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SEMINAR ON THE ROLE OF HEALTH SERVICES AND TRAINING INSTITUTES IN THE CONTROL OF VECTORS AND RESERVOIRS OF DISEASES

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THE ROLE OF THE COMMUNITY AND HEALTH SERVICES IN CONTROL OF VECTORS AND RESERVOIRS OF DISEASES

by

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There are a number of vector-borne diseases with important health and socio-economic consequences, which must be intercepted, controlled and eventually eliminated. The decision as to whether a vector control programme should be initiated must be made in the light of the socioeconomic importance of the disease and the resources that can be made available.(1) Such programmes must be conceived on a long-term basis, for once the programme has been launched, there is no easy way to cancel it. Therefore, a comprehensive planning approach should be followed, taking into account the realistic possibilities of carrying it on according to the availability of resources Decisions have to be made on the priorities of public health problems. The plan of operation derived from the preliminary systematic investigation may be elaborated to respond to national or provincial needs, but it should also be technically and financially justified. In time, it is anticipated that more and more vector control programmes will be developed as a part of PHC, country-wide or at provincial, district or local levels.

In our traditional and professional way we are presenting attempts to solve all, or at least most, of the existing problems by vertically organized programmes, using the necessary manpower and other resources provided.[2.3]

It is supposed that the Ministry of Health has the moral responsibility for the health of the citizens, whether or not the State has elected to designate regulatory functions in this sector to departments of agriculture, labour, natural resources or other government agencies not otherwise concerned with health.(2)

Consequently, the Ministry of Health delegates authority and responsibility to the specialized health institutions at lower levels: such as national public health centres or, further down, to provincial or district epidemiology departments or units (See Chart I).

At local level, a central logistical problem is whether sanitarians should be attached to the local health centre (basic health unit) or be linked vertically to the district epidemiology department. Usually mobile groups of sanitary technicians and other semi-trained personnel are responsible for carrying on such programmes in the field.

In order to initiate vertical programme activities a vertical organization must be established!

1 VERTICAL ORGANIZATION

From the Ministry of Health down to the grass-roots level, a planned operational and managerial process usually comprised the following features:

1 1 Legislation - developing parallel to and synchronized with all activities at lower levels, gradually extended: a) in content - to cover a number of diseases and risks,

b) in coverage - not only treatment of facilities, but also measures for promotion and prevention, for the total population

1.2 Training and supervision - of primary health workers, through well trained and experienced supervisors in DDD* (in-service, continuous education)

1 3 Logistics and supplies - such as standardization of equipment and maintenance, regular provision of chemicals or biological agents, etc

1 4 Reporting and Monitoring - with special regard to the community's participation and involvement.

Unfortunately, some organizational patterns may be of only limited value. There are many examples of technical interventions being purely palliative, so that a short time after an intensive insecticidal or anti-vector campaign is finished (and very good results obtained) an infestation of lice, for example, has returned and become the same as before.

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* Disinfection, Disinsection and Deratization Unit

In using chemicals and killing vectors we often forget the hyman being! In protecting human beings from vectors and reservoirs of the disease, insects, rodents, etc., we usually keep them away from our "scientific" or "technical" action, we have them as passive recipients instead of involving them actively

It has been proven that most transmissible or communicable diseases may be prevented or eliminated by the people themselves All efforts of health workers are less effective, if not useless, and certainly not permanent, without community involvement and participation.

Take for example the major vector-borne diseases prevalent in countries of EMR: malaria, leishmaniasis, filariasis, trypanosomiasis and some arbovirus diseases. Most of them are dependent upon the peoples' attitudes and behaviour to survive and increase. There are not enough technicians, supplies and equipment, transportation and money available to kill regularly all mosquitoes, flies, fleas, lice, snails and rodents. Only if the people take an active role in combating these pests, will the results be more promising and the efforts of professionals more satisfactory.

2 ROLE OF INDIVIDUALS, GROUPS AND COMMUNITIES IN VECTOR CONTROL

The Ministry of Health and the national health system obviously have the collective responsibility for the health of citizens,(2) but every citizen also has the responsibility for his own health and his environment. The UNICEF/WHO ideology Health for All and Health by the People expressed through the Alma Ata Declaration on Primary Health Care [5] defines clearly the role of the health system versus the community and peoples' involvement and participation.

