NATIONAL HEALTH DEVELOPMENT NETWORKS IN SUPPORT OF PRIMARY HEALTH CARE

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This publication is based largely on the experience of countries that have put into practice the concept of national health development networks and have developed permanent machinery for bringing together institutions from within and outside the health sector to support development of primary health care. Thanks are due to Professor Carl E. Taylor, who compiled and edited this publication, and to the Swedish International Development Authority and the Swedish Agency for Research Cooperation with Developing Countries (SIDA/SAREC), which have financially supported this effort at the national and international levels.

1. BACKGROUND AND RATIONALE

Recognition of the need for national health development networks has grown from an awareness that standard management approaches were not producing the social change and institutional development needed for primary health care (1, 2). A better way was needed of bringing together the scattered expertise of individuals and institutions to help resolve particular problems. Networks fulfil this function by helping to create a "critical mass" of expertise in systematic problem-solving from among the staffs of a country's regional agencies and institutions. By drawing on the expertise of various institutions and encouraging collaboration in practical field work, networks are providing conditions in which service personnel and experts can together obtain valuable experience in solving problems of health care in the community.

Most important of all is that a network provides a practical means of decentralizing decision-making so that problems may be solved at the periphery. It permits general policies and principles to be adapted to local conditions and needs. To make sure that the various components of primary health care are working together properly, a delicate balance needs to be maintained between two tendencies. On the one hand, improved management needs central control for the best use of limited resources; on the other, "bottom-up" planning and community involvement can provide the flexibility needed for adjusting to local needs. Central authorities can decide what needs to be done, but local collaborating groups can work out how to apply these policies flexibly so as to adapt them to local arrangements and priorities.

"Health for all" demands a long, difficult process of social change, especially because little is known about such critical issues as community involvement and intersectoral cooperation. Local units in a network can apply general principles flexibly to local conditions. The delicate and fluctuating interaction between activities that are best done centrally and those that should be done locally can be adapted to fit regional cultural and administrative patterns.

Two concepts provide the logical basis of health development networks. The first is mobilization of resources, knowledge, skills, personnel, and enthusiasm to promote primary health care through the health and other sectors and among the people. The second is coordination of the separate and often competing institutions, agencies, and experts whose contributions are essential if "Health for all" is to be attained. This rationale may be illustrated by outlining some of the problems that these networks are expected to remedy.

Health development has been complicated in the past (partly owing to the diversity of the institutions and agencies whose collaboration is needed in the various activities involved) because of lack of coordination in the following areas: health policy formulation, identification of local health problems and their causes, resource allocation, priority and target setting, patterns of health manpower development, orientation of training institutions, management processes, methods of evaluation, the setting of research priorities, relations with traditional systems of health care, efforts of separate sectors, and the roles of other agencies and non-governmental organizations in health development.

The goal of "Health for all" will remain elusive as long as health systems have as many gaps and inconsistencies as they tend to have at present. It will remain elusive also unless the natural connections between the following pairs of factors are recognized and acted upon: health and food supply, proper nutrition and agriculture, infections and environmental sanitation, maternal and child health and family planning, improved communications and education, and a wider role and education for women and the responsibilities of women to their families. It is essential also to find ways of improving personal and technical support to peripheral health workers. Clearly, with so much to be done, and so many sociopolitical and economic factors to be taken into account, ways must be found of bringing together a variety of sectors, institutions, and agencies in the health development process.

In their post-Alma-Ata enthusiasm many decision-makers assumed that, since primary health care was supposed to use simple methods, it would be simple to implement. Expectations grew, based on many examples from every part of the

world, that primary health care could halve child and infant mortality, dramatically improve morbidity, significantly enhance growth and development, and accelerate the achievement of a new low balance between birth and death rates, at costs ranging from $2 to $15 per capita per year (3-9). General problems in implementation have become increasingly evident, but specific causes and solutions have not been obvious. As one difficulty is corrected, others tend to emerge. Experience in national programmes shows that there are no universal solutions and that what works in one place does not necessarily work in another.

Perhaps the greatest threat to the network idea now is the tendency to burden what are still vague assortments of institutional link-ups with all the problems and unsolved issues that have come to light. A primary need is to build on existing strengths, assigning a manageable and discrete range of responsibilities to local institutions with the capacity to show that networks can achieve their purpose. As networks increase their capacity they can progressively cope with health problems at all levels. This entails a step-by-step involvement of all parts of the health system, including hospitals and referral systems, and the improvement of their functioning. The network idea will, it is hoped, make it possible to learn from past mistakes and to move equitably and steadily towards improved health and better quality of life for everybody.

The idea of organizing networks to promote the implementation of social programmes has its origins in various strands of experience. Informal networks between institutions have always been the basis of the academic and scientific communication through which knowledge has been advanced. Professional associations whose function is to improve the capacity and effectiveness of their members are well-established formal networks. International organizations of professional institutions, such as associations of schools of public health and medical schools, have helped to strengthen faculties and research organizations.

Agriculture is a sector in which an international network has proved especially effective. The sophisticated research activities of the 13 centres of the Consultative Group on International Agriculture Research are a rich

source of new knowledge (10). To apply this knowledge in practice, many countries have established formal links between agricultural universities and extension services engaged in programmes to promote the local adoption of new approaches through demonstrations and regular contacts with farmers. This linkage between research, training, and services in agriculture may serve as an example suggesting how primary health care might be made more effective. In the health field, there is a great advantage that proper surveillance can prevent benefits from being monopolized by an élite. Experience in rural development has shown that programmes of social change by means of a "blueprint approach" may not work (18). However, a new "learning approach" has shown promise in activities ranging from dairy development to irrigation. A blueprint for complex social change cannot be made like a blueprint for a building. However, by involving individuals with the necessary range of disciplines and technical expertise in field activities, problems of implementation can be solved as they arise. A great advantage is that field learning generates the local capacity to maintain a continuing process of problem-solving. This is the kernel of the "learning approach".

Certain special characteristics of the health system need to be recognized in order to define the location of a network in a particular health system. In most places health care began as a highly entrepreneurial activity, based on fee-for-service practice focusing on individuals. By contrast, public health programmes tended to focus first on mass problems that could be attacked directly by passing laws and regulations requiring public compliance. Environmental control measures and means of preventing major epidemics were best planned and implemented from above in a tightly controlled, hierarchical manner.

Public health professionals have automatically tended to use the same vertical approach for two sets of circumstances in which it has worked less well. The first is that, as health care became accepted as a human right, politicians promised free medical care, assuming that government services would provide total care. In most countries, however, they failed to accompany their promises with adequate resources. It was mistakenly thought

that quality care could be disseminated through a centrally controlled hierarchy. In many developing countries, the best that tax-funded services have been able to do is to provide access to care for 15-20% of the population, mainly in the more affluent urban areas. Since Alma-Ata, people have realized that to achieve health for all requires a new approach that gives priority to reaching the people in greatest need.

Similarly, it has proved difficult to apply a "top-down" hierarchical approach in promoting personal preventive services to deal with conditions in which one person's illness does not pose a threat to others. After the variable success of straightforward programmes to control communicable diseases, attention shifted to the prevention of conditions that depended more on individual action and changes in life-style. Much of child care depends on mothers, who are the most important health workers in the world; educational programmes to improve their child care practices must fit in with local culture and conditions. Measures to prevent and control such chronic diseases as cancer and heart disease depend even more on individual and community motivation, action, and life-style. Most primary health care problems need a "bottom-up" approach. Many effective measures depend on individual and community initiative and continuing action.

A network can find local solutions to these problems by providing the framework for a "bottom-up" learning approach. When the central authority of the network is at a sufficiently high level in government, it can stimulate the cooperation of regionalized health services and local institutions in developing district demonstration services. Those responsible for services can draw on expertise in local institutions. Solutions to problems in the health services will be sought in the field practice and research area. As solutions are worked out jointly by health staff and experts from local institutions they can be rapidly fed back into general application. There have now been innumerable demonstrations of locally successful projects in primary health care (3-9). With time their findings have erratically, but eventually, been incorporated into general health care. Perhaps the first such field demonstration project in developing countries was the Ting Hsien

experiment (11) in the 1930s in Central China, which gradually over the next 20 years evolved into the "barefoot doctor" programmes. What seems to be needed now is a systematic, continuing process that does not leave implementation to chance but takes advantage of an improved understanding of community-based social change and culturally adapted management methods.

