

**Consultant's Report on the
Evaluation of the Field
Epidemiology Training Programs in
Indonesia**

July 2011

The international consultants thank the WHO office in Indonesia for arranging the logistics of this evaluation and the staff of the FETP secretariat, Indonesia Ministry of Health, University of Indonesia, University of Gadjah Mada, Provincial Health Offices in Surabaya and West Kalimantan and the FETP students and graduates for their assistance in this evaluation. We hope that the recommendations from this evaluation will strengthen the Indonesian FETPs and thus the quality of the training and consequently, the quality of the graduates. The skills and experience the gained from the FETP training will help graduates become competent epidemiologists and play an essential role in protecting Indonesia and other countries from emerging diseases, re-emerging diseases, neglected diseases and non-communicable diseases.

Sincere wishes from the consultants,

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Evaluation of the Field Epidemiology Training in Indonesia

Executive Summary

In 2008, the Indonesian Ministry of Health began an effort to revitalize their field epidemiology training program (FETP). The FETP began in 1982 as a two-year non-degree program. Interest in the program decreased because students wanted a degree upon graduation. In response, the Director General Disease Control and Environmental Health entered an agreement with the University of Indonesia and the University of Gadjah Mada to award students a master's degree after completion of their FETP training. Unfortunately, this changed the original "learning by doing" program to a more academic format. In 2008, the MOH decided to revitalize the FETP by increasing the time spent on field projects. After three years of the new curriculum, the MoH requested an evaluation of the program. This evaluation was conducted in July 2011 by a team of international experts in FETP.

The consultants used the Continuous Quality Improvement (CQI) tool developed by TEPHINET (Training Programs in Public Health Interventions Network) to conduct the evaluation. To assess the FETP, the consultants interviewed staff of the FETP secretariat, MoH, University of Indonesia, University of Gadjah Mada, current students, graduates, and field supervisors of students. When available, the consultants reviewed reports written by the students.

The FETP has made considerable progress. A secretariat office was created and staffed and manages the FETP; a curriculum was developed to re-emphasize field projects and a 70/30 field to classroom ratio; Provincial Health Offices would co-pay cost of the FETP training; efforts being made to recognize epidemiology as a profession; the FETP has several donors to support the program; the universities receive many qualified applicants for the program.

The following recommendations are based upon interviews with students and staff of the FETP, the FETP secretariat, WHO and the MoH.

- **Change selection criteria for incoming students.** The selection criteria for incoming students are made by the admission policies of UGM and UI. The criteria are based upon grades and graduate aptitude tests. Potential students from underserved areas generally have lower grade point averages and admission test scores. These areas generally have the greatest public health needs. To increase the epidemiology capacity in underserved areas, we suggest that the selection criteria for admission to the university FETP training to allow people with weaker academic credentials to enroll into the program. Increasing the number of students from underserved areas will also increase the number of epidemiologists in these areas since graduates usually return to their pre-FETP work place. UGM and UI FETP programs should be part of the selection process.
- **Involve the laboratory in the student's outbreak investigations and projects.** As the disease surveillance system of Indonesia changes from syndromic reporting to diseases that are confirmed by diagnostic laboratory tests, we request integration of the laboratory into field projects and outbreaks. The laboratory can play an essential part of an outbreak investigation and field project. Students must understand the strengths and limitations of the laboratory and the diagnostic tests and can gain this experience by working with laboratory staff on outbreaks and projects.
- **Strengthen field supervision.** Field supervisors and mentors are the strength of every FETP because they play a direct role in developing confident and competent epidemiologists. In addition, just as students

need training to become epidemiologists, PHO and DHO staffs that serve as field supervisor need ongoing guidance on how to be effective field supervisors. Field supervisor's performance should be evaluated.

- **Evaluate students' reports and field placements.** One way to measure of the quality and impact of the field placement is by examining the student's reports on outbreak investigations and field projects. These projects not only document the student's progress and competency, they also are a reflection of the quality of the field supervision. An independent consultant should conduct these reviews.
- **Advocacy for the FEPT.** The Indonesian FETP is a success story and serve as a model for other FETPs that want to grant degrees and well as how to improve recruitment and ensure sustainability of funding. Advocacy should be at the PHO and DHO level to help recruit students as well as recruit field placements; at the national level within the health sector and also outside public health agencies such as agriculture, local government. In addition FETP programs and other epidemiologists need to know about the revitalization and success of the Indonesia FETP.

The consultants also have other comments regarding the FETP.

- Staffs at PHOs and DHOs recognize the value of FETP and want to hire graduates to manage their outbreak response and surveillance systems. The staff also feels strongly that students play valuable role during their field placement. Students feel program is giving them the training they need to become competent epidemiologists. Also feel having a master's degree after completing FETP training is important and helps to advance their career. The FETP secretariat needs to tell other programs of their success for FETP students in other programs want to have a degree after they complete their training.
- Expansion of an FETP to other universities should wait until the present programs have been proven a success and ongoing processes for monitoring of program output and quality have been implemented.

Background

A field epidemiology training program (FETP) strengthens the public health workforce capacity by producing competent epidemiologists. Health professionals in the two-year program gain skills and experience in disease surveillance, program management and outbreak response and thereby increase the capacity of their country to detect and respond to public health events of national and international concern.

The Indonesian FETP started in 1982 as a two year full-time non-degree program administered by the Directorate General of Disease Control and Environmental Health (DG DCEH) in the Ministry of Health (MoH). However, the FETP had difficulty recruiting students because they wanted a degree after spending two years in a training program. In 1990, the DG DCED and the University of Indonesia (UI) and Gadjah Mada University (UGM) agreed on a curriculum that awards a master's degree to students who successfully completed the training. While this association provided degrees for graduates, the program became more theoretical and began to move away from the foundation of FETP training, "learning by doing" under the guidance of senior epidemiologists.

In 2007, the Government of Indonesia, in collaboration with WHO, UI and UGM, initiated efforts to revitalize Indonesian FETP. An assessment and evaluation of FETP in Indonesia was carried out to identify strategies to improve the quality of the FETP training and to establish a baseline to measure progress. The evaluation identified several issues to enhance the quality of FETP: the curricula needed to be updated; trainees needed access to learning aids such as textbooks and internet; many academic lecturers had little experienced with field epidemiology and needed training to deliver quality teaching; field placements must provide a positive learning environment and a challenging set of field projects; and graduates needed governmental support for career advancement. The MoH issued a national decree to revitalize the FETP and proclaim it as a national strategy for health workforce development. The aim of training epidemiologists was made explicit and minimum professional

standards for epidemiologists were set by the decree. With funding from donors such as Ausaid and the European Union, the FETP revitalization started with revising the curriculum, emphasizing field projects and requiring field projects. A Memorandum of Understanding was signed between the Ministry of Health and the universities regarding roles, budgets and responsibilities regarding administration, funding and operation of the FETP. In addition to revising the curriculum, in 2008, the FETP secretariat was established in DGDCEH to support the revitalization of the Indonesian FETP. In 2011, there are 73 students enrolled at UI and UGM which are using the revitalized FETP curricula.

Although the revitalization of Indonesia's FETP is still in its early stages, the program has made progress. The geographic distribution of students as well as the number of field placements and alumni in the country has increased. The global network of FETPs known as TEPHINET invited the Indonesia FETP to become a member. Lastly, the investment in students, curricula and field projects has strengthened the quality of training and the field projects of the students. In their field placements, students became an integral part of efforts to investigate outbreaks of national importance such as avian influenza H5N1, pandemic influenza A H1N1 and large outbreaks of diarrheal diseases. They also participate in the response to natural disasters such as earthquakes and floods. The recent success of revitalization is also reflected by the success of Indonesian students at international conferences.

Establishing and sustaining FETPs is a challenge because the programs use a resource-intensive training model. Indonesia's recent revitalization of its FETP can provide guidance for other FETPs that wish to establish or review their own programs and become degree-granting program. Sustaining and maintaining the highest possible quality of FETP in Indonesia is essential to the credibility of a program and ensures that it is responsive to the needs of the country and is able to make the greatest contribution to public health. The use of the TEPHINET Continuous Quality Improvement (CQI) tool, a systematic review of inputs, processes, outputs and outcomes of training programs will serve as the framework to evaluate the performance of the FETP.

Objectives of the Evaluation

Four international experts were invited to conduct the assessment using the Continuing Quality Improvement tool designed by TEPHINET. The tool has been used to evaluate FETPs. The objectives of the evaluation were to:

- Use the CQI to evaluate the progress of the Indonesian FETP. The 2007 evaluation will serve as a reference,
- Identify achievements, lesson learned, best practices, operational and curriculum gaps, issues and make recommendations to improve the FETP in Indonesia,
- Identify mechanisms to implement the recommendations in the CQI evaluation, and
- Review and deliver recommendations and inputs in the development of FETP road map and FETP Indonesia strategic plan for short, medium and long term periods.

Time Frame of the Evaluation

The evaluation was conducted from 12-20 July 2011. On July 13, consultants were given an overview of the CQI evaluation and the Indonesian FETP. Consultants were divided into two teams with one team travelling to UGM and Surabaya and the other team travelling to UI and West Kalimantan to interview university staff and FETP students and field supervisors. Consultants returned to Jakarta and discussed their recommendations with staff from MOH, FETP and WHO.

Methods

The consultants used the TEPHINET CQI tool and interview guidelines for the evaluation (appendix I). Consultants traveled to Jakarta and interviewed staff from WHO, MoH and the FETP secretariat. Consultants also traveled, to Jogjakarta and West Kalimantan and interviewed UI and UGM staff, FETP field supervisors and students and staff at the PHO.

At the field visits, FETP or stakeholder staff gave a short presentation on their program to international reviewers. The MoH staff gave short presentation on CQI evaluation objectives to PHO and DHO staff. The consultants interviewed students and staff separately. The consultants presented their conclusions to FETP staff and students and PHO staff and students. In addition to the interviews, the consultants obtained and reviewed student reports and other documents.

Other activities related to the evaluation included meeting the WHO, FETP Secretariat and CDC, a stakeholder workshop to discuss preliminary findings at strategies for implementing recommendations and interviewing and data collection at the FETP secretariat office.

