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PARTICIPATION OF PRIMARY HEALTH WORKERS IN URBAN MALARIA/MOSQUITO CONTROL PROGRAMMES[1]

by

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1. The need for primary health care in the urban community

Since the Alma-Ata Conference (WHO/UNICEF, 1978), primary health care has become the main thrust and focus for the promotion of world health. Primary health care, however, has frequently been identified with rural health care, mainly because it is the rural populations who have the least geographical access to health care in general. However, urban populations are just as much in need of primary health care, for, while the more economically advantaged usually live in urban areas where they have both geographical and economic access to health care, the poor in many large cities do not. Bryant (1969) pointed out the uneven access to health services within the urban areas in developing countries; as an example, in Cali, Colombia, where there is a ratio of one doctor for every 900 people, 17% of the children who

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die have not been seen by a physician during their fatal illness and another 19% have had no medical attention in the 48 hours preceding their death. This illustrates the need for developing primary health care in urban communities.

2. Malaria control in the context of primary health care

Primary health care addresses the main health problems in a community. As defined in the Declaration of Alma-Ata, it includes: health education; food supply and proper nutrition; supply of safe water and basic sanitation; maternal and child health care; immunization; prevention and control of locally endemic diseases; treatment of common diseases; and provision of essential drugs (WHO/UNICEF, 1978). All these problems are also essential health problems in an urban community and some, such as safe water supply and basic sanitation, are of top priority in the urban development of developing countries. In addition, malaria, wherever it is endemic, becomes an essential component of primary health and thus one of the principal tasks of primary health workers.

3. The problem of urban malaria

In India and Pakistan, the problem of urban malaria is always associated with the mosquito vector Anopheles stephensi which has a predilection for breeding in wells, cisterns, fountains and ground or overhead tanks. This vector of malaria is also adapted to polluted water and even brackish water up to a certain degree of salinity. It breeds wherever there are any water collections, drains, grass fields, cess pools, sewage water, etc. Thus in some rapidly growing cities where sanitation has not kept up with the provision of adequate facilities such as those dealing with water (sewage, drainage, water supply), many breeding sites exist and consequently transmission of malaria takes place. The marginal areas of a city which represent an urban rural interface, may be threatened by the rural vector A. culicifacies as well.

Urban malaria also exists in some cities of the Middle East where A. claviger breeds in cisterns constructed for the storage of rain-water. In Africa malaria transmission occurs in the peripheral areas and even the centres of most cities and virtually all towns, the slums on the city edges as well as the well-to-do suburbs being at special risk. Malaria transmission is also found in urban areas in Turkey (Sharif et al., 1978). Malaria transmission may be occurring in many other cities and towns with semi-urban conditions but, due to the lack of surveillance activity and data, it has not attracted the attention of relevan authorities.

4. The control of urban malaria through the primary health care approach

In the control of urban malaria, the highest priority should be given to correcting, where possible, the environmental conditions that produce abundant breeding places for the vector. Although the ultimate solution lies in sanitary engineering, financial and other constraints hinder the implementation of such measures in many developing countries. In the primary health care approach, however, stress is laid on using appropriate technology. The following methods may be considered to be appropriate as they are effective, easily accepted and understood, and applicable by community health workers:

(1) environmental management to decrease breeding sites, such as the filling of ponds, and borrow pits, the clearing of marginal vegetation along water courses, the cleaning and straightening of open drains and sewers to avoid stagnation, etc.,

(2) chemical methods such as larviciding and, if necessary, indoor residual spraying,

(3) surveillance activities, including case detection and treatment,

(4) biological control such as the breeding and use of larvivorous fish, and

(5) personal protection.

Another feature of the primary health care approach is community participation. This requires that measures be taken to make people conscious of their own responsibilities towards themselves and their community and to help them become self-reliant and desirous to solve their health problems through their own efforts. In the primary health care approach, the community thus becomes the active agent of its own health development instead of being a mere recipient of health care delivery. Widespread support from the public is of prime importance.

In urban malaria/mosquito control programmes the above mentioned measures should not, therefore, be imposed upon the community, but instead, the community should be consulted through an effective machinery and be given the chance to assess the situation, choose the technology to be used, become motivated to participate in the operation, or at least be made to understand why these measures are applied so that community cooperation may be obtained for their application.

5. Primary health care workers and urban malaria/mosquito control personnel

At the first level of contact between individuals and the health care system, primary health care is provided by community health workers acting individually or as a team. The community health worker may therefore be considered to be a first line primary health care worker. The types of health worker will vary by country and community according to needs and the resources available for satisfying them. For many developing countries, the most reliable solution for attaining total population coverage with essential health care is to use community health workers who can be trained in a short period of time to perform specific tasks (WHO/UNICEF, 1978).