2. EXPERIENCE IN DIFFERENT COUNTRIES

This chapter briefly reviews experience in a number of countries that have been trying to establish national health development networks. The reports provide information on: the basic reasons for developing a network; the structure of decision-making bodies for health and health-related matters; the organizational leadership of the network; the coordinating mechanisms; the executive secretariat; the composition of collaborating institutions; and the major functions of the network. In most cases some practical experience has already been gained, but some countries could report only their plans.

Ethiopia - High-level political appointments have been made to a special National Health Development Network Committee on which relevant interested groups are represented. The Committee is responsible to the Central Planning Supreme Council. It has a strong coordinating role for the 14 institutions which compose the network. Being directly linked to political authorities at a high level, the Committee can translate policy goals into specific requests for support measures and resources. The Department of Community Health of the Medical Faculty of Addis Ababa University acts as the network's secretariat. The network has undertaken several activities, such as: reviewing, through established working groups, curricula for various health professionals, the preparation of a national programme of continuing education; and the provision of learning materials for various types of health worker. Several field projects have been initiated. The secretariat prepares a health development newsletter and journal and provides general staff support.

Finland - Various networks cover specific functional areas, each with its own management system. The different components are linked by several means. The collaborating institutions function independently and do not belong to a formal organization. The links between some units are organizational, while others depend on informal affiliations based on educational or voluntary connections such as agreements between groups with a common ideology or common

interests. There is no focal point; the units function on the basis of informal relationships. However, a need has been recognized for new methods of financing and planning to solve problems of coordination and reorientation for future planning.

India - A primary health care research network has been planned under the Indian Council of Medical Research. In each of five states, a district of about one million people has been designated as a research and training area to be linked with local institutions, which include one school of public health, three medical colleges, and one rural development institute. These institutions are directly affiliated with the districts in a link-up that also involves provincial health officials. The main effort will be devoted to comparative health systems research.

Indonesia - Two networks are being developed. In the better established one, which is concerned with community-oriented medical education, about six medical colleges have formed different types of affiliation with kabupatens or districts. Some of the linkages have existed for up to 10 years. The emphasis has been on field teaching, with a few research projects. The second network will be composed of five units, each consisting of a school of public health affiliated with one kabupaten.

Jamaica - Coordinating machinery has been set up to support health development activities. The National Planning Agency acts as the focal point, especially as regards intersectoral collaboration with agricultural agencies. In addition, task forces have been set up. An example is the Population Policy Task Force, of which the Planning and Evaluation Unit of the Ministry of Health forms the nucleus. A review has shown that many of the functions of the network already exist in the health system, but in a scattered way. These functions and existing arrangements are being studied with a view to strengthening the network and providing further support to participating organizations.

Malaysia - The National Development Planning Committee acts as a focus for intersectoral and interagency collaboration and functions like a national health council. The National Health Planning Committee in the Ministry of Health serves to coordinate activities with institutions outside the Health Ministry. Planning for a network has been started. Several weak areas in existing networks have been defined, and the Ministry of Health is trying to strengthen links in order to provide more dynamic support to the achievement of "Health for all".

The Republic of Korea - A National Health Council has been formed and will undertake network development as one of its responsibilities. The Council comprises a Permanent Secretary and representatives from the Economic Planning Board, the Ministry of Health, and relevant ministries. The network is structured and hierarchical, with a group of leading administrators directly responsible to the National Health Council. Linkage with political decision-making seems to be well organized. The secretariat is the Korean Institute for Population and Health, which is directly under the National Health Council. Arrangements are being reviewed in order to define and improve functional relations with collaborating groups. The secretariat has been functioning well, but the National Health Council has not yet been active.

Sri Lanka - There is a National Health Council composed of nine ministers, with the Prime Minister as Chairman. Its role is to make national health policy. Under the Council, a National Health Development Committee provides for high-level functional collaboration and intersectoral coordination. To obtain technical support for the national health development committee, six standing committees have been created for various aspects of health development, including health manpower development and training, primary health care, health systems research, drug policies and management, traditional medicine, technical cooperation among developing countries, and appropriate technology for health. The standing committees are guided by a National Health Development Network secretariat, which is responsible for planning future programmes. The secretariat is a special unit in the Ministry of Health. The political process of developing the network has facilitated

acceptance of the idea that a coordinating network of collaborating units is needed, but it has yet to be set up. The network is a basic element in the national "Health for all" plan and has promoted interest among political decision-makers.

Sudan - Consideration will be given to the establishment of a national health development network, starting with the creation of a National Health Development Council (NHDC). Health and health-related ministers, including those responsible for planning, finance, agriculture, and education, and the Regional Minister will be members. The NHDC will have a strong technical secretariat. Its members will include: under-secretaries of the participating ministries, the six Regional Directors of Health, and the head of the National Research Council. The NHDC technical secretariat will be in the planning directorate of the Ministry and will cooperate with other members as needed. This strong technical secretariat is expected to maintain contact with high political levels to ensure that the network effectively supports the health development process. Institutes such as those for training, research, information, and other activities will form part of the network and collaborate in the development activities to be carried out.

Thailand - A network has been established with the main objective of coordinating the activities of government health services with those of training and research institutions, thereby making a more systematic effort to implement established policies. The National Economic and Social Development Board is the highest decision-making group on health policy matters. The Board has designated a National Social Development Project to be responsible for intersectoral coordination. The network is composed of such bodies as the Health Policy Study Centre, the Health Management and Training Project, health research committees, and primary health care training and development centres. These are coordinated by a committee which includes the deans of all faculties of medicine, high-level officials in the Ministry of Health, and others. The Under-Secretary of State for Public Health acts as the Chairman, and the Director of the Planning Division in the Ministry of Health is Secretary of the network.

The United Republic of Tanzania - A national health development network has been formed to bring together functionally the various technical institutions equipped to tackle problems related to planning, research, training, and management. They are expected to facilitate the identification of gaps in the development and implementation of primary health care. The initiating authority is the Ministry of Health and the network committee, on which participating institutions will be represented, will function under the Ministry's auspices. The Preventive and Promotive Health Services Division of the Ministry of Health serves as the secretariat. A high priority is to strengthen district level planning and management.

Yugoslavia - The national policy of "self-management socialism" has led to a highly decentralized system of government. Decision-making power is delegated to the republics and communes. Spontaneous contacts have produced an informal network in which numerous local units participate. Involvement of the people stimulates innovative approaches, mobilizes resources, and provides the sustained motivation needed to maintain high standards of quality. Community involvement tends to maintain links at the level of the people. The decentralization in decision-making makes greater coordination even more important. The need for coordination has been foreseen in laws and regulations at republic level, which include provision for a network of link-ups between institutions. There is a recognized need for the further development of a more formal and systematic network, with specified goals and policies. However, it is recognized that formal coordinating mechanisms should not replace the participatory decision-making and self-management that have proved so important in stimulating local initiatives.

Zambia - A network has been established whose main objectives are to promote the general development of primary health care and to facilitate the coordination of sectoral programmes. A national primary health care development committee was formed in May 1983. Its membership includes the Ministry of Health, research institutions, the National Commission for Development and Planning, the Ministries of Education, Agriculture, Labour, and Social Services, the School of Medicine (Department of Community

Medicine), and a few others. The network is thus multisectoral, and should bring together highly placed intellectuals and decision-makers for frank and constructive criticism and discussion, which should facilitate coordination of the health and health-related activities of different sectors and institutions, research and development, and monitoring and evaluation of national health development.

