Table 1). In this way, the FT program could ensure benefits and motivating factors for all stakeholders.

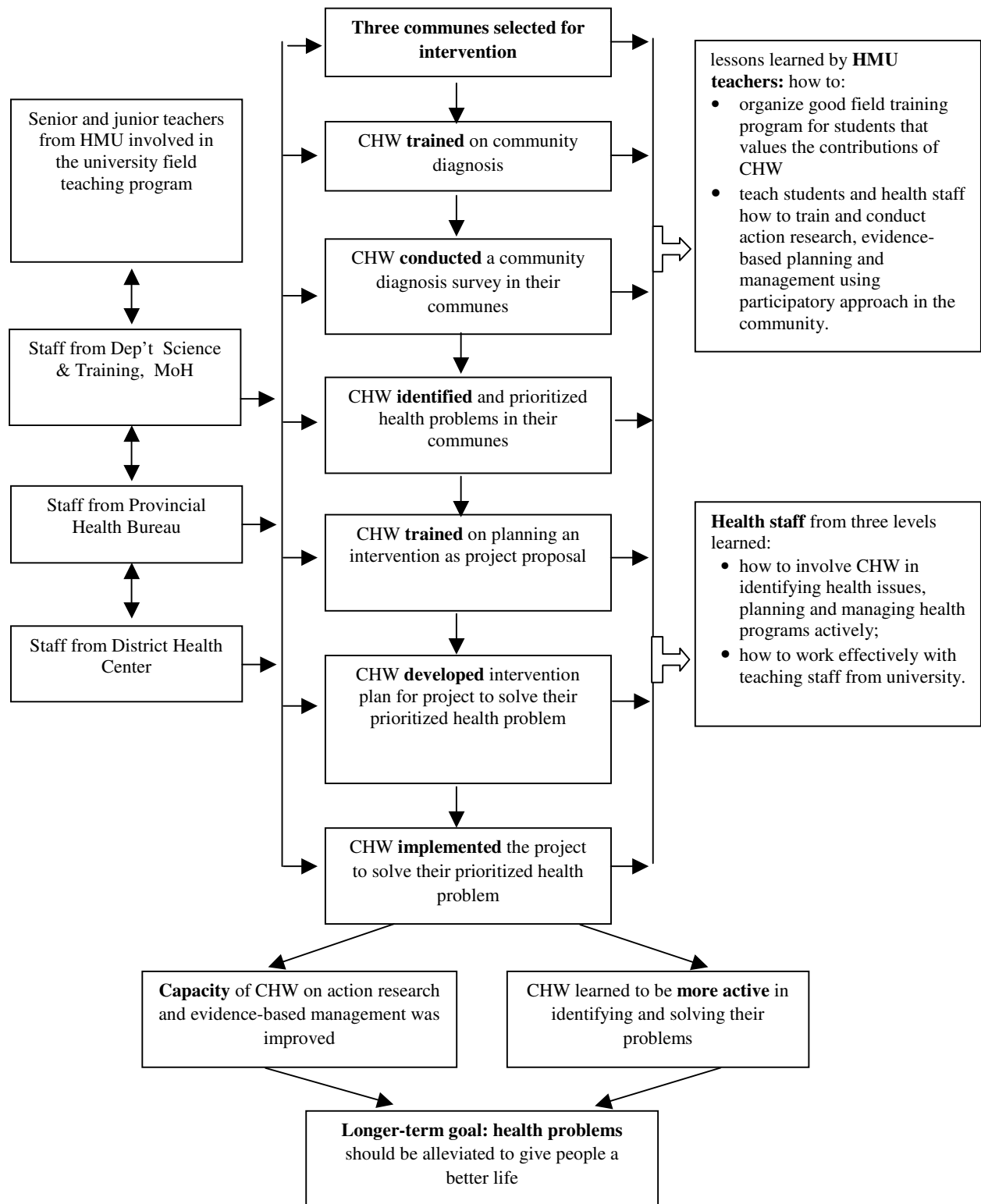
Once the plans were prepared, the intervention to improve FT programs began in the eight medical schools. The FT programs were not identical in each school because they were adapted to fit the local situation; however, all worked towards the community–university partnership with attention to and respect for the needs and benefits of all stakeholders.

