

Chapter 9

EVALUATING AND MONITORING PHC

"Evaluation is an essential part of any health system since it provides those responsible for planning and management at all levels with information to make national decisions."
Zambia(79)

9.1 INTRODUCTION

The importance of evaluation in PHC development was emphasized in 1978 at Alma-Ata:(208) in order to ensure that primary health care is functioning properly and that the lessons learned in the course of its operation are used to improve the programme, a process of evaluation has to be built in. Evaluation is carried out by those providing the services, those using them, and those responsible for managerial and technical control at the different levels of the health system. Thus, a dialogue is created among all involved, based on their respective assessments but always with a view to improving primary health care.

The need to differentiate more clearly between "monitoring" and "evaluation" emerged as PHC developed. The words "evaluation and monitoring" are in fact often still used interchangeably, hence it is important to determine the exact meaning of the user.

The difference between "evaluation" and "monitoring" was explained in a report from the Philippines: "Monitoring is a continuous activity which is usually the responsibility of an operational unit. The objective of monitoring is to ensure that the necessary action is taken to guide a plan towards its objectives and that activities are modified according to the needs and circumstances under which they are implemented. Evaluation is undertaken periodically and depends upon the nature and intended effects of the plan".(164) Monitoring then is a continuous activity contributing to evaluation which occurs at specific periods. Progress and efficiency require regular monitoring while effectiveness can only be evaluated over a longer period. In order to assess the impact of a programme an even longer period is needed - at least five years. Monitoring contributes to evaluation by showing whether the selected "path" is still being trodden; evaluation shows how much distance has been covered - and how far there is still to go.

Both evaluation and monitoring are based upon, and generate, basic information. Fifteen of the countries reviewed commented on realities and constraints related to basic information.

9.2 BASIC INFORMATION - THE REALITIES AND CONSTRAINTS

One of the main features presently characterizing evaluation and monitoring of the health system is the lack of basic national information and statistics. In some countries a census of the total population has yet to be carried out. In others existing census data have been found to be inadequate - whole sections of the population have been missed out. In some countries existing health information and statistics refer mainly to minority urban populations, and in others they fail to reflect rural and urban differences. Often, it was observed from the African Region, "the profusion of data available is only marginally relevant and sensitive, whereas there is a lack of other more useful data".(5)

Lack of basic national information has serious implications for planning. Effective planning for health requires a broad and reliable base of both statistical and qualitative information. Where this is not available, plans stand in danger of being constructed without a solid base in reality.

The kinds of interrelated problems faced by countries due to lack of basic information were described in a 1980 Mozambican document: "Even at central level there were few people with experience in data collection and organization. Decisions thus were sometimes made on the basis of what should be, goals set on figures pulled out of the air simply because there was no baseline data and no time to collect it. It was only by 1979 that the Ministry of Health had more accurate data - at which point only it became possible to evaluate the PHC programme.(53) It was also found that the previous estimate of population based on a 1970 census had been at least one and a half million short.

The lack of basic information can also conceal what is really happening to specific population groups. For example, a 1977 general census in Mauritania found that in fact the nomadic population had dwindled over the decade from 65% to 36% due to the establishment of new villages by the former nomadic tribesmen. The magnitude of this trend had previously been unrecognized.

Various countries in the review reported recognition of the need to improve their information systems. The successful conduct of a census would provide in Afghanistan the essential benchmark data for future demographic analysis.⁽¹²⁾ The improvement of the collection of data and statistics was regarded as being necessary in Botswana. The present system for collecting and utilizing data in the Gambia could not adequately, it was reported, support the proposed PHC programme. Except for the capital there was no compulsory registration of births and deaths on a country-wide basis.⁽³⁵⁾ A Senegalese report noted in 1981 that there was a lack of trained personnel to collect, collate and analyse statistics. Also the civil registration system contained deficiencies as in the case of the registration of perinatal deaths. A Peruvian evaluation noted that there were many omissions in the registration of births and deaths; that those that were recorded were not always reported to the civil authorities or appropriate level of the health system; and that there was no system for registering migrants.⁽¹⁵⁾ No report existed either of the number of persons registered under the Social Security System.

A study from the Republic of Sudan reported that a great variety of people were responsible for recording births and deaths, from special units in a general hospital to a single person in district and rural hospitals. In rural health centres a statistical clerk was responsible for registering incoming patients. In smaller facilities it was a medical assistant, nurse or community health worker who did all the recording and reporting. In rural areas village midwives were expected to record births and village chiefs to record deaths. Both were expected to report to specified health units. The statistics produced were of limited usefulness regarding scope, completeness and reliability.⁽⁹⁸⁾ A framework existed for recording and reporting statistical information on resources and activities, but the figures usually differed according to different sources, and sometimes it was merely estimated. Statistical indices for inpatient care were found to be poorly understood by those who calculated them. Neither were vital statistics considered to be accurate.

In rural Egypt the parents of a newborn child are responsible for reporting the birth to a central unit within two weeks. In principle parents failing to do so are fined. In villages without clinics midwives are traditionally and informally responsible for reporting all new births, sometimes via the local telephone operator, who in turn notifies the clerk of the nearest clinic. Although late registration is illegal, it frequently occurs. It sometimes takes the midwife or the parents months to report the birth of a child. Sometimes an infant dies before being registered, and neither the birth nor the death is registered.

In many other parts of the world early infant deaths also go unrecorded, especially for example, where the local culture does not consider a very young child as a "person". Deaths due to tetanus neonatorum (tetanus of the new-born) also often go unreported, especially where disapproval from the formal health sector may be feared, as in the case of traditional birth attendants. Also, in some countries it is necessary to pay a small fee for the registration of a death. But many parents consider that they simply cannot afford to pay for the registration of a dead child - when they have living children to feed. A further constraint then to the proper reporting of early infant deaths is poverty itself.

As of 1982 in Nepal there is reported to be no nationwide operational system for the registration of vital events. While the village health workers of the Integrated Community Health Services Development Project collect such information, this project is only operational in 23 of Nepal's 75 districts. Decennial censuses have however been carried out since 1911, the last one taking place in 1981. At present only preliminary results are available from the 1981 census. In the absence of a systematic reporting and recording system, available morbidity and mortality data are viewed with caution. Although data is available from the hospitals and health posts, the decennial census and various demographic sample surveys conducted in Nepal are utilized to assess the overall health situation.

In Burma it is reported that some available data is inadequate and unreliable for the purposes of evaluating health care efforts. There is a lack of statistical staff and office facilities at peripheral levels; the general and postal communications systems present difficulties; there is lack of constant supervision at each level; personnel at intermediate and peripheral levels are unfamiliar with planning, management, monitoring and evaluation methods; there is lack of coordination between Township Medical Officers and health teams and there is a lack of transportation facilities.

The existing vital and health information system in Tanzania was not in 1981 said to be generating adequate regular and reliable statistics for effective monitoring of the implementation of the national health programmes. Civil registration was still confined to urban areas and was not complete. A pilot project aimed at introducing civil registration in four districts using existing administration and political structures will be implemented during the next three years. If the system proves effective and economical, it will be gradually extended to other districts with a view to covering the whole country over the next two decades.

From Zimbabwe it was reported that existing mortality and disease statistics referred mainly to hospital populations and were biased by various legal requirements (the registration of births and still-births of Africans outside urban/township areas was voluntary). There was thus good coverage for Europeans and fair coverage for urban Africans, but poor to non-existent coverage of disease statistics for the rural African population.⁽⁸⁾

From Honduras it was reported that the indicators issued by the National Population Survey in 1972 were still being used as they were considered to be the most valid due to the under-recording of vital statistics since that time which was so great as to invalidate the data compiled.

Even where information and statistics do exist, they may not be easily available for use. In Nigeria for example the Federal Office of Statistics is responsible for the collection and analysis of all types of demographic, economic and social statistics. Its data tend however not to be used by ministries for planning purposes. The Federal Government therefore intends to develop a working relationship between the Federal Office of Statistics and federal and state ministries in the social sectors to ensure cooperation in the collection and analysis of data for the planning, monitoring and evaluation of services, especially for children.⁽¹²⁾

Basic information is then in short supply for evaluation and planning purposes. Often it has not been collected, or if it has, it may be unreliable, or unavailable.

9.3 ACTION TO IMPROVE INFORMATION SYSTEMS

Some countries have adopted various courses of action to improve their systems of registration and the methods used for the collection of basic information. For example, it was reported in 1981 from Sierra Leone that a major project had been initiated with external assistance to strengthen the registration of births and deaths and vital statistics. One of the main objectives was the unification of the civil registration laws so as to obtain compulsory nationwide registration. Another aim was to strengthen the routine collection of statistics relevant to health planning. In Morocco it was announced that following the completion of the population census for 1982, the Government will undertake various social surveys with the objective of improving the data base for the planning of social services. Among the surveys foreseen for 1983 are those on the nutritional status of children under four years of age and on the relationship between education, training and employment. A survey will also be carried out to determine infant mortality.⁽¹⁰⁾ In the African Region as a whole it was reported that all countries will have carried out a census by the end of the WHO Seventh General Programme of Work.⁽⁵⁾

In Burma a new system of collection of demographic information has been designed to get reliable information from both urban and rural areas. This includes the collection by midwives of vital information from the villages or wards where they are residing or working. Vital statistics are also collected by other community-based health workers.