Zimbabwe - There are at present ad hoc working groups of a multisectoral nature concerned with specific subjects such as nutrition, drinking-water supply, and sanitation. These groups have proved useful and provide a basis for developing a permanent network. The network's focal point will be the Health Planning Unit of the Ministry of Health. The terms of reference of the network will include the translation of health policies into programmes and projects and the coordination, organization, and mobilization of technical capabilities and resources for primary health care.

3. FUNCTIONS OF NATIONAL HEALTH DEVELOPMENT NETWORKS

A national health development network can discharge many different functions, but it cannot be regarded as a panacea for simply and quickly solving all the problems of primary health care. The management does not immediately burden a network with all the issues that are not being adequately handled in health care. When a few carefully chosen priority problems are tackled to begin with, success is more readily assured; collaboration between units leads to wider responsibilities as the network's problem-solving capacity increases.

In the sections that follow, the functions shown by experience to be those such a network might discharge are defined in two ways. First there is a general list of a broad range of possible functions to be considered. Then there is a more detailed discussion of several critical functions that will probably demand priority attention.

Possible functions of a national health development network

The following list of functions could be consulted to determine which of them meet local conditions and needs. The choice of functions has to be highly selective since it is better to choose only a few and perform them well than to dissipate efforts on a number of them.

Policy review: to determine the relevance of existing and proposed health policies in each of the regions where the network has a collaborating unit, as part of the formulation and revision of national strategies to achieve "Health for all by the year 2000".

Decentralization and regional review of resources: to help analyse, in the various regions, the functions that should be decentralized and those that should continue to be centralized, recognizing that the balance will vary. This will include evaluating local variations in prospects of mobilizing financial and other support for locally generated activities. The formulation and implementation of alternative arrangements will vary according to local capability, even when there is a general policy of decentralizing services.

Selection and implementation of priority programmes: to help in the process of selecting, from among alternative interventions, those which each collaborating unit can most suitably undertake. The selection of priority problems requires a systematic review of proposed programmes for potential effectiveness, cost-effectiveness, and equity under local conditions.

Multisectoral involvement: to stimulate and mobilize multisectoral cooperation in a wide range of activities related to health.

Community involvement: to establish and promote national policy encouraging community involvement, and to facilitate "bottom-up" planning and implementation.

Health manpower development: to review and, when necessary, reorient the health manpower development process (policy, reallocation of roles, training and utilization of health personnel) so as to make it relevant to primary health care. The process of health manpower development is discussed in more detail in section 5.

Information and management: to define the needs for information at different levels within the health system and to promote the appropriate use and availability of information for management and planning. This is likely to lead to a sharp reduction in the number of recording and reporting forms and procedures, and to their simplification; at present these functions consume one-quarter to one-third of the time of primary health care staff, and the data collected are often neither reliable nor usable (12). Simple sample surveys are used to obtain information that longitudinal data collection cannot provide efficiently. As one of its main functions, a network can analyse and disseminate useful health information in an aggregated format useful for policy-planning and management.

Health systems research: to define immediate and long-term research needs, on the basis of priorities derived from a local situation analysis and an awareness of health system constraints. Field research of this kind concentrates on practical means of strengthening local decision-making and widening involvement in the implementation of findings; ideally, it involves all levels of health personnel (13). Health systems research is discussed in more detail in section 6.

Monitoring and evaluation: to assist in the development and use of targets and surveillance methods in order to monitor the various aspects of health development, and to set up periodic and continuing evaluation systems based on selected indicators, especially for recording achievements in terms of output and outcome.

District planning and management: to use the network of selected districts as demonstration, research, and training areas, and in this way to improve the local planning and management of primary health care. This will help health service managers to determine how various programmes can be better coordinated and operational problems solved, and how the experience can be used to guide regional and local decision-makers in improving both planning and action.

Drug policies and management: to review patterns of drug procurement and use, and to initiate a continuing evaluation of drug policies and management in order to ensure adequate and equitable availability of drugs, particularly for primary health care and at the first referral level.

Traditional medicine: to assume or share responsibility for improving relations with practitioners of traditional medicine, notably as regards policies to facilitate their participation in primary health care.

Priority functions of national health development networks

(a) Local planning and structural reorientation of the health system

A dictum concerning the kind of planning that focuses on implementation is that it must involve as much as possible those who are to implement it. A network's primary role is to enable those who have technical skills in planning to come together with those responsible for carrying out what is planned. This applies equally at the central, regional, and local administrative levels.

A second dictum concerning planning is that it is foolish to plan for the health services to pay for, or do, anything that someone else will pay for or do. The health services can give preference in the use of their resources to

long-term objectives that are unlikely to be funded from other sources, and especially to ensuring equity in providing "Health for all". In mixed economies people can be given the opportunity to share in providing support for those activities they consider most important.

The health system can then use its resources to supplement community funds, particularly for those activities for which people are usually less willing to pay directly, such as preventive services and family planning. As the priorities of the health system shift from providing high technology, specialist services in hospitals to strengthening frontline services, some resources will have to be reallocated. Politically powerful professional and élite groups will resist the shift from providing care that is excellent, but mainly accessible to only a few, to a more equitable distribution of health care and concern.

Lasting changes require structural reforms. A network can influence such reforms mainly by the types of institution that are brought into it and by planning within a long-term framework. Structural aspects will need to be reviewed at all levels of the health system, including hospitals and arrangements for referral. A dominant feature of planning is stepwise systematic projection towards future goals. The year 2000 provides a long-term perspective within which a network can help to allocate responsibilities in each short-term planning cycle rather than try to solve all problems at once.

(b) Intermediate- or district-level link-ups to improve management

Most planning has been concerned mainly with national institutions and agencies. It was assumed in the past that, if decisions were made at high levels, a natural flow of action would result in health for all at the local level. The Alma-Ata concept of primary health care reverses this orientation and stresses the need for new means of facilitating and mobilizing regional and local capacity so that the people can solve their own problems. National policies can be translated into continuing programmes most rapidly by increasing capability at the intermediate "district" and community level.

Networks can facilitate and demonstrate an improved managerial process by mobilizing and coordinating the contributions of all agencies and sectors related to health in a demonstration district. Problems are identified in the regional health services, and solutions that fit local conditions are worked out in the demonstration area by means of field trials and research. This experience is fed back to improve services in the region generally. Findings from demonstration districts can permeate the rest of the country by using the districts for workshops, study tours, long-term training, and general publicity about achievements. A demonstration district can be used in the same way as a teaching hospital is used to set standards of performance for other hospitals in a region. While the teaching hospital focuses on training medical specialists, the demonstration district can serve a similar function for community health officers, mid-level and peripheral health workers, and community representatives.

Continuing collaboration in the selected district between health services and institutions that have special problem-solving capability, such as universities, is likely to be most effective if it is based on a systematic process of problem-solving. To develop improved patterns of care in an area which will serve as a demonstration for regional health services, some or all of the following steps may be found useful:

A situation analysis to define locally important health problems. To begin with, simple epidemiological methods are used to identify "professionally determined need". At the same time, "community demand" is determined in order to give expression to people's perceptions of their needs and preferences, and to ensure their active involvement. On the basis of this need-demand analysis, priorities among the health problems may be established.

Normally the situation analysis involves a systematic identification of problems in the functioning of the health system. A simplified work sampling can reveal what each member of the health team is actually doing, not just what is written in a job description, if there is one. It can tell how personnel are spending their time in various functions and activities. Gaps and inconsistencies can be identified by matching what is being done with regard to each function against priority problems and policy objectives.

For each high priority health problem defined, a systematic review of possible interventions to clarify the alternative options from which programme choices can be made. This takes into account such "appropriate technology" considerations as low cost, use of local materials, and simplicity (to facilitate operation and maintenance by local people); and, in particular, local cultural sensitivities and preferences. For instance, success with preventive measures, such as oral rehydration, often depends on the cultural acceptability of the methods recommended. With regard to oral rehydration, people in some regions are already using liquid starchy foods or indigenous preparations that can be readily adapted to include the necessary electrolytes.