Every individual, family, neighbourhood association, village, tribe and community has a clearly defined role in the light of primary health care according to the Alma Ata recommendations: it is the right and duty of everyone to participate actively in planning, implementation and evaluation of all health and health-related activities. In other words, health workers and other people must act in close cooperation to solve the people's health problems where they live and work. That is why the people should

be encouraged in self-care and self-reliance, and by no means be incapacitated and kept passive by health workers and other professionals who want to take the whole responsibility for the people's health on themselves. Therefore, horizontal organization is also necessary in vector control

3. HORIZONTAL ORGANIZATION

This means a comprehensive approach at all levels, such as:

3.1 Intersectoral Collaboration

At all levels, e.g :

- National (coordinating board)
- Intermediate (provincial or district supervisory group)
- Community - board of community key persons (not only formal representatives of various sectors, but primarily of influential non-formal leaders, such as: religious, voluntary organizations, tribal and family chiefs).

3.2 Intrasectoral Links

Between different parts of the health care service according to·

- the referral system
- the development of Basic Health Units or Health Centres

3.3 Community Organization

Starting with the "felt needs" of the community and gradually introducing "unfelt needs" for the following important reasons:

- participation and involvement means an inexhaustible source of human, material and financial means,
- collaboration with local people will mean greater effectiveness in the long run,

- people's involvement is a challenging, educational and growing process.

3 4 Strategies and Approaches

These must be elaborated together with the local community leaders and key persons, separately for each disease, and according to awareness, readiness and motivation (to be continually watched and stimulated)

It should be emphasized that the strategies and approaches taken at the community level differ from those at upper levels. How, it may be asked. In the following ways:

4. WORKING WITH THE PEOPLE NOT FOR THE PEOPLE

When speaking about people's needs we must consider real people's needs, not merely our own professional ones. According to the cultural background, customs,beliefs and value system the people's needs and aspirations follow a different priority scheme than those of professionals. Thus their "felt needs" are usually not the same as those we feel.

As a rule, without satisfying the people's felt needs it is impossible to implement any vertical (national) programmes successfully and on a long-term basis. Jowever, if such felt priority needs have been satisfied by health workers, they will get the credit and obtain the confidence of the poeple to initiate other community health projects. The author remembers such an illustrative example in the early fifties:

A team of malaria professionals came to a village to initiate an anti-mosquito campaign. They started to speak to the people, saying that the disease (malaria) was a serious evil for them, and that it was caused by the mosquitoes. They did not ask the people what were their problems, but tried to introduce their professional diagnosis or point of view. The people were reluctant, reserved and not willing to discuss anything.

Some of them made comments that the disease was not caused by insects, but by bad water. The main health problem in their view was to get good water, not to eliminate mosquitoes As the health workers needed community participation for the drainage of a marsh, they decided to drill a well. When the village got water the people decided to take part in the mosquito campaign

There are many more similar examples. Horizontal organization at the community level means first of all - planning with the people and following their priority needs. Once a comprehensive community programme has started, other vertically planned health activities can be integrated.

Modern technologies in vector control can be considered as a substantial advantage but at the same time an inconvenience in some under-developed areas. They are elements which are not only costy like insecticides, but also somewhat dangerous, if not properly used, they can be harmful not only for the people who perform spraying, but also for the others, who may be in contact with higher concentrations of the material. That is why individual participation of those involved in any kind of vector control means that they should be educated and persuaded to protect themselves in an appropriate way and at the same time not endanger others.

Education and active participation of non-professionals who are involved in such campaigns or continuous activities are also needed to inform people that the resistance of vectors is another risk likely to be encountered in campaigns. The people must be familiar with the characteristics of insecticides and their effectiveness.

Newly developed biological means in the control of malaria and schistosomiasis (larvivorous fish) are less dangerous, and probably more convenient for some areas. In such cases the population must be really actively involved because professionals are not able to provide permanent surveillance as to the denisty of fish and other conditions necessary in order to make such measures effective. During the dry

season the fish must be restocked in ponds and reservoirs One compensation for people's participation is that the fish can be used for food. The people should also know at the end of the dry season how to breed the fish and replenish the water reservoirs and irrigation canals.