Surveys are undertaken to supplement the existing information system. During these surveys, the morbidity/mortality information from rural urban areas is obtained through the Burmese Lay Reporting System. Twenty-two USAID statistical technicians have been appointed at intermediate and central levels to improve the information system. It is anticipated that statistical assistants will be reinforced at the peripheral (township) levels to strengthen the information system. It is also envisaged to undertake more evaluation studies and surveys partly to support the present information system and partly to measure the impact of the country's health programmes. Plans are under way to improve the current system of collecting hospital inpatient morbidity statistics, outpatient morbidity statistics and information on diseases under national surveillance. It is expected that Townships will be provided with essential office supplies and equipments, namely statistical calculators and typewriters.

Population and Family Planning data in Bangladesh has been computerized, greatly improving the availability of information in this area. There is an acute need for more, better quality and more easily available health data. The Ministry of Health has set up a special committee for development in this field. In the reformulation of the organization and functions of the PHC teams information needs have been taken fully into account.

In the Maldives the Government is keen to develop a National Health Information System (NHIS) in collaboration with WHO. One short term consultation has been provided to develop a medical record system as part of an overall NHIS network. A long-term staff member is working on the design of the NHIS.

In addition to the further development in Nepal of reporting and information systems for various vertical projects, the Health Planning Unit of the Department of Health Services has the objective in the "Sixth Five Year Plan" of developing and unifying the national health information system. The Data Bank established by the Health Planning Unit is expected to play a leading role in the development and possible coordination of nationwide procedures involving statistical services and epidemiological information. The Health Planning Unit will also attempt to develop appropriate procedures for the decentralization of information collection at the district level.

In addition, WHO has provided technical support to the Epidemiological and Statistics Division of the Department of Health, to conduct epidemiological surveys through the existing health services. A general Infectious Disease Survey for 10 diseases - cholera, typhoid, measles, infectious hepatitis, parasitic diseases, tetanus, encephalitis, tuberculosis, leprosy - has been conducted throughout the country. Also 33 medical record assistants have been posted in the Zonal, Regional and District Hospitals since March 1981. WHO has also supported various training programmes, workshops and fellowships for staff involved in the development of a national health information system.

9.4 MONITORING AND EVALUATION - REGIONAL VIEWS

By monitoring PHC implementation a report from the African Region points out that it is possible to determine whether programmes have been correctly formulated and whether the activities and services have been well designed. Officials need to know the extent to which national and regional policies, strategies and plans of action help to improve the health status of the populations. The same indicators and criteria should be used at the various stages of the managerial process, although they may have to be adjusted. Impact indicators¹ will make it possible to measure the changes which have occurred; the level reached will enable results to be compared. Evaluation must be carried out at all operational levels. This means that the individuals and groups responsible for managing services, institutions or programmes are also responsible for evaluating them. However, final responsibility for this evaluation rests with the central authorities. The WHO guidelines¹ may be used by countries wishing to assess progress made to evaluate their policies, strategies and plans of action. In order to measure progress towards an acceptable level of health, the numbers of indicators must be limited and it is essential to understand how to use appropriate figures.⁽⁵⁾ The Regional Committee at its thirty-first

¹Documents HPC/OPE/78.1 and HPC/MPP/DPE/80.2.

session adopted a resolution (AFR/RC31/R4) which invited the Member States to select a limited number of reliable indicators to evaluate progress made. The Regional Director sent a letter to all the countries recalling the terms of this resolution. The regional HFA strategy is to be implemented over a 20-year period through the six-year programmes of work and biennial programme budget. These mechanisms imply regular reviews with results recorded six-yearly and two-yearly respectively.

In the Region of the Americas the systematic monitoring and evaluation of HFA strategies and plans of action is described as a "key activity". Its purpose is to refine the whole HFA process by feeding the experience gained back into it. This will help in decision-making for the adjustment and reorientation of policies and programmes, besides providing the necessary information for adopting international technical and financial cooperation and TCDC.

Analysis of progress in the health sector in the Region has been seriously impeded by the inadequacy of national and regional health information systems, while the incompatibility of existing systems makes it difficult, if not impossible, to compile, correlate, or compare health data between countries, or to gain an overview of health and health care systems in the Region.(611)

The current inability, it is reported, of most of the countries to establish an effective evaluation capacity is recognized in the policy measures for the Third International Development Decade. Where necessary evaluation capacity, comprising also statistical capability should be strengthened with assistance, if requested, from appropriate multilateral and bilateral sources.

The countries in the Region recognize the importance of developing systematic processes for the planning and evaluation of their national health systems. These processes should be integrated into economic and social development planning, provide a sectoral, multi-agency coverage, and include not only national, regional and local-level institutional planning, but also programming at the level of the community sub-system. The process should also be participatory and be a learning experience in which all levels of and participants in the system are involved and in which the institutional planning units play a supporting and analytical role.

A need is seen to develop two types of indicators: those that measure health and social status, and those that measure the provision of health and social services. The health sector has traditionally employed indicators that measure life expectancy, mortality and morbidity, births and fertility. Indicators are also used to measure the quality of life and the degree of social, economic and cultural development. New indicators, it is reported, need to be developed. For example, indicators that measure community participation, penetration of the health sector (i.e., distribution of health resources), environmental conditions and life style. The indicators must also be able to illustrate the difference in health situations between countries so that corrective or developmental measures can be taken through bilateral or multilateral efforts. They must be objective, valid, consistent and sensitive to change. In the policy-making context, indicators are used to motivate and draw attention to priority health concerns. At the managerial or administrative level, they are used for setting objectives and priorities; programming, directing, supervising, monitoring and controlling programmes. Hence, the source data for indicators must, in the majority of cases, be generated at the local or field level, and the data must be capable of being collected or recorded by persons who may not have a very high level of technical expertise.

While, as far as possible, existing sources of data are proposed for indicators for HFA/2000, new systems and procedures for the collection of data will need to be established in a number of cases. The development of appropriate information systems should, it was recommended, be featured in the work plans of Member States.

An intensive evaluation of impact will be conducted in the third year of each general programme of work period, a regional analysis of the health situation being carried out in the final year.

Support to Member States in improving or strengthening the planning process will serve as an initial contribution in the development of monitoring and evaluation. Further support can be provided by promoting evaluation exercises, strengthening the existing evaluation process and training staff.

It is recognized that there are at least two instances when Member States come together and report on their work in the field of health: sessions of the Regional Committee and the World Health Assemblies. It is proposed that reports should be so structured as to be evaluative in nature as well as prospective.

In the Eastern Mediterranean Region because of the great uncertainty of long term plans, considerable emphasis must be placed on monitoring and evaluation so that changes can be made during the plan period in response to new information and opportunities.(10)

For the purpose of HFA/2000 the health indicators selected should be objective, sensitive and specific and be related to the main elements of each national health programme. Preference should be given to choosing a small number of national indicators that have social and political punch and will motivate people and policy-makers to action. Another important use of indicators suggested is in the management of health activities and programmes at different levels - local, regional and central.

The processes of monitoring and evaluation should be in-built and should take place at two levels: the policy level, and the managerial and technical level. Responsibility for evaluation needs to be specifically assigned and the necessary means provided to carry it out. In most countries in the Region monitoring and evaluation units are attached to the central office or committee responsible for planning and implementation. They need to be closely linked with the national health information system. The evaluation network should also include the peripheral level.

In the Region as a whole, although evaluation mechanisms have been broadly outlined, it is felt that the serious gap in the overall evaluation process might be partly overcome by formulating, in close collaboration with countries, a simple evaluation "protocol" as a basis for evolving more detailed and specific national evaluation guidelines. It is further proposed that a report on monitoring of progress towards HFA/2000 should be published biennially.

Training of the national manpower to be responsible for monitoring and evaluation should be planned concurrently. Recruitment would be made by the national authorities concerned, based on the background, experience, interest and career prospects of potential candidates, with actual courses organized for candidates from groups of countries with similar socioeconomic backgrounds.

A 1979 report from the European Region commented that measures of mortality and morbidity have always existed but that evaluation of care also requires indices of outcome. New and more subjective indicators, suitably standardized, are becoming available and offer new opportunities for evaluation in PHC.(12)

Most countries in the South East Asia Region had by 1980 set up mechanisms in their national and health planning bodies to plan, implement, monitor and evaluate programmes for HFA/2000.(144) It is evident that further work will be required for the full fledged development of indicators covering not only the health sector targets but also health-related intersectoral development targets. However, it was emphasized that the strategies in this regard will not be complete by mere selection of appropriate indicators. Action is also required to set up appropriate mechanisms for carrying out evaluation activities.