The following participated in the evaluation:

- UGM. Interviewed all full time academic program staff: 1 coordinator, 2 academic supervisors,
- Field supervisors
 - PHO Surabaya (Dr Ahmed): field supervisor, also Head of Communicable disease section, supervises with DHO staff
 - UGM: Dr. Banning, DHO primary field supervisor
 - BPKL head (Dr Bang Bang), primary field supervisor for FETP students
- Students and graduates
 - UGM. 4 students, 2009 (3) and 2010 (1) cohort, 2 graduates (2011, 2005)
 - PHO Surabaya. 3 students (2 UGM, 1 UI), all 2011 cohort (started March 2011)
 - BPKL. 2 students (1 UI, 1 UGM) (started August 2010)

Findings

Input

Curriculum

The universities have a curriculum with the major elements of class work and field projects. The curriculum at UGM and UI are similar in structure and content with a few differences in the number of projects and coursework modules (e.g. GIS taught at UI but not UGM). Both require completion of projects and a thesis.

Human resources

Human resources at UI and UGM and the secretariat are listed in Annex 1. Overall, the student to FETP field coordinator ratio was 1:5 in (IU) and 1:10 (in UGM) and the FETP student to field supervisor ratio is 1:3 in the two field sites visited by the consultants. However, this ratio, and how it meets student requirements, may be different in other field placement sites and should be assessed systematically. Students interviewed were satisfied with the access they had to both FEPT coordinators and field supervisors. The main need expressed by students was access to content area experts for their projects.

Coordination

The secretariat effectively coordinates FETP activities. However, a shortcoming is the lack of ongoing, formalized and systematic technical support provided to field supervisors, and technical coordination between the two universities and with the field placements. In addition, there are limited opportunities for cross-institutional interactions for students and staff.

Material resources

Annex 1 lists the material resources in the FETPs. Communication and information resources are appropriate in the classroom and field sites visited by the consultants. The main gap in information resources and communication

materials appears to be at the DHO level where there is limited communication infrastructure and access to journals and text books. One area where for further assessment and input is laboratory support for the student's investigations and projects.

Trainee recruitment

At UGM, recruitment of FETP students is managed by the university admissions department. The requirements for FETP admission are similar to other masters programs (i.e. TOEFL and GAT). These criteria pose a disadvantage for students with low scores, which are often those who live in areas with the greatest need for public health services. Another issue is the decreasing number of medical graduates applying for training (Table 1).

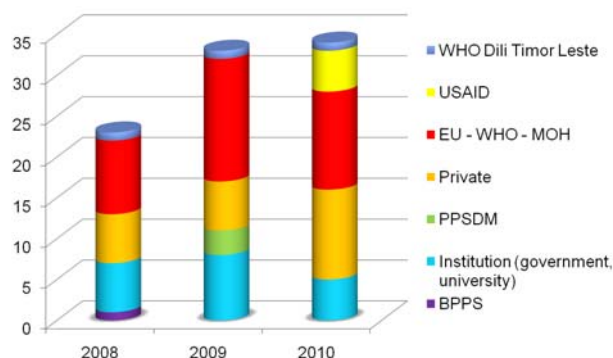
Table 1. Educational Background of FETP Students Prior to Entry into UGM or UI.

Educational background of trainees	UGM			UI		
	2008	2009	2010	2008	2009	2010
Public Health Specialist	16	26	24		8	9
Medical Doctor	6	5	3	4	0	1
Dentist	-	-	1			
Veterinarian	-	-	5		0	0
Pharmacist	-	1	-			
Nurse					4	4
Mathematician	1	1	-			
Engineer	-	-	1			

Financial resources

Diversified funding is a key aspect toward achieving sustainability. The Indonesian FETP has made considerable progress in this area. There are multiple funding sources and the Government of Indonesia is one of the major funders. The EU funding ends this year, and will be replaced by funds from the MOH.

Figure 1. Funding Sources for the UGM FETP program



Monitoring and evaluation plan

The program strategy following the 2008 evaluation and revitalization included implementing a monitoring and evaluation plan. However an ongoing process for ensuring this is yet to be developed or implemented.

Certification and career path/opportunities for graduates

Students receive a Masters degree at graduation, and all stakeholders agreed that this is an important incentive for recruitment of trainees and for their future career advancement. Additional measures such as functional recognition of trainees and graduates within the MoH and professional recognition of epidemiology as a specialist qualification within the MoH structure is also important for this process. The FETP secretariat and the coordinating sites have been active in lobbying for process to implement this, but wider recognition and implementation in practice is required.

Process

Class work

The students spend 4 months of the 24 month program in the classroom. The curriculum covers the theoretical foundation required for the core learning requirements (See Annex 1 for a list of courses).

Field work

Students spend 20 months of the 24 month program in the field. This includes a period at the provincial health office, and then placements within the districts, usually for field investigations. This is an appropriate level of field placement, but external process is required to ensure that it is standardized across all placements.

Supervision

Field supervisors are the core of every FETP program and the success of the “learning by doing” model relies on their ability to provide effective supervision and mentoring to trainees. The field supervisors interviewed for this evaluation were committed and experienced individuals with the skills and knowledge to provide this training. However, we are unable to assess if every field site had competent field supervisors. The presence of a systematic and ongoing process for capacity building of supervisors is a way to ensure that all trainees have a high quality supervision. There was a workshop for supervisors of WHO funded trainees held this year through the secretariat, and another held by UGM for other supervisors working with UGM trainees. The feedback on these activities was positive, and further such activities, with a focus on technical skill development and updating, were requested by coordinators and field supervisors we spoke with.

Evaluation of trainees

Trainees produce twice-yearly progress reports which are assessed by field supervisors then sent to the secretariat. It is unclear if there is three-way discussion of these reports between coordinators, field supervisors and the technical staff in the secretariat. Student project reports are evaluated by coordinators and field supervisors and approved, but there is no further formal review, and these are not part of the student’s final thesis. The final thesis submitted for examination includes the student’s research project only. The final thesis is examined as per the academic requirements for a Master’s level theses. This process includes examination by 5 examiners, 3 are academics from the student’s university, and 2 are external topic area experts. The external experts are often FETP graduates, but this is not a requirement.

Evaluation of staff

Program staff, (i.e., coordinators and field supervisors, are informally evaluated by the FETP technical staff member during field visits. No formal evaluation of staff, by external individuals or by students, is currently undertaken.

Outputs

Graduates and mentors

There are graduates of the FETP Indonesia program in all provinces. Most field placements are in PHOs with supervisors who are FETP graduates. However, the target expressed by most stakeholders as ideal was a FETP graduate in each district.

Oral and poster presentations and publications

An indicator of success is the number of abstracts accepted in a scientific conference. The abstracts submitted to the National Scientific Conference of Epidemiology in November 2010 provided data to measure the acceptance rate of the students' abstracts (Table 2). All FETP students were required to submit at least 1 abstract. However not all the students submitted an abstract. Although preference was given to English abstracts, most students submitted abstracts written in Bahasa. This allowed assessment of acceptance that was unbiased by ability and/or support to write in English.

Table 2. Acceptance Rates of Student Abstracts Submitted to the National Scientific Conference of Epidemiology, November 2010.

	UGM	%	UI	%	Other	%
Total trainees at time	39		26		N/A	
Abstracts submitted in Bahasa						
Submitted	22		14		13	
Accepted for oral	10	45	5	36	2	15
Accepted for poster	6	27	0	0	6	46
Abstracts submitted in English						
Submitted	11		7		25	
Accepted for oral	8	73	4	57	6	24
Accepted for poster	4	36	1	14	7	28
Distribution of abstracts by topic						
Malaria/dengue	4	22	1	11	0	0
NTD/Malaria	3	17	1	11	1	13
Borders/disasters and PHEICs	2	11	2	22	1	13
Hygeine, clusters and outbreaks	1	6	1	11	3	38
NCD	3	17	0	0	2	25
TB/HIV/AIDS	2	11	2	22	1	13
Outbreaks	3		2	22	0	0

The data on the acceptance of abstract shows that students had a high rate of accepted abstracts for oral presentations, for both Bahasa and English abstracts. There was also a wide range of topics covered in the abstracts accepted from FETP students, suggesting students undertake field projects in several areas.

Service outputs

No central database in English was available of student projects. The only data available was the fact that every student is required to submit a report on a field project in each of the core learning areas prior to graduation. These reports represent a significant output of trainees and graduates. Consequently, it is important that these reports are assessed formally and comparisons made between funding streams and institutions (coordinating sites and field placements).

Outcomes

Key stakeholders who utilize FETP outputs (i.e., student project reports and FETP graduates and trainees) remarked that they are committed to the program because they recognize its value in strengthening program implementation through field epidemiology and operational research.

Strengthened workforce, systems and programs

The program places students in a PHO that is not the residence of the student. Graduates are obligated to return to their pre-FETP place of work to work in communicable disease control sections at district and provincial level. The graduates must stay at this worksite for two years. This is a significant asset to the public health and epidemiology workforce of the country. Because of the return to their former working place, criteria for selection of students by province are important to assure wide geographical distribution of the graduates.

Other outcomes and impacts

More detailed assessment of other outcomes and impacts could not be undertaken due to time and language limitations. However, examples were identified from discussions at field sites e.g. a student project that found community workers were effective in improving DOTS adherence has now been implemented in high default areas throughout the province. It is important that a systematic way of documenting and accessing these outcomes and impacts from student work is identified and implemented, both for the trainees themselves, but also as a key tool in advocating for the program.

Progress with the recommendations in the 2007 evaluation of the FETPs

The FETP has made progress since the 2007 review and commencement of revitalisation. Many examples of success were described above. The following table summarizes this progress in reference to the 2007 review and identify the areas that need more activity.