Identification of the points at which the various interventions can most logically be introduced and integrated to evolve simplified service packages for several priority problems. In formulating these packages, effectiveness, efficiency (cost-effectiveness), and equity are given equal weight. Both health personnel and members of the community should participate in developing these packages through a joint learning process. If the people are involved at this stage, they are more likely to make the changes in community practices and life-style that are called for in implementing the service packages. Such local involvement produces much more continuity than the community manipulation that has often occurred in "top-down" primary health care programmes. In the demonstration district in each region adaptations of the community learning process can be worked out in a way appropriate to the cultural setting.

Decisions on who is to carry out each task in the service package of priority interventions. In accordance with the principle of increasing the capacity of local communities to solve their own health problems, responsibility is delegated as far to the periphery as possible. In this role reallocation, the tasks for which clear routine instructions can be specified are carried out as close to people's homes as possible. This is especially necessary for maternal and child health because of the great difficulty mothers, children, and the poor normally have in obtaining access to health facilities, for geographical, social, or economic reasons. It also applies to nutrition, sanitation, and other factors that depend on changes in life-style. It is likely that all members of the health care team and

suitable community members will need to be retrained in accordance with this task analysis, and that a complete review of curricula and training methods will be needed.

Tightly organized arrangements for logistic support, drugs, transport, referral, technical quality control, and continuing supportive supervision. This aspect of the managerial process is based on the principle that the further services reach to the periphery, the more crucial it is for people to be able to count on consistency and regularity of supplies, supervision, and other essential support services.

Constant monitoring, evaluation, and feedback to ensure that inconsistencies between what is planned and what is done are identified early and that necessary changes are made. Ultimately, effective learning depends on this. It is also important for the programme as it evolves that new gaps should be identified and filled. As some problems decline, it will become possible to define and introduce corrective interventions.

One of the greatest strengths of a demonstration, teaching, and research area is that data and experience in problem-solving accumulate over time. A basic information system that has both precision and flexibility permits new projects to be undertaken at only a fraction of the usual cost of separate studies. Staff come to know local realities and become skilled in field methods of survey and investigation. Data from previous studies help interpretation. Information on such items as household variables do not have to be gathered afresh every time. Improved efficiency helps both research and teaching.

Ultimately the demonstration district develops the capacity to continue this progressive problem-solving process more or less independently. If it does not have a particular health problem at the level of intensity needed for study, it is a relatively simple matter to extend the established procedures to another area. In all these activities a flexible balance needs to be maintained between community control, support from the health services, and stimulation, training, and research from local academic institutions.

The end-result of all this activity in the demonstration district is that, by means of extension methods, the findings are applied to the rest of the region. This is not a simple process; rather, it takes advantage of openings as they occur. Patience is needed to give natural forces of communication and social change time to work. Important direct action can, however, be taken to facilitate diffusion. Some of the principles of contagion apply to extension from demonstration. First, people are exposed, for example by regular workshops, conferences, and seminars in the demonstration area. Seeing someone else do something successfully encourages a doubtful person to say "I can do that too." The main problem is often that people are not aware either of a problem or of its possible solution until they have seen the new approaches themselves, and then they become open to the idea of changing their own performance. They then have to be encouraged to try out the new approaches under guidance. This may mean arranging for successful field workers from the demonstration district to follow up individuals from other districts who have been to workshops so as to encourage them to test and adopt the new approaches. As the process of permeating the region with the new approaches begins to spread, new logistic and management methods will usually have to be introduced to support and reward the innovators. Instead of trying to solve complex problems by simply issuing a new set of regulations, a flexible process of open management enables everyone in the system to know that change is being encouraged and that rewards will be given selectively for improved output and outcome.

4. ESTABLISHING AND MANAGING A NATIONAL HEALTH DEVELOPMENT NETWORK

Mobilizing political and administrative support

A network will succeed only if central policy-makers give it high priority and support efforts to decentralize primary health care and adapt it to local needs. Even then problems will arise, because the notion of a network will be threatening to groups and individuals who are used to working either with considerable autonomy or in a tightly controlled hierarchy. To avoid any implication that coordination will be imposed, planning should be shared, so that all involved recognize that the network will help them to work better and will lead to less, not more, inconvenience.

The development of a sound power-base for the network will depend on effective working relations between decision-makers, field workers, and institutional experts. A network will earn credibility among administrators, professionals, and the public by showing that it can produce results of practical utility through effective cooperation. In formalizing the network, collaborative arrangements should not be subjected to so many regulations that flexibility in responding to changing circumstances is lost. Ministries of health have an essential role in the development of networks, with regard to mobilization, establishment, coordination, and administrative support.

Organizational frameworks

As countries consider establishing a network, they may find they already have some coordinating mechanisms in place. Some changes in relations and formal understanding may complete the process. Patterns of organization and interaction will vary from country to country; for the most part, they involve functional orientation and linkages rather than the creation of new structures.

For the most formal type of network, a special coordinating council at a high government level could mobilize and stimulate the wide range of

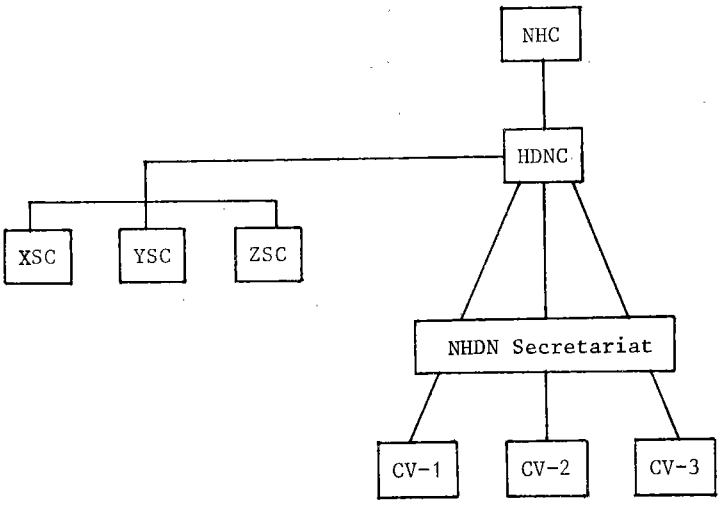
activities necessary to promote primary health care. Such a central mechanism would be in a position systematically to create linkages with institutions both inside and outside government.

At the other end of the spectrum could be a largely unstructured, ad hoc set of relationships in which various groups would work together spontaneously. Where there is a well-established tradition of effective services, informal communication may be sufficient. Such an unstructured organization may sacrifice creativity, however. A more formal mechanism may be more efficient in mobilizing and coordinating interactions of agencies and of activities.

A diverse range of intermediate types of structural network might include various kinds of linkage between institutions outside the ministry of health and ministerial units. Multiple networks might evolve, with an umbrella organization to coordinate the various linkage groups. One or more sub-networks might focus on single functions such as manpower development or health systems research.

Components of a national health development network

A network may entail bringing together or creating the following components, arranged in a locally appropriate model; however, reorganization should be kept simple and non-threatening.



(a) National health council

Some countries have established, at the highest possible level in the government, an advisory group to the health ministry, consisting of the most senior government officials from relevant ministries and a few selected individuals with recognized credibility from universities, non-governmental organizations, and professional groups. Its principal function is to determine policy and oversee the implementation of the national strategy for achieving the goal of "Health for all". When representatives of the various health-related ministries and sectors carry with them the weight of their authority, the council is in a strong position to review needs and broad directions, mobilize resources, consolidate accomplishments, and provide overall national guidance and support to health development. It may be appropriate for the network to function as the secretariat of the national health council.

(b) Health development network commission

At a more technical level, momentum is maintained in network activities when the responsible authorities and the competent officials and experts concerned with planning, management, training, and research meet regularly as a commission to follow up and implement policies established by the national health council. The major contribution of such a commission is to promote decentralization by stimulating the development of the regional units of the network and cooperating institutions. The commission channels information from the various regions to the national health council and other decision-making bodies, so as to assist in formulating policy in a flexible way that can accommodate variations in regional needs and circumstances.