In the Western Pacific Region at national level the guiding documents in monitoring and evaluation will be the country reports on national policies and strategies for health/2000 and the medium-term plans formulated, or to be formulated, within that context. Monitoring and evaluation will be carried out routinely at fixed intervals as part of the administrative process, as for example, in connexion with the formulation of annual budgets, the preparation of annual reports, mid-term reviews of the medium-term plan, or formulation of a new plan.

It will need to be carried out also at various levels, including the community level, by the health authorities themselves and national health councils and agencies specially assigned for the purpose. (196)

In fact, monitoring by health personnel at local level including, where relevant, social control by community will be strengthened and local level operational monitoring will be linked with the national level programme evaluation to guarantee that what was planned is appropriately implemented and what was implemented was in accordance with the plan. Planning and budgeting, however good, do not guarantee the required implementation. Thus it is proposed that reports should be so structured as to be evaluative in nature as well as prospective. An intensive evaluation of impact will be conducted in the third year of each general programme of work period, a regional analysis of the health situation being carried out in the final year.

Few countries are yet able to match Sri Lanka's reputation for having one of the better organized statistical systems for the reporting, recording and transmission of information concerning vital events in the South East Asian Region. The completeness in registration of births was estimated, according to a 1980 report, to be over 98% and death registration was almost 95% complete. (144)

The central role of information systems in the managerial processes for national health development was emphasized in a 1981 WHO report. (207) In order to plan and manage primary health care the right kind of information is essential, but the collection of information has to be kept to the minimum required. It is important to identify only that relevant information which is going to be used in the community or the referral service. In many instances it is more important to start with qualitative information on the health and demographic situation than to attempt to gather precise quantified data. Quantitative precision can be built up in the course of time. Every level of the health system has its own information requirements concerning primary health care, and the same information may call for a different degree of elaboration and aggregation at each level. Usually information will be of two types: information in response to which immediate action is required, and information on which to base more general inferences, evaluation and subsequent modification of programmes as required. An information gathering system should be planned at the beginning of PHC activities, and as an integral part of those activities and their supporting services.

9.5 REGIONAL AND NATIONAL ACTION

Of the countries studied in this review many described different mechanisms for both monitoring and evaluation. Some involved large-scale nation-wide evaluation studies or monitoring processes. Other described small-scale evaluation studies.

In the African Region it was observed that national information systems pose a complex problem, since they are designed for many purposes. These include support to the national development process, management of health institutions and the conduct of biomedical research. (5) Improvement of health information systems was the subject of the technical discussions of the thirtieth session of the Regional Committee in 1980. A Regional Expert Committee meeting focused on the choice of indicators for planning, management and evaluation of health systems. Workshops were held on information systems and also for teachers of health statistics and information systems. Lastly, a workshop was held on the recording of morbidity and mortality data by non-medical personnel.

Individual countries in the region have detailed plans regarding the development of their evaluation and information systems. For example, Zambia envisages the evaluation of the national PHC programme as proceeding in two overlapping phases: 1) evaluation of implementation of the programme throughout the nation; and 2) development of a simple evaluation system as integral part of PHC activities within each primary health care unit. During the implementation phase particular attention will be paid to community participation and intersectoral cooperation. Detailed evaluation procedures have been worked out for community, district, provincial and central levels, as seen in the following example.

The first step in evaluation at community level is the need to define the area for which each health centre is responsible. Theoretically the boundaries comprise a circle of 12 km. radius from the health centre. Taking various factors into consideration, the health assistant at each centre will establish the true boundaries for which the centre is really responsible. The next steps include mapping the area and a household survey. Community health workers are envisaged as helping in the surveying of their own villages, and maintaining up to date information by recording births and deaths. At district level a baseline survey is envisaged to collect data on the existing health status of the population and available health resources. This can serve as a training exercise for health centre staff and community health workers in establishing their own evaluation system. A provincial PHC coordinator will collate the data from all reports, and this combined data will be used for provincial level planning, as well as being forwarded regularly to the Ministry of Health. These reports will also form the basis of a feedback mechanism providing comparative information by which staff in the districts can assess progress in their own localities. Training seminars on evaluation are also planned for health centre staff. At central level the PHC Section of the Ministry of Health assisted by the Statistics Section will collate and process the information forwarded regularly from provincial level. At least once a year reports will be sent to the provincial and district level medical officers to enable them to assess their own performances in relation to other provinces and districts. "This system of feedback is essential if evaluation is to have any practical use in improving local planning and decision-making."(79)

Even where information is being collected, the system by which it is analysed and "stored" often undermines its full, effective utilization.

In the Gambia for example, it is reported that data tend to be compartmentalized as in the case of tetanus neonatorum - cases are handled through the main statistical unit, whereas the data on immunization of pregnant women against tetanus toxoid are compiled separately by the MCH services. In order to meet urgent needs in the improvement of data collection, the Central Office of Statistics has proposed a simple scheme based on the utilization of traditional leaders in villages as recorders of vital events and the use of specially trained assistant registrars to compile these data on a divisional level. A need is also seen to integrate the present statistical unit with the epidemiological services and health planning unit. Personnel at all these levels are said to require training in the collection and use of data as a means of understanding and monitoring the local situation. Education authorities and school teachers also need to continue to encourage parents to provide a birth certificate on admission to school.

Information gathering activities were reported from Kenya where it was said that the most satisfactory recent nutrition survey was carried out not by the Ministry of Health but by the Central Bureau of Statistics. It provided very useful information because it linked anthropometric data with many other variables collected in an integrated household survey programme. In the projects described, very comprehensive diagnoses of communities were obtained by undergraduate medical students, auxiliaries and community workers. Much of the information required for planning community health activities and PHC was not difficult with community participation. The process of community diagnosis had been described in a "do-it-yourself" type of manual which provided guidelines adaptable to any level of technical ability, from the PHC worker and auxiliary to the medical student and district medical officer. Community diagnosis was regarded as an important part of training for community health, and a learning situation which promoted teamwork and management skills.(304)

In Malawi a new national information system has been set up following a pilot trial in three districts, with plans for the entire country to be served by this network by the end of 1981. With the help of a WHO consultant in 1979 Swaziland developed a country-wide health information system with patient-retained record cards following a pilot study in one area.

Nigeria, which has been implementing a basic health services scheme for over five years, reported on an in-depth review of the scheme. Among the number of shortcomings identified which appeared to have hindered the rapid and equitable spread of health care was the fact that there were no in-built evaluation mechanisms with suitable indicators. This made difficult the task of determining what was obtained from the massive investments.(6)

Other countries have been involved in making nation-wide "inventories" by the listing of all available resources for health. This baseline contributes to more effective planning and management, and is a prerequisite for effective monitoring and evaluation.

In Tanzania baseline data for the development of a simple and relevant health information system was obtained as part of a complete inventory of health facilities carried out in 1978-79. The inventory provided pertinent information on health manpower, equipment, and health service facilities in terms of distribution activities, accessibility and state of the facilities. This information is proving very useful in the preparation of a new long-term plan to the year 2000. Certain selected information will continue to be updated on a regular basis.(65)

An inventory of health personnel and infrastructural facilities was carried out in all districts of Zimbabwe. For one month, eight teams visited health facilities throughout the country's eight provinces collecting demographic data and information on staff, buildings, supplies, equipment, drugs, services offered, and common illnesses. Information on training institutions was also collected. As a result of the inventory, the Ministry is now compiling the information to identify gaps and establish priority areas in the existing system. This will serve as a planning document for future programmes.

In the Region of the Americas in Peru UNICEF-assisted small-scale studies of rural development programmes have involved the training of community level promoters in planning skills. The Regional statistics office and sub-offices were reported as being strengthened and training was given to 66 civil registrars and volunteer statistics collectors at community level.(23)

A report from the Eastern Mediterranean Region(10) emphasized that national health information systems must be designed for the needs of actual and potential users. Since health statistical data constitute the main input, a part of the total strategy must be oriented towards the strengthening of health statistical services. It may well be necessary to conduct ad hoc sample surveys to satisfy specific needs for information. They may be less costly, more accurate, and produce data that will actually be used. Personnel dealing with information systems at various operational levels in the field should be made aware of the importance of the data they collect, and of their potential contribution to the success of the total plan. Firm lines of communication should be established between planning, information and research activities.

In Sudan all hospitals were reported as having a statistical unit which reports to the Director and was technically supervised by the Directorate General of Statistics of the Ministry of Health. The units produced monthly and annual reports on the work performed and resources available.(98) With UNICEF assistance a statistical handbook on the demographic, educational and health situation of the young child had been prepared.(23)

In 1978 Afghanistan reported that the organization of the national health information system was to be under the direct supervision of the Health Statistics Division of the Ministry. A shortage of funds was identified as preventing the carrying out of health surveys in the general community. The development of the national health information system was being hampered by a number of factors. Shortage of experienced staff at central level and lack of a network of well-trained statistical assistants at local level represented the most frequently quoted problems.

