The following is an example of a program evaluation, the Executive Summary of the Evaluation of the Field Epidemiology Training Program by Battelle Centers for Public Health Research and Evaluation.

In this evaluation summary, FETP is used to indicate both FETPs and PHSWOWs.

Overview of Battelle Evaluation of CDC=s Field Epidemiology Training Programs: The First Two Decades

BACKGROUND: CDC=s Field Epidemiology Training Program (FETP) was initiated in Thailand in 1980. Between that time and the writing of this report, in 1998, 13 additional countries have implemented FETPs, and three countries have initiated Public Health Schools without Walls (PHSWOWs) programs. (The latter are bridge programs between the traditional academic epidemiology training programs and the original FETP "learn by doing" approach.) The design of the FETP is taken from CDC=s Epidemic Intelligence Program (EIS), the first training-and-service program for epidemiologists, established at CDC in 1951 and in continuous operation since that time. CDC=s specific goals for its FETPs are a) to train public health professionals in applied epidemiology, b) to promote the sustainability of training programs, and c) to initiate and maintain an international public health network that enhances the participating country=s epidemiologic capacity. FETPs include several weeks of didactic training to provide a foundation in epidemiologic methods, communications, and biostatistics, followed by supervised field work. The program requires that training take place in the host country, that the total duration of training be at least 2 years, and that at least 18 months of the training be in a field setting in which trainees, with supervision, address substantive public health problems.

PURPOSE OF EVALUATION: To conduct the first assessment of the effectiveness of CDC in achieving the objective of building capacity in applied epidemiology in participating countries through FETPs and PHSWOWs.

OBJECTIVES OF EVALUATION:
X To evaluate the usefulness of the FETP
X To determine the methods used for the recruitment of FETP trainees
X To assess the quality of training
X To confirm the sustainability of FETPs
X To describe the role of each FETP in creating national and international linkages among field epidemiologists worldwide
X To characterize the in-country deterrents and barriers to achieving the stated objectives of the program(s).
Annex 1: Program Evaluation Summaries, continued

**METHODOLOGY OF THE EVALUATION:**

- Defining the program logic model (the hypothesized relationships among inputs to the program from CDC and host countries, the operation of the training program itself, and the outcomes of the program)
- Deriving research questions and instrumentation (including questions to address each of the objectives listed above)
- Collecting data (through correspondence and site visits to FETPs in four countries -- Mexico, the Philippines, Spain, and Thailand -- and correspondence and site visits to one PHSWOW, in Uganda)
- Processing and analyzing data (interview notes were analyzed for content with Ethnograph, Microsoft Access, and SAS software, and results were reviewed and confirmed by FETP directors)

(Limitations of the study include the fact that most FETPs were not included in the analysis, and those that were are not necessarily representative of the entire group of programs. Also, more data were collected from some of the five countries than from others because of variation in the response rates to the various data-collection instruments used.)

**MAJOR FINDINGS:**

- **Program recruitment and development:** In each of the four currently autonomous FETPs visited, from the outset, there were key officials in positions of authority who supported the concept and implementation of FETPs in their countries. This support was present at the outset and has continued throughout the operation of the FETPs in these countries.

- **Quality of training:** Trainees (past and present) reported that their FETP experience had provided them with opportunities to characterize public health problems, carry out studies, and convey their findings to appropriate audiences. Training in management skills -- including planning, evaluation, and cost effectiveness -- were less consistently reported by FETP alumni/ae. Program graduates and program faculty did not always recall the same items in the curriculum. Graduates were more likely than faculty to remember having been exposed to qualitative methods, health services delivery systems, and research methods. Respondents from all of the countries felt that a major strength of the curriculum was its flexibility and emphasis on learning by doing. They felt the need for greater emphasis on health economics and statistics and on program planning and evaluation. Persons who collaborate with FETP trainees and graduates report that participants in the FETPs have improved skills in identifying and investigating health problems, in effectively documenting and disseminating information about emerging health problems, and in coordinating intervention strategies and public health service programs with local health officials.
Annex 1: Program Evaluation Summaries, continued

FETP graduates are viewed more and more favorably in the responding countries as being trainers of and supporters of local health officials in the latter group’s efforts to enhance scientific and investigative skills. FETPs are also more often viewed as effective stepping stones in enhancing public health officials’ marketability within and beyond the public health systems of their home countries.