Most countries find they need to draw up strategy documents on particular issues. Usually the planning unit of the ministry of health undertakes this responsibility, but the health development network can assist by helping planners follow a "learning approach" rather than a "blueprint approach". The network can serve in either an advisory or an executive role for particular issues.

Most national programmes to achieve "Health for all" benefit from a "think tank" of the best local experts, who bring together facts and projections to explore alternative approaches to the difficult underlying issues that are usually ignored under the crisis-solving pressure of most planning and programming activities. Normally the outcome will be a clear statement for decision-makers of alternative options, with a balanced presentation of pros and cons for each.

(c) Secretariat

A secretariat to provide permanent support for network activities has been found essential; without one it is unlikely that the network can function. Continuity and persistence in tackling the difficult, long-range problems that must be resolved in implementing primary health care require the continuing commitment of qualified personnel and resources. Organizational units to which a secretariat might be attached are: the national planning commission, the national health council, the office of the health minister, or the national health planning unit. On the other hand, it could be based in an institution outside the ministry, such as a university. It could possibly be assigned to an existing unit or institution. The secretariat must have high-level credibility among several different groups, ranging from field personnel to senior administrators and research workers.

It may be advisable to supplement the full-time staff with a part-time panel of selected experts in essential disciplines, who can provide liaison with relevant institutions. The composition of the secretariat and its role should reflect the principle of having a foot in both camps - one within the governmental health system, and the other among collaborating institutions and agencies.

(d) Subcommittees

Under an umbrella network, some countries have organized separate networks dealing with special functions. Some are considering specialized networks for

manpower and training, for health systems research, for information systems, or for education of the public in health. Even more specifically, special networks for such subjects as population, nutrition, or environmental problems, already set up, may need to be coordinated into the overall network. For broad-based progress in primary health care, strong links need to be maintained between all such networks.

(e) Other elements

Countries make use of expert groups, ad hoc committees, national consultations, and a variety of other elements to serve as organizational components of networks or to perform various network activities.

(f) Collaborating units made up of regional health services and local institutions, agencies, and groups

The day-to-day work of the network is carried out in several field demonstration areas where methods can be developed for the joint activities of the regional health officials and their collaborating institutions. Link-ups between the services and local universities are the principal means by which networks operate. The following seem to be essential requirements:

Close working relations between technical specialists, policy-makers, and field personnel. These can best be achieved if a field demonstration, training, and research area is developed cooperatively by local health authorities and a school of public health or a properly oriented medical school. Such a collaborating unit or focal point in the network can prove as important in improving primary health care as a teaching hospital is in improving clinical care in a region. It is essential for this demonstration area to be an administrative district or equivalent political unit such as a county. If only a few of the existing health centres are put together, "community fatigue" is liable to set in rapidly and demonstration services will never be convincing because they do not cover a whole administrative unit with its own decentralized control of decision-making.

Multidisciplinary institutional teams including specialists for the particular functions and problems being studied. A "critical mass" of competence is needed, and where there are gaps it will be worthwhile to obtain or train new experts and induce them to join in field activities. This applies particularly to economics, social sciences, and other disciplines important in the understanding and promotion of community involvement.

High priority for the management disciplines needed if services are to be effective, cost/effective, and equitable. Primary health care is often handicapped by inefficient management.

Real intersectoral cooperation in primary health care. The only way that functional relationships with other sectors can be established is for the health sector and other sectors to work together over a period of time. In this way they learn one another's languages and values, and can choose activities that manifestly represent common development objectives.

Concentration of a few strong institutions as the core of the network. The notion of a network often seems attractive to administrators because it suggests that diverse groups can be brought together to provide continuing help in solving problems. A recurrent practical dilemma, however, will be whether to include all institutions that express a desire to participate or whether to be highly selective as regards both individuals and institutions. Experience suggests that the best way to extend long-term influence is to be selective at the beginning, i.e., that the network should begin by bringing together the strongest institutions committed to the idea of a national health development network in a country rather than permitting it to be swamped at the outset by weaker institutions. The strong institutions will already be extremely busy and will have to be persuaded to take the lead in progressively helping to develop other institutions and groups so as to permeate the whole health system eventually.

Management of networks

It stands to reason that, if it is to promote efficient management in the whole primary health care system, the network of constituent institutions must itself be well managed. Effective management is so important, and so often

lacking, that almost all networks would benefit from having a subcommittee to promote the managerial process for national health development, and to take responsibility for encouraging good management practices in the work of the field demonstration area and in all network activities.

Network managements have been particularly concerned about the following aspects of management:

(a) Political and administrative authority

A national health development network receives authority, but has to earn credibility. The factors that determine a network's accomplishments seem to be the position and level of its component units in the health system and the staff's calibre and reputation, means of influencing decisions, and success in creating public awareness. Network staffs are aware of the need to build a favourable image vis-à-vis professionals, political decision-makers, and the public. One of the network's functions is the adequate testing of new and tentative patterns of relations before they become finally established and perhaps sanctioned by special legislation or regulations.

(b) Management procedures

Mobilizing collaboration between a variety of institutions and coordinating relations between professionals can be among the most sensitive and difficult of all managerial activities. When the secretariat becomes skilled at facilitating the work of all collaborating groups, individuals find it easy to make the extra effort needed to maintain good collaboration. The management makes sure that every participant gets credit for the accomplishments of the group, and that rewards are shared by interacting groups. Systematic means of providing scrupulous recognition for positive contributions and incentives for extra effort are found to be essential. The many competing interests that have interfered with cooperation in the past can be channelled constructively by new management techniques. Some countries report a very strong tendency on the part of bureaucratic units to subordinate all other goals to the defence of their own territory.

(c) Utility

To maintain relevance, a management has to take special care to demonstrate the utility of its network. The benefits of participation in the network are made clear to the institutions involved. Successful networks have concentrated first on activities that not only were important but also had the greatest chance of success. Once credibility is established, there is usually sufficient momentum to enable the network to take on more difficult and uncertain assignments. An example of a discrete activity that has been found to need attention is the improvement of the network's information system by trials in field areas, usually concentrating first on eliminating all forms and reports that can be eliminated from a health system without loss to decision-makers.

(d) Funding

The financial relationships in a network are as diverse as the organizational arrangements. Since cooperation often follows a release of funds, network managements have found it necessary to make special provision for the use of flexible funds at key intersection points in the network to facilitate procedures that might be otherwise difficult to implement. Small amounts of money at the right time have had the effect of mobilizing extra effort and overcoming institutional constraints and territorial concerns.

Constraints

A number of constraints are implicit in what has already been said. Experience in countries where health development networks have been started shows that these constraints must be faced forthrightly. The most obvious obstacles are those arising from the innate resistance in any organization to any effort to change or coordinate established activities. Normal career patterns require personnel to concentrate their efforts within their own immediate place of work. Network activities, by definition, mean that people are expected to work outside their usual institutional hierarchy, and this is normally considered a nuisance or even a threat to career advancement.

Some networks have therefore expressly arranged for due recognition of network activities in the hierarchical reward systems of individual institutions. Most health services are characterized by intense competition for limited funds, authority, or the attention of top officials and the public. Territorial defensiveness between elements of the health ministry can be obstinate. Between ministries the main problem encountered has been an apathy that has been even more difficult to overcome than open competition.

The following are some of the specific constraints reported by network managements:

(a) Difficulty in balancing national planning priorities and locally chosen priorities

As defined at Alma-Ata, primary health care has always had as a fundamental principle the need to start by selecting and concentrating on a limited set of high priority interventions. Constant pressure to achieve quick results, however, frequently leads to decisions to separate the priority activities from the rest of the health services. Purely categorial or vertical programmes focusing on a single disease or programme tend to interfere with the long-term development of the infrastructure for primary health care.