A pre-Alma Ata meeting in the South East Asia Region provided a framework for information collection adaptable to different settings. The group drew up a detailed list of symptom associations, indicative of common health problems in various parts of the world, that lay or paramedical personnel giving primary health care in remote areas should be able to recognize. From this detailed list two shorter lists were derived, one for causes of death and the other for reasons for contact with the health service. Field trials of the recording system using the forms suggested were conducted in four countries in South East Asia - Burma, India, Sri Lanka and Thailand. The list was limited to conditions that are important because of their frequency, their gravity, or their cost to the community. In addition they were conditions capable of being recognized by the people reporting them. Some conditions, however, can meet the latter criterion only when the reporting personnel have been specially trained or when the conditions are endemic in the area or a proven epidemic of a particular disease is in progress.

Bangladesh reported the setting-up in 1975 of a Project Implementation Bureau (PIB) under the Ministry of Planning. The main functions of the Bureau were evaluation of projects and schemes, and the collection and compilation of data for the preparation of periodic progress reports. The Health Information System is to be further developed and "bottlenecks" in collecting/obtaining data removed by exacting appropriate legislation where necessary in conjunction with the managerial and operational processes. Bangladesh has drawn up and annually revised major indicators and targets with the aim of monitoring progress towards HFA/2000.

In 1979 Nepal reported the intention to develop the National Health Information System with progressive development of a "Lay Reporting System". The planning unit of the Ministry of Health presently coordinates the development of and assists in the formulation of short-, mid- and long-term plans under the Ministry of Health. It also liaises with the Planning Commission. The planning unit is also the intersectoral coordinating body for updating of information contained in the HFA/2000 document, which was developed by the inter-departments of the government in collaboration with WHO.

In Burma a well coordinated system for the monitoring and evaluation of the people's health programmes (PHP) has been established. The Health Information Service of the Ministry of Health is responsible for its technical development, analysis of information and submission of the results to the PHC monitoring and evaluation sub-committee.

From Thailand it was reported that the Planning and Evaluation Section under the Secretariat Office of the PHC Coordinating Committee and other related agencies is to be responsible for the planning, management and evaluation of the PHC programme. The Ministry of Public Health has initiated the collection and analysis of existing information, part of which is an extensive mid-term review and assessment of programme progress. A working group has been formed to identify quantifiable indicators and to collect a relevant data base for forward planning.

In the Western Pacific Region the WHO Regional Office in 1979 initiated activities to establish a socioeconomic and health indicators data bank which would provide a basis for the regional analysis of the health situation and in due course for the study of health trends in the Region. The first issue of the document contained data on 15 indicators. Based on further information received from countries and areas, these data were corrected and updated. Data on 13 other indicators were also included. The data bank is being reoriented to support regional monitoring of the implementation of the HFA strategies. Accordingly, as a first step, estimates for the year 2000 based on some of the basic health indicators have been included. Other indicators considered relevant for regional monitoring will be added.(401)

9.6 FEEDBACK AND TWO-WAY COMMUNICATION

A Gambian report pointed out certain characteristics of their information gathering system, many of which are shared by the countries reviewed. Firstly, there was a shortage of trained manpower at both intermediate and peripheral levels. Secondly, this was compounded by the fact that the statistical forms used were complicated and not action-oriented, as they were outdated and seemed to serve mainly as a means of collecting data for archival purposes rather than for providing essential information for planning and evaluating health services.(35)

Information has other important functions besides "feeding" the needs of the health services. It also serves when it is a two-way process to help the health service to remain responsible to community level needs and development. But much of the information, particularly of a statistical nature, collected for the purposes of planning and evaluation cannot be readily understood at the intermediate and peripheral levels of the health services, or particularly at community level. One way of organizing information into a more easily usable form is by producing regular bulletins. In Nicaragua, for example, a monthly epidemiological bulletin has been produced which indicates the measures to be taken with respect to diseases classified as dangerous; local health services are thus kept constantly informed.(3) In Sudan a series of bulletins were produced in a UNICEF-assisted project, on the social situation of children and their families.(9) In another UNICEF-assisted

project in Peru training was given to 40 health promoters and 34 technicians regarding the production of audiovisual aids and the most efficient ways of conveying technical knowledge to the community. Some 1500 educational booklets, 10 sets of audiovisual aids and six photographic displays were produced in the central workshop of an urban slums project. (23)

In The Western Pacific Region the provision of information to the public is regarded as a major component of future strategies in support of HFA. Public opinion is envisaged as being mobilized at both regional and national levels through the development of appropriate health education methods, and approaches in community organization. The public will be kept informed through the mass media and through personal contacts with health sector personnel. This kind of information exchange is an essential part of education for health or "health education" - in its broadest sense.

9.7 THE USE OF INDICATORS

A 1981 WHO publication⁽²⁰⁵⁾ pointed out that Member States are now engaged individually in developing or updating strategies to attain health for all in their own countries. Regional and global strategies are also being developed or updated in support of these national strategies. There will then be a common need to know what progress is being made towards reaching the goals of HFA.

One method for assessing progress involves the use of "indicators" which are, as the name suggests, designed to give an indication of a given situation or to give a reflection of that situation. To be effective, indicators should be valid - they should actually measure what they are supposed to measure; they should be objective - ideally, what they indicate should be the same if measured by different people in similar circumstances; they should be sensitive - they should be sensitive to the changes in the situation; and they should be specific - they should reflect changes only in the situation concerned. Indicators then are reflections of "reality". They are indirect or partial measures of a complex situation, but if measured sequentially over time they can indicate direction and speed of change and serve to compare different areas or groups of people at the same moment in time. (205)

Hundreds of possible health and health-related indicators exist. WHO's task has been to provide a selective list from which countries can choose those which are most relevant to their own health and socioeconomic situation and for which data collection and analysis is feasible. The final selection of indicators should be guided by the uses to which they are put. The selective list of priority indicators to monitor progress towards health for all has been based upon the primary health care concept as outlined in the report of the Alma-Ata Conference.

9.8 INDICATORS - SOME COUNTRY VIEWS

What types of indicators are presently being used or are considered a priority by the countries reviewed? Nearly a third (31%) of the countries reviewed mentioned specific issues relating to indicators being used or planned in order to evaluate progress towards HFA goals.

An Indonesian report emphasized that in principle some indicators were relevant for long-term evaluation while others were essential for short-term monitoring of health activities. The former were related to measuring the quality of life; the latter, to measuring specific aspects of health. The former were also to be determined by and useful to other sectors besides health. The specific indicators for some areas such as education are still far from being clearly defined. Others, for example for coverage and disease incidence, are already available. "We cannot therefore expect to have a single set of indicators for 20 years, but instead must utilize certain available indicators for the entire period and add others as they become available at the end of each five-year plan period". (113)

A report from Senegal suggested the specific criteria by which appropriate indicators for PHC progress should be selected:

Adaptability - they can be adapted to the purposes of the specific PHC activities;

Acceptability - to policy and decision-makers who, in the final analysis, permit the selection of the strategy;

Stability - they permit the obtaining of results which are comparable in different conditions and at different times;

Simplicity - simple to understand and enabling the collection and analysis of information at the periphery;

Applicability - to all the levels of the health services, and capable of illustrating differences in health status between specific population groups.(57)

9.9 SPECIFIC INDICATORS BEING USED TO MONITOR PHC

The four broad categories of indicators for monitoring progress towards HFA/2000 as suggested in a 1981 WHO publication, relate to: health policy, socioeconomic factors, health care provision and health status.(205)

9.9.1 HEALTH POLICY

In the first category - health policy - the specific indicators suggested are:

- political commitment to health for all
- resource allocation
- the degree of equity of health resources
- community involvement in attaining health for all
- organizational framework and managerial process.

Of the countries studied in the review 21% (15) mentioned indicators of political and financial commitment to health for all. Of these, four were using the percentage of the national budget spent on health; one was using the percentage of the health budget on primary health care; one reported that PHC did not figure in the health budget but that PHC interventions could perhaps be themselves evaluated; one alluded to the specific implementation of PHC in certain regions of the country as an indicator of serious commitment; one alluded to the percentage of effective resources (not exclusively financial) allocated to PHC; one regarded the construction of health centres plus their recurrent costs as an indicator of political and financial commitment; one used "classical" indicators (non-specific); two gave no details of indicators in use and four were not presently using indicators in this category at all. Indicators relating to degree of equity of health resource allocation were not alluded to.

Only seven countries in the review (10%) mentioned indicators relating to community involvement in attaining health for all. Five of those seven claimed not to be using any indicators at present. Of the remaining two, one reported that no general national indicators were presently available, except for one specific programme; the other, was using the number of health posts available (whether the posts were constructed and/or operated via community involvement was not clear). It appears then, that community involvement indicators are being considered but not yet used.

