PUBLIC MENTAL HEALTH

GUIDELINES FOR THE ELABORATION AND MANAGEMENT OF

NATIONAL MENTAL HEALTH PROGRAMMES

DIVISION OF MENTAL HEALTH AND PREVENTION OF SUBSTANCE ABUSE

WORLD HEALTH ORGANIZATION

GENEVA
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This document provides a practical tool for both decision makers, health managers and health workers involved in activities related to mental health care, particularly the care of people with mental disorders. Its publication is a response to, and is justified by current levels of morbidity and disability associated with mental disorders. It is based on existing knowledge and expertise and on tested models available for the management of these disorders.

KEY WORDS: health policy; health programmes; mental health; mental health care.

MENTAL DISORDERS CONTROL

DIVISION OF MENTAL HEALTH AND PREVENTION OF SUBSTANCE ABUSE

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FOREWORD

This document has been conceived as a practical tool for decision-makers (professionals and non-professionals alike) and health managers and workers who are - or could and should be - involved in activities related to mental health, particularly the care of people with mental disorders. This is essentially justified by current levels of morbidity and disability associated with mental disorders. It is based on existing knowledge and expertise and on tested models available for the management of these disorders.

It reflects the many years of experience by WHO staff and consultants, at Headquarters, Regional Offices and in the field, of both advising health leaders and working with local and peripheral level care providers. Summarizing this vast and rich experience is not an easy task. Mental health care is closely associated, on the one hand, with the general health care system, and, on the other hand, with local customs and habits prevailing at any given place. Therefore, huge disparities exist not only in relation to what is actually done, but also in relation to what is acceptable and accepted at different places.

During its long gestation and production period, this document benefitted from comments from all mental health staff in both Headquarters and Regional Offices. We are, however, particularly grateful for the dedicated attention and detailed comments provided by Dr J. Orley, Manager, Programme on Mental Health; Dr I. Levav, Regional Adviser for Mental Health, AMRO/PAHO; Dr A. Mohit, Regional Adviser for Mental Health, EMRO; and Dr H. Sell, Regional Adviser, Health and Behaviour, SEARO.

This document takes into consideration more the commonalities than the differences found across Regions and countries. Nevertheless, it was not always a simple task to develop a consensus from the sometimes opposing views of those involved in the preparation of this document. From its coverage (all mental health, or all mental health care, or mental disorders care, or psychiatric care), through its target audience (health planners and managers, or mental health professionals, or non-psychiatric health officers), up to its format (a concise text, with annexes to further develop specific topics, or a detailed text incorporating all the information) all were subject to divergent views and opinions.

Finally, a decision was taken to finalize the successive drafts which had been circulating for years, issue it and observe its utility in the field. The following decisions were also taken:
(a) the content to be covered would be that of care, treatment and management of those with mental disorders, from a public health perspective; this includes the prevention of priority mental disorders, the treatment of mental disorders and the rehabilitation of people disabled by those disorders. The issue of promotion of mental health will be the subject of another document;

(b) the target audience was defined as "decision-makers (professionals and non-professionals) and health managers who are - or could and should be - involved in activities related to mental health care"; and

(c) as for the format, the choice was for a lean text referring the reader to different annexes, where particular information is discussed in greater detail. Since this text addresses different readers, their interests may vary; therefore, in the main body of the text, the basics on all sections are provided, and, whenever appropriate, the information is further detailed in annexes, each one specific to a topic.

Comments and suggestions on this document are welcome and should be addressed to

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INTRODUCTION

Mental health is an essential part of health, and mental health programmes\(^1\) play an important part in general medical care by using specific mental health techniques to promote health as defined by WHO (30). According to the opening to the WHO Constitution: "Health is as state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity" (17).

The current usage of the expression "mental health" (or its equivalent in other languages) makes an undue misidentification of mental health proper - in its broad conception or more comprehensive level - with mental disorders - a specific level which is, of course, part of the mental health field. Hence the occasional confusion between mental health care - in its broad meaning - and mental disorders control. When discussing mental health policy it is clear that we cannot separate the more comprehensive from the more specific level; however, when discussing programming we must be specific\(^2\). This document will address in detail both mental health policy and mental health programmes. It serves the purpose of equipping those involved with decision-making, management and direct care related to mental disorders with a practical tool containing information not easily available in written format.

Activities related to mental health care - whose ultimate goal is the improvement of quality of life of the general population as well as the control of mental disorders - can be subsumed under the following subheadings:

(a) the promotion of mental health;
(b) the prevention of mental and psychosocial disorders\(^3\);
(c) the treatment of people with mental and psychosocial disorders, and
(d) psychosocial rehabilitation.

Also, it is generally understood that mental health also deals with activities related to the development of psychosocial skills and knowledge, as well as to functional and psychosocial aspects of health care, which can facilitate and improve the functioning of the general health care system and help to prevent untoward consequences of socio-economic development and change (24).

\(^1\) Predominant terms related to this topic used in different Regions could be translated either by programme or plan. Throughout this document the word programme, however, will be used indiscriminately to refer to both.

\(^2\) Future documents will deal specifically and in detail with other areas only superficially covered here, such as the promotion of mental health.

\(^3\) In many countries, particularly developing ones, some neurological disorders (e.g. epilepsy) are also dealt with in the framework of mental health programmes.
The promotion of mental health is primarily concerned with the optimal psychosocial development of human beings; it is a process which aims at enabling people to develop and increase control over their health, in general, and their mental health in particular, and at the same time improving it. It also refers to the process of enhancing the value which individuals and societies give to mental health and functioning. It implies a great deal of attention to overall social development as well as to psychosocial aspects of health in general - and of health care. Prevention of mental disorders is the provision of specific protection against specific disorders/conditions (e.g. mental retardation due to iodine deficiency, suicide, brain damage due to infections or trauma).

The treatment of people with mental disorders calls for the adequate application of biological, psychological and social interventions aimed at reducing the impact of a disease/disorders, once it has appeared. Once a disease/disorder has caused any degree of impairment, disability or handicap, these can be curbed and reversed by the appropriate use of psychosocial rehabilitation measures (e.g. social skills training, vocational training, social networking, human rights’ protection).

Epidemiological data show that there is an annual prevalence rate of about 25% of diagnosable mental disorder in the population (5,6,8,9) of which an appreciable proportion suffer significant disability. Indeed, according to the World Bank (31), mental disorders are the leading cause of disability amongst non-communicable diseases. Hence, it has become very apparent that every country should have a mental health policy⁴ and that this policy should lead to a national mental health programme⁵. Ideally, policy and programme should bear a close relationship to each other and show no major discrepancies between them, the former always preceding the latter.

