

## From the Field

INTERNATIONAL DEVELOPMENT CENTER  
FOR ENVIRONMENTAL AND PUBLIC HEALTH ENGINEERING  
SANITATION

# Training Trainers in Developing Countries... Health Education and Mass Media Aspects of Low Cost Sanitation

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### Abstract

*Human excreta disposal remains a significant public health problem for developing countries. The authors delineate the health education and mass media approaches necessary to introduce and promote the new technological features of low-cost sanitation and discuss some of the problems associated with one particular training course on ventilated improved pit latrines.*

In April 1982 a seminar on low-cost sanitation sponsored by the United States Agency for International Development (USAID) was conducted in Dar es Salaam, Tanzania, East Africa by Environmental Training and Management in Africa (ETMA)\* and the Department of Sewerage and Drainage within the Tanzanian Ministry of Land, Housing and Urban Development (ARDHI). With the cooperation of the Tanzanian Ministry of Health and the Dar es Salaam City Council, the two-week training course was held at the ARDHI Institute, Department of Public Health Engineering, Dar es Salaam.

### Focus

The seminar was considered a necessary step in helping alleviate the deteriorating sanitary conditions, especially in periurban centers of Tanzania, where high concentrations of peo-

ple live. The aim of the seminar was to introduce new technology in human excreta disposal, the ventilated improved pit (VIP) latrine, which is potentially inexpensive and yet efficient in eliminating health hazards. The VIP latrine is a pit latrine equipped with a vertical pipe, screened at its top, extending from the top of the pit to a point well above the superstructure (building) roof, providing ventilation which helps control odors, flies and mosquitoes. The Dar es Salaam Sewerage and Sanitation Project, in which 3,600 VIP latrines will be introduced, was the major focus.

### Objectives

The training course had seven objectives (4):

- 1) to provide training and techniques of promoting VIP latrines
- 2) to review experience of Tanzanian pilot projects in VIP promotion and implementation
- 3) to monitor construction of one VIP latrine during the course
- 4) to analyze experience of other Third World countries (especially Zimbabwe) with VIP latrines
- 5) to review maintenance procedures
- 6) to study promotion and implementation campaigns with special emphasis on the utilization of media
- 7) to establish an action group to assist in coordination of a Dar es Salaam campaign for installing latrines

### Participants

In attendance were 26 students from the Public Health Engineering Department at ARDHI Institute, ten public health officers involved with the Tanzanian School Health Program, six health officers from the Dar es Salaam City Council, an engineer and a health officer from Morogoro Town Council.

### Format

The seminar consisted of three parts: lectures, discussions and field trips. Guest speakers and instructors gave morning lectures which were usually followed by questions and/or comments.

Discussion groups were formed in the afternoon in which various sanitation issues were addressed, solutions were formulated, and designs and deliberations were presented to the group as a whole.

### Health Education Component

The health education components included preparing and managing promotional campaigns as follows: a) working with local community, party, and other neighborhood groups; b) using film, radio, neighborhood film shows, and other mass media approaches; and c) working with school and adult education groups.

As health educators, our major responsibility focused on the training of trainers, educators and extension workers to develop promotional techniques which

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"take into account the social and cultural variables of a community for which the project is intended (3)." These eventual promoters of the VIP latrines needed assistance in organized educational methods which would: a) create public awareness of the improved facility (VIP latrine); b) identify a felt need for the improved system; c) dispel misconceptions based on taboos and beliefs; d) give specific instructions for installation, use and maintenance; and e) explore financial aspects and restraints (4).

### Overview of the PRECEDE Model

Because of the varied educational and professional backgrounds of the seminar participants, it was necessary to establish a common base of understanding of health behavior and health education planning before getting into specific health education strategies. For this purpose, a slide presentation, providing an overview of the PRECEDE Model, taken from *Health Education Planning: A Diagnostic Approach* by Green et al. (6), was used as an introduction. This model was considered appropriate because it addresses important steps that precede actual intervention in community and/or school health education.

### Training Manual

A trainers manual was provided to each participant which included: a) a replication of the slide presentation mentioned above covering the PRECEDE Model; b) a review of mass media approaches taken from *The Role of Mass Media in Public Health* by Griffiths and Knutson (7); c) comments on the Smokey the Bear model and soap opera model as promotion approaches; d) outlines for working with local community, party, or neighborhood groups; e) the article "Theater for Development: An Appropriate Tool for Extension Communication and Non-Formal Education in Zambia" by Dall (5), an example of folk theater; f) adapted and revised training units and guidelines taken from *Working with Villagers* (2).

A section of the manual provides step-by-step activities for training field workers to carry out community and/or low-cost sanitation workshops covering the following areas: a) setting the climate for the workshop; b) identifying and verifying village problems; c) dealing with negative attitudes about latrine use; d) creating and reviewing effective lessons; e) increasing learner involve-

ment and participation; f) stimulating participation through questions and discussions; g) reviewing teaching methods and tools; h) teaching techniques; and i) assessing learning.