Recommendations in the 2007 evaluation	Progress from the 2007 evaluation
Develop advocacy documents and a website	Surveillance department responsible for website Advocacy documents available: <ul style="list-style-type: none"> - Brochures for recruitment (see below) - Other documents (pamphlets, stickers etc.) are handed out at workshops and meetings such as annual surveillance directors meeting.
Implement cost-sharing	Implemented co-sharing of funding between the MoH and PHO. There is a diversified funding sources for staffing and for student costs. Main contributor is MoH

Prepare a 'road show' to promote the program to other provinces and districts.

Seek additional funding sources such as other bi-laterals and the private sector.

Fully implement the functional career path for graduates.

Engage the Indonesia Epidemiology Network (JEN) of institutions and Indonesian Epidemiology Association (PAEI) for individuals.

Will use road map to advocate with DHO/PHO. No activities linking awareness of FETP to external stakeholder such as medical community, senior non-health policy makers.

Co-sharing has been implemented, with a diverse funding stream. However, the continuation of these funds to sustain the program is unknown.

Professional recognition for epidemiology training/qualifications to ensure appropriate career advancement for functional positions. Umbrella/ legal framework is there (i.e. functional positions is there), but those in management do not understand epidemiology as part of this unless providing direct clinical care. Need clear ToRs that define role in terms of certification and advocacy of this by personnel bureau of MoH and PPSDM to management. Also advocacy through IEA (see below).

These organisation are very involved and committed to achieving professional certification by MoH for epidemiologists. Steps forward are clear.

Recommendations for initiating governance

Establish Advisory Committee
Organizational and financial
permanency for the Secretariat

Plan a process for adding of new
universities to the Indonesian FETP.

Set up the Secretariat as soon as
possible, including staff
It may be appropriate for one of the
members of the Secretariat to be a
person on detail from PPSDM to help
forge the link with that Bureau right
from the beginning.

Established

Currently 3 positions (Director, technical staff and secretary) funded by AusAID for 4 years. Reduced from 5 positions as moving towards including sub-directorate surveillance staff to support secretariat work.

University of Erhanga, Hassanudin, and Udayana have applied to be coordination sites. Applications have been assessed by CDC/FETP secretariat but not assessed as having appropriate structure and process in place as yet. Assess using same process as applied to UGM and UI.

Established, see above regarding staff/financing.

See above, move towards more CDC staff with roles in FETP secretariat.

Recommendations for the Secretariat's work-plan

Advertise the FETP widely and seek
applications and screen applications
prior to sending for University
testing.

MoH recruits candidates and they are assessed by the University for enrollment. Of those that are eligible the secretariat has funds for some of the students. For those who are not awarded a scholarship, they usually reapply or withdraw rather than funding their training with personal funds.

Brochures for recruitment are sent yearly pre-recruitment (2 months prior to Secretariat closing date for applications, usually 4 months prior to commencing of course) to all PHO's throughout country, to BTKL's, sent in bulk for distribution to DHO's. Specific focus on recruitment.

Criteria applied at secretariat:

- Bachelors degree (in any field)
- 2 years work experience in any field
- Willing to move for placement

Overall, around 50% of applicants are accepted for the course.

Prioritize the positions where FETP graduates are needed.	Placement location decided on by Chief of Sub-directorate surveillance and Outbreaks. Informal, no specific criteria. Informal process for requesting consideration of students from areas of need. However, final decisions always with university.
Create an alumni list	Have a current list with contact details for EU funded candidates in last 3 batches. Need to include non-EU funded graduates.
Develop the website and newsletter. Arrange workshops to engage central government departments and engage field placement sites (provinces districts and others)	www.fetpindonesia.org Invited staff widely (all health stakeholders, including program managers across health department) to epidemiology association meeting last year. Others are program specific.
Strengthen Field Supervision in collaboration with Universities	One technical position at secretariat, roles are to go to field to supervise supervisor, and to link with PPSDN (Bureau of Health Workforce Development, MoH)
Provide and orientation/training session for field supervisors. Each student should have a Letters of Field Assignment that clearly state responsibility of Field Supervisor, the University, and the student. Mentor training for new graduates of the FETP	MoU signed between secretariat and field placement, as supervisors get paid a stipend, with primary field and academic supervisor. No direct link with mentors (e.g district DHO who work on projects). Training provided once graduate became a supervisor

Conduct monitoring including the following activities:

Periodic reports from universities	Progress reports sent from field placement to secretariat as requirement of funding. Secretariat does not send this to university.
Periodic reports from students	Yes, going to field supervisors then to Secretariat.

Secretariat and external review of student project reports

Cross participation of universities and the Secretariat on thesis defense panels	Implemented informally. 5 members of thesis examination panels, 3 academic supervisors and 2 external. The external are topic experts, and often are FETP graduates.
External review of project notebook	Requires implementation.
External review of classroom curriculum and materials	External review not occurring, suggest start with evaluation from central level/ technical coordination.
External review of field placements	Reviewed by academic supervisors and staff from secretariat. Visit close by placements more often due to funding issues, these are usually visited during field investigations. Secretariat would visit distant placements more often if more funding.
Strengthen collaboration between field epidemiology and laboratory sciences.	One secretariat staff member allocated to technical collaboration across institutions
Joint training activities across universities	Work with the universities to determine what joint training activities, where students from all the universities are brought together for a short course, are needed and appropriate to complement the university-based courses. These supplemental courses would be an opportunity for sharing experiences across universities and geographic areas, and for team building. However, their timing and content should be carefully considered.
Computers and Internet access while at field sites.	Needs to be resolved.

Alignment of the curricula, in particular the field components, with the competencies delineated in the Project Description.

Broaden assessment to ensure field competencies have been met from field components.

Broaden curriculum

New universities should not be brought on until 2009 at the earliest. TEPHINET Continuous Quality I should be performed in 2011, following the graduation of the first class

Progress reports and supervisor review student reports has been implemented, but more needs to be done. Still no process aside from supervisor review of assessing value and quality of student reports.

Previous evaluation recommended adding: leadership & management, bio-safety, laboratory field methods, epidemiology in disaster situations, epidemiology of communicable and non-communicable diseases of importance to Indonesia and SE Asia.

A proposal to add Erhlanga University was assessed by CDC and decision made to postpone until stronger system of QA in place.

Implemented in July 2011

Limitations

The consultants faced several limitations in their evaluation of the FETP. Most documents in field sites (curriculum, outputs etc.) were in Bahasa Indonesia and consultants could not read the reports. Many CQI indicators were not readily available at either central, coordination or field sites. Evaluators were therefore required to spend the limited time available in trying to obtain this data from multiple sites and sources. Many of the key stakeholder groups spoke in Bahasa and translation was needed. Translation was provided by FETP or MOH staff. An independent translator would have been preferred. The actual time for interviewing FETP staff at the university and students and field supervisors was about 90 minutes each. This was insufficient time to do a thorough interview.

Conclusions

Overall the structure of coordination based at academic institutions and field placement primarily at PHO/DHO sites is achieving the objectives of the program. Administrative coordination through the secretariat has supported the implementation and maintenance of the processes required to achieve this, and considerable progress has been made in developing a sustainable and robust program structure. Many of the issues identified related to a lack of formal and systematic technical support and evaluation across the program as a whole.

Recommendations

The following recommendations are organized in the TEPHINET CQI framework.

Inputs

a) Curriculum:

- a. Maintain 70% fieldwork and monitor this on an ongoing basis for all coordinating institutions.
- b. Align requirements and curriculum across universities that offer FETP curriculum.
- c. Consider adding electives such as cost-effectiveness analysis, disaster epidemiology, spatial statistics in the university classes.

b) Human resources:

- a. Students interviewed reported that they had sufficient access to FETP and field supervisors. Consultants only visited 3 field sites and this must be assessed for all field sites.

- b. Ensure students have access to topic matter expert for their projects
- c. Increase capacity building activities for field supervisors and mentors. Field supervisor updating workshops were very useful and should be given once a year and focus on building facilitating skills of supervisors and mentors.
- d. Strengthen technical support to academic institutions. This could include resources for :
 - i. Capacity building of field supervisors and mentors
 - ii. Streamlining of curricula
 - iii. Technical input into development of case studies, lectures and other teaching materials
 - iv. Editorial/ scientific writing support
 - v. Liaison between FETP programs and central MoH program directors
 - vi. Formal assessment of quality of reports
- e. Material resources
 - i. Establish direct between students and laboratory for FETP student projects at national, PHO and DHO.
 - ii. Ensure access to personal protective equipment at field level for students undertaking field investigations.
 - iii. Ensure access to sample collection and transport for students undertaking field investigations.
- f. Maintain co-sharing and diversity of funding sources
- g. Trainee recruitment
 - i. Modify criteria for student selection to include students from rural/remote/disadvantaged/under-represented areas.
 - ii. Implement measures to increase recruitment of medical graduates
- h. Monitoring and evaluation plan
 - i. Ensure ongoing collection and review of data (output, outcome and impact data as per TEPHINET CQI) for monitoring and evaluation at all levels
- i. Certification and career path
 - i. Continue to implement processes for professional certification of epidemiology training within government and professional institutions
 - ii. Students commented that a master's degree is essential for career advancement.

Process

- a) Advocacy is essential for mobilizing support including funding and recruitment:
 - i. Nationally: Road show to PHO/DHO/public health community and all other stakeholders.
 - ii. Internationally: hold a symposium at the 2011 TEPHINET Conference in Indonesia for FETP directors and attendees of the conference.
- b) Class work: consultants' schedule did not allow enough time to assess class work
 - i. Field work : ensure adequate orientation of students, field supervisors and mentors, including DHO mentors working with student on specific field investigations
- c) Supervision: Maintain appropriate student to supervisor ratio. This can be assessed by looking at contact hours between student and supervisors.
- d) Evaluation of trainees: Implement an assessment process for student project reports. This process should be conducted by external assessors and based upon the following criteria:
 - i. Value of project to student in terms of skill development. This includes whether the project provided an opportunity to deal with competencies and that the projects as a whole reflect a breath of experiences, skills and field work activities.

