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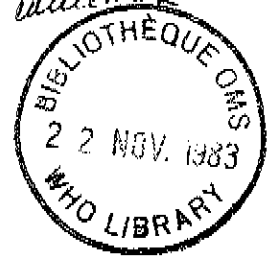
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DEVELOPMENT OF INFORMATION SUPPORT TO
NATIONAL HEALTH MANAGEMENT FOR
HEALTH FOR ALL BY THE YEAR 2000*

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I. INTRODUCTION

Member States of the World Health Organization, in their acceptance of the goal of "health for all by the year 2000", have established some form of managerial process for national health development (MPNHD). Nine essential elements of MPNHD, directly related to health and social systems, which can be identified, in spite of the wide inter-country variations, are:

- (1) Formulation of national health policies: made up of goals, priorities and main directions towards priority goals;
- (2) Broad programming: translation of the policies into strategies;
- (3) Programme budgeting: allocation of financial resources for implementation of the strategies;
- (4) Master plan of action: main lines of action to be taken to implement the strategies;
- (5) Detailed programming: statement of objectives, targets, technology, manpower, infrastructure, financial resources and time required for implementation of the strategies;
- (6) Implementation: translation of the detailed programmes into action including day-to-day management of programmes, support services and institutions;
- (7) Evaluation: assessment of the impact and effectiveness of programmes;
- (8) Reprogramming: re-examination of any of the elements of the management process in the light of the evaluation results;
- (9) Information support.

It is within the context of the interrelationship of these elements of MPNHD, indicated in Figure 1, that one can discuss the rôle of information support.

II. INFORMATION REQUIREMENTS

The purpose of any information is to improve the understanding of problems and issues and for decision making. The value of such information depends on its relevance, clarity, timeliness and specificity. Each component of the MPNHD has a minimum information requirement. The following are examples of minimum information required for each MPNHD component:

- (1) Formulation of national health policies
 - Situation and trends in: health, demography, economy, environment.
 - Health-related political decisions.
 - Development policies of non-health sectors: population policy, education policy, agricultural policy.
- (2) Broad programming
 - Main causes of morbidity, mortality and disability, with special emphasis on those conditions that are preventable or curable.
 - Cost of preventive or curative actions for the above conditions.
 - Morbidity/mortality by specific disease/condition for which preventive or control action will be taken.

- Existing coverage with preventive or control action.
- Past achievements in relation to stated international, regional and national goals (including quantified targets and deadlines).
- Available infrastructure and its characteristics, with special emphasis on characteristics concerning the health sector.
- Manpower productivity.
- Projections of what can be done given different amounts of resources.

(3) Programme budgeting

Recent and present programme budgets (for the governmental subsector, private and community sectors and nongovernmental organizations) with a breakdown of resources/expenditure by main categories of activities and by main geographical/social areas. For example: manpower, facilities (hospital beds, etc.), vehicles, fuel, training institutions, equipment and supplies, costs.

(4) Master plan of action

Outline of strategy and budget allotments.

(5) Detailed programming

Manpower technology, infrastructure, finance, time constraints.

(6) Implementation

Information on:

- Actual coverage data for the eight essential primary health care activities, patient flow, drug flow, school and industrial health, environmental hazards, disease outbreaks.
- Current usage of transport, manpower, supplies and equipment.
- Expenditure.
- Quality control of health education, prevention activities, curative activities, environmental health action, etc.

(7) Evaluation

- Time charts showing progress towards reaching targets.
- Cost-benefit and cost-effectiveness measurements and projections.

(8) Reprogramming

- Situation and trends.
- Projections.

The relevant observations and data come in a wide variety of forms, are made by many different observers and generated from various records which flow through a number of channels. Hence the need for a systematic examination of the development of information support to health management whether at national or subnational level.

The precise development of Information Support to National Health Management (ISNHM) depends upon local, regional and national organization and administrative traditions as well as cultural and economic factors. The ISNHM should in practice be developed from the periphery to the central level. Although the leadership in its development may originate from the national level, it should always be remembered that ISNHM is to serve the needs of all the people, those who seek services and receive them, and those who need but neither seek nor receive appropriate services.

III. SOURCES OF INFORMATION

As already mentioned MPNHD requires relevant information for appropriate decisions to be made. Regular reporting systems and special surveys may serve as sources of the necessary information. Sometimes 'impressions' and 'learned' judgements of 'experienced' people may be the only available source of information. There are methodologies developed to collect information arrived at by consensus from a group of knowledgeable and responsible people. Delphi techniques are an example.