### ***Intervention activities for field teaching***

The main activities of the intervention are summarized (Table 2).

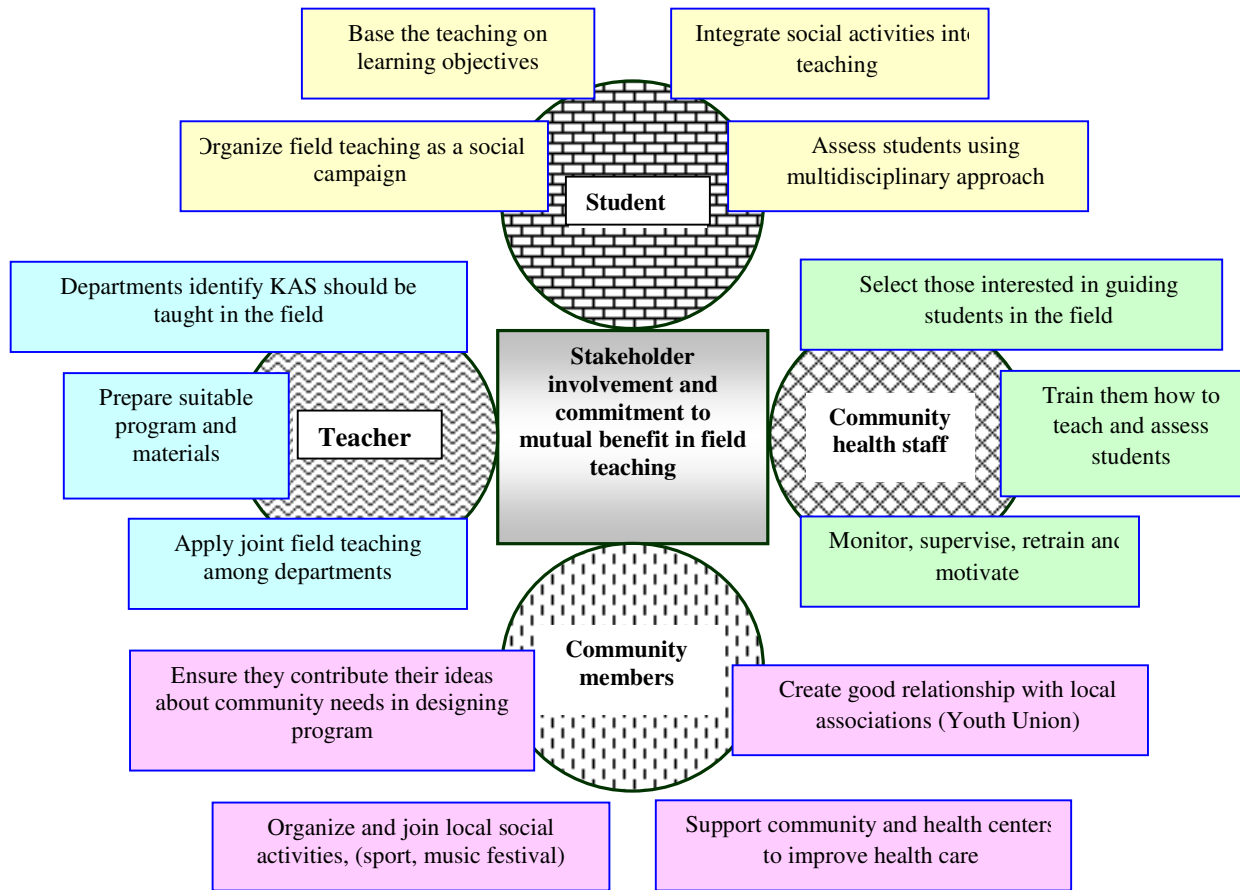
### ***Results after interventions***

The results and achievements of the intervention are summarized (Table 3), comparing columns according to the situation before and after intervention.