- ii. Value of the project to field placement office – did the project meet the office’s need for evidence based policies and practice.
 - iii. Overall scientific quality of report. This is important to do on an ongoing basis, especially in the first year of training when there is time to make adjustments to the student’s capacity to write quality reports.
- e) Evaluation of staff : independent evaluation on an ongoing basis of field and university supervisors

Outputs

- a) Graduates and Mentors
 - i. Graduates return to original workplace, this makes recruiting of trainees from areas of need even more of a priority.
 - ii. Updated registry of all graduates including contact details as a first step in establishing an active alumni association
 - iii. Networking
- b) Presentations and publications
 - i. Increase number of publications by students including submission of papers to journals such as OSIR (Outbreak Surveillance Investigation Reports; osirjournal.net and WPRO journal)
 - ii. Encourage submission of abstracts to national and international conferences
 - iii. Encourage submission to local and national Bulletins by making this a core requirement of the program
- c) Service outputs
 - i. Evaluation team could only look at 3 reports due to limited time and language. Strongly recommend independent review of student projects and related reports to ensure they are meeting student and placement requirements.
 - ii. Student communication of project findings to (a) managers, (b) peers and (c) public should be encouraged by making it a core requirement of the course.

Outcome and impact

- a) Graduates return to original workplace, and this strengthens the workforce at all levels of the MoH.
- b) We identified a few examples of student projects where recommendations were translated to improved policies and practice. More detailed assessment was limited due to time and language. This must be part of the external assessment of student project reports and incorporated into the ongoing monitoring and evaluation plan.

Evaluation process

In addition to the TEPHINET CQI items, the consultants would like to comment on the evaluation process. There should be pre-evaluation preparation to collect students’ reports and translate into English. This should be an ongoing activity in the M&E plan, and not just for the external review. The consultants felt the time available to interview university staff, field supervisors and students was too short. The consultants schedule should include more time to conduct interviews. In addition, consultants wanted to visit other field placement sites and interview additional students and field supervisors. This will allow a broader view of the FETP.

Comparison of UGM and Surabaya PHO and UI and West Kalimantan Programs

UGM and Surabaya PHO

UI and West Kalimantan

Curriculum

Content:

- Coursework based on a MPH academic program. MPH program includes students in FETP and students not in FETP
- Learning competencies defined
- FETP and non-FETP students take same courses in first semester and are assessed with the same outcomes
- Suggested additional courses and skills for FETP students:
 - o health priority setting, including cost-benefit and cost-effectiveness analysis
 - o Advocacy, mobilizing political will, including communication to stakeholders and policy makers about findings and recommendations in reports.
 - o Risk communication, especially during the investigation and before you have definitive findings
- Curriculum decided by FETP coordinator with not much input from secretariat

University coursework units

Semester 1

- Research Methodology
- Epidemiology
- Public Health Surveillance
- Biostatistics
- Priority Health Problems I : Communicable Diseases

- Written learning competencies and curriculum
- 2 months class work

Coursework based on university Master degree in Epidemiology (ME) academic program

Coursework units are :

- Descriptive epidemiology
- Analytic epidemiology
- Biostatistics
- Surveillance
- Informatics
- Guidelines for fieldwork
- Communicable disease prevention & control
- Non-communicable disease prevention & control
- Laboratory & bio-safety procedures
- Surveys & sampling
- Communication
- Management
- Outbreak investigation
- Operational research

Project requirements : 6 projects, including thesis

	<ul style="list-style-type: none"> - Outbreak Investigation - Health Policy Management <p>Semester 2</p> <ul style="list-style-type: none"> - Social and Behavior Sciences - Biostatistics II - Priority Health Problems II (Non-communicable Diseases) - Health Communication and Advocacy - Epidemiology II - Environmental Health <p>Semester 3</p> <ul style="list-style-type: none"> - Analysis of Health Problem (District Situational Analysis) * - Evaluation and Implementation of Public Health Surveillance System * - Screening of Health Problem * - Analytic Epidemiology Research * - Evaluation of Public Health Program * - Outbreak Investigation * <p>Semester 4</p> <ul style="list-style-type: none"> - Thesis <p>- Semester 4 almost all in field, with classroom content seminars and presentations</p> <p>Project requirements : 6 projects, including thesis research project</p> <ul style="list-style-type: none"> - Health situation analysis - Outbreak investigation - Program evaluation - Surveillance evaluation <p>Feedback from students</p> <ul style="list-style-type: none"> - Balance between lecture and field work is fine - 6 projects is a lot of work but worth the effort 	<p>research project</p> <ul style="list-style-type: none"> - Health situation analysis - Outbreak investigation - Program evaluation - Surveillance evaluation <p>Feedback from students</p> <ul style="list-style-type: none"> - Lecture in theory should be modify to be more applicable in real situation of field work - 6 projects is a lot of work but worth the effort - Like diversity of curriculum in having lectures, case studies and discussion <p>Students would like more lectures on:</p> <ul style="list-style-type: none"> - Advocacy - Scientific writing - Disaster - GIS - Advance analysis for outbreak investigation
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	<ul style="list-style-type: none"> - Like diversity of curriculum in having lectures, case studies and discussion <p>Students would like more lectures on:</p> <ul style="list-style-type: none"> - Advocacy - Scientific writing - GIS - Spatial analysis 	
Learning methods:	<ul style="list-style-type: none"> - Classroom teaching is a mixture of lectures, case studies and discussion 	For each unit, percentage taught as lecture 20-40%, remaining is interactive discussion and field exercises.
<i>Human resources</i>		
Training staff:	<ul style="list-style-type: none"> - Full time program staff: 1 coordinator, 2 academic supervisors, 2 finance and 3 admin support. - Currently trainee to supervisor ratio 1:5 - Academic staff have significant workloads (for coordinator, outside workload is greater than FETP workload) outside FETP program - Barriers to international publication include language, time, and limited value (as reported by staff) of students projects e.g measles outbreak - Support at university for scientific writing : not systematic, no major editorial support, to get will need to pay - Academic staff also teach on MPH program, main role of coord is role of dean of env health 	<ul style="list-style-type: none"> - Six academic staffs coordinate FETP - Coordinator spends 24 hours per week on FETP, has research and lecturing responsibilities outside FETP - Other staff are supervisors, - Trainee to supervisor ratio 1:1 - Academic staff have significant outside workloads - Trainees receive >4 hours per week supervision - Students interviewed felt they had enough time with FETP supervisors and field supervisors - Priority is not high in scientific writing : lack of editorial support and other supports
Field supervisors:	<ul style="list-style-type: none"> - 56 field placements identified: BBTCL (3), Kab (29), Kot(6), Prov (14), East Timor (2). - Field supervisor Surabaya grad in 2005, now working at DHO, has 4 students, 3 UGM and 1 UI - Supervision as reported by 2011 and 205 grad: good, 2005 grad had non-FETP supervisor who had MPH, was also academic, 	<p>Positive attitude Field supervisor willing to train FETP students in PHO and DHO but only communicate by email with academic supervisor. Academic and field supervisor do not meet often, once a year, only</p> <ul style="list-style-type: none"> - PHO supervisor meet with students almost every day, feels he has time for these students

	<p>recent grad had FETP supervisor</p> <ul style="list-style-type: none"> - Drafts are approved by her before they go to academic supervisor. Academic and field supervisor do not meet often, usually once a year, communicate by email - Field supervision resource; UGM grads in every province now (including several in papua) - Most field supervisors have 4-5 students - PHO supervisor meet with students almost every day, has 5 students, feels he has time for these students - Students said they have enough access to supervisors, mentors 	<p>Students said they have enough access to supervisors, mentors</p> <ul style="list-style-type: none"> - Most field supervisors have 2-3 students
Admin support:	<ul style="list-style-type: none"> - UGM has 2 finance and 3 general admin staff, no dedicated FETP admin staff at field placements visited 	<ul style="list-style-type: none"> - 1 secretary, one admin and one finance staff member
Training partners (PH service and academic institutions):	<ul style="list-style-type: none"> - Key partner are PHO and DHO, usually head of communicable disease who mentors students for field investigations 	PHO, DHO, provincial laboratories
Staff/Faculty development:	<ul style="list-style-type: none"> - Training for field supervisors: WHO workshop very useful, should be regular and focus on updating of field supervisors technical skills. Field supervisors of non-WHO students did not attend this but UGM does provide those with some training - Field supervisors also supervise MPH student and get training through MPH program e.g on thesis writing - Capacity building for academic staff ; go overseas, lot of opportunities for overseas scholarships, but no formal career development structure 	<ul style="list-style-type: none"> -Capacity building for academic staff particular in Field Epidemiology ; Seek opportunities for short observation of best practice in other FETP outside the country - Updating of field supervisors technical skills through different workshops regularly
Mentors:	<ul style="list-style-type: none"> - DHO staff as above 	As above
<i>Coordination</i>	<ul style="list-style-type: none"> - Support from secretariat: Staff from secretariat have visited university several times. Very rarely give lectures. FETP secretariat has translated Gregg to BI. X2 meetings per year between UI and UGM staff to coordinate programs ect. FETP 	<ul style="list-style-type: none"> - Academic staffs work with PHO/DHO entirely through field supervisors, e-mail and telephone - Academic staff visit field placement once a semester

	<p>have a role in this</p> <ul style="list-style-type: none"> - Universities work with PHO/DHO entirely through field supervisors, no direct link - University staff visit field placement once a semester - Very limited links between MoH central program managers and FETP secretariat. - Rare that academic staff participate in field investigations, limited due to lack of time, not resources - Student opportunities to interact cross-institutionally: only 2x per year, joint seminars and report presentations. Interact with at Indonesian epidemiological assoc meeting, but this is not regular, maybe once per year 	<ul style="list-style-type: none"> - Rare that academic staff participate in field investigations, limited due to lack of time, not adequate resources - Very limited links between MoH central program managers and FETP secretariat. - FETP secretariat staffs are not permanent position and not link to surveillance network but more administrative tasks - Staff from secretariat have visited university several times. Very rarely give lectures. FETP secretariat has translated Gregg Epidemiology book from English to BI. - 2 meetings per year between UI and UGM staff to coordinate programs ect. FETP have a role in this -
<i>Material resources</i>		
Learning materials:	<ul style="list-style-type: none"> - Standard formats exist for reports, not for publications. These were developed years ago, and only in Bhasa, would like help to translate and update - Textbook (Gregg) just been translated, will be provided free of cost to students through secretariat 	Lectures, guidelines for field investigations and exercises for trainees are available. But guidelines werenot fully applicable at District level when Students use it in the field and lectures were not specific to real field problems
Information resources:	<ul style="list-style-type: none"> - Library of School of Medicine Gadjah Mada University equipped with books, printed journals (including epi) , CD-ROM, inter-library loan, and electronic library) - FETP library collection 	<ul style="list-style-type: none"> - Website of University or faculty of Public Health - Library of center for Epi-research and surveillance - Electronic journal access including to Epi- journals
Access to computer resources:	<ul style="list-style-type: none"> - Computer laboratory (total of 50 computers) equipped with LAN connection and wireless internet connection at UGM - Not at field level 	Yes, at central level (University and province) , but not in field