For the establishment of both policies and programmes a reasonable awareness of the real situation - or diagnosis of the situation - on which they will be made operational is mandatory. Beyond the many similarities common to both policy and programmes there are, however, a few specificities to each. For instance, despite the common ground to be covered, which includes information on (i) the population, (ii) the resources and (iii) the environment (see ANNEX 1), the depth and extent of information on the elements needed may vary for policy and for programme formulation. This impacts directly on an extremely important step, namely the selection of priorities, as discussed below.

As for the major tactical differences between policies and programmes there is the fact that the success of a given policy depends more on decisiveness and willingness on the part of competent authorities than on specific technical knowledge. It depends on the interest of

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⁴ Policy is the set of objectives, related approaches and options adopted which orient and guide implementation of strategies and programmes at operational levels. A policy is a general orientation, previous to any actions, expressing principles, or general “intentions”. A health policy is almost always closely connected with distinct policies emanating from other sectors, such as education, housing, economic production, nutrition, etc. All these policies mutually influence each other.

⁵ Programme is an aggregate of activities (in compliance with a given policy) executed to generate a line of products, undertaken under the responsibility of a specific authority and with a specific budget. It may be further broken down into specific programmes.
large sectors of the population, whereas the implementation of a programme is dependent on more concrete elements, such as technical knowledge and expertise and the resources availability.

Having set these basic considerations, the next three sections will deal specifically with

(i) mental health policy;
(ii) overall national mental health programmes, and
(iii) specific mental health programmes (e.g., violence control, prevention of alcohol abuse, control of epilepsy).

In order to facilitate reading and to streamline the information, the main text has been kept rather short and extensive use has been made of ANNEXES where additional and more detailed information is provided.

THE MENTAL HEALTH COMPONENT OF PRIMARY HEALTH CARE (PHC)

As indicated above, the broad range of the mental health programme covers not only the treatment of mental and neurological disorders (usually identified as neuro-psychiatry), but also their prevention and the promotion of health. The programme should also include the prevention and treatment of drug and alcohol-related problems and other aspects of the interaction of psychosocial and behavioural factors with health and health services.

The necessity for mental health care to be integrated with the rest of the health programme is beyond doubt, whereas the need for separate mental hospitals is more debatable. Certainly the building of new ones should be discouraged in favour of siting psychiatric wards in general hospitals. Although outreach from existing psychiatric institutions is to be encouraged, the role of such an outreach service is not to provide a separate vertical mental health service but to support mental health activities by the primary health and other peripheral workers.

Like other programmes, but possibly requiring even stronger emphasis, the need for intersectoral collaboration and community participation is a necessity for mental health care. At a local level, teachers and the police, as well as community leaders, amongst others, must collaborate with the health workers. At all other levels, coordination is also essential. At national level a multi-sectoral coordinating group can be most effective in highlighting mental health needs and coordinating activities in meeting them.

There can be a mental health component to many programmes. For instance, attention to the psychosocial development of the child is as important as the physical development. The integration of psychological inputs with nutritional inputs in a programme is not difficult, the expertise and resources may be available locally. This should therefore be pointed out when any development programme is being planned. The question that needs asking each time is, "Are the psychological and social needs being met in the programme in addition to the physical ones?". The mandate for this is in the opening to the WHO Constitution mentioned above. Also from Chapter 2 (m) of the Constitution, one of the functions of the Organization
is defined as "to foster activities in the field of mental health, especially those affecting the harmony of human relations". Local resource people and suitable consultants may include professionals from other fields (e.g. psychology, social welfare, rehabilitation and education) and should not be restricted to psychiatrists.
MENTAL HEALTH POLICY

INTRODUCTION: THE UNDERLYING VALUES FOR MENTAL HEALTH

A nation's mental health policy is commonly established within a complex body of health, welfare and general social policies. These policies may set the framework for the delivery of mental health services by defining a country's stand on personal liberties, and the protection of people with any disorder or disability as well as their families. The mental health field will be affected by many policies, standards, and philosophies not necessarily directly related to mental health.

Similarly, various policy areas determine the nature of the psychiatric patient's community support services, retraining, resocialization and economic welfare programmes. Other policies may determine practices and approaches to specific target groups such as the young, the elderly, the disabled and/or handicapped, victims of crime, offenders, refugees and displaced persons, as well as many others. Some of these groups, and certain activities, may require special consideration in the formulation of a mental health policy. Attention must be paid to the needs of special groups, as well as to the influence which activities in other sectors (both governmental and non-governmental) may have on the mental health field. All policies should ensure that all government activities contribute to (not detract from) mental health and well being.

To maximize its positive effects, a mental health policy must give due consideration to the social and physical environment in which people live; it is particularly useful to consider inter-sectoral collaboration between education programmes, health and welfare policies, employment policies, city planning and municipal services, the maintenance of law and order, and policies addressing the young or the old. In order to facilitate such an inter-sectoral collaboration, each country should give serious thought to establishing within the Ministry or Department of health, an administrative post to give focus to the coordination and potential integration of activities and policies affecting mental health and mental health promotion within the general health services, as well as with other sectors of governmental and non-governmental organizations.

Underlying any mental health policy will be certain values which should be made explicit. Uppermost should be the value placed on psychological well-being, the enhancement of which will underlie mental health promotion activities. Another underlying principle refers to equity in relation to the concern for people with mentally illness; equally important is the acceptance that interventions on their behalf must be the least restrictive and least intrusive that are reasonably available and likely to be effective. A balance is pursued between the rights of those identified as ill and the needs and resources of their families and of the

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This section has heavily drawn from a document prepared by WHO in collaboration with the WHO Collaborating Centre for Research and Training in Mental Health at the Douglas Hospital Centre, Montreal, Canada, under the title Care for the mentally ill: components of mental health policies governing the provision of psychiatric services (Doc.: WHO/MNH/POL/87.10), Ref. (24).
communities in which they live. This balance will vary from culture to culture, but the balance should be in favour of the rights of patients.

Ideally a mental health policy should be framed in a special document emanating from the government. In addition, a national policy can be inferred from a number of sources, such as (i) legislation affecting health matters and the well-being of the general public; (ii) other activities to promote health; (iii) programmes of other social sectors; (iv) teachings of different origins relevant to health and well-being; (v) current health practices; and (vi) the harmony between existing policies and the programmes of the various social sectors (25).