Regarding indicators relating to the organizational framework and managerial process of HFA strategies, 24.2% (17) of the countries reviewed mentioned specific indicators which were being used or proposed. These dealt largely with collaboration between the health sector and other sectors. One country reported on the indicator of transmission of health information to the ministers of other sectors. Some countries included under the general WHO-suggested heading of "organizational framework" data relating in fact to indicators of "health facilities", and "socioeconomic progress". These data related to factors such as adult literacy rate, the provision of water and sanitation and proper nutrition. (For the purpose of this review a problem emerges here of attempting to "fit" the reality of what countries are doing to the suggested conceptual framework to be used with the WHO-proposed indicators for HFA.) The main emphasis was on the education sector, with seven countries pointing out the importance of the adult literacy rate and the difference in literacy rates between male and female. School attendance was an indicator in three countries, "national

education" in another, the distance to school in another, and in another an examination of the success of mass education. Eight countries reported on use of indicators relating to the provision of safe water and basic sanitation. The indicators involved number of wells and latrines, distance to piped water, percentage of population covered by water supply and sanitation facilities, and ratios of facilities to population. Other indicators in this category dealt with harvesting, agricultural production, food intake, food reserves, and the establishment of programmes. Also mentioned were housing, civil registration, road access and family planning.

The very diversity of the foregoing indicators illustrates a basic problem. The problem is that different countries are using the same indicators for different purposes. According to the rights of self-determination countries in principle can choose specific indicators for their own specific purposes. For example, adult literacy can be used both as an indicator of "social progress" and one of "reduction of inequality", and the number of available health posts can be seen as an indicator both of "coverage and accessibility" and of "community involvement". In the final analysis however it could be difficult if not impossible to meaningfully relate the diverse information generated by the same indicators but for different purposes. Any final assumption of progress made would be seriously invalidated.

In principle, the same indicators can be used with good reason for a variety of purposes. In practice, however, it is necessary that the specific purposes of specific indicators are clearly defined at the outset and on through the different levels of the information system from community to global level. For national level data is often further aggregated at regional and then again at global level. Each "aggregation" removes the data further from the reality to which it relates, and if the basic data is not sufficiently reliable, the aggregations become increasingly meaningless.

9.9.2 SOCIOECONOMIC FACTORS

In the second category the specific social and economic indicators related to health are:

- rate of population increase
- gross national product or domestic product
- income distribution
- work conditions
- adult literacy rate
- housing
- food availability.

Few countries in the review reported, with the exception of the adult literacy rate, on the use of social and economic indicators.

9.9.3 HEALTH CARE PROVISION

In the third category the indicators of provision of health care are:

- coverage by primary health care (the essential components of PHC)
- coverage by the referral system.

The first indicators relating to the essential components of primary health care deal with information and education concerning health.

Few countries reported on indicators of health education. Five countries pointed out that they did not presently employ national level indicators in this respect. One country reported on an evaluation in progress of a health education programme with the implicit assumption that indicators might thereby be forthcoming.

Indicators relating to the promotion of food availability and proper nutrition were mentioned by eight (14.2%) of the countries reviewed. Two were not presently using indicators although specific nutrition programmes were mentioned.

Twelve (17.1%) of the countries reviewed mentioned indicators relating to water and sanitation. These included the ratio of water supply or sanitation facilities to population, the number of wells and latrines, the distance necessary for access to safe water and the percentage of population covered by water and basic sanitation. One country reported that no assessment was presently being made regarding water and sanitation.

Seven countries (10%) mentioned indicators relating to maternal and child health. One gave no details; another pointed out that no national indicators were presently in use, but small-scale projects were furnishing statistics relating to maternal and child health. One country reported on the use of crude numbers of consultations but had not so far developed specific indicators.

Other indicators mentioned were the number of births and birth weight, and family planning at national level. Indicators relating to immunization were mentioned by eight countries (11.4%). These included the number of children immunized, the number with vaccination scars and the percentage of EPI coverage. One country which collected information on numbers immunized, pointed out that it was not presently using the information. Another country reported that the information relating to immunization was not collected with any specific indicators in mind.

Seven countries (10%) mentioned indicators of prevention and control of endemic diseases. Two were not presently using indicators in this respect. Four countries were using indicators (not specified) but considered them as unreliable. One country claimed to be using indicators relating to malaria, leprosy and onchocerciasis.

The indicators relating to treatment of common diseases and injuries was mentioned by seven (10%) countries. Five indicated that the number of consultations was regularly monitored. Another reported that the number of consultations did not differentiate between all consultations and those at primary level. One country was using indicators relating to five specific conditions - malaria, upper respiratory and eye conditions, light wounds and diarrhoea. One country was using indicators relating to four conditions - malaria, diarrhoea, eye conditions and wounds.

Seven countries (10%) mentioned indicators in connexion with the provision of essential drugs. One was not presently using any indicators. One did not have any indicators in connexion with drugs used specifically at primary level. One was using indicators in relation to five specific conditions - malaria, upper respiratory and eye conditions, light wounds and diarrhoea. The other three were using: a) indicators relating to urban-rural distribution, b) a centralized distribution system, and c) budget per capita on a Regional basis.

The accessibility and geographical distribution of referral facilities were mentioned by 16 (22.8%) countries. One did not presently use specific indicators. Two claimed to use indicators but gave no details. One did not presently use indicators but was charging the health committees with collecting information in this respect. One was using unspecified health indicators, but not for PHC specifically. One country was using unspecified indicators in areas of maximal rural development. Of the remaining countries, under the general heading of "coverage and access" the following groups of indicators were reported as being used by the individual countries concerned:

- health facilities per village and distance to facilities
- facility - population ratio, MCH utilization and number of wells
- facility - population ratio and EPI coverage percentage
- facility - population ratio and percentage of population within five kilometres of a health facility

- facility - population ratio plus the percentage of users of the new water supply services
- distribution of health facilities and manpower, input and output of manpower training programmes, utilization of health facilities and coverage of the eligible population by the immunization programme
- percentage of skilled maternal care plus EPI coverage
- facility to population ratio plus percentage of children covered by the EPI and specific disease (unspecified) rates
- MCH utilization, EPI coverage and number of wells.

The grouping of indicators to assess accessibility and PHC coverage differs between countries and in some cases even within countries. The ratio of facilities to population is the most frequently mentioned indicator, followed by EPI coverage.

Virtually no information was available in the documentation studied regarding the actual utilization of referral facilities, the types and quality of care provided in them, or the economic and cultural accessibility of these services to the population.

9.9.4 HEALTH STATUS

The indicators in the fourth category of indicators for PHC relate to health status:

- nutritional status and psychosocial development of children
- infant mortality rate
- child mortality rate (1-4 years inclusive)
- life expectancy at birth or at other specific ages
- maternal mortality rate
- disease specific mortality
- morbidity
- disability
- social and mental well-being.

Regarding indicators of nutritional status, although 64 (98%) of the countries mentioned protein calorie malnutrition as a problem, very few figures were given as to the percentage and groups of populations suffering from malnutrition. Two countries reported on using indicators of nutritional status. No information was available regarding the psychosocial development of children.

The use of the infant mortality rate as an indicator of health status was mentioned by 13 (18.5%) of the countries reviewed. A few countries emphasized urban/rural differences in principle, if not in statistical terms.

Little information was available regarding the use of the child mortality rate or under-five mortality rates as indicators of health status. In the HFA plans however, several countries had specific indicators and targets relating to child mortality, such as for example India where the present pre-school (1-5 years) mortality rate of 35-40 is scheduled for reduction to 15-20 and to 10 by the year 2000.⁽¹²⁵⁾

Use of the indicator of maternal mortality rate was reported by few countries, but many countries planned to incorporate it into HFA plans.

Regarding disease-specific mortality and morbidity, two countries reported on the use of these specific indicators. Seven other countries reported on the use of "classical" indicators to assess health status, using presumably indicators which include mortality and morbidity rates. One country used "indicators of health status" (unspecified).

Four countries reported use of the indicator of crude death rate, and two on the indicator of crude birth rate. One reported use of the rate of demographic growth as an indicator of health status. One country was using the number of wells and bore-holes as an indicator of health status.

No information was reported regarding indicators of disability or social and mental well-being, but due largely to emphases and activities generated by the International Year of Disabled People 1981, the evidence suggests that indicators on disability are likely in some countries to be in the formulation stage.

The indicator of life expectancy at birth was mentioned by eight (11.4%) of the countries reviewed. One country was using life expectancy plus IMR to assess the impact of the health services on the population. A few countries differentiated between different groups of the population.

A composite use of health status indicators was reported from Papua New Guinea⁽¹¹⁷⁾ where a health status index was based on: the rural life expectancy, rural child mortality and malnutrition level, and the percentage of five year old children attending clinics who are less than 80% weight for age. In addition, a health service index was based on the number of health extension officers per thousand people and ratio of population per aid post plus travelling time to aid post. These indicators relating to health status and health services were used to determine fund allocations per province. A statistical assessment of the full value of this mechanism is not yet available.