Lab support:	<ul style="list-style-type: none"> - Local laboratories provide diagnostic services when students are undertaking field investigations. However, for students research projects, have to fund their own lab investigations 	No equipment for sample collection or transport , but have access to local laboratory and biosafety equipment
Work space:	<ul style="list-style-type: none"> - Students have a workspace in same room as supervisor at Surabaya PHO - Lecture room with in-focus, computer, and internet connection at UGM 	Students have a workspace in same room as supervisor at West Kalimantan PHO and Pontianak DHO Lecture room with in-focus, computer, and internet connection at UI
Communication:	<ul style="list-style-type: none"> - No use as yet of videoconferencing/skype due to lack of internet capability in placement sites, but this is changing. (this capacity is available at UGM). WHO students get a modem 	At university, have all communication material required by trainees, 100% have email access
Transport:	<ul style="list-style-type: none"> - Financial support for field investigations usually comes from districts, and generally no problems getting this 	<ul style="list-style-type: none"> - Financial support for field investigations usually comes from PHO and DHO, and generally no problems getting this except some remote areas
Website:	<ul style="list-style-type: none"> - Under website of faculty of university 	Under website of faculty of university
<i>Financial resources</i>		
Budget:	<ul style="list-style-type: none"> - WHO stipend always late for students, other donors do not have this problem 	Budget allows for international travel, student stipend But payment always late for students
Funding sources:	<ul style="list-style-type: none"> - See text of report - Stipend and fees provided centrally - District field costs provided by placement 	<ul style="list-style-type: none"> - from MoH (80%, specific line item), University (specific line item), JICA, local government - Stipend and fees provided centrally - District field costs provided by placement
<i>Trainee recruitment</i>	<p>Student intake:</p> <ul style="list-style-type: none"> ○ 2008 - 2009 23 ○ 2009 - 2010 33 ○ 2010 - 2011 34 <ul style="list-style-type: none"> - Pre-requisites: introduced by university, TOEFL and general aptitude test. Equivalent to acceptance requirements for other 	<p>About 50% of applicants accepted as trainees each year 2008-2010.</p> <p>Applicants from 18 provinces, trainees from 13 provinces in 2010</p> <p>Have a plan for achieving geographic coverage</p> <p>Student intake:</p> <ul style="list-style-type: none"> ○ 2008 - 2009 10

	<p>masters-level courses at university, no account taken of experience. Most who pass are from Java, disadvantages rural applicants, those from the east of the country. FETP staff no longer makes the decision, but have lobbied university to change this, include special consideration for applicants from east of country.</p> <ul style="list-style-type: none"> - 2012 have 49 enrolled students ? how many applicants - 2010 5 vets, all placed in MoH placements, not sure where they came from - Privately funded students mostly from Java - No difference in supervision, type of placement or requirements between students from different funding sources. 	<ul style="list-style-type: none"> o 2009 - 2010 16 o 2010 - 2011 14 <p>No difference in supervision, type of placement or requirements between students from different funding sources.</p>
Monitoring and evaluation plan		
Certification and career path/opportunities for graduates	<ul style="list-style-type: none"> - Masters degree is awarded on completion, important for career advancement - Degree is recognised by Indonesian epidemiological association - MoH has a career placement plan for graduates, must return to original work site, and complete 5 further years of service. 	<ul style="list-style-type: none"> - As for UGM
Process		
Class work	<ul style="list-style-type: none"> - Placement 2 years, 4 semesters, 2 months class room and 4 months field activities in each semester. Semester 1-2 MPH based teaching, 3-4 project write up and thesis preparation. - Students have opportunity to teach and present; teach district health staff and present project when it is completed - Publications are not a high priority even though this is a university based program. One factor in the lack of publications is that their English writing skills is poor. - Training at university focuses on quantitative methods; training could include qualitative analysis methods. 	As for UGM

<i>Field work</i>	<ul style="list-style-type: none"> - Placements : not same position as they were prior to training, sometimes same place - PHO students, 4 months since arriving in placement: Started their situation analysis. Takes about 2 months for review and approval by University, PHO and DHO - Investigated outbreaks; measles, leptospirosis, suspect hepatitis - Have support for biostats, epidemiology, IT - Typically most students submit their project reports in S2, but some delay - PHO Surabaya: 1 month orientation across all programs in CDC section, then sent to district. Following that, only return for 1 week per semester to present reports and seminars 	<p>Trainee completion of core learning activities:</p> <ul style="list-style-type: none"> - 100% completed CLA 1-9, 12-14, 17-19 - <20% CLA 10 (report for public health bulletin) - ~ 40% CLA 11 & 15 (Submit abstract /present at scientific conference) - CLA 16 (respond to public, media or health professional enquires is not a CLA)
<i>Supervision</i>	<ul style="list-style-type: none"> - Every field project is proposed, reviewed and assessed by field and academic supervisor - Projects are identified by placement; academic supervisor just looks at them to see they do not duplicate other students work. 	<ul style="list-style-type: none"> - Field Supervisors are given a formal orientation process, and their performance is assessed each semester - Trainees are consulted as part of this process
<i>Evaluation of trainees</i>	<p>Assessment process:</p> <ul style="list-style-type: none"> - Coursework examined as per MPH requirements - Field work reports are approved by field and FETP supervisor, they both have ongoing input into report drafts. - Progress report is written on each student by field supervisor each semester, this is sent to the secretariat directly, not sent to academic supervisors, - thesis is examined through oral, external examiners are usually academics with expertise in topic area, not FETP graduates 	<ul style="list-style-type: none"> - Trainee progress evaluated monthly using standard format, and trainee informed of result
<i>Evaluation of staff</i>	<ul style="list-style-type: none"> - No formal evaluation of field or FETP supervisors 	
<i>Outputs</i>		
<i>Graduates and</i>	<ul style="list-style-type: none"> - Numbers graduating by year 	<ul style="list-style-type: none"> - Numbers graduating by year cohort commenced

<i>Mentors</i>	<ul style="list-style-type: none"> ○ 2008: 19 ○ 2009: 25 ○ 2010: 20 - Students who fail usually do so at time of thesis examination - Average time to graduation is 34 months (2010-2011), but median is around 25 months, delays partly due to time taken to write up projects. 	<ul style="list-style-type: none"> ○ 2008 cohort: 10 (100% graduated) ○ 2009 cohort: 16 (93.7% graduated) - 240 graduates since program began - In last 5 cohorts: <ul style="list-style-type: none"> ○ 70 graduates ○ 100% working in Indonesia ○ 84% in government public service (national and sub-national health departments) ○ 24 central, 16 provincial, 12 district, 8 airport health office ○ 40% provinces have a graduate - 1
<i>Oral and poster presentations and publications</i>	<ul style="list-style-type: none"> - Abstracts accepted for national/international conferences, quality similar across all placements, student types (source of funding) - No peer-reviewed publications - Quality of abstracts similar across all students - Program produced national publications, no international publications - Last epi association meeting, 10 student presentation awards, 9 won by UGM students - Barriers to submission of abstracts include language 	<p>Peer-reviewed articles accepted for publication</p> <ul style="list-style-type: none"> - 1 (2009), 13 (2010), 2 (2011) <p>Abstracts</p> <ul style="list-style-type: none"> - Submitted : 2 (2009), 15 (2010), 2 (2011) - Accepted : 1 (2009), 13 (2010), 2 (2011) - Acceptance rate: 50% (2009), 86% (2010), 100% (2011) - Accepted for oral : 1 (2009), 11 (2010), 2 (2011) - Accepted for poster: 0 (2009), 2 (2010), 0 (2011) - Percent of students with at least 1 abstract submitted, 2009-2011 : 100%
<i>Service outputs</i>	<ul style="list-style-type: none"> - - - - PHO considers student reports useful for increasing awareness at provincial and district level. E.g. TB observer program using community members to improve adherence was piloted and evaluated by student. Findings showed program was effective 	<p>All 40 graduates in the period 2008-2011 have conducted and reported on the following:</p> <ul style="list-style-type: none"> - Investigation of an acute health event - Surveillance project evaluation - Surveillance project establishment - Surveillance report

	<p>so no implemented across province on those areas with high default rates.</p> <ul style="list-style-type: none"> - Recent graduate (2011 grad) had trouble identifying how recommendations were utilized, had impact on programs, or how student could participate in this process. - Quality of student reports could not be assessed as they were in Bahasa. 	<ul style="list-style-type: none"> - Short term policy recommendation - Long term policy recommendation - Quality of student reports could not be assessed as they were in Bahasa and the inadequate time
Outcomes		
<i>Strengthened workforce, systems and programs</i>	<p>Student expectations upon entering FETP</p> <ul style="list-style-type: none"> - Gain knowledge and experience especially on how to investigate disease outbreaks, evaluate surveillance systems and conduct epidemiological research - Do something different from their current job - Career advancement <p>Did FETP meet your expectations?</p> <ul style="list-style-type: none"> - Yes, allow to conduct research and investigations - Yes, achieved competency and recognized as expert <p>Comments by Head of CDC, Surabaya PHO</p> <ul style="list-style-type: none"> - effective advocate, sees great value in program - See as key support in health program advocacy at district and provincial level - Trainees add value :Technical input including epi, report writing - Would like more graduates (one in every district) :Surabaya is CD warehouse! <p>CDC section head:</p> <ul style="list-style-type: none"> - Sees key role of trainees as improving programs through recommendations on how to implement programs, also as a source of information on latest developments in communicable disease programs. 	Similar to UGM
<i>Strengthened evidence-based decision making</i>		