MAIN ELEMENTS OF A MENTAL HEALTH POLICY

The main elements which indicate the quality of a given mental health policy include: decentralization, intersectoral action, comprehensiveness, equity, continuity, community participation and periodical reviews (14). These are assessed by indicators which must be set and defined.

Decentralization/regionalization

A key concept in the planning and delivery of mental health services emerging in recent years has been that of the sector or area of (service) responsibility7. This requires the designation of precise geographical spheres of responsibility for mental health services, and necessitates the creation of services for defined populations, small enough to allow most patients to be served within easy travelling distance of their homes. The development of such an approach is felt to be best suited to the needs of patients, their families, and their communities. The definition of an area of responsibility or of sectors, however, should not imply the domination of an institution over that population. Rather, the institution, if it exists at all, should be just one of a variety of mental health facilities which serve that population.

The creation of sectors (or "catchment areas"), as a basis for community-based programmes often proceeds slowly; however, it may be an important element in the establishment of coherent community-based services. In countries or regions where services are in transition, and in countries where services are being newly created, and where comprehensive services and programmes by catchment areas are not yet possible, a degree of sectorization can allow the development of more rational patterns of care, more efficient use of resources and the development of community alternatives to institutional care.

Intersectoral action

An effective mental health policy will be integrated into a country’s or region’s overall general health policy and will designate individuals responsible for this implementation and coordination of services. At the governmental level, it is vital that all of a government’s policies be reviewed to ensure that they enhance mental health. At the

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7 Usually referred to as “catchment area” in North American literature.
community level, responsible individuals can ensure the optimum use of existing resources and help establish priorities in creating new programmes responding to unanswered needs.

Comprehensiveness

A comprehensive mental health policy should, in particular, promote community care, and redirect functions of hospitals primarily to those that cannot be carried out outside the hospital. This may include providing active treatment in emergency situations or for conditions requiring very active and intensive care. It is likely to include care for those patients who cannot give enlightened consent to the administration of their care when their condition may endanger themselves or others.

Large psychiatric institutions should be reduced in size, while increasing the diversification of services provided in general hospitals and community centres, and developing alternatives to hospitalisation that are community-based and which do not cut patients off from society. Services should be community-based and should be comprehensive in the sense that they provide a range of facilities differentiated to meet the mental health needs of the population at large, as well as of certain age and at-risk groups.

Any policy should also pay due attention to activities related to the promotion of mental health and the prevention of mental disorders, in addition to those specifically related to the treatment and rehabilitation of people with mental disorders. This document, however, will focus mostly on the latter.

Equity

In the health field, equity refers to access to health care and distribution of resources. Indeed, health indicators are also fine indicators of wealth distribution. Some mental disorders may render people less capable of dealing with daily living activities or even of looking for and obtaining appropriate care. Therefore people with mental disorders must be considered as a vulnerable group and as such deserve special attention.

Legislation can be a major tool towards equity, through the provision of a framework for mental health policies as well as other social policies. The role of legislation may be to serve as a declaration of policy - as a statement of principle or as a social ideal - or to create and promote social values. In doing so, such legislation will reflect a society’s ethical tone, its consensual values, and as well, symbolize both spoken and unspoken social attitudes.

A right to treatment is only meaningful when treatment is available; legislation will often determine whether the health care system, for instance, has a duty to make it available. Whatever its stated purpose and approach, the existing legislation of a country in the field of health care and mental health care must be taken into consideration when formulating a mental health policy and revising the framework within which all health care policies will exist.
Continuity

Mental health services alone are not enough. An entire array of interlinked services, support and opportunities is needed by individuals in order to function within the community, including services to address basic human needs. It rather draws upon elements of the medical model, rehabilitation model, and social support model in an attempt to consider the comprehensive needs of persons living with long-term mental illnesses.

Most policy-makers and experts have agreed that such programmes, with a community-based orientation, can assure that services will meet the needs of all community groups, including widely dispersed populations. In this way, those in need are helped to fully develop their potentials without being unnecessarily isolated or excluded from the community.

Community participation

In mental health, as for health in general, the individual and the community should have the opportunity to contribute to determining policy and mechanisms should be available for people to express their opinions. This is indeed one of the pillars of the strategy of Health for All (30).

Activities intended for the enhancement of well-being should arise from a consensus between the citizens and those working in the mental health field, and must be acceptable to the population in order that they can be carried forward through maximum participation of the community. The goal of mental well-being cannot be achieved without such participation which may require the assessment of community attitudes towards mental illness and the possible introduction of appropriate awareness programmes.

Most countries have some form of institutional care for people with mental illness. Most countries have also formulated some kind of intention to move towards a community orientation, either through an identified community mental health service, or by integration within the general health care system. However, comprehensive mental health promotion programmes and mental health care services within community-based programmes will never be provided by health services alone, nor by the community alone. Effective programmes and policies must be developed on the basis of a consensus with respect to needs identified both by those responsible for services and policy and the members of the communities they are meant to serve.

Prevailing community attitudes towards mental illness and people disabled by mental disorders must also be taken into account. This will help ensure that policies and services respond to the specific needs of different regions and to the different needs of individual groups within a community. All parties should be taken into account and a clear consensus will assist in providing a sound starting point.
MECHANISMS FOR POLICY FORMULATION AND IMPLEMENTATION

A mental health policy will be specific for a country (or province/state) in content and implementation. All health care policies of a country must be related to its needs, demands and resources (see ANNEX 1), and should contain stated priorities as to the reasonable expectations for servicing in light of available resources.

In most countries, mental health services are operationally a part of the Ministry or Department of Health. Therefore, a major portion of mental health policy formulation and implementation will be related to general health policy. However, other matters which should be given consideration include the relevance to mental health of policies affecting education, the police and criminal justice system, social welfare, environmental and work-place matters, and those affecting identified groups such as immigrants, the young, the elderly, women, substance abusers and others.

Those producing a draft policy should be mandated to outline the basic orientation or the mental health sector and to define as clearly as possible what choices must be made by authorities and officers at local level. The mandate should further require the inclusion of recommended approaches for intervention, examine how to ensure that services are appropriate to the mental health needs of the population, and be based upon a consensus among the various parties concerned.