The question is not whether there should be a selection of priorities but where this selection should be made. While it might seem that a choice must be made between a "top-down" or a "bottom-up" approach, the reality is that both are needed but with a flexible and shifting balance between them. Some activities require a "top-down" approach, and others can be effective in the long term only if they are community-based. The final selection of priority activities is made by balancing local epidemiological realities and community preferences. An effective network seems to be the best means of defining what the local primary health care priorities and services should be, because this helps to decentralize the decision-making process, thereby promoting the local flexibility that is implicit in self-reliance and community involvement. What may be desirable, therefore, is upward planning within broad guidelines, and downward support.

(b) The threat posed to established vertical programmes by the integrative principles underlying primary health care

In theory, all vertical or categorial programmes accept the principle that they should eventually be integrated into the general health services. In practice, the more successful and established they become, the greater their tendency to defend their territory and their insistence on being the framework on which primary health care should be built. Most vertical programmes have been promoted by international agencies that wanted to trace the flow of their money and were looking for quick and dramatic results. Little attention has been paid to the long-term consequences of establishing separate hierarchies, with the result that countries have repeatedly been left with large numbers of categorial programme personnel who have invariably resisted integration.

Not only have such personnel tried to protect their special privileges, but they have also based their resistance on a sense of superiority to other health workers. In order to promote efficiency, vertical-programme staff have typically been encouraged to believe that they were an élite group, and this attitude has caused resentment among other health workers. Increasingly, national decision-makers resist having priorities proposed or imposed by outside donors. The health development network provides a framework for dialogue with funding agencies about the systematic local selection of a limited package of priority activities adapted to the needs of each region of the country.

(c) Traditional resistance to collaboration between institutions, agencies, and professional groups

Wherever possible, networks work with existing institutions and agencies, which have established patterns of competition and cooperation. Attempts to establish linkages take these patterns into account, but the defensiveness of professional associations may be a particularly serious obstacle. In the more developed countries the multiplicity of existing agencies with specialized interests has tended to make the organization of a national overall network

difficult. In less developed countries, problems of territorial defensiveness tend to be somewhat less firmly established and it is often possible to move more directly to the establishment of a formal network. In general, it has been found worthwhile to foster a climate that makes it evident that each institution will benefit more than it will lose from the network, and that the collaborating institutions can further their individual and collective interests through cooperation.

(d) Structural obstacles to intersectoral cooperation in primary health care

Central to the Alma-Ata concept of primary health care is the fact that health improvement depends as much on activities in other sectors as on the health services. If the coordination of activities within the health sector continues to prove as difficult as it has been so far, it would seem naïve to expect much intersectoral cooperation. Two approaches have been tried. In the first, high-level political and administrative commitment makes it evident to the relevant sectors that it is in their best interests to work together to promote primary health care, and funds can be linked to cooperative activities. In the second, which is at the opposite extreme, it is recognized that communities ordinarily do not understand, and refuse to accept, distinctions between sectoral activities, as such distinctions make no sense in the context of the problems faced by villagers. Comprehensive intersectoral development is automatic at village level. As communities become more involved, they may be able to educate and influence the bureaucracies. Intersectoral cooperation has been stimulated when, in each region, the component units of the network have included representatives of other sectors as well as communities, with appropriate incentives to make participation attractive. Programmes planned jointly have brought together the various sectors: for instance, maternal and child health care and family planning have been linked with education and improved opportunities for women; nutrition with agriculture; water and sanitation with public works and housing. The obvious mutual benefits have created a climate for the continuation of joint activities.

5. HEALTH MANPOWER DEVELOPMENT

Health is one of the most labour-intensive of all development sectors. The approaches to manpower planning vary tremendously among countries (14). A long-term perspective is essential because the units of measurement are lifetime careers, and projections within the time-frame of the year 2000 are therefore appropriate. The primary health care approach demands basic changes in the orientation, motivation, skills, and knowledge of all health workers.

Health manpower development comprises three processes: planning, production, and utilization (personnel management). These need to be coordinated with health planning and development in general, but they also call for special attention and methods.

Manpower planning begins with the definition of roles and tasks, as outlined above. Job descriptions specify the characteristics and responsibilities required of personnel. The skills and knowledge needed for each task are defined, with an indication of the need for a quality assessment to allow for the intrinsic uncertainties of the procedures used for defining tasks. Such analyses provide a rational basis for defining educational objectives in behavioural terms for each category of health personnel.

Manpower planning also includes the quantitative estimation of current and future supply and demand. The reclassification of personnel is based on the qualitative analysis mentioned above rather than on past stereotypes of worker categories, which may no longer be relevant. The manipulation of numbers that have little meaning in terms of work actually performed should be avoided. The role of women as health providers will need special attention, since various estimates suggest that 70-80% of the world's health workers are women. Their special needs, and provisions to promote their career advancement, are receiving attention in most countries.

The second part of manpower development is the production of manpower. It is widely agreed that training programmes for all categories of health personnel will need to be revised and reoriented in accordance with the

principles of primary health care. There have been major innovations in the training of health personnel in recent years, especially in the network of medical schools around the world that have developed new, community- and problem-based curricula, and use field-training areas. Similar innovative approaches are needed for training middle-level and community-based personnel. An issue that often arises is whether training areas should be improved to demonstrate how health services should work or whether the students should be exposed to average conditions and actual limitations. The question can be answered best by the analogy of the teaching hospital. It is generally agreed that the skills of clinical care should first be learnt on the basis of norms and expectations of how services are supposed to work, and that the teaching hospital should set the relevant standards. Later, students can be exposed to more realistic conditions as they develop the skills to adapt to working under the usual constraints. The field-training area can follow the same principle. Neither the hospital nor the field training area should be divorced from reality, but both should provide quality services to show students what is expected.

Current experience in educational innovation can be broadly summarized as follows: (i) it bases all training programmes on a clear statement of learning objectives formulated in terms of behaviour or performance; (ii) it orients curricula towards problem-solving so as to make education more realistic; (iii) it pays special attention to the preparation of supervisors for field training; (iv) it uses continuing education to promote and establish innovations in primary health care, but this education should be regular, organized in a systematic way, and related to everyday work and supervision, rather than limited to spasmodic efforts; (v) it recognizes that new approaches to community-oriented teaching are as important as bedside teaching is in clinical training; (vi) finally (and this is basic to all manpower training) it trains teachers to be good role models.

The third component of manpower development is its deployment and utilization (or management). Personnel management is a major and very difficult part of all good management. It comprises, in particular, systematic means of recruitment, clearly specified employment criteria,

improvement of working and living conditions, systematic career development, and continuing education and supervision. The motivation necessary to maintain good-quality services depends greatly on the care taken to maintain job satisfaction.

All the above features of manpower development can be greatly improved by systematic monitoring, which provides quantitative information based on performance criteria, estimates of service quality, and data on consumer satisfaction. Its effectiveness for the improvement of services depends on a rapid analysis of the information and its feedback to the planning, production, and utilization (management) phases of manpower development.

6. HEALTH SYSTEMS RESEARCH

Since Alma-Ata much has been said about health systems research, and some small beginnings have been made. WHO's Global and Regional Advisory Committees on Medical Research have accorded it the highest priority. It has become evident, however, that a major international effort to develop networks for promoting field research and for training research workers in the needed disciplines would greatly facilitate progress.

One of the first needs is to demystify the term "research" for administrators and to get agreement on what is required (13). All levels of health personnel can take part in research of various types. The most important research usually requires not sophisticated expertise but practical problem-solving to apply what is already known. It is field-based and starts with real problems that interfere with day-to-day health care. The people who understand field realities from their daily work experience are in the best position to take the initiative in identifying these problems. They can turn for technical help to persons with special training and experience, who can choose simple research methods from a wide range of disciplines. Decisions about research depend upon sound interpretation of biological, ecological, environmental, and administrative factors that affect health services, and especially upon ability to understand and explain the influence of sociocultural and economic factors in the community. Workshops and seminars are being used systematically to train institutional experts in needed disciplines, and health service personnel in how they can collaborate in conducting suitable research projects.