**Figure 4: Process of evidence-based planning and project management and its achievements. CHW, Community health workers; HMU, Hanoi Medical University; MOH, Ministry of Health.**





**Figure 5: The role of each stakeholder in strategies to improve field teaching. KAS, knowledge, attitude and skills.**



**Table 1: The application of Herzberg’s motivation theory to strategies for field teaching programs**

Factors from Herzberg theory	Intervention approach for stakeholder groups	
	School, teachers and students	Community health staff and community members
<p><b>Hygiene factors</b></p> <ol style="list-style-type: none"> <li>1. Working conditions</li> <li>2. Salary</li> <li>3. Status</li> <li>4. Security</li> <li>5. Policy &amp; administration</li> <li>6. Relationships with different people</li> <li>7. Personal life</li> </ol>	<ul style="list-style-type: none"> <li>• Teaching and learning towards policy of MoH and government, not only school → more willing (5,6,9,11)*.</li> <li>• Field teaching and learning are integrated with social activities and providing health services for community → better conditions for teaching and learning in the field (1,8,9,10,11,12,13)*.</li> <li>• Teachers in many departments participated to identify learning objectives and KAS for teaching students in the field → improved awareness of teachers and students on necessity of FT (9,11,12)*.</li> <li>• More assignments &amp; opportunities for teachers to work and for students to learn independently → more responsibility at field sites (11,12,13)*.</li> <li>• Student assessment done by different stakeholders → recognition for achievement &amp; increased student motivation for FT (8,9,12,13)*.</li> </ul>	<ul style="list-style-type: none"> <li>• Take into account community healthcare needs to design FT program → community sees benefit of accepting students in their community (6,7,11,13)*</li> <li>• Community authorities, people, local health staff involved in designing FT program, and in guiding and assessing students → improved status and participation (3,7,8,9,11,13)*</li> <li>• Local health staff invited to teach and guide students in the field → students have chances to learn things from local health staff that teachers in schools are less experienced in, while local health staff are recognized and appreciated by teachers and students (1,3,6,7,9,10,11,13)*</li> <li>• Local health staff receive medical updates and in training teaching methods and assessment and get paid as field preceptors → increased status as teachers &amp; improved participation (3,6,8,12,13)*.</li> </ul>
<p><b>Motivation factors</b></p> <ol style="list-style-type: none"> <li>1. Achievement</li> <li>2. Recognition for achievement</li> <li>3. Interest in the job</li> <li>4. Responsibility for tasks</li> <li>5. Advancement to higher level tasks</li> <li>6. Personal growth</li> </ol>		

FT, Field teaching; KAS, knowledge, attitude and skills; MOH, Ministry of Health.

\*The standard Herzberg hygiene and motivation factors are listed in the first column, while the related issues in FT development are shown in the subsequent columns, followed by numbers representing the relevant Herzberg factor. Not all Herzberg factors could be identified in the FT programs and perhaps because the FT largely concerned teachers outside the university, most of the factors fell in the category ‘motivation’.

### *Evaluation of the intervention by different stakeholders*

To evaluate the improvements in FT and achievements of the community–university partnership approach, surveys were performed among the three important FT stakeholders:

- (i) local health staff who now become preceptors for FT;
- (ii) community members and local authorities at the FT sites;
- and (iii) the students. The results of these surveys are summarized (Table 4).



**Table 2: Relationships between aims and actions in field teaching**

Aim	Activities
1. To have consensus about the main difficulties and challenges of FT and possible solutions	<ul style="list-style-type: none"> <li>Conducted first inter-school workshop on FT for 40 staff in charge of FT in eight medical schools and FT experts (2001)</li> </ul>
2. To identify an appropriate model of community–university partnership in FT	<ul style="list-style-type: none"> <li>HMU implemented and evaluated a pilot intervention in three communes</li> <li>Learned from other related projects having an FT component</li> </ul>
3. To improve awareness at department level of staff's role in FT and identification of KAS that should be taught in FT	<ul style="list-style-type: none"> <li>Working groups of the same 15-18 departments in eight schools identified KAS that each department should teach in the community</li> </ul>
4. To have consensus on materials for FT, including clear objectives, teaching and learning materials, and assessment tools for each department and whole curriculum	<ul style="list-style-type: none"> <li>Working groups in each school developed FT program, teaching, learning materials and tools for assessing students during and after FT</li> </ul>
5. To have an FT program that includes involvement of experienced local staff in the teaching	<ul style="list-style-type: none"> <li>FT working groups in each school developed programs to recruit and train local health staff as preceptors for FT</li> </ul>
6. To improve both medical knowledge and skills and training capacity of local health staff involved in FT	<ul style="list-style-type: none"> <li>Identified training needs of selected local health staff and trained them</li> <li>Supervised and coached them after training</li> </ul>
7. To evaluate the field training program and assess the community–university partnership model for improvement	<ul style="list-style-type: none"> <li>Obtained feedback on FT from community members, local health staff and students involved in the program</li> </ul>
8. To assess and share improvements in programs after the interventions among medical schools and outside the country	<ul style="list-style-type: none"> <li>Conducted the second inter-school workshop on FT (2005); 52 staff and FT experts attended</li> <li>Presented the results of the evaluation surveys among local health staff and community at an international conference</li> </ul>