Comparison of UGM and Surabaya PHO and UI and West Kalimantan Programs

	UGM and Surabaya PHO	UI and West Kalimantan
<i>Curriculum</i>		
Content:	<ul style="list-style-type: none"> - Coursework based on a MPH academic program. MPH program includes students in FETP and students not in FETP - Learning competencies defined - FETP and non-FETP students take same courses in first semester and are assessed with the same outcomes - Suggested additional courses and skills for FETP students: <ul style="list-style-type: none"> o health priority setting, including cost-benefit and cost-effectiveness analysis o Advocacy, mobilizing political will, including communication to stakeholders and policy makers about findings and recommendations in reports. o Risk communication, especially during the investigation and before you have definitive findings - Curriculum decided by FETP coordinator with not much input from secretariat <p>University coursework units</p> <p>Semester 1</p> <ul style="list-style-type: none"> - Research Methodology - Epidemiology - Public Health Surveillance - Biostatistics - Priority Health Problems I : Communicable Diseases 	<ul style="list-style-type: none"> - Written learning competencies and curriculum - 2 months class work <p>Coursework based on university Master degree in Epidemiology (ME) academic program</p> <p>Coursework units are :</p> <ul style="list-style-type: none"> - Descriptive epidemiology - Analytic epidemiology - Biostatistics - Surveillance - Informatics - Guidelines for fieldwork - Communicable disease prevention & control - Non-communicable disease prevention & control - Laboratory & bio-safety procedures - Surveys & sampling - Communication - Management - Outbreak investigation - Operational research <p>Project requirements : 6 projects, including thesis</p>

	<ul style="list-style-type: none"> - Outbreak Investigation - Health Policy Management <p>Semester 2</p> <ul style="list-style-type: none"> - Social and Behavior Sciences - Biostatistics II - Priority Health Problems II (Non-communicable Diseases) - Health Communication and Advocacy - Epidemiology II - Environmental Health <p>Semester 3</p> <ul style="list-style-type: none"> - Analysis of Health Problem (District Situational Analysis) * - Evaluation and Implementation of Public Health Surveillance System * - Screening of Health Problem * - Analytic Epidemiology Research * - Evaluation of Public Health Program * - Outbreak Investigation * <p>Semester 4</p> <ul style="list-style-type: none"> - Thesis <p>- Semester 4 almost all in field, with classroom content seminars and presentations</p> <p>Project requirements : 6 projects, including thesis research project</p> <ul style="list-style-type: none"> - Health situation analysis - Outbreak investigation - Program evaluation - Surveillance evaluation <p>Feedback from students</p> <ul style="list-style-type: none"> - Balance between lecture and field work is fine - 6 projects is a lot of work but worth the effort 	<p>research project</p> <ul style="list-style-type: none"> - Health situation analysis - Outbreak investigation - Program evaluation - Surveillance evaluation <p>Feedback from students</p> <ul style="list-style-type: none"> - Lecture in theory should be modify to be more applicable in real situation of field work - 6 projects is a lot of work but worth the effort - Like diversity of curriculum in having lectures, case studies and discussion <p>Students would like more lectures on:</p> <ul style="list-style-type: none"> - Advocacy - Scientific writing - Disaster - GIS - Advance analysis for outbreak investigation
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Mentors:	<ul style="list-style-type: none"> - DHO staff as above 	As above
<i>Coordination</i>	<ul style="list-style-type: none"> - Support from secretariat: Staff from secretariat have visited university several times. Very rarely give lectures. FETP secretariat has translated Gregg to BI. X2 meetings per year between UI and UGM staff to coordinate programs ect. FETP 	<ul style="list-style-type: none"> - Academic staffs work with PHO/DHO entirely through field supervisors, e-mail and telephone - Academic staff visit field placement once a semester

	<p>have a role in this</p> <ul style="list-style-type: none"> - Universities work with PHO/DHO entirely through field supervisors, no direct link - University staff visit field placement once a semester - Very limited links between MoH central program managers and FETP secretariat. - Rare that academic staff participate in field investigations, limited due to lack of time, not resources - Student opportunities to interact cross-institutionally: only 2x per year, joint seminars and report presentations. Interact with at Indonesian epidemiological assoc meeting, but this is not regular, maybe once per year 	<ul style="list-style-type: none"> - Rare that academic staff participate in field investigations, limited due to lack of time, not adequate resources - Very limited links between MoH central program managers and FETP secretariat. - FETP secretariat staffs are not permanent position and not link to surveillance network but more administrative tasks - Staff from secretariat have visited university several times. Very rarely give lectures. FETP secretariat has translated Gregg Epidemiology book from English to BI. - 2 meetings per year between UI and UGM staff to coordinate programs ect. FETP have a role in this -
<i>Material resources</i>		
Learning materials:	<ul style="list-style-type: none"> - Standard formats exist for reports, not for publications. These were developed years ago, and only in Bhasa, would like help to translate and update - Textbook (Gregg) just been translated, will be provided free of cost to students through secretariat 	Lectures, guidelines for field investigations and exercises for trainees are available. But guidelines werenot fully applicable at District level when Students use it in the field and lectures were not specific to real field problems
Information resources:	<ul style="list-style-type: none"> - Library of School of Medicine Gadjah Mada University equipped with books, printed journals (including epi) , CD-ROM, inter-library loan, and electronic library) - FETP library collection 	<ul style="list-style-type: none"> - Website of University or faculty of Public Health - Library of center for Epi-research and surveillance - Electronic journal access including to Epi- journals
Access to computer resources:	<ul style="list-style-type: none"> - Computer laboratory (total of 50 computers) equipped with LAN connection and wireless internet connection at UGM - Not at field level 	Yes, at central level (University and province) , but not in field

Lab support:	<ul style="list-style-type: none"> - Local laboratories provide diagnostic services when students are undertaking field investigations. However, for students research projects, have to fund their own lab investigations 	No equipment for sample collection or transport , but have access to local laboratory and biosafety equipment
Work space:	<ul style="list-style-type: none"> - Students have a workspace in same room as supervisor at Surabaya PHO - Lecture room with in-focus, computer, and internet connection at UGM 	Students have a workspace in same room as supervisor at West Kalimantan PHO and Pontianak DHO Lecture room with in-focus, computer, and internet connection at UI
Communication:	<ul style="list-style-type: none"> - No use as yet of videoconferencing/skype due to lack of internet capability in placement sites, but this is changing. (this capacity is available at UGM). WHO students get a modem 	At university, have all communication material required by trainees, 100% have email access
Transport:	<ul style="list-style-type: none"> - Financial support for field investigations usually comes from districts, and generally no problems getting this 	<ul style="list-style-type: none"> - Financial support for field investigations usually comes from PHO and DHO, and generally no problems getting this except some remote areas
Website:	<ul style="list-style-type: none"> - Under website of faculty of university 	Under website of faculty of university
<i>Financial resources</i>		
Budget:	<ul style="list-style-type: none"> - WHO stipend always late for students, other donors do not have this problem 	Budget allows for international travel, student stipend But payment always late for students
Funding sources:	<ul style="list-style-type: none"> - See text of report - Stipend and fees provided centrally - District field costs provided by placement 	<ul style="list-style-type: none"> - from MoH (80%, specific line item), University (specific line item), JICA, local government - Stipend and fees provided centrally - District field costs provided by placement
<i>Trainee recruitment</i>	<p>Student intake:</p> <ul style="list-style-type: none"> o 2008 - 2009 23 o 2009 - 2010 33 o 2010 - 2011 34 <ul style="list-style-type: none"> - Pre-requisites: introduced by university, TOEFL and general aptitude test. Equivalent to acceptance requirements for other 	<p>About 50% of applicants accepted as trainees each year 2008-2010.</p> <p>Applicants from 18 provinces, trainees from 13 provinces in 2010</p> <p>Have a plan for achieving geographic coverage</p> <p>Student intake:</p> <ul style="list-style-type: none"> o 2008 - 2009 10

	<p>masters-level courses at university, no account taken of experience. Most who pass are from Java, disadvantages rural applicants, those from the east of the country. FETP staff no longer makes the decision, but have lobbied university to change this, include special consideration for applicants from east of country.</p> <ul style="list-style-type: none"> - 2012 have 49 enrolled students ? how many applicants - 2010 5 vets, all placed in MoH placements, not sure where they came from - Privately funded students mostly from Java - No difference in supervision, type of placement or requirements between students from different funding sources. 	<ul style="list-style-type: none"> o 2009 - 2010 16 o 2010 - 2011 14 <p>No difference in supervision, type of placement or requirements between students from different funding sources.</p>
Monitoring and evaluation plan		
Certification and career path/opportunities for graduates	<ul style="list-style-type: none"> - Masters degree is awarded on completion, important for career advancement - Degree is recognised by Indonesian epidemiological association - MoH has a career placement plan for graduates, must return to original work site, and complete 5 further years of service. 	<ul style="list-style-type: none"> - As for UGM
Process		
Class work	<ul style="list-style-type: none"> - Placement 2 years, 4 semesters, 2 months class room and 4 months field activities in each semester. Semester 1-2 MPH based teaching, 3-4 project write up and thesis preparation. - Students have opportunity to teach and present; teach district health staff and present project when it is completed - Publications are not a high priority even though this is a university based program. One factor in the lack of publications is that their English writing skills is poor. - Training at university focuses on quantitative methods; training could include qualitative analysis methods. 	As for UGM