Divergent laws, policies and persons or bodies who formulate or implement these, especially isolated official departments in charge of various aspects of enforcement, must all be harmonized for any effective plan for the promotion of mental health. Basic issues with respect to the need for legislation include the initial presumption of whether or not it should be used, and the various risks and benefits involved in its use or non-use. These must be considered within each jurisdiction considering the mechanisms for formulating and implementing a mental health policy. Finally, while perhaps ultimately outlining an ideal model for mental health care and mental health promotion within the policy statement, a description of priorities, based upon identified needs taking into account available resources, should also be included (see Selection of Priorities below and ANNEX 2).

The international conference organized by WHO/PAHO on "Restructuring Psychiatric Care in Latin America" which took place in Caracas, 11-14 November 1990 represents a very interesting model of a broad based policy formulation methodology (27). It brought together jurists, parliamentarians, health professionals, community leaders and consumers to discuss policy issues related to psychiatric care. The immediate result of that conference was the Declaration of Caracas (28), and its beneficial effects are being felt throughout Latin America.
SELECTION OF PRIORITIES

Given the vast range of mental and behavioural disorders the selection of priorities is essential. International experience (4,7) adapted to local situations (e.g. (10)) has already pointed out the use of a few selected operational criteria to identify priorities, which include the following⁸:

1. Magnitude (dimension) of the problem.

2. Severity of the problem, measured in terms of:
   (a) mortality;
   (b) disability;
   (c) burden on families;
   (d) economic losses.

3. Importance attached to the problem:
   (a) by health workers;
   (b) by community members;
   (c) by affected members and their families.

4. Controllability of the problem:
   (a) in terms of preventive interventions;
   (b) in terms of treatment/rehabilitation interventions.

5. Availability of resources:
   (a) technical resources;
   (b) administrative/infra-structure resources.

6. Costs.

7. Institutional commitments.

⁸ Discussed in greater detail in ANNEX 2.
OVERALL NATIONAL MENTAL HEALTH PROGRAMMES (NMHP)

Once a situation is defined in terms of demography, epidemiology and available resources, and once priorities are set, time comes for translating a given policy into a sound programme (26). A wide range of countries have developed their own mental health programmes; a review of these programmes shows that the strength of health programmes, and mental health programmes in particular, vary enormously across countries. Whenever appropriate, excerpts of existing national mental health programmes available to WHO will be used to illustrate some points in this document; they will be shown in text boxes aligned at the right margin, in bold characters.

These programmes often point to the dire need for manpower, facilities and other resources for mental health services. When there is a severe lack of resources for health in general, then mental health care is affected in the same way. The reverse, however, is not always true and even where other health care is relatively well provided for mental health care often lags far behind. There are many reasons for this state of affairs, sometimes due to common misconceptions about mental health.

PROGRAMMING

In the framework of a policy, a *programme* is defined as the planning unit which describes and organizes a set of actions aiming at a particular objective. From a practical standpoint, the content of a given programme can be described under the following main headings:

1. Justification
2. Overall objective
3. Specific objectives (targets)
4. Strategies and procedures
5. Monitoring and evaluation

Justification

It is in the written NMHP where the scope of the problem, as it can be identified in population and epidemiological terms, is presented. In this way the selection of priorities is justified, in the context of a given policy. To this end, indicators are extremely useful; among these one can suggest the magnitude of the problem, its severity, the cost of *not* treating the problem, and the positive results expected from the programme.

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9 WHO document *Quality assurance in mental health care: check-lists & glossaries* (Vol.1) (Doc.: WHO/MNH/MND/94.17) (14) has a section dealing specifically with national mental health programmes. In it, guidelines and indicators (with their operational definitions) for the assessment and evaluation of those programmes are presented. It could serve as a basis for locally established standards and norms.
Example of a justification:

"Mental health problems are a major disease burden within the community. The demands of life today are more conducive to mental and psychosocial problems which, unless dealt with adequately, would have a negative cascading effect on personal and family life, society and the economic well-being of the country. The mental health sector requires a radical reform." (Malta, 1995)

This section should also present the strategy for the implementation of the programme. The way it is to be carried out should be in harmony with the overall health and social policies. In order to avoid ambiguities, it is useful to include operational definitions by providing a glossary of basic concepts and terms used in the programme.

Overall objective

The overall objective states what is expected from the programme answering the question "What is this programme for?"

Examples of overall objectives:

"To reduce the level of disability caused by mental illness by improving significantly the treatment and care of mentally disordered people." (UK, 1991)

"To respect the basic human rights of people disabled by mental disorders." (Chile, 1993)

Specific objectives

Specific objectives enunciate the changes expected from the programme answering the question "What will the programme do?". Some specific objectives may be expressed as targets (discussed below).

Whenever possible specific objectives should include:
(a) "what" (nature of situation to be achieved);
(b) "how much" (quantitative/qualitative expression of the expected changes);
(c) "whom" (target population);
(d) "when" (time frame for the changes to take place);
(e) "where" (catchment area of the programme).

Example of specific objectives:

"1. To detect mental disorders as early as possible and to provide appropriate care and treatment.
   2. To rehabilitate people with mental disorders in view of their optimum social integration.
   3. To provide basic training in mental health care to all health workers.
   4. To provide systematic supervision to all health workers involved in mental health care.
   5. To set a case register of psychiatric cases, as part of the overall health information system.
   6. To stimulate training of mental health researchers with particular emphasis on services research.
   7. To monitor and evaluate activities of the programme in a systematic and periodic way." (Angola, 1990)

Targets

A target is a quantified indication of the actions to be performed, or changes to be attained, in a given time frame. It is a fundamental criterion for evaluation purposes. In many instances targets become norms or standards. Annex 3 presents - by the way of examples and not necessarily as recommendations - a list of frequently used indicators, targets and standards.

Examples of targets:

"By the year 2000 the average length of stay of psychiatric patients should be reduced by 50%." (Uruguay, 1994)

"Within 5 years, at least 20% of all physicians working in PHC centres will have undergone 2 weeks training in mental health." (India, 1982)
Strategies and procedures

This section of a NMHP is perhaps the one involving the greatest amount of practical detail, since it deals with personnel, facilities, beds, medication and specific interventions. It answers the question "How to implement the programme?" by defining issues such as:

(a) "how" (e.g. norms, working methods and systems, how to diagnose, how to treat, how to discharge, how to record relevant information, how to inform patients and families);
(b) "with what" (materials, equipment, medication);
(c) "with whom" (definition of the participating team and its functions in a hierarchical format, with a clear indication of levels and lines of authority).