FT, Field teaching; HMU, Hanoi Medical University; KAS, knowledge, attitude and skills.

**Table 3: Results and achievements of field teaching after the intervention**

Intervention areas	Before intervention	After intervention
1. Agreement among eight medical schools on FT	<ul style="list-style-type: none"> <li>Each school had their own objectives and plan for FT; the quantity and quality of FT varied greatly</li> </ul>	<ul style="list-style-type: none"> <li>Schools had opportunities to share experiences of FT</li> <li>KAS to be taught in the field, agreed by all eight schools and listed in the KAS book</li> </ul>
2. Objectives of the field learning for students	<ul style="list-style-type: none"> <li>Not clear and not the same in every school, depended on the teachers involved, characteristics of the field sites, availability of resources and feasibility to organize</li> </ul>	<ul style="list-style-type: none"> <li>Listed in a learning objectives book as follows:                             <ul style="list-style-type: none"> <li>÷ have gained ability to approach the community</li> <li>÷ have practised the 10 key issues in primary health care in Viet Nam</li> <li>÷ able to identify priority health problems at the field site.</li> <li>÷ able to make intervention plans to solve priority health problems at the field</li> <li>÷ have attended and learned how to manage a basic health station</li> </ul> </li> </ul>
3. Departments involved in FT	<ul style="list-style-type: none"> <li>Only a few teachers in public health departments involved in organizing and implementing FT</li> </ul>	<ul style="list-style-type: none"> <li>Training department and public health departments organize the FT, with 6–10 clinical departments (depending on school) now involved in FT</li> <li>In each school, all 15–18 departments involved in the project now aware of need to teach their KAS in the field and willing to do it</li> </ul>