In many cities, an urban malaria/mosquito control programme has been in operation for a long time. Larviciding, clearing of vegetation along water courses, dredging, etc., are the responsibility of the vector control service. As a strictly temporary solution, if so warranted in an emergency, this work may also be undertaken by the malaria eradication control service. Surveillance activities are often carried out by the malaria service.

In other cities, appropriate measures may not have been taken due to a lack of initiative on the part of the local authorities and a lack of adequate provision in the malaria eradication control service.

In places where there has been little antimalaria activity in the past, urban malaria/mosquito control activities could be developed as a component of primary health care; while in those cities where an antimalaria programme has already been undertaken, the existing antimalaria activities could form part of the basis for developing primary health care in the urban area and appropriate personnel in the urban malaria/vector control service could be trained as community health workers. It would be a great waste of health manpower if a corps of community health workers were constituted without taking into consideration the existing personnel in some specific services such as malaria, tuberculosis, leprosy, food and nutrition, immunization, maternal and child health care, etc.

Urban primary health centres with clearly defined areas of jurisdiction should in any case be established. The number and size of the urban health centres may vary not only according to the local conditions, needs and available resources, but also from one part of the city to another. However, it is more convenient if the areas of jurisdiction correspond to the administrative divisions of the city. Generally speaking, each part of the city should be covered by an urban health centre. Government organizations, enterprises and factories should be included in the coverage, because often they too create sanitary and other community health problems, but it would be preferable for them to select members from their own staff to be trained as health workers as they would be more acceptable to the rest of the staff.

The community health workers should be assigned to a grass-roots administrative unit or units within the area of jurisdiction of the health centre. They work under the guidance and supervision of the medical officer or other responsible member of the relevant health centre

and are directly accountable to the administration of the grass-roots unit of the community. Their activities will be listed in a job description which will be prepared for each category of primary health worker according to the expressed needs of the community. Antimalaria and mosquito control activities can be incorporated into this list.

6. Training of primary health workers

Community health workers may be required to carry out a wide range of health activities, or alternatively their functions may be directed to certain aspects of health care. The question of single purpose or multi-purpose workers in primary health care has always been a thorny one (Cohen, 1980). Ideally, primary health care workers should have adequate skills to deal with a wide variety of health problems including malaria, but this implies such a protracted period of training as to be often impractical. However, such a goal could eventually be achieved if the community health worker is assigned to work after a short period of training, then, after working for a period of time, is retrained for new skills and techniques and following this retraining is given new tasks. In this way the community health workers may finally become multi-purpose workers, though care must then be exercised not to overload them. A primary health care approach does not mean that all essential health problems can be solved at the same time. Priorities must be identified and a plan of operations worked out accordingly. Training of primary health care workers should be task-oriented and directed to the implementation of the plan.

As far as urban malaria/mosquito control is concerned, a community health worker must acquire the fundamental knowledge of what is malaria, how it is transmitted, where are the breeding sites of mosquitos and how to eliminate them, etc. In addition, they must also acquire the skills and knowledge needed to carry out the following tasks:

(1) collect a blood smear from each identified fever case;

(2) administer presumptive treatment to suspected cases as well as radical treatment to confirmed cases;

(3) apply larvicides to breeding sites and carry out surveys for larvae;

(4) disseminate larvivorous fish and sustain their breeding;

(5) manipulate and modify the environment so as to reduce the mosquito breeding habitats; and

(6) maintain a constant dialogue with the community, propogate knowledge about health and advise the people on health matters.

7. Participation of primary health workers in urban malaria/mosquito control programmes

The first line primary health care workers, i.e. the community health workers, may take the responsibility of detecting clinical cases of malaria, administering presumptive or radical treatment to suspected or confirmed cases of malaria respectively. Should it be necessary, they may be helped by voluntary health workers or health aides who may assist in providing information about fever cases, making blood slides and distributing antimalarials for presumptive and radical treatment. In the event of an outbreak, these voluntary health aides may also assist the community health worker in administering chemoprophylaxis. Health workers of other categories such as public health nurses, maternal and child health care workers as well as physicians in health centres and hospitals share the responsibility of detecting malaria cases. In many developing countries, it is important to collaborate with traditional medical practitioners and indigenous practitioners in order to detect malaria cases because it is to them that many fever cases go first for treatment. It is the responsibility of the community health workers to involve them in case detection.