IV. SELECTIVITY OF INFORMATION

Selectivity of information is a very crucial aspect of ISNHM: information gathering and analysis are expensive in terms of money, time and human resources. They should therefore never be embarked on as a vertical programme within the health care delivery system. They should be part of the health activities and undertaken in conjunction with all of them. Before information gathering and analysis are undertaken it is important to identify who the users are likely to be and what kind of relevant information they are likely to need. Different potential users; health managers and care personnel at all levels, research workers, educators etc., may require different types of information or the same kind of information presented differently. Even the degree of detail would vary for basic information on the demographic characteristics of the people.

V. GUIDING PRINCIPLES FOR DATA ACQUISITION

The only reason that any society creates or permits the existence of a formal, or even informal, health care establishment is to assist its citizens in improving their health and in alleviating their perceived health problems. From this fundamental premise it is possible to derive principles that should guide the development of information support to national health management:

- (1) The data should be person-specific. The information support must have the capacity to relate health problems, attributes, events, activities, services and outcomes, for example, to counts of individual persons. It is usually more important for a manager to know how many people are severely disabled by cause, than it is to know how many disabling diseases, classified by the ICD, exist in the population. Similarly it may be more important to know how many children are appropriately immunized (those with full course of immunizations within a prescribed age period) than it is to know how many immunizations were given by the nurses. Although it may, in some settings, be desirable and even possible to count all persons in a population, sampling methods are frequently adequate, as well as more accurate, for purposes of making useful estimates and they are usually much less expensive.
- (2) The data should be population-based. The information support must have the capacity to make comparisons across geo-political jurisdictions and over time. This can best be accomplished by the statistical process of standardization not only for differences in the age and sex structures of populations but also for such factors as disability, severity, chronicity, urgency and case-mix. For the equitable distribution of resources on the basis of need among peripheral and geo-political jurisdictions such comparisons are needed by politicians and planners. They are best made by the calculation of rates in which the numerator is from sample surveys of households or clinical records and the denominator from censuses or population estimates.

Comparisons over time both within and among geo-political jurisdictions are needed in order to monitor progress being made towards the specified goals and objectives. The frequency with which comparisons are made should be related to the expected rate of change of the phenomenon being observed. For example, acute conditions change more rapidly than chronic conditions, and treatable or preventable conditions should decrease more rapidly than those for which no treatment is known or available.

Most current statistics bearing on health services tend to be practice-based or hospital-based and in the absence of data identifying the person's place of residence it is impossible to generate population-based statistics. This is a most serious deficiency and a major impediment to the use of much health information for setting priorities and allocating resources, especially in peripheral and intermediate sectors of the health system.

- (3) The data should be problem-oriented. The information support must be problem-oriented. The task of a health care system is to assist in the prevention, treatment, and management of the people's perceived health problems.
- (4) The data should be provider-specific. The information support must have the capacity to identify where and by whom the service was provided. The deployment of resources effectively and efficiently implies a requirement that they be related to the distribution of the people's problems over space and time. To monitor these relationships, as well as the quality, benefits or outcomes of care, the individual person and his problem need to be linked to the provider, and all three to the population served. In addition, it is important for the manager to ascertain that simple treatable problems are being managed at the lowest appropriate levels, at the earliest possible time, and with the least expensive use of resources.
- (5) The data should be product-specific. The information support must have the capacity to identify the forms of intervention used, the drugs prescribed, the procedures carried out or the advice given in order that the distribution, quality, benefits, outcomes and appropriateness of care, and the uses of resources and costs incurred can be monitored. In general it is desirable to start with short lists of broad categories of commonly employed "products", than with long classifications of all possible forms of service.
- (6) The data should be period-specific. The information support must have the capacity to relate persons and places, over periods of time. Again, the precise structure of the recording instruments and methods employed should be related to the decisions to be made and the geo-political levels involved. For monitoring industrial accidents requiring emergency services it may be desirable to record time of day, whereas the monitoring of seasonal epidemics may only require identification of the day or week.
- (7) The data should be practical. The information support, as a managerial tool, should seek to minimize the respondent burden whether the respondent is the individual in the community, patient in the clinic/hospital, the community health worker or any other workers in the health system.

VI. INDICATORS

Returning to the fundamental premise that the only reason that any society creates or permits the existence of a formal, or even informal, health care establishment is to assist its citizens in improving their health and alleviating their perceived health problems, we beg the question: "How can the 'society' tell whether it is achieving the expressed goal?". Society needs some yardsticks for measuring its progress towards the goal. The yardsticks are called 'indicators' which, according to WHO's guidelines for health programme evaluation (Health for All Series No. 6), are defined as "variables which help to measure changes".

Member States of the World Health Organization agreed on a short list of twelve indicators for monitoring the progress of the Global Strategy for Health for All by the Year 2000. These indicators are not only of health status, but cover the other relevant areas such as health policy, social and economic factors, health care provision and PHC coverage. For reference see: Health for All Series Nos. 3 and 4.