**Table 3: cont'd**

<b>Intervention areas</b>	<b>Before intervention</b>	<b>After intervention</b>
4. Involvement of local health staff	<ul style="list-style-type: none"> <li>• Mostly as local organizers and guides, not as teachers; had no influence on students</li> </ul>	<ul style="list-style-type: none"> <li>• 144 local health staff at FT sites of eight medical schools were recruited and trained to join FT</li> <li>• These local health staff are considered to be field preceptors of medical schools and are now involved actively in organizing, training, supervising and assessing students at their sites</li> </ul>
5. Year of study and duration of FT	<ul style="list-style-type: none"> <li>• Varied among schools, mostly third year and fifth year joined FT</li> <li>• Duration from 4 to 6 weeks during 6 years</li> </ul>	<ul style="list-style-type: none"> <li>• Five among eight medical schools send small groups of students in turns to practise in district hospitals or the community throughout the year</li> <li>• Big field training campaigns are still conducted for students (often in 3rd and 5th year) in every school (from 4 to 6 weeks during the six-year study)</li> </ul>
6. Preparation of students for FT	<ul style="list-style-type: none"> <li>• Students often prepared only logistics, not learning contents and experiences</li> <li>• Many schools taught theory topics related to FT at the field sites instead of real practice</li> </ul>	<ul style="list-style-type: none"> <li>• Both school teachers and field preceptors are now involved in preparation, identifying topics, teaching methods and ways of organizing FT</li> <li>• Students and trainers often have one week together before going to FT to prepare for the contents of field learning, and to experience working with the community</li> </ul>
7. Topics taught in the field	<ul style="list-style-type: none"> <li>• Topics were mainly from departments of public health, such as health education, health organization, nutrition, environment and immunization</li> <li>• Topics were easy to organize (not based on needs of stakeholders)</li> </ul>	<ul style="list-style-type: none"> <li>• Topics based on which skills identified as needing to be taught in the field in the book of learning objectives, but each time they are selected differently, depending on the stakeholders involved, especially the needs and interests of local health staff and community, but also the level of students and departments involved</li> <li>• FT teams work closely with other stakeholders to identify content and training methods for each topic, based on clear objectives</li> </ul>
8. FT sites	<ul style="list-style-type: none"> <li>• Each school had 1–2 field sites, often commune health centers that were upgraded to be models for students → not representative of work places for students after graduation</li> </ul>	<ul style="list-style-type: none"> <li>• Each school has 3–6 field sites in districts, including district hospitals. Students can go (on rotation) to different communes and hospitals at these sites</li> <li>• All schools set up partnerships with FT sites to have mutual support for the mutual benefit of official involvement in the teaching of medical students</li> </ul>
9. Field teaching, learning materials	<ul style="list-style-type: none"> <li>• Produced by a few teachers in public health departments who were assigned to organize FT</li> </ul>	<ul style="list-style-type: none"> <li>• Field teaching, learning materials produced according to learning objectives with involvement of teachers assigned for FT in all departments involved in FT. Main materials have been published as school text books for FT</li> </ul>
10. Assessment of students in FT	<ul style="list-style-type: none"> <li>• Students had to write a report to show what they did and learned in the field but, due to lack of supervision, this was not awarded marks towards their study progress</li> </ul>	<ul style="list-style-type: none"> <li>• All schools now use standardized checklists, tools and questionnaires for self-assessment and peer assessment; assessment by local health staff and by community members where the students stay during FT, as well as assessment by teachers, and students' final reports were assessed by teachers with a mark that contributes to overall assessment for study progress</li> </ul>
11. Support of schools for FT	<ul style="list-style-type: none"> <li>• FT had become a relatively unimportant activity; the focus was on hospital-based teaching</li> </ul>	<ul style="list-style-type: none"> <li>• Four schools have already set up an FT unit that belongs to the training department that organizes FT</li> <li>• Financial support is provided for teachers and students going into the field</li> <li>• Teachers who join FT obtain a favourable performance appraisal, which also motivates them</li> </ul>



**Table 3: cont'd**

Intervention areas	Before intervention	After intervention
12. Community– university partnership in FT	<ul style="list-style-type: none"> <li>FT was conducted based on the needs of students only → teachers, local authority, local health staff and community people were not satisfied</li> </ul>	<ul style="list-style-type: none"> <li>All stakeholders are now motivated to join: health problems in FT sites can be identified and partly resolved during FT; local health staff become paid preceptors of the university which gives them status. Teachers are willing to go because they consider it their duty and want other rewards (see 11).</li> <li>Relationships and mutual support have increased between the community and schools</li> </ul>

FT, Field teaching; KAS, knowledge, attitude and skills.