Since most NMHPs operate with more than one objective, it is useful to have a specification of different strategies and approaches, as well as an indication of the sequence of procedures, for each objective (2). The result may be a series of sub-programmes, e.g. on prevention of mental retardation, improvement of existing mental health care facilities, control of schizophrenia, linkage with community development. Post and task descriptions are useful tools for defining strategies and for defining the limits of procedures.

Examples of description of tasks of the community health officer, as set by the Ministry of Health of Nigeria:

"(i) All the tasks of community health assistants. [described previously]
(ii) Initiate and follow-up treatment for psychoses and epilepsy; should have full knowledge of side effects of drugs and their management; take full history with mental health status examination in all patients.
(iii) Individual and group psychotherapies for limited periods.
(iv) Follow-up patients maintenance of drug therapy and tracing defaulters.
(v) Close liaison with district hospitals and other secondary level care for continuing education, professional interaction and referral only of difficult cases. " (Nigeria, s.d.)

Two most frequently asked questions about procedures concern standards in mental health care; they are related to the ideal number of professionals (e.g., psychiatrists and other mental health workers) and to the ideal number of psychiatric beds. It should, however, be
very emphatically stated that no absolute figures can be given as answers to either of these questions.

In relation to professionals, it is their background training, qualifications, expertise, time dedication and integration as part of a health - and mental health - team that determines the level and quality of the care they can provide, rather than their mere amount.

As far as psychiatric beds are concerned, it is their location (e.g. in a large and remote state mental hospital or in an urban general hospital), type of utilization (e.g. emergency, acute or chronic care), coverage (e.g. for acute psychoses, the elderly mentally ill, people with mental retardation), qualification of staff responsible for them, and their integration with the overall network of health services that settles their usefulness, rather than their mere numbers.

Nevertheless, as a rule of thumb which has been shown to be a workable proposition in many developing countries, the following figures are used either for monitoring or for planning purposes:

- one consultation per 100 population per year;
- one admission to a psychiatric facility per 1,000 population per year; and
- one psychiatric bed per 10,000 population.

Further information on this topic is found in ANNEX 3. In addition, ANNEX 4 provides examples of mental health activities of different members of the health team, and in ANNEX 5 a methodology for calculating the needs (i.e. personnel, beds, medication) for a certain size population is presented which can be useful for establishing local standards with a greater precision.

Monitoring and evaluation

The main function of an evaluation process is to identify whether:

(a) the intervention is proceeding according to its objectives,
(b) the impact of the intervention truly derives from the performed actions, and
(c) the impact is positive, negative or irrelevant.

In other words, the evaluation examines the relationship between the existing situation and the expected situation, according to the mission of the programme.

The two pillars of evaluation are (i) well formulated objectives, and (ii) reliable and precise records, without which no sound evaluation is possible. It is performed with the help of indicators usually classified as structure, process, outcome and impact indicators (14). (See also ANNEX 3).
The evaluation should not be seen as an activity to be performed only at the end of a programme, but rather as a continuing, monitoring activity, which allows for corrections to be made during the development of a programme.

Budget

Although not frequently presented, the budget description should be part of any NMHP. The costs of a programme are usually presented as a global value, or by items of expenditures, or by costs of a service unit.

Of growing importance is what is called "opportunity planning": activities are planned for which there is no budget, at the time of the planning, but for which funds are being sought; when they become available their destination is already clear.

MANAGEMENT AND COORDINATION

Several approaches have been proposed and used for the management of national mental health programmes. Perhaps the commonest one refers to the designation of a responsible officer in charge of planning, budgeting, implementing and evaluating mental health related activities and actions. This focal point is usually located at the Ministry of Health, where he/she can either be an adviser to the Minister or occupy a given position in the hierarchy of the Ministry. Also, the function of the focal point can be delegated to an institution with national respectability and visibility, such as a National Institute of Mental Health.

The Iranian Government has put forward the following administrative strategies for the management and coordination of its NMHP:

"Administrative Strategies
  1 To have an officer in the Ministry of Health responsible for the implementation of the programme.
  2 To establish a multisectoral National Coordinating Group, including representatives from the Ministry of Health and other sectors along with leading mental health professionals of the country.
  3 To establish similar multisectoral coordinating groups at the provincial levels." (I. R. of Iran, 1986)

A complementary approach, which does not eliminate the need for a focal point for the coordination of mental health actions, is the establishment of a national Advisory/Coordinating Committee. This committee is composed of representatives from different sectors such as health, social welfare, education, labour, interior and others.
Representatives from non-governmental organizations (e.g. those representing professionals, consumers and other interested parties) should also be invited to participate in the work of the group. Experience with this type of committee has been mixed: in some countries it has provided excellent support to mental health activities whereas in others - due to a variety of reasons - it has worked more as a block to effective and concrete action. At any rate, it is the kind of mechanism worth considering in the development of national mental health programmes (15).

SPECIAL ISSUES RELATED TO THE IMPLEMENTATION OF NMHP

A few issues deserve particular attention in terms of the implementation of mental health programmes; these are related to:

(a) the incorporation of mental health care into general health care;
(b) the existence of clinical guidelines for the management of priority mental disorders;
(c) the availability of essential treatments, particularly of essential drugs;
(d) the training of health workers (including both care providers and administrators); and
(e) information systems.

The incorporation of mental health care into general health care (PHC)

Although this is mostly a policy and strategy issue, it has important practical consequences. Given the wide distribution of mental disorders and the relative scarcity of mental health professionals, the incorporation of mental health care into general health care is perhaps the best solution, particularly within the framework of the strategy of Health for All (19). An example of a policy and strategy document on the integration of mental health care into the district health system approach is found in the document AFR/RC40/10 (23) which resulted in a resolution later adopted by the WHO Regional Committee for the African Region.

Care is needed, however, to avoid creating an unbearable burden on general health workers. These workers are usually already overburdened with many tasks and if more than one new task is introduced at any given time, results could easily be counterproductive. Therefore the careful selection of priorities is important.

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The Government of Mozambique has defined the following basic strategy for the implementation of its NMHP:

"The adoption of a policy of decentralization and of integration into general health care particularly along the lines of the Primary Health Care strategy." (Mozambique, 1992)
Clinical guidelines for the management of priority mental disorders

The standardization of a methodology for the management of specific disorders greatly contributes to its incorporation into routine care; it has also been demonstrated that the use of flowcharts adds a touch not only of simplicity but also of attractiveness. Since the 1970s WHO has been producing these guidelines, some of which, after several field tests, have been published (3); subsequent to this a series of similar guidelines have been published at national level (11). Current work by the WHO Programme on Mental Health related to a PFIC version of ICD-10 (Mental and behavioural disorders) includes a series of guidelines for the management of mental disorders frequently seen at general health care services (22).

