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Head Office: 60 Queen Street, Ottawa

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Use of Dry Pit Latrines in Rural and Urban Ethiopia

K. Kinde

Ethiopia is situated in northeastern Africa, close to the equator. Because the altitude varies from 90 m below sea level (Danakil depression) to over 4500 m above sea level (the Semien Mountains), climatic conditions range from hot desert to cold mountain. The country is 1225000 km² in area and is very fertile, with a large proportion of arable land. It also has one of the most rugged terrains in the world, however, which makes communication difficult.

A population census has never been conducted, but two sample surveys and various studies have shown that its 30 million people are of highly diversified ethnic origins and speak over 50 languages. Almost 90% of the population live in rural areas and about 95% of those are engaged in agriculture and animal husbandry. Only about 15% of the population lives within a reasonable distance from organized health services.

Preventable diseases and malnutrition, in particular, cause heavy morbidity and very high mortality. It has been constantly affirmed by public health experts that about 80% of the health problems of the country could be prevented through relatively simple public health measures, such as improvement of environmental sanitation, sound personal hygiene practice, health education, and mass vaccination.

Better health for the Ethiopian masses, particularly the rural masses, has been one of the themes of the revolution. Based on this, the Ministry of Health has started reorienting the health policies and programs of the country. Thus, programs oriented toward the rural masses, based on more prevention, self-reliance, and mass participation, are stressed.

As a member of the international community, Ethiopia is committed to the present United Nations declarations of “health for all by the year 2000” as a goal, and “primary health care” and the “International Drinking Water and Sanitation Decade” as strategies to attain the goal.

A key to the realization of these ambitions, policies, and challenges is the provision, to all people, of basic health services, in general, and preventive health services, in particular, placing more emphasis on the proper disposal of human wastes.

Use of Dry Pit Latrines in Rural and Semiurban Ethiopia

Provision of a sanitary excreta disposal system is listed by the World Health Organization (WHO) expert committee on environmental sanitation (1954) among the first basic steps that should be taken toward ensuring a safe environment in rural areas and small communities.

In Ethiopia, as in many developing countries, faecal-borne illnesses are the most formidable public health problems, even though the number of deaths due to these diseases is not exactly known. However, recent surveys carried out within the country have shown that all elements of rural sanitation are more or less lacking and indiscrimi-
nate fouling of the soil with human excrement is common and as a result gastrointestinal diseases rank high among the most important communicable diseases.

To alleviate this health problem through environmental control, the most satisfactory method of excreta disposal is, of course, a waterborne excreta disposal system, but it will not be possible to install such a system in rural and semiurban Ethiopia for many years to come.

As an alternative, a sanitary pit latrine human waste disposal system is as effective as the other methods in controlling faecal-borne diseases and is cheap to build, easy to maintain, and within the reach of the communities. Therefore, a pit latrine excreta disposal system was found to be an appropriate system for the rural and urban fringe Ethiopian communities.

Realizing the importance of sanitary latrines for rural Ethiopians, the Ethiopian government, in collaboration with the donor agencies (multilateral and bilateral), established a public health college and training centre at Gondar, Ethiopia, in 1954 to train a team of middle-level health workers (health officers, community nurses, and sanitarians), with the objective of solving the public health problems of rural and semiurban communities. The first group of health workers graduated in 1958 and were used to staff district health centres. It was then that organized community sanitation services started, with the required organizational structure to carry out a successful preventive and promotive health service program, emphasis being put on, among other things, the development of sanitary pit latrines in rural areas and small communities through local participation.

After more than two decades, the public health program and excreta disposal systems in rural areas failed to show any significant improvement commensurate with the duration of service. In the villages, sanitary pit latrines are very rare and open field defecation and urination is a common practice. Proper assessment of excreta disposal means in rural communities has not been carried out, but a sample survey made in most of the administrative regions has shown that about 1% of the rural population uses pit latrine excreta disposal systems. Even this meagre number of latrines is not properly designed, constructed, and maintained.

In general, the health education and pit latrine construction program that has been carried out in Ethiopia for the last 20 years produced no significant change in the health conditions of the masses, even though a reliable study has not been conducted to assess the situation. This condition is attributed to the fact that the latrine construction, use, and maintenance program has not yet received the attention it deserves from the government, as well as the community served. As a result, the Ethiopian rural and semiurban communities continue to suffer from avoidable filth-borne diseases with the consequent heavy loss of lives and lowered productivity of the population.