**Table 4: Feedback from the three important field teaching stakeholders**

Issue	Survey among local health staff involved in FT <sup>†</sup>	Survey among community members <sup>†</sup>	Survey among medical students
Study population	<ul style="list-style-type: none"> <li>All local health staff who were recruited and trained as preceptors for FT in each school</li> </ul>	<ul style="list-style-type: none"> <li>Community members and local health authorities at field sites</li> </ul>	<ul style="list-style-type: none"> <li>Third year students just finished their field learning period</li> </ul>
Study sites	<ul style="list-style-type: none"> <li>FT sites of the eight medical schools</li> </ul>	<ul style="list-style-type: none"> <li>FT sites of Thai Nguyen and HMU</li> </ul>	<ul style="list-style-type: none"> <li>Six field sites of HMU</li> </ul>
Sample size and methods	<ul style="list-style-type: none"> <li>Interviews with 144 local health staff who participated in FT of medical schools</li> </ul>	<ul style="list-style-type: none"> <li>Interviews with 300 community members</li> <li>12 FGD with local authorities</li> </ul>	<ul style="list-style-type: none"> <li>Survey of 240 students using a semi-structured questionnaire</li> </ul>
Main findings	<p>Motivation is mainly:</p> <ul style="list-style-type: none"> <li>They felt proud when their role changed from organizers and guides to preceptors; they participated in teaching, supervising and assessing students in the field. They are motivated to learn more to be good preceptors</li> <li>They have opportunities to share their experiences in the field with students and teachers and feel proud that they can contribute to training future doctors</li> <li>They upgraded their own knowledge and skills when participating in training conducted by the university, which helps them in their regular work</li> </ul>	<p>The people are happy because:</p> <ul style="list-style-type: none"> <li>The contributions of both teachers and students improved health care in their community during the FT</li> <li>Students can help them when they stay in their house</li> <li>Students' respectful behavior for the community improved when they were officially supervised by local health staff</li> <li>Technical capacity of local health staff is improved by their participation in FT</li> </ul>	<p>Students are happy because:</p> <ul style="list-style-type: none"> <li>Of opportunities to learn from local health staff and have experiences that would not be possible in school</li> <li>They understood more about rural life and communities</li> <li>They enjoyed their stay in the field</li> <li>They received good support from local health staff and people</li> <li>Assessment is more comprehensive with input from local health staff</li> </ul>
Commitment, comments and suggestions	<ul style="list-style-type: none"> <li>Want to continue to participate in FT</li> <li>Need more training from schools to fulfill their role</li> <li>Need more appropriate teaching, learning materials</li> <li>Time for FT should be longer</li> </ul>	<ul style="list-style-type: none"> <li>Willing to receive students to stay in their homes</li> <li>Want greater collaboration between community and medical schools besides FT</li> </ul>	<ul style="list-style-type: none"> <li>FT should be conducted every year with a longer duration</li> <li>Students should be prepared better before joining FT</li> </ul>

HMU, Hanoi Medical University; FGD, focus group discussion; FT, field teaching.

<sup>†</sup>Results of this survey were presented at an International Conference 'Making Primary Health Care Work: Challenges for the Education and Practice of the Health Workforce' organized by The Network: Towards Unity for Health (TUFH), in Ho Chi Minh City, Vietnam November, 2005.



In addition to the direct benefits of FT for all stakeholders, the results of the surveys also revealed that the medical schools and their teachers gained many indirect benefits. Indirect benefits for the teachers included:

- Their KAS were improved by greater exposure to the community and by sharing experiences with local health staff when teaching in the field. They also shared duties in organizing and supervising students during FT.
- Student assessment was more objective with input from the local preceptors so the teachers have more confidence in it.
- The quality of teaching and learning in the field was much better using the new model that involved all stakeholders.

Indirect benefits for the schools included:

- It was easier to conduct FT when local health staff are actively involved and motivated.
- Local authorities paid more attention and assisted the students more in the field.
- The schools could reduce financial support for teachers and students because community members were willing to provide accommodation (due to the FT benefits for themselves and their community).
- The relationship between the community and schools was better when they shared planning and implementation as a collaboration.

## Discussion

### *What we have learned*

Field teaching has been applied widely in many medical schools, especially in developing countries and in countries where there is a need for medical practitioners in rural areas<sup>2,3,12,16-19</sup>. These periods are believed to develop students' ability to integrate their knowledge in the basic and behavioral sciences in relation to practice in a real situation<sup>20</sup>. It also helps students better understand the

doctor–patient relationship, the decision-making processes in the real life context, and how the health care environment is changing<sup>21</sup>. As Kaufman said, 'If learning in medical schools is to be suitable for rural practice, students must receive early and sustained exposure to rural communities and to rural physician role models'<sup>7</sup>. Many programs aim to influence medical students to choose rural practice after graduation, although it is not yet clear whether that is always the program outcome<sup>1-3,20,22</sup>. There is evidence that FT can lead to better communication between the primary-care level and the referral levels and better community-based care for those with chronic conditions<sup>23</sup>. In Vietnam, FT at rural sites has a long history, but since 1986 when the market economy and private sectors were introduced to the country, medical schools faced many challenges in its implementation. The general objective of FT should be to expand the students' perception of community health problems and their learning through providing service and performing research in the community<sup>3,24</sup>. At the same time students should contribute to improving the health of the community in which the program is conducted.

In Vietnam, the eight medical schools worked together to build a community–university partnership in their FT programs that would benefit both the students and the communities. The greatest challenge was to motivate all stakeholders to be involved actively and effectively, especially the local health services and the community. Using the theories of motivation outlined by Herzberg<sup>14</sup> and by Adams and Maslow<sup>25</sup>, we considered the motivation of different stakeholder FT participants (Fig5; Table 1).