While it would appear that many countries are not yet extensively using the specific categories of global indicators suggested, other chapters portray a situation where this type of quantitative and qualitative data is being collected for other purposes.

9.10 SUMMARY

The importance of evaluation and monitoring in PHC development continues to be emphasized in regions and in countries. Monitoring is seen as a managerial process, a continuous in-built activity which is undertaken to assess progress, efficiency, and ensure that the plan adopted is being implemented and that necessary adjustments can be made. Evaluation is seen as a process which makes use of the information generated by monitoring, but is a more "periodic" activity undertaken at specific times and for specific reasons, particularly to assess effectiveness and impact. From the information obtained from the countries reviewed the following trends were evident relating to evaluation and monitoring primary health care:

a) A lack of basic national information and statistics was reported as one of the main factors presently complicating monitoring evaluation and planning activities in many countries. Civil registration of vital events, where it occurs, is often still confined to urban areas or minority population groups, and there are cultural and poverty constraints to the reporting of some events such as early infant deaths. Even where basic information has been collected it is sometimes of limited usefulness regarding scope, completeness and reliability. Many existing systems of health monitoring and evaluation have been designed to support a national development process, management of health institutes or for research purposes. Future systems require closer approximation with the HFA goals. Sample surveys were suggested by some countries as being able to satisfy specific information needs and as being less costly, more accurate and capable of producing usable data.

b) Many countries reported plans of action to improve existing information systems. These included the carrying out of censuses, inventories, large-scale and small-scale evaluations and surveys, pilot trials, the setting up of specific units with special responsibility for monitoring and evaluation the computerization of information and the introduction of relevant legislation, for example for compulsory registration of births and deaths. Plans are also under way to improve current systems of collection of institution-based morbidity and mortality statistics.

- c) Some countries have introduced specially trained assistant registrars to compile data at divisional level and traditional village leaders are being utilized to record vital events as part of the development of lay information systems. In one Region guidelines produced have included a handbook on statistics and a manual to assist the process of community diagnosis and the provision of baseline data. This also serves to promote teamwork and managerial skills. In another Region a framework for peripheral level information collection has also been developed which is adaptable to different settings and relates to symptoms associated with common health problems.
- d) Ineffective general and postal communications systems have also posed problems in developing effective country mechanisms for monitoring and evaluation. A further problem relates to "compartmentalization" of data, such for example as where data relating to tetanus cases is handled by one unit, but immunization of pregnant women against tetanus is compiled separately by another unit. In addition, there is often lack of coordination between various ministries and institutions which produce basic information and statistics. The need is recognized therefore to integrate entities such as statistical units and epidemiological services with health planning units. There is also reported to be a need for coordination between planning, information and research activities.
- e) A variety of manpower customarily records vital information, such as those associated with special units in general hospitals, single individuals in district and rural hospitals, clerks in health centres and community health workers and traditional birth attendants at community level. Some data can therefore be collected or recorded by persons who do not have high levels of technical expertise. Ideally monitoring and evaluation of PHC should be carried out by those providing services, those using them and those responsible for managerial and technical control at different levels of the health system, thus creating a "dialogue" for PHC improvement and progress. It has been suggested that it is more important to start with qualitative information on the health and demographic situation than to attempt to gather precise quantified data. Quantitative precision, it is hoped, can be built up in the course of time.
- f) For effective systems of monitoring and evaluation "two-way" systems of communication are essential. This serves to help health services remain responsible to community level needs and development. Some countries have used regular bulletins, audiovisual aids, displays, and the mass media for information feedback purposes to keep the public informed.
- g) Countries reported that various mechanisms have been set up for monitoring and evaluation, including special units and bureaux. Nevertheless it is recognized that even at central level there are often few individuals with experience in data collection, collation and analysis. There was also reported to be a lack of intermediate and peripheral personnel familiar with planning, management, monitoring and evaluation methods, and a lack of constant supervision at each level. Additionally there was often a lack of basic office facilities such as typewriters and calculators.
- h) Workshops have been held to assist health manpower in developing national health information systems. Fellowships have also been awarded in this area. It is recognized that responsibility for monitoring and evaluation must be specifically assigned, and the necessary means provided to carry it out. New systems for data collection and analysis therefore need to be developed.
- i) It is generally recognized that monitoring and evaluation potentially refine the HFA process by feeding experience gained back into the process. It is also recognized that effective planning for health requires a broad and reliable base of both statistical and qualitative information. Such information also assists decision-makers in adjusting and/or reorienting policies and programmes, and providing necessary information for adopting international technical and financial cooperation and TCDC.
- j) It is recognized that monitoring and evaluation should ideally be planned at the initiation of PHC activities, should be action-oriented, should provide essential information and statistics, and should be seen as an integral part of those activities and their supporting services.

- k) Some countries point out that monitoring and evaluation of PHC should be participatory learning processes in which all levels of the health system are involved and in which institutional planning units play a supporting and analytical role.
- l) At national level the guiding documents for monitoring and evaluating progress towards HFA generally consist of national policies, statements, and plans. National monitoring and evaluation systems for HFA are generally carried out as part of the administration process in connexion for example with the formulation of annual budgets, the preparation of annual reports, mid-term reviews of medium-term plans or the formulation of new plans.
- m) At regional level a constraint to the development of effective monitoring and evaluation processes for HFA is the incompatibility of existing national monitoring and evaluation systems which presently render it difficult/impossible to compile, correlate or compare health data between countries or to gain an overview of health or health care systems in a region. It has been pointed out also that there are at least two instances when Member States come together to report on their work in the field of health: sessions of the Regional Committees and the World Health Assembly. The proposal has been made that country reports should therefore be so constructed as to be evaluative in nature as well as prospective. It has also been suggested that regional level simple monitoring and evaluation protocols would serve as the basis for evolving more detailed and specific national monitoring and evaluation guidelines.
- n) Countries are now engaged individually or collectively in developing or updating strategies for HFA, and regional and global strategy development or updating is designed to support these endeavours. Nearly a third of the countries reviewed gave details of specific health and health-related indicators in use or planned. WHO has assisted in providing a selective list of indicators from which countries can choose those indicators relevant to their own health and socioeconomic condition and for which data collection and analysis is feasible. Consolidated lists of regional HFA indicators are presented in Tables A-K, following the summary. At present some countries are using a variety of indicators relevant to long-term evaluation (for example of intersectoral quality of life); others relevant to short-term monitoring activities relating to measuring specific aspects of health. Countries point out that some universally applicable indicators are not yet available and must be added in the course of time. The criteria for effective country-level indicators are suggested as adaptability, acceptability, stability, simplicity and applicability.
- o) In principle the same indicator can be used for different purposes. In practice however this poses a problem. The problem however is that different countries are using the same indicator for different purposes, such as for example using the number of health posts to indicate coverage and access, or to indicate existence and degree of community involvement. It thus becomes difficult, if not impossible particularly at supra-national level, to meaningfully relate diverse information generated by the same indicator, and can invalidate assumptions made. It is therefore necessary that the specific purposes of specific indicators be clearly stated at the outset, and then again through the different levels of information systems from community to global level. For, at each level aggregations of data occur, as they move further away from the reality to which they relate. If the data are not sufficiently reliable at the outset, the aggregations become increasingly meaningless.
- p) What is needed is the use of a limited number of commonly accepted indicators with which to periodically review and update national HFA policies, strategies, and plans of action in 1983 and for specific periods thereafter. Apart from traditional indicators for health status and provision of health services there is also a general need to employ indicators relating to quality of life, community involvement, degree of socioeconomic and cultural development and environmental conditions. Indicators for HFA need to relate not only to health sector targets but also to health-related intersectoral development targets.
- q) Every level of the health system has its own information requirements regarding progress in PHC. The same information calls for different degrees of elaboration and aggregation at each level. Some information is used for immediate action, other information for more general inferences, monitoring and evaluation, and modification of activities or plans.
- r) It has been pointed out at regional level that it is not always lack of information but lack of ability to specify information needs that is presently the single most significant problem for improving monitoring and evaluation for HFA.