<i>Field work</i>	<ul style="list-style-type: none"> - Placements : not same position as they were prior to training, sometimes same place - PHO students, 4 months since arriving in placement: Started their situation analysis. Takes about 2 months for review and approval by University, PHO and DHO - Investigated outbreaks; measles, leptospirosis, suspect hepatitis - Have support for biostats, epidemiology, IT - Typically most students submit their project reports in S2, but some delay - PHO Surabaya: 1 month orientation across all programs in CDC section, then sent to district. Following that, only return for 1 week per semester to present reports and seminars 	<p>Trainee completion of core learning activities:</p> <ul style="list-style-type: none"> - 100% completed CLA 1-9, 12-14, 17-19 - <20% CLA 10 (report for public health bulletin) - ~ 40% CLA 11 & 15 (Submit abstract /present at scientific conference) - CLA 16 (respond to public, media or health professional enquires is not a CLA)
<i>Supervision</i>	<ul style="list-style-type: none"> - Every field project is proposed, reviewed and assessed by field and academic supervisor - Projects are identified by placement; academic supervisor just looks at them to see they do not duplicate other students work. 	<ul style="list-style-type: none"> - Field Supervisors are given a formal orientation process, and their performance is assessed each semester - Trainees are consulted as part of this process
<i>Evaluation of trainees</i>	<p>Assessment process:</p> <ul style="list-style-type: none"> - Coursework examined as per MPH requirements - Field work reports are approved by field and FETP supervisor, they both have ongoing input into report drafts. - Progress report is written on each student by field supervisor each semester, this is sent to the secretariat directly, not sent to academic supervisors, - thesis is examined through oral, external examiners are usually academics with expertise in topic area, not FETP graduates 	<ul style="list-style-type: none"> - Trainee progress evaluated monthly using standard format, and trainee informed of result
<i>Evaluation of staff</i>	<ul style="list-style-type: none"> - No formal evaluation of field or FETP supervisors 	
<i>Outputs</i>		
<i>Graduates and</i>	<ul style="list-style-type: none"> - Numbers graduating by year 	<ul style="list-style-type: none"> - Numbers graduating by year cohort commenced

Mentors	<ul style="list-style-type: none"> ○ 2008: 19 ○ 2009: 25 ○ 2010: 20 - Students who fail usually do so at time of thesis examination - Average time to graduation is 34 months (2010-2011), but median is around 25 months, delays partly due to time taken to write up projects. 	<ul style="list-style-type: none"> ○ 2008 cohort: 10 (100% graduated) ○ 2009 cohort: 16 (93.7% graduated) - 240 graduates since program began - In last 5 cohorts: <ul style="list-style-type: none"> ○ 70 graduates ○ 100% working in Indonesia ○ 84% in government public service (national and sub-national health departments) ○ 24 central, 16 provincial, 12 district, 8 airport health office ○ 40% provinces have a graduate - 1
Oral and poster presentations and publications	<ul style="list-style-type: none"> - Abstracts accepted for national/international conferences, quality similar across all placements, student types (source of funding) - No peer-reviewed publications - Quality of abstracts similar across all students - Program produced national publications, no international publications - Last epi association meeting, 10 student presentation awards, 9 won by UGM students - Barriers to submission of abstracts include language 	<p>Peer-reviewed articles accepted for publication</p> <ul style="list-style-type: none"> - 1 (2009), 13 (2010), 2 (2011) <p>Abstracts</p> <ul style="list-style-type: none"> - Submitted : 2 (2009), 15 (2010), 2 (2011) - Accepted : 1 (2009), 13 (2010), 2 (2011) - Acceptance rate: 50% (2009), 86% (2010), 100% (2011) - Accepted for oral : 1 (2009), 11 (2010), 2 (2011) - Accepted for poster: 0 (2009), 2 (2010), 0 (2011) - Percent of students with at least 1 abstract submitted, 2009-2011 : 100%
Service outputs	<ul style="list-style-type: none"> - - - - PHO considers student reports useful for increasing awareness at provincial and district level. E.g. TB observer program using community members to improve adherence was piloted and evaluated by student. Findings showed program was effective 	<p>All 40 graduates in the period 2008-2011 have conducted and reported on the following:</p> <ul style="list-style-type: none"> - Investigation of an acute health event - Surveillance project evaluation - Surveillance project establishment - Surveillance report

	<p>so no implemented across province on those areas with high default rates.</p> <ul style="list-style-type: none"> - Recent graduate (2011 grad) had trouble identifying how recommendations were utilized, had impact on programs, or how student could participate in this process. - Quality of student reports could not be assessed as they were in Bahasa. 	<ul style="list-style-type: none"> - Short term policy recommendation - Long term policy recommendation - Quality of student reports could not be assessed as they were in Bahasa and the inadequate time
Outcomes		
<i>Strengthened workforce, systems and programs</i>	<p>Student expectations upon entering FETP</p> <ul style="list-style-type: none"> - Gain knowledge and experience especially on how to investigate disease outbreaks, evaluate surveillance systems and conduct epidemiological research - Do something different from their current job - Career advancement <p>Did FETP meet your expectations?</p> <ul style="list-style-type: none"> - Yes, allow to conduct research and investigations - Yes, achieved competency and recognized as expert <p>Comments by Head of CDC, Surabaya PHO</p> <ul style="list-style-type: none"> - effective advocate, sees great value in program - See as key support in health program advocacy at district and provincial level - Trainees add value :Technical input including epi, report writing - Would like more graduates (one in every district) :Surabaya is CD warehouse! <p>CDC section head:</p> <ul style="list-style-type: none"> - Sees key role of trainees as improving programs through recommendations on how to implement programs, also as a source of information on latest developments in communicable disease programs. 	Similar to UGM
<i>Strengthened evidence-based decision making</i>		

-		
<i>Strengthened partnerships and networks locally and internationally</i>	<ul style="list-style-type: none"> - International students from East Timor (2 currently, 3 in total) 	-
<i>Enhanced credibility of PH institutions</i>	<p>PHO/DHO staff would like students /graduates to have stronger skills in the following</p> <ul style="list-style-type: none"> - Priority setting , economic and cost-effectiveness analysis - Health advocacy : capacity to advocate for the implementation of recommendations with managers and politicians - Qualitative research 	PHO staff want behavioral science capacity and Qualitative research skill graduates
Impact		
<i>Protected or improved health of the community</i>	-	-

-		
<i>Strengthened partnerships and networks locally and internationally</i>	<ul style="list-style-type: none"> - International students from East Timor (2 currently, 3 in total) 	-
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Impact		
<i>Protected or improved health of the community</i>	-	-

Annex 3

Updated FETP Workplan, Republic of Indonesia, July 2011

	Activity	Progress up to July 2011	Suggested additional activities	Responsibility
WHO				
	Funding commitment	Transferred to MoH, will fund 30 students in 2012	Continue co-share, advocacy to PHO/DHO, local government	PP&PL; WHO
Advocacy				
	Workshop for national DG's	Yes, in August 2008	Implement annually, invite also local government officials	PP&PL; Secretariat
	Workshop for provinces and districts	Yes, in August 2008	Implement annually, invite also local government officials	PP&PL; Secretariat
	Brochure	Yes, in August 2008	Continue dissemination	Secretariat
	Website	Yes (www.fetpindonesia.org)	Underutilised as a supervisor and student resource. Increase functionality for presenting student program reports	Secretariat
Recruitment and selection of students				
	Obtain selection process approval from PPSPDM	Yes	Identify process for selecting trainees from areas of need. This must include additional resources for bridging courses (e.g. 3-month pre-FETP course) and more intensive field supervision (utilise example of TML students at UGM as a model)	Secretariat
	Develop and distribute request for applications to districts, provinces, functional units	Occuring	Continue	Secretariat
	Applications submitted to Secretariat	Occuring	Continue	Districts, Provinces and functional units
	Review applications and refer acceptable candidates to take university entrance exam	Occuring	Continue	Secretariat
	Candidates take university entrance exam	Occuring	Continue	Applicants & universities
	University submits ranked list of candidates who passed exams to Secretariat	Occuring	Continue	University
	Final list of students who are accepted to receive scholarship is forwarded to PPSPDM	Occuring	Continue	Secretariat
	All candidates and their co-sponsoring organization notified	Occuring	Continue	PPSPDM & Secretariat

Annex 3

Set up Secretariat				
	Secretariat director selected	Dr Nyoman in position since October 2008	Continue	PP&PL; PPSDM
	Admin Officer	Yes	Continue	Secretariat director
	Admin Assistant	No	Consider recruiting, especially for workload related to additional workshops/conferences	Secretariat director
	Training & Field Coordination Officer	Yes	Increase these activities, preferably with staff under surveillance section (details in 2011 evaluation report)	Secretariat director
	Writer/Editor	No	Key position, though recruitment has been difficult. Consider alternatives such as regular workshops facilitated by national/international presenters	Secretariat director
	Office and furniture	yes	Adequate	PP&PL
	Equipment	yes	Adequate	PP&PL
	Communications	yes	Adequate	PP&PL
	Supplies	yes	Adequate	PP&PL
Advisory Committee				
	Membership	Yes	Membership to reflect FETP program implementers and priority stakeholders for advocacy (i.e. those utilising outputs and those targetted as potential funding sources)	Secretariat
	TOR	Yes	Reinvigorate, consider realigning ToR to increase advocacy role to progress recommendations and workplan	Secretariat
	First meeting	Meetings occur ad hoc	Set specific objectives related to revised ToR for first meeting, and hold first meeting on a date/location with opportunities to showcase student activities (e.g. TEPHINET Bali)	Secretariat
Activities with UI and UGM				
	Staff development and refresher	Informal staff development as part of general university plan, and outside of FETP	Develop formal and ongoing plan for staff development using FETP secretariate human resources. Should be monitored as part of ongoing M&E, including the external evaluation of staff.	PP&PL; WHO
	Curriculum review and socialization workshop within UI	Completed series of meetings in 2008 which reached an agreed level of alignment	Implement tools and process for regular collection and review of CQI data related to student outputs, in particular student reports. This will require the following steps : (a) Structure of report that covers all areas e.g. may need to add a section on 'Public health impact' in order to collect impact data (b) process of reporting that includes all coordination sites, field placements and Secretariate in a cycle of review and feedback, (c) positive and negative incentives for both staff and students e.g. awards for best student/ best supervisor; disaggregated regular reports on indicators by coordinating site and placement	Secretariat; UI FETP director
	Curriculum review and socialization workshop within UGM	Completed series of meetings in 2008 which reached an agreed level of alignment		Secretariat; UGM FETP director