In the case of the students and teachers, who already knew that FT was necessary and that they had to be involved, by applying Herzberg's theory we recognized a need to provide them with maintenance factors. These could be, for example, providing good learning and teaching environments, integrating the learning with social and entertainment activities, combining the learning and teaching in the field with implementing research and providing health services, thereby giving both students and teachers more opportunities





to learn and to share their experiences. Motivation factors for teachers in FT started with giving them responsibility, first asking teachers from each department to identify and plan for the KAS that they should teach in the field. The departments and the faculties supported that request and the teachers felt responsible. The teachers could also learn from other stakeholders and get involved in community research and services; these actions would contribute to their career advancement and provide recognition and appreciation from students, local health staff, the community and their colleagues. For students, the opportunities for self-learning, enjoying life in the community with social activities, and the freedom to explore new areas were the main motivational factors. They were also motivated by their responsibilities and achievements, once we introduced a good supervision and assessment system with the participation of all stakeholders. Students gained the recognition of classmates, teachers and the community when they performed well in the field learning sessions. These benefits were recognized by students who had been on rural placements in other countries<sup>1,2,20,26</sup>.

Efforts to improve FT and make it sustainable included capacity building for individuals like teaching staff and students, and also for their organizations and institutions. In all eight medical schools, the teaching staff received support to produce the new FT program involving all stakeholders, with appropriate teaching and learning materials, including tools and procedures for student assessment. Once the systems were established and the materials available, maintenance costs were relatively low. Some schools set up an FT unit under their training department to coordinate all FT activities, but others have not yet made that move and have left FT to the public health department to organize and implement. It remains difficult to motivate the clinical and basic science departments to become involved. This may be in part because of financial losses they may incur by remaining rural, but it is also an attitudinal problem with a belief that there is not enough relevant work during a rural attachment. In the schools that made a specific effort to include clinical teaching in their rural FT periods there were

a few key clinical departments (such as obstetrics or pediatrics), actively involved.

For the local authorities, health staff and community members, Adams' theory<sup>25</sup> of job motivation may provide a better basis for analysis, because they may not consider FT their responsibility. To involve them actively, we had to consider the balance between what we wanted them to contribute to FT and the benefit they could gain from their involvement. In Tasmania, Australia, field preceptors felt excluded from the educational process until a program to provide them with training skills and more involvement with the students was instituted<sup>1,27</sup>. When the Vietnamese program was adapted to give the local health staff and others more responsibility and clearer benefits, the feedback from all community groups was very positive.

Using a multi-stakeholder approach that addressed appropriate motivating factors for each stakeholder, the FT project interventions appear to have been successful in gaining the support and involvement of all main stakeholders, as is illustrated (Table 5).

## Conclusion

Eight medical schools in Vietnam recognized a need to improve their rural FT programs and worked together to achieve this. The situation analysis guided the selection of issues to be addressed, then pilot FT interventions were carried out at rural field sites before applying them to all medical schools. The development of strategies for involving stakeholders at the field sites was informed by theories of motivation. This resulted in an effective community–university partnership model that satisfied all stakeholders. This step-by-step approach demonstrated a number of successful strategies to creating conditions for continued stakeholder contribution to FT. Such a 'win–win' approach to community–campus collaboration should be considered in every activity to maintain, develop and strengthen the community–university partnerships in FT in Vietnam and in other countries.