REGIONAL INDICATORS SPECIFIED FOR MONITORING PROGRESS TOWARDS HFA/2000^ATABLE A HEALTH STATUS AS OF OCTOBER 1982REGIONS

	AFRO	AMRO ¹¹	EMRO	EURO ¹²	SEARO	WPRO
1. Crude Death Rate	x				x	1
2. IMR ²¹	x ²	x	x	x	x	x
3. Perinatal Mortality Rate	x			x	x	
4. Neonatal Postneonatal Mortality Rate				x	x	
5. Pre-School Child Rate					x	
6. "Toddler" Mortality 1-4 years	x	x				
7. MMR ²³		x		x	x	x
8. Life Expectancy ²²	x ³	x		x ¹⁵	x	x
9. Morbidity/Mortality: Specific Diseases	x ^{10,13}	x ¹⁴		x ^{7,16}	x	
10. Incidence/Prevalence: Communicable Diseases ²⁴		x		x ⁵		
11. Incidence Mortality Chronic Degenerative Diseases		x				
12. Birthweight Below 2500 gr. ¹⁹	x	x	x	x ⁹	x	x
13. Kilo Cals: Food per capita ¹⁷		x			x	x
14. Protein & Calorie Intake ¹⁸		x				
15. % Children 50% Underweight	x			x ⁸		
16. Height/Weight in children ²⁰						
17. Birth Rate			x			
18. Population Growth ²⁵						x
19. Fertility Rate		x		x ⁴		
20. Family Planning Indices			x		x	
21. Smoking/Drinking Habits, by Age/Sex and per capita consumption		x		x ⁶		
22. Mortality Rate: Selected Causes				x		
23. Dental Health				x		

^A References:

- a) AFR AFR/RC31/4, 13 July 1981.
- b) AMR Official Document No. 173, December 1980 and "Propuesta de Indicadores obligatorios para la evaluacion y monitoreo de las estrategias regionales para alcanzar la meta de salud para todos en el ano 2000 (30/4/81)".
- c) EMR EM/RC 30/9, August 1980.
- d) EUR ICP/SPM 043(1), April 1981.
- e) SEA SEA/RC33/19, July 1980.
- f) WPR WPR/RC32/6 Add. 1, April 1981.
- g) Health Resources Indicators: Health Indicators proposed by WHO Regional Offices and Health Indicators in International Programmes. WHO, Geneva, 12.1.1982.

¹ Final selection of regional and global indicators was reported as in progress in 1980. The indicators mentioned are therefore provisional. Other indicators mentioned for possible

inclusion are: Industrial absence; Absence from School; Incidence of specific nutritional deficiencies, such as nutritional anaemia; xerophthalmia goitre, oral health status.

- 2 IMR below 50.
- 3 Life expectancy above 55.
- 4 Percentage of pregnancies before 15 years of age.
- 5 Incidence of sexually transmitted diseases and incidence of water-borne diseases.
- 6 A further "Lifestyle" Indicator was "Number of People in Sports Associations" - by age.
- 7 A "Quality of Life" Indicator is "Proportion of persons disabled as a result of permanent impairment - in selected age groups.
- 8 % of children below a given nutritional state - by age.
- 9 Birthweight in selected groups.
- 10 % of morbidity by major cause and as ratio of outpatient visits and hospitalized cases.
- 11 Also number of persons incapacitated by accidents.
- 12 Also days of restricted activity: also disability/level of activity and prevalence of long-term disability.
- 13 Also % of mortality by major cause and as ratio of outpatient visit and hospital cases.
- 14 Plus mortality EPI diseases.
- 15 And at ages 1, 20, 40 and 60.
- 16 Plus years of life lost.
- 17 The global indicators in "Global strategy for health for all by the year 2000", WHO, Geneva, 1981, specify "The daily per capita calorie availability exceeds 2500 calories."
- 18 The global indicators specify "The daily per capita protein availability exceeds 70 grams".
- 19 The global indicators specify "At least 90% of newborn infants have a birth weight of at least 2500 grams".
- 20 The global indicators specify "At least 90% of children have a weight for age that corresponds to reference values given in Annex I to 'Development of Indicators for Monitoring Progress towards Health for All by the Year 2000'."
- 21 The global indicators specify "The Infant Mortality Rate for all identifiable sub-groups is below 50 per 1000 live births."
- 22 The global indicators specify "Life expectancy at birth is over 60 years".
- 23 The global indicators specify "Maternal Mortality is below 3 per thousand live births".
- 24 The global indicators specify "No cases of diphtheria, tetanus, whooping cough, measles, poliomyelitis and tuberculosis occur".
- 25 The global indicators specify "The population growth rate is reduced to less than 1%".

TABLE B HEALTH SERVICE PERFORMANCE

REGIONS

	AFRO	AMRO	EMRO	EURO ₄	SEARO	WPRO
1. Immunization Status ⁷			x		x	x ¹
2. % at Risk Children Immunized	x	x		x ⁵		
3. % Uptake of Services Offered					x	
4. % Population requiring minimum service annually/ type/socioeconomic group		x		x ²		
5. Services to Individuals by type		x				
6. Formal and Informal Environmental Services/Type		x				
7. % Coverage with Ante-natal Care. ¹⁰					x	x
8. % Delivery by Trained Attendants. ⁶					x	x
9. Effective Protection of Couples with FP.				x ³	x	
10. Characteristics of Services Supplied according to National Programming Standards (Availability). ⁸		x				
11. Volume of Programmed Production by type of Service/Type Population (Availability). ⁹		x		x		
12. Activities Programme by Unit of Resource (Availability)		x				
13. Production of Services/Type/Population Group		x				
14. Persons Attended by Type Service/Population Group		x				
15. Observed Productivity by Unit of Resource/Type Activity		x				
16. Duration of stay in hospital				x		

¹ Other indicators possibly to be included are % delivery by trained attendant and the provision of nutritional supplements.

² % population entering the health system through PHC.

³ % of contacts in PHC which do not involve curative services, i.e. family planning.

⁴ Also % of contacts in PHC not involving curative services, like surveillance, health education/promotion plus: % general population not willing or reluctant to use a given type of services, plus: % of users satisfied with the ways the services are provided.

⁵ Number of countries having achieved 100% coverage with immunization.

⁶ The global indicators specify "The percentage of deliveries by trained health personnel is 95".

⁷ The global indicators specify "The percentage of children immunized against diphtheria, tetanus, whooping cough, measles, poliomyelitis and tuberculosis is 95".

⁸ The global indicators specify "local health care including the availability of at least 20 essential drugs, within one hour's walk or travel is 100%".

⁹ The global indicators specify "The percentage of children up to at least one year of age given routine child care by trained health personnel is 100".

¹⁰ The global indicators specify "The percentage of pregnant women with at least 3 visits for antenatal care is 100".

TABLE C HEALTH MANPOWER

<u>Indicators</u>	<u>REGIONS</u>					
	<u>AFRO</u> ₃	<u>AMRO</u>	<u>EMRO</u>	<u>5</u> <u>EURO</u> ₁	<u>SEARO</u> ₇	<u>WPRO</u>
1a Human Resources by type/10.000 pop.		x ⁴				
1b Population/Physician Ratio	x	x		x	x	1
2. Population/Nurse Ratio	x	x		x ²	x	1
3a Population/Midwife Ratio	x			x	x	
3b Population/Dentist and Pharmacist		x		x		
4. Population/CHW Ratio		x			x	
5. Population/Voluntary HW Ratio					x	
6. Health centres Without Doctors					x	
7. Adequacy/Distribution				x ⁶		
8 Ratio, number of village health team to villages in region and/or country	x					

¹Other possible indicators mentioned: measures to introduce status and career prospects of manpower; human resources by type; establishment of mechanism for continuous monitoring of training needs.

REFERENCES

1. Number of doctors working alone in primary care practice and number of teams of 2. 3. 4.... partners. Also number of persons working in primary care teams other than physicians, by category.
2. Plus % nurses working in hospital and the community.
3. Both public and private sectors/district/region/national/urban/rural.
4. Plus numbers sanitation workers, dentists, radiologists, medical laboratory workers, veterinarians, nutritionists/10,000 pop.
5. Plus % personnel working outside institutions.
6. Population concerned by trained personnel in PHC service.
7. Plus health manpower by urban/rural
Plus ratio between various types of health manpower.
Plus ratio between PHC workers and the rest of the health system.

TABLE D HEALTH FACILITIES

	REGIONS					
	AFRO ⁴	AMRO ⁷	EMRO	EURO ²	SEARO	WPRO
1. Physical Resources/Type		x				1
2. Population Per Unit by Resource	x ⁵	x				
3. Index of Use Local Resources in Production Essential Drugs & Construction Health Facilities						
4. Population/Bed Ratio Rural/Urban	x	x		x	x	
5. Population/Health Institution Ratio		x ⁸		x	x	
6. Population/Health Centre Ratio					x	
7. % Population Covered by Safe Water/Rural/Urban		x		x	x	x
8. % Population Covered by Sanitation/Rural/Urban ¹⁰		x		x	x	x
9. Degree of Equity of Distribution of Resources	x ⁶					
10. Standpipe/Protected Water 15 mins. from Home. ⁹	x					x
11. Availability of Essential Drugs	x					
12. Health Service Coverage/Access		x ⁸		x ³		
13. % of First contact with specialists resulting from referral from PHC				x		

¹ Other possible indicators: transfer of knowledge and skills to members of the community health service, quality and appropriateness, community satisfaction with the health services.

² Average daily time of availability of PHC services.