Also included in the manual is a skill exercise section which gives suggestions on how to make and use a chalkboard, flannel graph and flipchart; recipes for making low-cost media materials; and ideas on color, design, line drawing and lettering.

A segment of lecture time was spent giving an overview of the manual, thereby encouraging seminar participants to view the manual as a valuable resource and to use whatever sections would be appropriate for their potential training situations.

### Promotional Campaign

#### Mtu Ni Afya ("Man is Health")

A review was presented of Mtu Ni Afya, a national "Man is Health" campaign which focused on community health/preventive medicine which was successfully implemented in Tanzania during 1973. The campaign grew out of two branches of communication development: radios-farm forums (radio study groups) and mass campaigns. It included the following aims: a) to increase people's awareness of how they can make their lives healthier and to encourage both groups and individuals to take appropriate action, b) to provide clear and simple information about the symptoms of specific diseases and their prevention, and c) to encourage those who have participated in the national literacy campaign to maintain their skills by reading campaign materials designed especially for the newly literate (8).

Two fundamental lessons learned from the endeavor which provide planning implications for further mass media attempts were: a) a media forum as a communication approach that can lead to action, and b) political support and popular involvement are keys to truly effective programs (9).

### National Caricature

A promotional campaign, based on the "Smokey the Bear" model, which was used successfully in Malawi in the late 1960's (1), was introduced as a possible means of providing the target areas with a national caricature for health. Just as "Smokey the Bear" and "preventing forest fires" are synonymous in the United States, Tanzania's "spokesper-

son" would immediately project an image of positive health issues, especially eliminating certain diseases through appropriate sanitation.

The caricature, in the form of a puppet, would require a distinctive voice and a specific logo, such as Smokey's "Only You Can Prevent Forest Fires." All educational materials (films, posters, jingles, etc.) would carry the puppet's picture and/or voice as a means of immediate program identification and to provide continuity. In order to get initial media attention, a wide-scale "Name the Puppet" contest would be sponsored with prizes offered for the top three entries.

### School Health Campaign

Before a school health campaign can be carried out, it is essential that input be provided by community representatives and parents, in addition to health officials and school personnel, to establish a needs assessment of health problems. This community involvement is invaluable in establishing appropriate goals and objectives, specifying program purposes, and enhancing good public relations.

Curriculum development should include behavioral objectives and corresponding activities which cover the following three areas (10):

1. knowledge/information - showing a basic knowledge of health and health related topics, i.e., understanding diseases caused by poor waste disposal;
2. attitudes/feelings - development of positive attitudes toward good health practices, i.e., stating a desire for cleanliness; and
3. taking action - development of good health practices, i.e., using and maintaining a latrine appropriately.

As educators, it is important to stress the decision-making process in making good health choices.

A specific health issue such as latrine maintenance or school grounds cleanup may be the focus of a short-term school campaign. Besides fostering good health practices, the element of positive competition among classes or designated groups may enhance the morale of teachers and students. The following steps are suggested once a problem area has been identified:

1. A committee of teachers and students is formed to plan and monitor the campaign.

- A. An appropriate length of time is determined
  - B. Secret judges are chosen
  - C. Rewards are established for the winning groups, i.e., prizes, free time, announcement of names, etc.
2. The national caricature is utilized for continuity, in the form of a puppet. Posters bearing the caricatures' likeness are used for publicity and for giving guidelines for demonstrating good health practices.

### Puppet Presentation

As an example of the educational and motivational power of the puppet, a simple script was written and presented featuring Mary Mosquito and Fred Fly.

The plot addressed the "negative" aspects of the VIP latrine and the "positive" aspects of a poorly maintained traditional latrine from the insects' point of view. Some of the names of seminar participants and a few Swahili phrases were included to add humor and to personalize the skit. Very simple puppets were made using colored construction paper and string. The "stage" was a movie screen lowered halfway with the puppeteers hidden behind it.

The seminar participants were so enthusiastic about the puppets that they chose to develop and perform their own scripts in fulfillment of their afternoon assignments on developing promotional campaigns. As students coming from a technological orientation and yet destined to soon become promoters of the VIP latrine, it appeared evident that they were beginning to recognize the importance of educating the public in a very basic yet entertaining way. Also, the fun and laughter as a result of their performances provided an additional benefit of "breaking the ice" for some of the more reticent participants. In his final report of the conference, Professor Emil Chanlett of the University of North Carolina remarked that "the puppet demonstrations raised the participant's enthusiasm to a full outburst (4)."