Having chosen depression as a priority, The Australian Government has indicated the need for clinical guidelines for its management as follows:

"The Royal Australian College of General Practitioners (RACGP) in collaboration with other professional organizations such as the Royal Australian and New Zealand College of Psychiatrists (RANZCP) and governments should develop best practice guidelines including quality assurance mechanisms for the early identification, treatment and long term management of depression in general practice. Special attention should be given to psychoactive drugs.

The RACGP in collaboration with other professional organizations such as the RANZCP and governments should develop and implement ongoing education and training packages for general practitioners in identification, treatment and long term management of depression in primary care with particular attention to the needs of rural/isolated providers." (Australia, 1991)

Availability of essential drugs and of other essential interventions

Since the introduction in the 1960s by WHO of the concept of essential drugs, this has proven to be a tremendous asset to health services (12). The main advantages of using a limited range of essential drugs include: a reduction of the number of drugs to be purchased, stored, analyzed and distributed, resulting in more efficient management and quality control; better possibilities for block purchasing - and consequently lower prices; and the easier provision of comprehensive and objective drug information.
Example of a statement on the importance of essential drugs:

"Inclusion of neuroleptic and other essential psychiatric drugs in the Department of Health procurement or specific budget allocation for such medications in the field." (Philippines, 1988)

Based on the success of the essential drugs policy, the WHO’s Mental Health Programme has recently embarked on a more ambitious project, namely that of expanding the concept to the use of essential treatments in psychiatry. Accordingly, essential individual biological, psychological and psychosocial interventions have been identified and described. The same benefits observed with the use of essential drugs are expected from the rational use of these essential interventions.

Training of health workers and the general public

The information provided at universities and technical schools to health students is not always adequate for the needs of the population they will have to work with. Therefore, once the action plan established by the NMHP is defined, there is a need to educate both health workers (care providers and administrators) and the community (leaders and users of services, as well) in relation to the specificities of the programme. The integration between institutions involved in education and training and the NMHP (or regional or local programmes) has tremendous potential for the improvement of these programmes.

Learning and teaching materials - such as manuals - are an important component of educational programmes. They can impart knowledge and orient educators and trainers on the best approaches to specific problems. They are also needed if particularly aimed at specific problems. Attitudes, however, of health workers as well as of the public in relation to mental health and mental disorders are as important as knowledge and should also be considered when designing training programmes.

WHO’s Annotated directory of mental health training manuals (16) lists and comments on some 100 such manuals. These have been conceived for a varied readership, ranging from specialists to primary health care workers and the general public. Some cover the field of mental health as a whole, whereas others concentrate on specific topics, such as depression, child psychiatry or schizophrenia. Altogether they are available in more than 20 languages.

The importance of both continuing education and supervision cannot be overemphasized. Experience has demonstrated that when educational programmes are not followed by adequate, systematic supervision, the chances are that the results obtained will
not persist and that all the effort will be lost. The establishment of continuing education and supervision programmes helps to maintain the knowledge, facilitates its updating and reinforces motivation.

Information systems

Information systems are an essential component of any mental health programme. They are fundamental for both monitoring and evaluation. Nevertheless, in order to be cost-efficient, they should be based on indicators and targets, and also be:

(a) simple to use;
(b) appropriate to the level of health staff, recording and using the data;
(c) aimed at clearly defined goals; and
(d) regularly analyzed, with feedback provided to the health staff.

Sufficient attention should be paid to the confidentiality of patients' records. Hospital data should be linked with PHC data and reviewed to see how they can be utilized for improving the national mental health programme, in addition to immediate service needs (24).
SPECIFIC MENTAL HEALTH PROGRAMMES

From a programmatic point of view, specific programmes are schemes for action designed to yield one or several products under a major programme through a number of technically related activities. From a budgetary point of view, a portion of the financial resources need to be earmarked for a specific programme.

Specific programmes can deal with specific disorders (e.g. depression, schizophrenia, alcohol dependence), with special groups (e.g. children, elderly people) or with special situations (e.g. refugees, victims of disasters or of violence, such as battered women).

Examples of specific programmes developed by WHO are found as follows:

- for specific disorders: Initiative of support to people with epilepsy (20).

- for special groups: Improving the psychosocial development of children: a programme for the enrichment of interactions between mothers and children (13).

- for special situations: Psychosocial consequences of disasters: prevention and management (18).

Mental health of refugees (29).
REFERENCES

ANNEXES
ANNEX 1

DIAGNOSIS OF THE SITUATION

The knowledge of the situation requiring intervention calls, at least, for information on the population, on resources and on the local environment.

The population

In order to be familiar with the population the following are necessary:

Data on basic demographic characteristics:

- size of the population (fundamentally a definition of the limits and geographic characteristics of the area of the programme);

- distribution of the population according to some characteristics such as gender, age, marital status, household composition, education, occupation, social class or status, ethnic composition;

- potential social problems, such as geographic mobility (migration), unemployment, school drop-out rates, illiteracy rates, marginality and criminality rates.

Data on basic epidemiological characteristics:

- birth and fertility rates, population natural growth, life expectancy;

- morbidity, mortality and disability rates, at least in relation to the most frequently seen diseases. If this information is not available, it might be useful to consider the possibility of organizing a specific survey.

Data on basic cultural characteristics (beliefs and values) of the pertinent communities:

- anthropological information which gives a specific identity to the communities which are the object of the programme. Here there should be information on the local socio-political organization, religious practices, and on concepts and attitudes related to health/ill-health, particularly mental health/mental ill-health, including help-seeking patterns and healing practices.

Resources

Resources include whatever conventional (or official) or traditional; formal or informal; human or material elements are present and available to be utilised by the
programme. The description of resources also includes eventual social support systems, both in the health sector and in other sectors (e.g. welfare, education, housing) as well as a description of family resources for caring, if available.

It is extremely important to have a good description of the prevailing health care system. In many - but not all - places, health care follows the Primary Health Care strategy, as formulated by the Alma-Ata Conference. The nature of the health care system will determine, to a great extent, the most efficient characteristics that the mental health care services should have.