Justifications for health systems research

For research networks to function effectively the following questions should be considered:

Why? Continuing improvement in the practice of primary health care needs field research. The problems to be solved range from very simple day-to-day managerial and logistic ones to those involved in such complex

tasks as the promotion of community involvement. A systematic and steady process of working out local solutions to constantly emerging problems demands consistent support aimed at developing individual expertise, institutional capacity and a climate in the health services in which the need for research is recognized.

Who? The new orientation to research involves anyone in the health system who has an interest in obtaining information that is not available, as well as specialists from the many disciplines that can contribute to improving the health system. The sharpest identification of problems and the best ideas for solutions and hypotheses often come from community members and field workers. Technical specialists should also be field-oriented so as to be able to choose well among the research methods available from such disciplines as the social sciences, economics, management, and operations research. If the problem is at all complex, the research needs to be multidisciplinary and multisectoral.

Where? Most of the research is done in the field and focuses on everyday activities. A demonstration district can serve as a field laboratory, with a defined population as the base for a continuing flow of problem-solving projects. Depending on the problem, however, any active health programme can be studied.

What? Health systems research, broadly defined, includes all systematic procedures for learning new ways of improving health. It goes beyond the concentration on services which was implicit in the term "health services research". It encompasses other sectors and private health activities. On the one hand, it needs to be distinguished from epidemiology, which is concerned mainly with identifying the frequency, distribution, and causation of health problems; health systems research is concerned with the organization and application of solutions to those problems. On the other hand, it should be distinguished from evaluation, which is a normal part of management and the purpose of which is mainly to find out whether and why accepted goals and objectives have been met or not met. Health

systems research is more concerned with whether the objectives, and the approaches being tried, are appropriate and whether alternative options and approaches might give better results.

Types of research

The various types of health systems research call for different methods and approaches, as outlined below:

Descriptive analysis or functional analysis. It is important first to find out what the current problems in health care are, using simple but systematic analytical methods that help to define causal patterns. These methods can be streamlined by sampling for quick results and by simplified procedures, so that a relatively small team can complete a functional analysis of health needs and resources for a population of several million in a few weeks (12). As gaps and discrepancies are identified, some solutions will be obvious but others will be more complex and will call for special study.

Incremental improvement of field operations. A gradual introduction of changes in services, and careful observation of results, can lead to the identification of successive obstacles and management bottlenecks in health care and of means of resolving them. Perhaps 70-80% of all health systems research should consist of this kind of simple testing of alternative field methods, leading to steady and continuing improvement.

Natural experiments or comparative analysis. Fundamental observations can be made on the causation of problems by looking for situations in which all variables are similar except for a few critical differences which can be measured so as to understand causation and devise possible solutions. Similarly, comparative analysis of situations in several areas with varying conditions can lead to inductive generalizations and thus to a better definition of approaches and an improved understanding of the balance of causal forces.

Simulations. Instead of field studies, simple paper-and-pencil simulations, or more complex computer simulations, can often speed up the process of finding solutions where problems are clearly defined and data are available.

Phase IV field trials. Field trials, in large populations, of new interventions that have been through clinical trials, Phases I-III, are increasingly needed to ascertain long-term effectiveness under natural conditions in the health system, the relative incidence of infrequent complications, and relative cost-effectiveness by comparison with alternative approaches, as well as whether the distribution of benefits has become more equitable.

Prospective controlled field experiments. More fundamental problems in health care sometimes require systematic prospective field experiments that produce well-controlled and carefully collected data. One approach is to vary inputs and systematically observe outputs in utilization and outcomes in health status. Of special value are studies which estimate the cost of various interventions and approaches so as to get information on cost-effectiveness and cost-benefit.

Organization of research networks

In the organization of research networks certain factors deserve priority:

- The development of a "critical mass" of expertise in the collaborating institutions by training individuals who know field realities and have learned the necessary range of research disciplines.

- Provision for regular participation by the community, other development sectors, private health services, and traditional systems of medicine in decisions about what should be studied and how.

- A formal administrative unit with about half a million people, except in areas of low population density, as the field demonstration, research, and training area. A population of this size is needed to prevent "community fatigue", which invariably occurs when field practice areas are limited to a few health centres.

- Collaborating units each made up of a field area and an academic institution, which can be stimulated and strengthened by national and international link-ups to engage in synergic programmes, comparative studies, and mutual sharing of experiences and learning.

- A central coordinating group to promote the overall functioning of the research network and maintain a systematic review of research needs in order to identify gaps in knowledge, inconsistencies between expectations and reality, and obstacles to effective functioning. Such a group can help each collaborating unit with problems of experimental design, research methodology, analysis, and reporting and feedback of findings for direct implementation. Especially important is the need for systematic training in research disciplines, ranging from doctoral studies in needed areas of expertise to regular workshops to transmit information on specific field methods or results from a comparative study.

7. INTERNATIONAL MACHINERY TO SUPPORT NATIONAL HEALTH DEVELOPMENT NETWORKS

Those who have been concerned with establishing national health development networks consider that existing facilities in WHO and UNICEF can continue to provide the stimulus that has brought the concept of the national health development network to its present level of acceptance. Continuing collaboration by such means as meetings, consultant assignments, study tours, and fellowships can make the concept even more explicit and publicize it widely.

There are already a great many regional and special interest networks that will continue and strengthen their coordinating roles. The development of networks is a prime example of an activity assisted by technical development between developing countries (TCDC) through the many regional groupings of countries that now exist, and also through more localized groups such as the Association of South-East Asian Nations (ASEAN) and the Caribbean Community (CARICOM). In addition, technical cooperation between developed countries could be greatly facilitated by the functional or regional grouping of institutional link-ups. Technical cooperation between developing and developed countries (TCDDC) should make it possible to avoid some of the mistakes and misunderstandings that have occurred in the past about such issues as "academic colonialism".

Certain functional areas are known to need special international coordinating machinery so that arrangements can be make to facilitate institutional link-ups, focused on specific themes, among several countries. The most effective networks at present are in populations where network activities of this kind have provided prototype models. Experience has been similar in the area of nutrition. The following are the functional areas in respect of which new networks seem to be in a critical need of international cooperation:

Health systems research. An earlier section has outlined the challenges in this essentially new field. A strong and concentrated effort is needed to build up the capacity of institutions to discover new ways of adapting the principles of primary health care to the specific needs of each region.

Health manpower development. The main initiative in this area has come from networks of professional associations and academic institutions, but one criticism that has been made of them is that they tend to focus on the special interests of their members and often seem interested mainly in maintaining the status quo. Wider networks, it is felt, might result in more objectivity in health manpower planning and education.

Decentralization. A new idea that needs critical attention is that of coordinating attempts at innovation at the intermediate level in the health system. It is at this level that problems in primary health care management are usually reported as most evident and amenable to correction. Some networks have been especially effective in mustering the expertise to solve these management problems through the collaborating units that have been described.

Intersectoral cooperation and community involvement. An emerging need is to bring together, in new international networks, the groups that are working on the difficult problems of intersectoral cooperation and community involvement.

8. SUMMARY AND CONCLUSIONS

The concept of a national health development network is outlined in the WHO publication Formulating strategies for health for all by the year 2000 (15), and it was elaborated in a follow-up document in 1979 (16). Since then an increasing number of countries have begun to develop permanent machinery for bringing together institutions from within and outside the health sector to facilitate multisectoral technical support. The present publication reflects the discussions of a consultation of some of those countries, held in Colombo, Sri Lanka, in November 1982. It also presents a framework, based largely on experiences of several countries from 1980 to 1985, which may guide further efforts to set up national health development networks.

Great success has been achieved since 1978 as regards the political commitment of countries to the goals agreed upon by the Alma-Ata Conference (17), but difficult problems remain regarding their implementation. Expressions of political will are only a start on the long road to "Health for all by the year 2000". Progress demands continuing efforts to increase problem-solving capacity in the various regions of each country.