**Table 5: Summary of benefits for stakeholders from each intervention in field teaching**

Intervention activities	Benefits for each stakeholder			
	Teacher/school	Students	Local health staff	Community
Each school selects several districts as FT sites (including urban sites)	<ul style="list-style-type: none"> <li>Easier to organize FT</li> <li>Easier to set up partnership</li> <li>Lower cost</li> </ul>	<ul style="list-style-type: none"> <li>Less crowded at each FT site</li> <li>More opportunities and more sites to learn from</li> </ul>	<ul style="list-style-type: none"> <li>Easy to teach with fewer students</li> <li>Easier to manage and supervise</li> <li>Less time to spend</li> </ul>	<ul style="list-style-type: none"> <li>Easier to provide accommodation &amp; other facilities</li> <li>Less disturbing to the community</li> </ul>
Involve LHS to be local preceptors	<ul style="list-style-type: none"> <li>Learn from LHS</li> <li>Share duties in FT with LHS</li> </ul>	<ul style="list-style-type: none"> <li>Field learning become easier</li> <li>Learn a lot from LHS</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge and skills Improvement</li> <li>Feel responsible and recognizable</li> </ul>	<ul style="list-style-type: none"> <li>Improved LHS can provide better services for community</li> </ul>
Conduct appropriate training for local preceptors	<ul style="list-style-type: none"> <li>Learn how to teach trainers</li> <li>Share &amp; learn from LHS</li> </ul>	<ul style="list-style-type: none"> <li>Will benefit from training when LHS teach them</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge and skills improvement</li> <li>Proud to be school preceptors</li> </ul>	<ul style="list-style-type: none"> <li>Indirect benefit from their LHS improvement from training</li> </ul>
Request departments to identify KAS they should teach in the field	<ul style="list-style-type: none"> <li>Identify their responsibility and duties</li> <li>Improve their understanding of FT &amp; COT</li> </ul>	<ul style="list-style-type: none"> <li>Topics for FT are more appropriate</li> <li>Get more attention from teachers</li> </ul>	<ul style="list-style-type: none"> <li>Topics appropriate for LHS to teach are also identified</li> <li>LHS can contribute ideas for FT from this stage</li> </ul>	<ul style="list-style-type: none"> <li>Take into account community health needs when identifying topics</li> </ul>
Involve all stakeholders in student assessment	<ul style="list-style-type: none"> <li>Can assess students better</li> <li>Better quality training</li> </ul>	<ul style="list-style-type: none"> <li>Assessment is more objective</li> <li>Achievement &amp; recognition</li> </ul>	<ul style="list-style-type: none"> <li>Feel responsible and important</li> <li>Recognition by students &amp; school</li> </ul>	<ul style="list-style-type: none"> <li>Feel responsible and important</li> <li>Students have better behavior</li> </ul>
Combine FT in doing research and providing health services	<ul style="list-style-type: none"> <li>More ideas for research</li> <li>Multiple FT benefits</li> </ul>	<ul style="list-style-type: none"> <li>Opportunity to participate in research and services</li> </ul>	<ul style="list-style-type: none"> <li>Learn how to do action research</li> <li>Promote evidence-based health care</li> </ul>	<ul style="list-style-type: none"> <li>Health problems can be identified and solved from research</li> </ul>
Promote more self-learning activities in FT	<ul style="list-style-type: none"> <li>Less input for monitoring and supervision</li> </ul>	<ul style="list-style-type: none"> <li>More confident creative and responsible</li> </ul>	<ul style="list-style-type: none"> <li>Less input for monitoring and supervision</li> </ul>	<ul style="list-style-type: none"> <li>More opportunity for students to help community</li> </ul>
Organize social & entertainment activities in the field with local youth & women's organizations	<ul style="list-style-type: none"> <li>Best way to learn about the social context and the culture of the community</li> <li>Improve school–community relationship and facilitate FT</li> <li>Makes FT more attractive for teachers and students</li> </ul>		<ul style="list-style-type: none"> <li>Understand and learn more from students and teachers</li> <li>Improve school–community relationship and community willingness to support FT</li> <li>More confidence to share and ask for help from students and teachers</li> </ul>	
Conduct FT as a big school campaign	<ul style="list-style-type: none"> <li>Encourage the participation of students and teachers in FT</li> <li>Feel responsible &amp; recognizable</li> <li>Easy to conduct and less cost</li> </ul>		<ul style="list-style-type: none"> <li>Focus on short period when it is more appropriate for LHS and community</li> <li>Feel more responsible and recognizable when many communes receive students</li> </ul>	
FT topics based on community needs	<ul style="list-style-type: none"> <li>Easy to involve community in FT (because of mutual benefits)</li> <li>More suitable for teaching and learning (availability of topics)</li> </ul>		<ul style="list-style-type: none"> <li>Topics are familiar</li> <li>Contributes more towards solving community health problems</li> <li>Improves the partnership</li> </ul>	

COT, Community-oriented teaching; FT, field teaching; KAS, knowledge, attitude, skills; LHS, local health staff.



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