With respect to environmental management, the community health workers probably act as a source of information on what measures could be taken to improve the environmental sanitation and decrease the number and the area of mosquito breeding sites. They may help to motivate the people to modify and to manipulate the environment by, for instance, the filling up of borrow pits and small ponds and the elimination of mosquito breeding places. They may also advise the people to change any habits or style of living which lead to collections of waste water and sewage in order to decrease manmade breeding sites for mosquito larvae. Larger-scale environmental modification, however, will require the conjoint efforts of the community.

Larviciding of small breeding sites especially those in the vicinity of houses could be undertaken by voluntary health aides under the guidance of community health workers but for large breeding sites, specific workers are necessary.

8. The support of primary health workers

Obviously, community health workers do not work alone. They should be supported by the government, by the health system at its higher echelons as well as by the community.

(1) Support from the government

In order to implement primary health care, the government must in the first place adopt the primary health care approach as a firm national policy and be fully committed to its development and implementation. This includes the allocation of resources, the re-orientation of existing health manpower and the development of new manpower, and finally, the designing, planning and development of health systems based on the primary health care approach. Of prime importance is support from the grass-roots administration to the first line health workers without which it would be difficult for the primary health workers to perform their duties. In other words, the grass-roots administration should not only take part in supervising the work of the primary health workers assigned to their area but also give them material and moral support. For example the grass-roots administration might provide the primary health workers with facilities, help them to overcome difficulties and obstacles and mobilize the population to participate in solving their own health problems.

(2) Support from the health system

The acceptance of primary health care implies the organization of the rest of the health system so as to provide support for primary health care and to enhance its development (WHO/UNICEF, 1978). The first referral level has important functions to perform to support the communities and the community health workers. It is this level that has the responsibilities of guiding, training and supervising the work of community health workers including the work on malaria/mosquito control.

The malaria control service at the higher and central levels should regularly check the status of urban malaria/mosquito control and work out plans to be implemented by the community health workers. Such plans should be made on the basis of a control strategy, using the integrated approach and staying within the limits of material and financial resources. It is also the responsibility of the malaria control service to supply the necessary chemicals, drugs and equipment and to evaluate the achievements of the malaria/vector control programme. The malaria control service should also carry out pilot studies to investigate and demonstrate the feasibility of obtaining the participation of the community and of community health workers in urban malaria/mosquito control.

(3) Support from the community

Community health workers must rely on support from the community in order to fulfil their functions. Otherwise in malaria endemic areas, the implementation of antimalaria measures alone would require a community health worker to spend most of his or her time whereas a community health worker is assigned to undertake multipurpose functions. A community health worker should therefore maintain a constant dialogue with the community,

motivate the community to participate in health development and advise the community on health matters. As regards urban malaria/mosquito control, environmental measures such as filling and draining can be carried out by non-health workers or by volunteer action of the community. The role of community health workers can be greatly facilitated if they are helped by voluntary health workers or health aides.

RESUME

PARTICIPATION DES AGENTS DE SOINS DE SANTE PRIMAIRES AUX PROGRAMMES DE LUTTE CONTRE LE PALUDISME URBAIN ET LES MOUSTIQUES

Après avoir brièvement passé en revue les besoins en matière de soins de santé primaires dans les communautés urbaines, la question de la place qu'occupe la lutte antipaludique dans le contexte des soins de santé primaires et le problème du paludisme urbain, ce document décrit de façon plus complète la lutte menée contre le paludisme urbain par l'entremise des services de soins de santé primaires. Dans cette approche, l'accent est mis sur une technologie et une participation communautaire appropriées. Au premier niveau de contact entre les individus et le système des soins de santé, les soins de santé primaires sont dispensés par des agents de santé communautaire opérant individuellement ou en équipe. L'agent de santé communautaire peut donc être considéré comme un agent de soins de santé primaires de première ligne. Là où il n'y avait autrefois que peu d'activités antipaludiques, les activités de lutte contre le paludisme urbain et les moustiques pourraient être développées en tant que composante des soins de santé primaires; et dans les villes où un programme de lutte antipaludique avait déjà été entrepris, les activités antipaludiques existantes pourraient contribuer à fournir une base au développement des soins de santé primaires en zone urbaine, et un personnel approprié relevant des services urbains de lutte antipaludique et antivectorielle pourrait recevoir une formation en tant que personnel de santé communautaire.

La participation d'agents de soins de santé primaires aux programmes de lutte contre le paludisme urbain et les moustiques et la formation à leur donner en vue de cette participation sont ensuite examinées. L'attention est finalement appelée sur le fait que les agents de soins de santé primaires ne travaillent pas seuls et doivent bénéficier de l'appui du gouvernement, du système sanitaire et de la collectivité.

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