Public health usefulness: FETP trainees become an important human resource in local and national efforts to investigate and resolve outbreaks of infectious disease or other health problems. Officials outside the FETP framework reported that FETP graduates are of particular value because they have a much more realistic view of and approach to dealing with health problems than do academically trained health professionals. At the same time, they say that the FETP model is raising the public health consciousness of academicians and clinicians by providing a more scientific basis for public health action. FETP graduates are proficient in the use of biostatistics and other analytic techniques that allow persons to quantify and understand the meaning of results that in earlier years would have been, at best, intuitive findings and, at worst, bad guesses. The use of epidemiologic methods, once concentrated only in central offices of the national ministries of health, is now being diffused to staff in regional and local settings, as well as to physicians and other health-care providers at the community level. Respondents stress that the impact of the FETPs is still focused primarily on infectious health problems and that such areas of public health concern as chronic disease and occupational and environmental health are only now beginning to receive attention.

Professional linkages: FETPs are believed to have improved linkages among public health professionals by having the programs support and manage the conduct of scientific conferences, by fostering the development of presentation skills, and by encouraging publication and presentation on the part of trainees. However, these linkages tend to be strongest within-country and not to cross international boundaries. The strongest international link continues to be with CDC Atlanta, and respondents felt that there is a pressing need to create and support an international network of FETP graduates, independent of CDC.
Annex 1: Program Evaluation Summaries, continued

X **Sustainability:** Sustainability refers to the capacity of an FETP to continue to function after an initial period of outside technical assistance and support. Autonomy (the program’s operation without a CDC or other technical consultant) and institutionalization (the presence of a national director, and inclusion of the program in an established national institution, a budget and the authority to administer it, and self-sustaining cycles of training and graduation) are the two measures used in Battelle’s evaluation to document sustainability. To date, nine of the 14 FETP countries have discontinued their dependent relationship with CDC. Of these nine, seven meet the definition for having an institutionalized program. Barriers to sustainability include the uncertainty of political support within the national health system, an underdeveloped infrastructure for health, and limitations in funding for program components.

**RECOMMENDATIONS:**

The recommendations outlined below are focused on program areas in which CDC is likely to be able to exert some influence.

Improving program recruitment and development:

X When establishing new programs, identify -- at the outset -- a champion for the program in the ministry of health or other powerful national agency, in which the FETP will eventually be institutionalized.

X Work to develop guidance for new FETPs that is based on lessons learned from other programs. Provide clear guidelines for fledgling programs of what has and has not worked for others.

X Gain consensus with all participating parties on the structure and function of the proposed FETP.

X Encourage FETPs to broaden the process for selecting trainees to include other important areas of public health practice in additional to infectious disease (e.g., chronic disease and occupational health).

Improving the quality of training:

X Encourage host countries to develop a formal curriculum that covers surveillance systems for health problems beyond the scope of infectious disease (e.g., chronic disease and injuries). Continue to seek the cutting edge for methodologies to deal most effectively with identifying and dealing with all categories of health problems.

X Broaden the field experience of FETP trainees to include the application of epidemiologic methods to such areas as program planning and evaluation, public health administration, and health economics.
Include material on conducting public health practice in real-world settings, including the realities of public health delivery in the presence of indifferent or hostile political and social settings.

Make better use of targeted, special-purpose workshops to provide trainees with expertise in various areas (e.g., public health advocacy with officials above the trainee in the public health system).

Explore the feasibility of distance-based learning programs to continue to provide FETP graduates with in-service enhancement of their knowledge and skills while they remain on the job.

Annex 1: Program Evaluation Summaries, continued

Improving the quality of public health usefulness:
X Foster the application of FETP-delivered knowledge and skills most effectively. Assist trainees in learning to be public health leaders and decision makers so that they can adapt to and operate in changing political and social situations.
X Teach the FETP participants to think and act proactively rather than reactively in terms of exerting influence over decision making and policy setting at all levels of the public health system.
X Encourage the broadening of FETPs to include practical training in management and administration, program design and development, and planning and evaluation.
X Focus heavily on the critical importance of interpersonal skills and a team-building approach to operating programs and solving problems.

Improving professional linkages:
X Expand efforts to place FETP in an international network of public health organizations.
X Provide language and editorial assistance to FETP trainees and graduates for publications/presentations aimed at English-language international journals/conferences.

Improving sustainability:
X Work with host countries to raise the profile of FETP achievements. Advocate effectively with in-country officials about the benefits of FETPs.
X Develop a broad and precise consensus among health professionals at the district, regional, and local levels about what FETPs can do for them.
X Work with in-country professionals to create a plan for institutionalizing the FETP for that country, preferably at or before the time the FETP is initiated, but at least as soon after initiation as possible.

Clarifying CDC's future role in creation and operation of FETPs:
X Provide prestige and political clout to in-country advocates for an FETP.
X Provide specialized technical assistance to the program and its managers as needed. Plan to provide this assistance until the program can be autonomous, not just for some pre-determined calendar period.
X Support the development of and linkages for an international network of FETP health professionals.

Full text of Batelle report available from CDC on request.