The information on existing facilities where mental health care services are provided (e.g., health centres, outpatient clinics, psychiatric hospitals, general hospitals with psychiatric services, etc.) is very important.

Local environment

The local environment covers mostly climatic conditions and sanitation (including housing conditions). Information on the local environment also includes data on degree of air, water and soil pollution, as well as on the level of local economic production (agriculture, industry, commerce, services) and on the political situation through which the community is living.

The skilful use of these three topics above provides a reasonable description allowing for the formulation of a policy and for the development of a plan of action.

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10 It is import to stress the distinction between Primary Health Care strategy (PHC), and primary level of health care. The former refers to "essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally available to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination" (WHO, 1978). The latter usually designates the "entry door" to the health care system.
ANNEX 2
CRITERIA FOR THE SELECTION OF PRIORITIES

Magnitude (dimension) of the problem

The dimension of the problem is indicated by valid and reliable epidemiological information on the general population at risk. More frequently than not, this information is precariously obtained from empirical experience based on users of health services and analysis of secondary data.

Depending on the nature of the target condition one could use either incidence or prevalence rates, the latter being more frequently used in the field of mental health. At any rate, the importance of a precise identification of the "population base" to which the dimension of the problem is measured should be highlighted.

Many mental disorders are unevenly distributed across different groups (e.g. age groups, gender groups, occupational groups). As an example, the rate of schizophrenia11 is usually relatively high among inpatients, less so among outpatient populations and considerably lower among the general population. Another example is given by the prevalence of dementia12 which has important variations depending on genetic, nutritional and life-style-related factors, which are reflected in the age group structure: the longer you live the higher the risk of developing dementia.

Severity of the problem

In public health, the severity of a condition is usually measured by its mortality rate. Yet, with the overall social development and the improvement of treatment modalities, mortality rates have undergone considerable reductions. The prevention and treatment of many diseases which until recently had high mortality rates has led to important increases in survival rates.

This has resulted in an accumulation of individuals with a varied degree of disability. The shift from death to disability, in addition to its more humane dimension, has many important social and economic repercussions. This is particularly the case in the field of chronic diseases, and even more so in relation to mental disorders13, which gives a special weight to this criterion.

Importance attached to the problem

This criterion refers to the importance given by both the technical sector and the public to a given problem, irrespective of its severity (as discussed above).

There are communities which do not attach full importance to problems with high mortality rates (e.g. diarrhoeal diseases in infants, and cerebro-vascular disorders in the elderly) because they are considered "natural" phenomena. At the other extreme, some diseases with a much lower mortality rate but with a higher communal visibility (such as epilepsy or psychoses with disturbed behaviour) may be the object of serious concern to these communities.

Health workers, as members of a given culture, also share that particular culture’s beliefs, attitudes and practices. Once put in contact with a given technical segment (through training or employment), they may have their initial cultural characteristics modified, and adopt new ones. In this respect, the question of the stigma attached to mental disorders is an important element to be fully explored and understood.

The relevance of this criterion derives from the fact that any programme has very little chance of succeeding without enlisting the interest and the participation of the community. When there are significant discrepancies between the perceptions of health workers and the community, it is imperative that public awareness of the importance of the problem be raised. Negotiation with a view to obtaining some degree of agreement between these two segments may be necessary for the attainment of the desired objectives.

Controllability

Controllability refers to the degree that health and other sectors are able to eradicate or attenuate the impact of a problem or of a specific disorder. In other words, it is the acquired capacity to prevent or successfully treat a disease.

The ideal intervention aims at eliminating/attenuating the etiopathogenetic agents of a disease, or modifying its determinants; in this respect, the controllability of disease for which there is an efficient vaccine is very high. Although there are a few historical examples of prevention and efficient control of some diseases (e.g. malaria in ancient Rome, much before the development of bacteriology), it is reasonable knowledge of the causes determining a disease or psychosocial problem which renders it more susceptible to intervention and control.

Therefore, on the one hand it can be said that the higher the degree of knowledge about causes of diseases, the closer we are to their control. On the other hand, diseases of unknown etiology pose more difficulties in terms of their control.

Availability of resources

The assessment of availability of resources should take into consideration the actual
availability (i.e., whether the resource is effectively available to the mental health worker, at his/her working place) and not just its mere existence, elsewhere. According to this criterion, one should consider:

(i) existing human resources (trained professionals, technicians and auxiliary personnel);
(ii) the physical infra-structure (buildings, equipment, and medication); and
(iii) operative conditions for the adequate mobilization of both human resources and the infra-structure, including logistics of drug supply and the channels for the flow of effective information and monitoring its progress.

Item (iii) above should correctly identify the need for training of the personnel, should human resources' background not be adequate for the needs of the programme.

This criterion fluctuates in time, and is usually assessed in terms of the efficacy, effectiveness and efficiency of the intervention in significantly reducing a given problem.

Costs

For the estimation of costs, one should include costs of the premises (own or rented); salaries, permanent materials (e.g. equipment, vehicles), current expenses (e.g. medication, cleaning, transportation), classified as:

- **direct** costs: expenses incurred in the immediate implementation of the programme.
- **indirect** costs: administrative expenses (such as electricity bill) which in general do not increase much even with an expansion of the programme.
- **fixed** costs: expenses necessary to care for few or many patients (e.g. rental).
- **variable** costs: expenses which depend on the volume of services provided (e.g. medication).

The public sector usually has its own premises and personnel, and costs are estimated on the basis of operational expenses, only, which include:

(a) estimates of person/hour;
(b) medication and other necessary materials (e.g. syringes);
(c) incidental expenses (transportation, per diem, etc); and
(d) expenses with training, supervision and evaluation.

In order to obtain the global cost of the programme, the above items must be multiplied by a factor which depends on the type of unit of intervention foreseen (individual, group, community), and multiplied by the duration of the programme.
Institutional commitments

The integration of local actions and programmes with actions and programmes existing in other places or regions becomes more and more frequent. Examples of this integration are immunization against some specific diseases (subject to international control), programmes for substance abuse prevention and control (which in some places are mandatory by operational or funding agreements) and for the prevention of AIDS.

Even when problems like these are not a priority in a given place, the mobility and interpenetration of different population groups, makes it necessary to take them into consideration, lest the global success of the programmes be affected.