Largely on the basis of the experience of the countries and institutions that took part in the Colombo consultation, it is possible to outline a flexible approach to the formation of a national health development network providing support for primary health care and aiming at improved regional cooperation between health services and institutions with technical expertise, such as universities or research centres. Such a network promotes decentralization by assisting regional authorities as they take responsibility for adapting the principles of primary health care to regional conditions. It is proving, in an increasing number of countries, to be the best way to identify in a region those parts of primary health care that work effectively, especially as regards management, and then to ensure that similar managerial methods are adopted in the general health services.

Better management and an increased problem-solving capacity produce constructive change when they are directed to local problems. The strength of primary health care is that it involves a partnership between the community and the health services, and this is making it possible to determine local priorities among health problems and to devise the most useful, simple, and low-cost interventions for those priorities. It is not easy, however, for administrative reorganization, management discipline, and continuing changes in living habits to match a region's particular needs. Reaching the people in greatest need is proving especially difficult. No universal solutions to these problems can be expected. A national health development network can devise approaches that will help in adapting the general principles of primary health care to local economic and social circumstances and varying ecological, cultural, and administrative conditions, as those approaches are extended through a region.

A national health development network can be defined as an organizational structure that can link together services, agencies, and institutions competent in the areas of service development, training, and research, in order to mobilize resources and coordinate activities such as management, planning, implementation, monitoring, and manpower development to achieve "Health for all".

A network supplements and supports a system but does not itself take over health care. It draws on the expertise of its constituent bodies to provide the managerial mechanisms that will enable the health system and local communities together to perform the following functions:

- to define priorities among local health problems;
- to identify problems and gaps in local health care;
- to promote intersectoral cooperation and generate a multidisciplinary learning approach to problem-solving in improving services;

- to promote community organization and involvement;

- to focus expertise and resources, otherwise dispersed in a multiplicity of agencies and institutions, on specific priority concerns, by mobilizing the best national and international experts for long-term, continuing involvement in field activities;

- to provide direct mechanisms for the general implementation of findings from local field trials.

A weakness in organizing primary health care has been the tendency of health authorities to select a simplified package of services, standardize ways of providing them in accordance with government regulations, and then attempt vertical implementation from the top downwards by means of "aggressive" management. This "blueprint approach" often fades out because vertical programmes do not fit easily into local health services. An approach that is more likely to succeed is the "incremental learning approach" to local social change (18).

Vertical programmes have been introduced into developing countries almost always by international donors, who want to trace the flow of their funds and to see quick results in the short time-cycles of their grants or loans. It is left to the local health authorities eventually to incorporate the programmes into the health services, but this does not necessarily follow. A frequent argument used to justify a vertical programme is the lack of a credible infrastructure in the health system. Rather than strengthening local health services, however, vertical programmes tend to weaken them by competing with them. Networks are finding ways of integrating vertical programmes into general health care, often against the objections of programme staff, who tend to protect their special status and privileges.

The experience of countries that have organized such networks can be summarized as follows:

1. A country identifies and organizes a structure in which groups can come together to promote health development. For such a structure, links between health service agencies and institutions with special expertise are strengthened and new link-ups created.

2. To contribute to national health policies and priority programmes, a network's composition and functions are defined in such a way that they reflect the country's political, administrative, social, and economic conditions.

3. The structure of a network can take a variety of organizational forms, but the following features seem to be essential:

   - a close link with the country's main health policy-making body, such as a national health council or an equivalent development planning authority;

   - a representative coordinating body to link its component agencies and institutions;

   - a secretariat to follow up the decisions of the coordinating body, to facilitate implementation of policy, and to promote collaboration among institutions;

   - effective linkage within the network, reaching up and down through the various administrative levels of health services;

   - effective horizontal linkage among various functional subunits or nodal points in the network, bringing together regional services and institutions involved in primary health care, research, training, and special programmes in population, nutrition, environmental protection, disease control, etc.;

   - participation, as elements of the network, of the strongest relevant

agencies and institutions and of the most competent groups and individuals; this has the effect of imparting credibility to the organization and of giving it the authority and power to function flexibly and dynamically, and to incorporate new elements as necessary.

When a ministry of health takes action to establish a health development network, it would be useful for it to establish a national health council as well, if there is no such body already. This council then carries out an analysis of the country's health problems, the structure and functions of the health-care system and other health-related institutions and groups, and the local sociopolitical environment and processes (situational analysis). Alternative approaches are then reviewed, and a network bringing together the most representative and strongest groups is developed by taking advantage of existing expertise and links among institutions. Effective collaboration becomes progressively more effective as activities are seen to be successful.

Countries find that international networks can be of assistance in establishing and strengthening national networks.

International organizations have a role in mobilizing political, technical, and financial support and promoting the exchange of experience among established national networks, and among policy-makers in health-related sectors and institutions. This they do by periodic meetings, consultations, study visits, publications, staff exchanges, joint research and evaluation activities, and other forms of collaboration. Network development is strengthened by technical cooperation between developing countries (TCDC), technical cooperation between developing and developed countries (TCDDC), and technical cooperation between developed countries. This may involve regional linkages, special policy-oriented groups, non-governmental organizations, and cooperative arrangements between the international agencies themselves.

Specific activities that need financial support are: situation analysis, review of alternative ways of organizing networks, initial operating costs,

and the recruitment, training, and orientation of staff. In certain functional areas, special international support is often needed for coordination systems to promote institutional linkages and capacity: these areas include health systems research, the development of field research and training areas linked to collaborating academic institutions to adapt services to local needs, intersectoral cooperation and community involvement, and manpower development at all levels.

REFERENCES

1. Primary health care - progress and problems. An analysis of 52 AID-assisted projects. Washington, DC, American Public Health Association, 1982, p. 101.

2. Review of primary health care development. Geneva, World Health Organization, 1982.

3. Djukanovic, V. & Mach, E.P., ed. Alternative approaches to meeting basic health needs in developing countries. Geneva, World Health Organization, 1975, p. 116.

4. Kielmann, A.A. et al. Child and maternal health services in rural India - the Narangwal experiment. Volume 1. Integrated nutrition and health care. Baltimore, MD, Johns Hopkins Press, 1983.

5. Taylor, C.E. et al. Child and maternal health services in rural India - the Narangwal experiment. Volume 2. Integrated family planning and health care. Baltimore, MD, Johns Hopkins Press, 1983.

6. Arole, R. & Arole, M., Jamkhed, In: Newell, K., ed. Health by the people. Geneva, World Health Organization, 1975.

7. Were, M., Organization and management of community-based health care. Nairobi, UNICEF, 1982.

8. National Conference on Evaluation of Primary Health Care Programmes. New Delhi, Indian Council of Medical Research, 1980.

9. Gwatkin, D.R. et al. Can health and nutrition interventions make a difference? Washington, DC, Overseas Development Council, 1980, p. 76.

10. Wortman, S. & Cummings, R.W. To feed this world - the challenge and the strategy. Baltimore, MD, Johns Hopkins Press, 1978.

11. Seipp, C., ed. Health care and the community: selected papers of Dr John B. Grant. Baltimore, MD, Johns Hopkins Press, 1963 (reprinted 1981).

12. Reinke, W.A. et al. Functional analysis of health needs and services. New Delhi, Asia Publishing House, 1976.

13. Taylor, C.E., The uses of health systems research. Geneva, World Health Organization, 1984 (Public Health Papers No. 78).

14. Hall, T.L. & Mejia, A., ed. Health manpower planning: principles, methods, issues. Geneva, World Health Organization, 1978

15. Formulating Strategies for Health for All by the Year 2000. Geneva, World Health Organization, 1979. (Health for All Series, No.2).

16. World Health Organization, Report of meeting on national health development networks. Geneva, 1979 (WHO document SHS/79.5).

17. Alma-Ata 1978. Primary health care. Geneva, World Health Organization, 1978 ("Health for All Series," No. 1).

18. Korten, D.C., Social development - putting people first. In: Korten, D.C. & Alfonso, F.B., (ed.) Bureaucracy and the poor - closing the gap. West Hartford, CT, Kumarian Press, 1983, pp. 201-221.