Quoting from "Global Strategy for Health for All by the Year 2000", in the Health for All Series No. 3, the twelve global indicators are:

The number of countries in which:

- (1) Health for all has received endorsement as policy at the highest official level, e.g., in the form of a declaration of commitment by the head of state; allocation of adequate resources equitably distributed; a high degree of community involvement; and the establishment of a suitable organizational framework and managerial process for national health development.
- (2) Mechanisms for involving people in the implementation of strategies have been formed or strengthened, and are actually functioning, i.e., active and effective mechanisms exist for people to express demands and needs; representatives of political parties and organized groups such as trade unions, women's organizations, farmers' or other occupational groups are participating actively; and decision-making on health matters is adequately decentralized to the various administrative levels.
- (3) At least 5% of the gross national product is spent on health.
- (4) A reasonable percentage of the national health expenditure is devoted to local health care, i.e., first-level contact, including community health care, health centre care, dispensary care and the like, excluding hospitals. The percentage considered "reasonable" will be arrived at through country studies.
- (5) Resources are equitably distributed, in that the per capita expenditure as well as the staff and facilities devoted to primary health care are similar for various population groups or geographical areas, such as urban and rural areas.
- (6) The number of developing countries with well-defined strategies for health for all, accompanied by explicit resource allocations, whose needs for external resources are receiving sustained support from more affluent countries.
- (7) Primary health care is available to the whole population, with at least the following:
 - safe water in the home or within 15 minutes' walking distance, and adequate sanitary facilities in the home or immediate vicinity;
 - immunization against diphtheria, tetanus, whooping-cough, measles, poliomyelitis, and tuberculosis;
 - local health care, including availability of at least 20 essential drugs, within one hour's walk or travel;
 - trained personnel for attending pregnancy and childbirth, and caring for children up to at least 1 year of age.
- (8) The nutritional status of children is adequate, in that:
 - at least 90% of newborn infants have a birth weight of at least 2500 g;
 - at least 90% of children have a weight for age that corresponds to established reference values.

- (9) The infant mortality rate for all identifiable subgroups is below 50 per 1000 live-births.
- (10) Life expectancy at birth is over 60 years.
- (11) The adult literacy rate for both men and women exceeds 70%.
- (12) The gross national product per head exceeds US\$ 500.

Because of the diversity of individual countries' indicator levels, global indicators cannot be obtained by averaging over countries. This is why global indicators are formulated in terms of number of countries in which...

Countries are encouraged to emphasize priority indicators among the twelve global indicators, and to adopt more precise and comprehensive indicators for national or subnational use.

VII. TRAINING

Development of information support for national health management does not begin and end with selection of indicators and design of systems of data collection. An important element of ISNHM is the training of all those operating in the system from the community health workers up to the policy makers at the central level.

Generally the training should cover the collection, organization, analysis and interpretation of data and the use of the resulting information. The mode of training is bound to vary according to the level of training in the health system and the country's resources. Policy makers at the central level would benefit more from principles of use of information in policy formulation than in techniques of data gathering. Those involved in actual health care delivery should have the necessary skills and knowledge in data recording, collection, collation, reporting, analysis, interpretation and use of the information in managing their respective areas in the health care system.

The Organization is ready to collaborate with Member States in developing practical courses to train the trainers of health personnel of both the central and lower supervisory levels in health information support. The Organization would also like to collaborate with Member States in coordinating practical courses in information support based on learning by doing, and encouraging the sharing and exchange between countries of training materials, facilities and trainers.

VIII. EXPERIENCES OF DEVELOPING COUNTRIES

The biggest impact of PHC on the improvement of levels of health of the people is most likely to be evident in developing countries. These countries realize the need for monitoring the progress towards H/2000 and have therefore started to re-examine their information support to health management. Unfortunately in some countries within, for example, the African Region of the WHO, the re-examination of the information support is not done from first principles. In many cases the approach has been to make superficial changes in the traditional 'health information systems' rather than a total overhauling of the systems in line with their new approaches to health care.

In a number of cases the approach has been merely to redesign data collection forms. Introduction of new forms, possibly with computer analysis orientation, has been regarded as the innovation needed for health trend assessment. The World Health Organization must share the blame for this. Quite often Member States have been following advice given to them by WHO consultants and so-called experts.

The 'first principles' approach is to ask: what information is needed for health management at the various health delivery levels: from the community (periphery) level to the national (central) level?

To answer this question, countries, especially those with limited resources, have to start thinking about the types of indicators they want to use to monitor the health of their peoples nationally and subnationally. Any list of important indicators would show that the necessary data have to come from many sources. Some of these sources are not traditionally thought of as part of the health sector.

REFERENCES

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4. WHO 1981. Health Programme Evaluation - Guiding Principles. "Health for All" Series No. 6.

FIGURE 1

MANAGERIAL PROCESS FOR NATIONAL HEALTH DEVELOPMENT