### Discussion Conclusions

#### A. Inclusion of Health Education

The health education component was not scheduled to begin until the sixth day of the ten-day seminar. This raises the question of the belief on the part of the seminar planners in the use of health education as bridging the gap between

technological and social forces. Health education did not appear to be an equal variable in planning and implementing this particular environmental health program. Pisharoti (12), states: "Although adequate attention must be paid to technology, the interaction between social forces and technology has created simultaneous need for consideration of social, psychological, economic, and political variables in the design and operation of environmental health facilities."

It is suggested that future seminars initially address the issue of the interplay of all components involved in carrying out a successful sanitation project.

#### B. Indirect Health Education

It is important to note how this seminar, as an example of indirect health education, fits into the international health education picture. Newman (11) describes four types of international health education.

1. **Example** - United States citizens create an impact through tourism and the military; also, the media provides an American role model abroad through advertising and movies.
2. **Professional Education** - an individual from a needy country goes to another country to learn to do things "better" in technical and/or health education areas.
3. **Direct Health Education** - (Peace Corps, CARE, and church missions) - through contacts at the community level, workers attempt to bring about changes in their adopted environment.
4. **Indirect Health Education** - (WHO and UNICEF) - education specialists work with a counterpart from the host government, giving advice, showing new techniques, constructively criticizing and generally helping with administration of two bureaucracies, that of the host government and that of his own agency.

As trainers of implementers and/or trainers, rather than working directly at the community level, it was necessary to face the reality that the success of the seminar could only be measured by the acceptance of our ideas and the willingness of our counterparts to set these ideas in motion at either the community or national level. Our government

counterparts may fully accept the advice and develop excellent plans only to have the implementation fail because of differing priorities at higher government levels or differing perceptions at community levels (11). Therefore, the possibility of the program losing its influence, even before getting to the people who need it the most, is very strong. Even though immediate results of our input are not clear, we feel our contribution has helped to establish the necessary basis upon which future health education programs involving low-cost sanitation can be built.

It is indeed difficult to comment on the overall "success" of this program because of a myriad of reasons/problems.

- At its inception, this program was organized rather hastily and precluded any opportunity for the authors to organize and generate an appropriate pre-test.
- The evaluation which was performed at the conclusion of the conference was performed by a representative of local government without consultation or input by the authors. The evaluation document was markedly flawed by problems of content, design and timing.
- Contacts with both expatriates and Tanzanians who were involved with the conference have been sporadic and sketchy. Furthermore, the majority of the primary participants have either left Tanzania or have been transferred to other posts within Tanzania which have little or no involvement with low-cost sanitation. The United States Agency for International Development (USAID) office was closed when the Tanzanian government failed to repay loans; therefore, USAID monies are no longer in the picture.
- There has been no formal ongoing evaluation of the project.

As one can readily see, it is most important that for the merits of such a program to be evaluated appropriately, evaluation must be promulgated and implemented before the actual project begins. Logistically, this can pose particular nightmares for outsiders coming into a new situation with very little information about what to expect, particularly when communication from major participants in Tanzania was not only minimal and incomplete, but also was filtered through two or three other agencies.

The low-cost sanitation project, at least in the periurban areas of Dar es Salaam,

continues to make progress even after three-and-a-half years of bureaucratic delays. The major funding for the project has come through the World Bank, which in 1984, provided a loan of \$25 million through the International Development Association (IDA). Half of these funds went to the initiation of a city sewer system for Dar es Salaam and the other half for further development of low-cost sanitation in the form of ventilated improved pit latrines for the periurban areas of Dar es Salaam. Furthermore, the TAG project (Technology Advisory Group) of the World Bank, in conjunction with the United Nations Development Programme (UNDP), has a field staff representative in Dar es Salaam who has been working with the Crown Agents — a British consortium of engineers who have been committed to a sewage and sanitation project for the last 10 years. In addition, the strength of the Tanzanian shilling, which at one time was dreadfully weak, has made a modest resurgence, particularly after a recommitment on the part of that government to better monitor and protect the external funding for such projects.

Prospects for the future of establishing

low-cost sanitation, particularly ventilated improved pit latrines, on a modest scale in the periurban areas of Dar es Salaam, Tanzania are reasonably good. Unfortunately, prospects for the integration and appropriate utilization of the health education and mass media aspects pertaining to low-cost sanitation and to the total project are remote. One bright spot: Ms. Letitia Obeng, a public health engineer with the Department of Water and Urban Development (WUD) of the World Bank has prepared 45 audiovisual modules and three films on video cassettes which are being reproduced by the World Bank's Publication Department for sale and distribution through an international training network dealing with water and waste management. It is planned that 15 centers will be set up for worldwide distribution of these materials over the next five years and that the initial centers will be in India, Kenya and Zimbabwe.

For further information about the slide-tape shows and the films mentioned above, contact Ms. Letitia Obeng, PHE, World Bank Water and Urban Development, Room N-832, 1818-H Street, NW, Washington, DC 20433.

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