With regard to the snails which live in the canals and utilize the grass for habitat and food, grass-eating fish can be the effective biologial means of control. Chinese carp can make irrigation canals grass-free but, again, constant control by the residents will be necessary. Once the grass is eliminated, not only the snails but also the carp will disapper; thus the carp can be used again as good food but sufficient must be kept in reserve for those parts of the irrigation system and water reservoirs where the grass will again become a problem, bringing with it the snail, the intermediate host of schistosomiasis.

In using the plant "damsisa" (Ambrosia maritima) which is apparently effective against snails (for snails cannot survive where this species is introduced to the canal) the active participation and involvement of the people are needed. This plant actually becomes a part of the life of the people in the areas concerned. They must know its protective qualities as well as how to grow it and apply it in the canal.

To sum up, where people's participation is needed, we must follow approaches which are the opposite of the epidemiological approach of disease and epidemics, namely: we know that ideas are also an infective agent and can be easily spread among the people. If we intentionally inform a few selected key persons in a community (so-called opinion leaders) and repeat to them the same idea several times (booster effect), we shall "inoculate" them Then, after a certain time, (incubation period) the first "symptoms" of the manifestation of the inoculated idea will appear. In some people this may occur very soon These may be called "easy acceptors" of innovations. They will start talking with other people in their environment, transferring the idea, now thought of as their own idea, and spreading the idea "disease" wherever they live and work The people in contact with these "carriers"

will also become infected to various degrees so that the innovative idea will become a sort of epidemic, especially if it is supported in a planned way through booster effects by various means of communication such as the mass media, the school, and contacts with health workers,etc.

Take another case of vector control - elimination of rats or deratisation. As it is an intelligent animal, the rat is very difficult to kill by poisoning or traps. Elimination can be more effective if carried out parallel to the continued action provided by the responsible epidemiological services in the area for the whole population, including the school children. Small grants or rewards such as a few coins for every dead rat can be a stimulus to farmers, youngsters, or school boys to find out the most effective ways to rid their environments of this danger.

Community participation is a complicated process. It must be properly planned, implemented and evaluated. Simple information or one-way communication with the people is not enough The training of professionals in the process with provision of field experience must be part of each vector control programme.

5. TRAINING AND EDUCATION

"Training" is the term used when we speak of how to enable professionals and other personnel to do their job; "education" is more appropriate when we are considering bringing about a desirable state of mind so that people will take action to ensure their own health.

Recalling all that has been mentioned, both training and education must be integral parts of our strategies in vector control programmes.

Both target groups (professionals and lay) must be trained and educated how to understand each other better in the first place, and how to help each other to solve common problems.

The community, as a rule, has more responsibilities than the vector control group or the whole health system All resources potentially available from national or other levels will not satisfy the every-growing health needs. The only reasonable policy is to shift as much as possible of the responsibility to the community. At the same time, this also means the delegation of competence to individuals, groups and agencies, to fulfil correctly the responsibilities for their own health. It means a carefully planned, mature educational programme, not only motivating community leaders, key persons and other individuals, but also accepting them as equal partners in the programme, as real competent team members.

Community participation has been well elaborated and sufficiently shown to be successful in any political, socio-economic and cultural conditions. Now the process needs to be implemented, by qualified,experienced and capable technicians in this field.

CONCLUSION

Communicable diseases, including those transferred by vectors, may be considered as a good example of the need for the primary health care approach in combating disease, where health workers and other professionals collaborate closely with local authorities and with the population in solving important public health problems.

It is evident that the people are usually unable to solve such problems without some professional expertise, but it is also true that professional intervention alone will not be effective and efficient without the people's participation and involvement.

Vertical approaches are not sufficient for health workers and other professionals cannot successfully assume the responsibility for people's health problems. Without the sharing of competence with individuals and groups in the community, little of lasting value will result.

The community is the most important source of manpower, supplies and finance. No central funds are available sufficient for expansive long-term activities of this

kind But if every individual and every family understands the problems of vector control and collaborates, lack of funds and manpower will no longer be a major obstacle in extending vector control programmes to wider horizons

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CHART I · ORGANIZATION OF VECTOR CONTROL