The sanitation problems of the Ethiopian communities are mainly related to the programs of education (general and/or health), organization, and the proper design and construction of latrines. Some of the barriers to the success of the pit latrine construction program are: (1) most communities have not had a chance to learn about the germ causation of disease and to realize the need to stop faecal-borne diseases through the use of latrines; (2) communities that have a habit of using open fields for defecation and urination resist change; (3) the availability of space (open fields) in rural areas for defecation and urination; (4) the nature of the work of villagers, particularly males and children, which is usually in the field (farming and herding), encourages open-field excreta disposal; (5) many villagers have never seen a latrine and thus are not interested in constructing one; (6) when villagers have seen a latrine, often it has been poorly maintained and is located in public places, and it has left an impression of being something foul and dirty; (7) footrests are uncomfortable and sometimes dirty compared with open-field practices; (8) the user is exposed to contaminated water when the groundwater level is high or the pit is open to rain or storm-water runoff; (9) accidents associated with poorly constructed and
poorly maintained latrines; (10) opposite sexes and/or different religious groups sometimes do not like to share the same facility; (11) the faecal material is visible, particularly when the pit aperture is uncovered or the pit is about to be filled; (12) the latrine has a bad odour when it is constructed close to a dwelling; (13) flies gather about the latrine; (14) construction and maintenance are expensive and difficult for people with low incomes; (15) even if they want a latrine, the communities often do not know how to construct and maintain a sanitary latrine properly; (16) lack of construction materials and tools; (17) lack of administrative procedures to ensure quick supply of proper materials where they are needed; (18) lack of concentration of efforts on latrine problems; (19) lack of careful guidance, supervision, and evaluation of field sanitation workers caused by a lack of finance and transport facilities; (20) lack of an adequate number of well-trained technical personnel; and (21) in some places, rocky soil formations and high water levels.

Use of Dry Pit Latrines in Urban Ethiopia

Practices and problems associated with dry pit latrines in towns are in many instances similar to those in rural areas. The difference is the type and gravity of the problem encountered as a result of urbanization. In addition to some of the problems related to pit latrine construction, use, and maintenance mentioned for rural communities, the urban communities are faced with problems of poor town planning and plot allocation, lack of space to construct pit latrines, landlord-tenant conflicts in cases of rented houses (before the revolution), lack of open fields for defecation and urination in comparison with rural areas, the diversified social and economic nature of the town, and the type of work which is usually carried out in the town.

In principle, in every town the municipalities are responsible for providing and maintaining suitable public latrines for the communities at places such as markets and bus stations. In practice, however, public latrine development in urban centres is an absolute failure, due to a lack of maintenance, abuse by the users, and irresponsibility of the municipalities to operate and maintain the facilities.

In towns where waterborne excreta disposal systems are nonexistent, all private houses are required to have proper privies on their premises. However, the majority of these facilities are not functioning well due to the reasons already mentioned.

Conclusions

Prerevolution health workers tried to form health councils, within the communities, to be responsible for health matters in a certain locality and to activate health services. The program failed, however, because the representatives on the council belonged to the landlord class.

The revolution, through its formation of various associations (urban dwellers, farmers, women's youth, all Ethiopian workers), has created a healthy atmosphere whereby the people organized themselves to solve their own health and sanitation problems. A situation where health cadres could make a better approach to the community, identify health and sanitation problems of the community, disseminate health education, and provide useful demonstrations of sanitary facilities was created. The Ministry of Health has taken a revolutionary measure in reorienting the health delivery system of the nation by strengthening the existing one and introducing a new system with a new health cadre, a community health agent, as a base for the health manpower pyramid. The new approach to health service by the Ministry of Health is supplemented by the countrywide campaign against illiteracy launched by the Ministry of Education.

All efforts made since the revolution have had a positive effect on the health delivery system, in general, and public health service, in particular. A case in point is a great number of dry pit latrines constructed by the
people in some of the administrative regions, yet more endeavours are expected to tackle the health and sanitation problems of the communities.

The barriers to the expansion of sanitary dry pit latrine system development in rural and urban Ethiopia, as elsewhere in developing countries, are many. Some are socioeconomic in nature, others are administrative in nature, and still others are of an engineering nature.

To overcome these hindrances, coordinated and concerted efforts by concerned agencies must be put forward to organize the communities so that they solve their problems on their own; to educate (general and health) the communities in order to raise the level of understanding about germ theory; to guide the communities; and to evaluate and reevaluate the public health activities carried out in the communities. To promote these activities, sound planning and programing of the sanitation activities of the communities are not only necessary but essential.