Annex 3

Initiate programs in new universities		Applications received from 3 universities, all assessed as not yet ready to be program site. No specific guidelines for applications	Ensure CQI and M&E process for current universities are in place before considering new coordination sites	
	Curriculum workshop		Structured format for universities applying to be coordinating sites. Should assess that appropriate process and inputs are in place, as well as prioritising universities that are able to meet the needs for underserved areas.	Secretariat, UGM, UI
	Review proposals from universities		Consider prioritising universities (a) located in underserved areas (b) with specific programs that will add value to the FETP such as strong laboratory focus/ links, strong links to veterinary/private veterinary sector	Secretariat
	Consultation from established universities			Secretariat; UI, UGM
	Orientation workshop?			Secretariat; UI, UGM
	Recruitment & Selection of students			Secretariat; PP&PL, PPSPM; universities
	First class starts			Universities
Field Placement Development				
	Terms of Reference for Field Supervisors	Yes		Secretariat, UGM, UI
	Field placement guidelines	Yes		Secretariat, UGM, UI
	Orientation course/workshop	Yes, held June 2011	Ongoing and regular (at least yearly) workshop for all supervisors and mentors. Training should focus on technical skills	Secretariat, UGM, UI
Program publications				
	Newsletter (may not be necessary)	yes (Segi Tiga)	Utilise this as a resource for disseminating student outputs	Secretariat
	Bulletin	yes	Utilise this as a resource for disseminating student outputs	Secretariat
	Website	yes (www.fetpindonesia.org)		Secretariat
	Annual report	yes		Secretariat
		Translation of Gregg textbook		
Networking				
	Student and alumni directory	no		Secretariat and universities
	Sponsor scientific meetings/seminars	yes		Secretariat
	TEPHINET participation	yes, through secretariat, not directly		Secretariat
	PAEI & JEN	yes, >1000 trained since 2008		Secretariat
	Exchange of experts	FETP staff went to other programs	encourage for specific objectives and outcomes	Secretariat

Annex 3

Supplemental training activities				
	Continuing education for alumni	no	Consider elective courses for trainees/graduates on writing/publication, cost effectiveness analysis/advocacy, GIS, disaster epidemiology	Secretariat & universities
	Short courses for current students	no		Secretariat
	PAEL, NETP, Managers courses?	no		PPSDM; Secretariat
Financial				
	Develop and revise budget	Diversification of funding occurred, MoH committed funding to 2012 cohort	Continue diversification, target local government (health and other sectors) for advocacy.	Secretariat
	Commit funds			Secretariat
	Monitor spending			Secretariat
Monitoring and Evaluation				
	Reporting forms and procedures	Informal evaluation by secretariat technical staff of both field placements and universities	M&E plan which includes regular external review of student outputs. This will require implementation of centralised ongoing process for collection and review of CQI data, with a focus on data for assessing quality, outcomes and impact	Secretariat; WHO
	External evaluation	CQI 2011 July	Activities for future reviews include : Assessing of student reports as per recommendations ; inclusion of a public health impact section in all student reports	Secretariat; WHO
	Reporting to WHO	Every 6 months	Continue, integrate process across secretariat, coordination sites and field supervisors, and formalise a means for active feedback at each level and within each level e.g. FETP bi-annual progress report from Secretariat to all sites summarising student progress, outputs and outcomes	Secretariat

Pictures of people involved with CQI Evaluation of Indonesia FETPs, July 2011



Staff and FETP students from Surabaya Provincial Health Office, Indonesia



Staff and FETP students at BPKL, Surabaya, Indonesia



Staff and FETP students at UGM, Yogyakarta, Indonesia

Outcomes Meeting Report
CQI Evaluation of Indonesia Field Epidemiology Training Programs
July 2011

Date: 16-17 July 2011

Location: Jakarta, Indonesia

Chair: Dr Nyoman Kandun

Background:

An evaluation was conducted of the Field Epidemiology Training Program (FETP) in Indonesia on 13-20 July 2011. Two field teams used updated versions of the TEPHINET's Continuous Quality Improvement (CQI) questionnaires to assess the Program's:

- Achievements, lessons learnt, best practice, gaps, issues and recommendations to improve FETP in Indonesia (including curricula, training model suitable for the Indonesian context, governance and sustainability).
- Mechanisms to implement recommendations arising from the CQI evaluation.
- Deliver recommendations and inputs in the development of FETP road map and FETP Indonesia strategic plan (short, medium and long term).

As part of the evaluation, a meeting was held to discuss the two teams' findings from the field visits to the universities and field placements. The meeting comprised various stakeholders including the FETP Secretariat, the university academic advisors, provincial and district health officers who participated in the evaluation in the field, WHO and the international consultants conducting the evaluation.

Meeting Discussion:

After general welcome from the FETP Secretariat, the first item during the meeting was a field report from both Team 1 and Team 2. Team 1 comprised Dr Kamalini and Dr Alden. They visited University of Gadjah Mada (UGM) in Jogjakarta, followed by the East Java Provincial Health Office (PHO) and the BTKL Surabaya. Team 2 comprised Dr Somsak and Dr Khanchit. They visited University of Indonesia (UI) and East Kalimantan province (PHO and one district health office, DHO).

A presentation was made by both teams. Each team's presentation described the process of the evaluation in the field, the comments from the key informants, the conclusions made by the teams and their recommendations. The presentations can be seen as an Annex to the evaluation report.

Following the presentations, there was general discussion and feedback about their findings. The key points can be seen below:

- Students in the field requested an orientation manual that provides them with the basic information about placements. This can be modeled on the Field Supervisors' manual available currently. East Java PHO explained that for students placed in the communicable diseases unit, new students would spend 1 month on rotation between programs so they build knowledge about various activities. After the month orientation, they are then assigned specific FETP-related tasks to commence field project requirements. One suggestion was to add a laboratory visit as part of the orientation so that students visit the relevant laboratories for that field placement and learn about the capacity, techniques and processes in those labs.
- Graduation of students can be delayed beyond the two years. Reasons for this were not explored fully but raised concern about the volume of projects (five at UI and 6 at UGM) for how to improve the timelines to completion. This was specifically a concern in terms of the visibility of the Program since it may affect future intakes into the Program. UGM provided feedback about the average time to completion for recent cohorts as can be seen in the Table below.

Year	Students	Pass	Lost to follow up	Deaths	Average Time	Median Time
2004	20	17	2	1	34	28
2005	18	18	0	0	-	25
2006	26	24	2	0	-	25.5
2007	26	24	2	0	-	25.5
2008	24	14 (10 in process)	-	0	-	-

- Ratio of students to supervisors varied from 3-5 students per supervisor. Even though this was perceived to be high, Team 1's observation in the field was that supervisors nevertheless allocated sufficient time to attend to student needs. Many students expressed the need for more supervision time (especially from academic supervisors) towards the end of projects. However, it was noted that students routinely request more supervision time and that this is not feasible.
- Participation of doctors in the Program is decreasing and may reflect that epidemiology is not perceived as a specialty by the medical board. The universities have been lobbying the Medical Council for change but requested the support of the MOH and especially the Secretariat in the process. Recognition of epidemiologists as a specialization will improve medical graduate enrolment.
- The FETP Secretariat has set the standards for epidemiologist function for recognition by the MOH. This is an important step in changing mindsets and perceptions of epidemiologists' function and especially for Medical Council recognition.

- Addition of universities to offer FETP training was discussed and consultants suggested that universities added to the Program may be selected for their specialties in veterinary health or other expanding fields in the conduct of epidemiology.
- Laboratory component of FETP was perceived as important to all stakeholders for FETP training. Students felt the need for greater access to laboratories. East Java PHO explained that during outbreaks, students accessed laboratories used by the PHO for laboratory support but that they had to seek their own funds and may choose any laboratory for the purpose of specific projects such as the thesis.
- Qualitative research methods were seen as valuable additions to FETP from the field. This raised the importance of consistently adapting and updating curricula in line with the needs of the field. In addition to qualitative research and focus on socio-behavior aspects of public health programs, there was discussion about adding curricula on disaster management. One suggestion was to have a core number of subjects but to supplement these with a number of electives so that students could select subjects of interest or priority (e.g. GIS, nosocomial infections, non-communicable diseases).
- For sustainability of the Program, the discussion centered on advocating for provincial and district funding for staff to attend FETP. This will supplement the 30 placements funded each year by the MOH (through recent collaboration between PP&PL and PPSDM).
- The national epidemiology forums were discussed including the need to invite representatives from various MOH programs. This will be an opportunity to hear FETP success and to hear student outcomes for incorporation into policy (where relevant).
- Secretariat functions were discussed including payments to students (improving timeliness), network opportunities for trainees, standardize training process between various placements, need for better coordination between field placements and the secretariat through regular meetings, and opportunity for support on scientific writing. The secretariat could also participate in the preparation of the weekly/monthly surveillance bulletin.
- Field supervisors requested regular meetings and refresher courses as an opportunity to raise and troubleshoot Program concerns, update data methods and to enhance skills such as advocacy and mentoring.
- The visibility of the Indonesian FETP was discussed. Internationally, the Program is perceived as too academic since it is university-based. However, based on the consultants' observations, this was far from the reality of the Program. A recommendation was to hold a symposium session during the TEPHINET bi-regional conference to inform participants (both students and other stakeholders) about the

Indonesian model. It may ultimately be an approach that is attractive and that can be exported to other countries.

- The final reports arising from each student were discussed. A participant noted that the thesis volume is too bulky and that there needs to be consideration for shorter theses and emphasis on maximization of content rather than volume. Another aspect about the reports was the importance of digitizing theses so that the content can be shared with other professionals more widely. WHO Indonesia is currently supporting research institutions in this endeavor.

After the above discussion points, Dr Nyoman Kandun (chair of the meeting) requested the consultants to present the draft format for the report for input. Dr Kamalini presented the outline with headings. All participants agreed to the format.

The meeting closed at 4pm.