³ Average delay between occurrence of emergency and appropriate care. Plus % population with access to PHC within 5, 30, 60 minutes or longer. Plus average waiting time for selected facilities. Plus Indicators of shortfall (number of people on waiting lists).

⁴ By district/region/national/urban/rural areas.

⁵ Number of people per PHC unit: plus ratio of different types of health unit to population.

⁶ % population having access to Health Care Unit (HCU) - catchment area to be determined by country and, if possible, as radius from HCU.

⁷ Plus total number of hospitals.

⁸ Number of hospitals within short/long distance and population/hospital

⁹ The global indicators specify "The percentage of population served with safe water in the home or within 15 minutes walking distance is 100%".

¹⁰ The global indicators specify "The percentage of population with adequate sanitary facilities in the home or immediate vicinity is 100%".

TABLE E FINANCE

Indicators	REGIONS				
	AFRO	AMRO ₆	EMRO	EURO ₁₀	SEARO ₁₂ WPRO ₁₄
1. Structure of GDP.		x			1
2. No. of countries with GNP PC US \$500+. ¹⁷	x				x
3. GNP per capita.		x	x	x	
4. Income PC with mean for lower 10%.			x		
5. % Budget to social sector.				x	
6. % GNP spent on health.	x	x		x	x
7. % budget to health sector.	x ⁴	x	x	x	
8. Health budget allocation rural/urban.	x			x	
9. Per capita expenditure on health.		x ⁸		x ¹¹	
10. % resources for PHC (including finance). ¹⁵			x ²	x ³	x ¹⁰
11. Sources of finance by sector/institution		x ⁹			
12. Structure of finance by institution/type of service.		x		x	
13. Programmed unit cost/type of activity.		x			
14. Observed unit cost/type of activity.		x		x	
15. Cost per health centre per annum.				x	
16. Income distribution.				x	
17. Ratio resources external origin to natural resources spent on health. ¹⁶	x				
18. Commitment/involvement of the population.	x ⁷				

- ¹ Other possible indicators: changes in pattern of resource allocation to HFA; priority of disadvantaged groups.
- ² Plus lowest 10%; plus calculations on per capita basis.
- ³ % of cost of health services devoted to primary care of which % devoted to pharmaceuticals.
- ⁴ Including health expenses borne by ministries other than the ministry of health. The global indicators specify "A reasonable percentage of national health expenditure is devoted to local health care".
- ⁵ Including expenditure by government, state-run/private bodies/private individuals.
- ⁶ Plus private health expenditure as % of national health expenditure. The global indicators specify "At least 5% of the GNP is spent on health".
- ⁷ Ratio or % of contributions by the population to health programmes to national expenditure.
- ⁸ Plus per capita government health expenditure. DG memorandum 29 March 1982 specifies "Resources are equitably distributed".
- ⁹ Plus expenditure on social security in % of national health expenditure.
- ¹⁰ Plus % cost of health services falling outside inpatient institutions. Plus % of population covered by medical insurance social security scheme, etc.
- ¹¹ Plus urban/rural/geographical/administrational region.
- ¹² Plus proportion of capital and recurrent expenditure by budgetary allocations.
- ¹³ Changes in pattern of resource allocation to primary, secondary and tertiary health care.
- ¹⁴ Plus priority of disadvantaged groups.
- ¹⁵ The global indicators specify "Defined strategies for HFA are accompanied by explicit resource allocation".
- ¹⁶ The global indicators specify also "Defined strategies for HFA need external resources", and a separate indicator: "The needs for external resources for defined strategies for HFA are receiving the sustained support of more affluent countries."
- ¹⁷ The global indicators specify "The gross national product per head exceeds US \$500 at 1980 market prices".

TABLE F HEALTH RELATED SECTOR

<u>Indicators</u>	<u>REGIONS</u>					
	<u>AFRO</u>	<u>AMRO</u>	<u>EMRO</u>	<u>EURO</u> ⁷	<u>SEARO</u>	<u>WPRO</u>
1. Population/age/sex/geog. distribution.		x	x			1
2. Population/distribution.		x	x			
3. % Population in extreme poverty.		x		x		
4. % Population living in marginal conditions.		x				
5. Unemployment and employment.	x ⁸	x		x ⁵		
6. % of population: landless/jobless.			x			
7. Communications.					x	
8. Total cereals grown per capita.					x	
9. Literacy rate. ⁸	x ²	x	x ³		x	x
10. % adults receiving non-formal education.					x	
11. % children in school.	x ⁴		x	x ⁴		
12. % children 5-10 in primary education.					x	
13. Dependant groups.			x	x ⁶		
14. % population exposed to given levels of selected pollutants.				x		
15. Levels of education/various age groups.				x		

¹ Other possible indicators: quality of life index plus disparity reduction ratio; secondary school entry and completion; measures to indicate change in social status of women: dependency ration; urban/rural population ratio.

² Literacy rate over 50%.

³ Literacy rate male/female.

⁴ Absenteeism from school.

⁵ Absenteeism from work and % active population seeking employment.

⁶ % people over 70 years with low dependency status.

⁷ Other indicators include criminality rates, and % of population satisfied with their own level of health.

⁸ The global indicators specify "The adult literacy ratio for both men and women exceeds 70%".

TABLE G COMMUNITY INVOLVEMENT AND SUPPORT

<u>Indicators</u>	<u>REGIONS</u>					
	AFRO	AMRO	EMRO	EURO	SEARO	WPRO
1. Measures of community resource allocation for health action. ⁵						x ¹
2. Measures community participation in management of health services. ^{3,4}				x ²		x

¹ Other possible indicators: measurement of health habits, i.e. use of latrines, safe water, personal hygiene, child rearing, fertility regulation.

² % of primary care teams with an established mechanism for community participation.

³ DG memorandum of 29 March 1982 cites this as "mechanisms for involving people in the implementation of strategies have been formed or strengthened and are actually functioning".

⁴ The global indicators specify "At least 80% of local communities at all levels have well-established voluntary and formal community organizations which are committed to continuous PHC action programmes".

⁵ The global indicators specify "The community contributes in cash and kind to health or health-related action".

TABLE H HEALTH POLICY

<u>Indicators</u>	<u>REGIONS</u>					
	AFRO	AMRO	EMRO	EURO ⁽¹⁾	SEARO	WPRO
1. No. of countries have allocated resources and developed appropriate managerial resources.	x					
2. Index of health legislation and enforcement	x			x		
3. No. of countries in which HFA has received endorsement as policy at highest official level. As per memorandum of DG 29 March 1982.						

(1) Number of countries having signed the European Health Charter.

TABLE I MANAGERIAL PROCESS

<u>Indicators</u>	<u>REGIONS</u>					
	AFRO	AMRO	EMRO	EURO	SEARO	WPRO
1. Mechanisms for development of HFA policies, strategies and plans of action i.e. National Health Councils and National Health Development Centres or Networks.				x		x ¹

¹ Other possible indicators: measures of decentralization of programme planning and management to provincial, district and community level.

TABLE J INTERSECTORAL COLLABORATION

<u>Indicators</u>	<u>REGIONS</u>					
	AFRO	AMRO	EMRO	EURO	SEARO	WPRO
1. Establishment of intersectoral coordinating councils.						1

TABLE K

LIFE EXPECTANCY AT BIRTH

		<u>Life Expectancy</u>		<u>Life Expectancy</u>	
		1979		1979	
AFRO	Chad	41	EMRO	Somalia	44
	Ethiopia	40		Afghanistan	41
	Mali	43		Pakistan	52
	Burundi	42		Sudan	47
	Upper Volta	43		Yemen Arab Republic	42
	Malawi	47		Egypt	57
	Rwanda	47		Yemen PDR	45
	Benin	47			
	Mozambique	47	SEARO	Bhutan	44
	Sierra Leone	47		Bangladesh	49
	Tanzania	52		Nepal	44
	Zaire	47		Burma	54
	Niger	43		India	52
	Guinea	44		Sri Lanka	66
	Central African Rep.	44		Indonesia	53
	Madagascar	47		Thailand	62
	Uganda	54		Mongolia	63
	Mauritania	43		Maldives	-
	Lesotho	51			
	Togo	47	WPRO	Kampuchea Dem.	-
	Kenya	55		Lao PDR	42
	Ghana	49		Viet Nam	63
	Senegal	43		China	64
	Angola	42		Philippines	62
	Zimbabwe	55		Papua New Guinea	51
	Liberia	54			
	Zambia	49	EURO	Morocco	56
	Cameroon	47		Bulgaria	73
	Congo People's Republic	47		Finland	73
	Nigeria	49		Portugal	71
	Gambia	-			
	Swaziland	-			
	Botswana	-			
AMRO	Haiti	53			
	Honduras	58			
	Bolivia	50			
	Nicaragua	56			
	El Salvador	63			
	Peru	58			
	Dominican Republic	61			
	Colombia	63			
	Guatemala	59			
	Canada	74			