Practical use of these criteria

The following Tables 1. and 2. show the results of a few exercises conducted with health workers at national and international meetings for the determination of priorities. In those exercises each criteria was utilized with the same weight. It might be interesting, however, to explore the possibility of giving different weights to different criteria, so as to better reflect their importance at local level.
TABLE 1. Priority determination among a group of heterogeneous disorders*.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Magnitude</th>
<th>Severity</th>
<th>Importance</th>
<th>Controllability</th>
<th>Resources availability</th>
<th>Costs</th>
<th>Institutional commitments</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuberculosis</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>Mental disorders</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>Cardiovascular disorders</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Dental decay</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Measles</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>19</td>
</tr>
</tbody>
</table>

* Rating for all criteria, except Costs: 0 = none; 5 = maximum possible. For Costs: 0 = maximum possible; 5 = none
TABLE 2. Priority determination among a group of selected mental disorders*.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Magnitude</th>
<th>Severity</th>
<th>Importance</th>
<th>Controllability</th>
<th>Resources availability</th>
<th>Costs</th>
<th>Institutional commitments</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol abuse and dependence</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>Psychoses</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Mental retardation</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Neurotic disorders</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Drug abuse and dependence</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

* Rating for all criteria, except Costs: 0 = none; 5 = maximum possible. For Costs: 0 = maximum possible; 5 = none
## ANNEX 3

**EXAMPLES OF INDICATORS AND STANDARDS FREQUENTLY USED IN MENTAL HEALTH CARE**

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>CRITERION</th>
<th>INDICATOR</th>
<th>STANDARD*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human rights</td>
<td>UN Resolutions</td>
<td>Formal adoption</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Freedom of patients</td>
<td>% of patients kept in a locked individual cell</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Involuntary admissions</td>
<td>% of all admissions which are involuntary</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td>Budget</td>
<td>Mental health budget</td>
<td>% of the total health budget allocated to mental health activities</td>
<td>at least 10%</td>
</tr>
<tr>
<td>Organization of services</td>
<td>Sectorization</td>
<td>Adoption of the principle of sectorization</td>
<td>at least 75% of all psychiatric hospitals</td>
</tr>
<tr>
<td></td>
<td>Location of beds</td>
<td>% of psychiatric beds in general hospital wards</td>
<td>at least 25%</td>
</tr>
<tr>
<td>Access to mental health care</td>
<td>Travelling distance to nearest mental health facility</td>
<td>% of population living more than one hour from nearest mental health facility</td>
<td>&lt; 20%</td>
</tr>
<tr>
<td></td>
<td>Availability of inpatient treatment facilities</td>
<td>Beds/population</td>
<td>0.5-0.8/1,000</td>
</tr>
<tr>
<td>Staffing</td>
<td>Availability of qualified psychiatrists</td>
<td>Psychiatrists/population</td>
<td>0.25-1/10,000</td>
</tr>
<tr>
<td></td>
<td>Availability of qualified psychiatric nurses</td>
<td>Psychiatric nurses/population</td>
<td>0.5-4/10,000</td>
</tr>
</tbody>
</table>

---

14 These figures are merely taken as possible examples; they are not WHO official recommendations.
<table>
<thead>
<tr>
<th>Hospital stay</th>
<th>Length of stay in psychiatric wards</th>
<th>Maximum length of stay in psychiatric wards</th>
<th>up to 30 days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of patients staying beyond the accepted maximum length of stay</td>
<td></td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>% of outpatient visits which result in admission</td>
<td></td>
<td>&lt; 5%</td>
</tr>
<tr>
<td>Time allocation</td>
<td>Administrative load</td>
<td>Time for training, and administrative activities</td>
<td>at least 10%</td>
</tr>
<tr>
<td></td>
<td>Locus of activities</td>
<td>Time spent in the community</td>
<td>at least 20%</td>
</tr>
</tbody>
</table>

* at a minimum level
ANNEX 4
EXAMPLES OF MENTAL HEALTH ACTIVITIES EXPECTED FROM HEALTH WORKERS

To achieve integration of a mental health component into primary health care, it is necessary to have a clear idea of what mental health activities are expected of workers at each level in the system. These activities will vary according to the structure of the system in each country or even between different parts of one country, depending on the number of workers for a particular size of population and the level of education and training of each level of worker.

As a model let us consider a structure in which there are:

At the primary (or community) level:

1. village health workers (part-time, few months training);

2. peripheral trained workers, often nurses or "multipurpose" workers with from 1.5 to 3 years training, working with outpatients and perhaps with one or two overnight beds;

At the secondary (or district general hospital) level:

3. district hospitals with general duty doctors, occasionally a specialist paediatrician or obstetrician, and with specialized nurses;

At the tertiary (or specialized hospital) level:

4. a specialist hospital, with specialist doctors and units.

The following are suggested mental health functions which can be carried out at these levels:

COMMUNITY LEVEL

Community health workers (CHW):

- monitoring of psychosocial growth as well as physical growth of children.
- identifying those with major mental and neurological disorders and referring them for advice or care to the next level.
- understanding the principles of continuous long term treatment for chronic conditions, and encouraging patients to take medication regularly.
- identifying alcohol or drug abusers and advising them to stop or referring them.
- identifying parental neglect or child abuse and referring or mobilizing community action as necessary.
- giving simple mental health education such as on the dangers of alcohol and drug use.

Above all the CHW will collaborate with the health worker working from an outpatient health clinic and referred to in this text as a primary health worker.

Primary health care worker

The functions of such a worker could be:

- to provide a basic health service which does not discriminate between mental health problems and physical health problems.
- in the mental health area to be capable of identifying those conditions defined as priority conditions - e.g. epilepsy; psychiatric emergencies; situational crises; alcohol and drug dependence problems; or chronic psychotic states.
- to be capable of mounting acute emergency care for the conditions identified above, thus requiring knowledge of a small number of essential drugs; to have a supply of these; and the authority to administer them.
- to be capable of identifying factors which indicate that the patient or client should be referred to a secondary level worker, either by transportation to the health centre or hospital, or by being seen by the secondary level worker on a visit.
- to be capable of providing simple educational inputs for the maintenance of good mental health; (e.g. pregnancy, nutrition, problems of drug dependence, problems of general health relating to attitudes, taboos, etc.); and should also have some knowledge of the importance of working with other persons in the community towards establishing and maintaining community morale, community goal direction, and community concerns about health and disease.
- the primary health worker should also be capable of keeping a register of chronic patients referred downwards from secondary and tertiary centres who require maintenance drugs on a continuing basis and should ensure that such patients do not drop out of sight and that they continue to receive their necessary medications

In addition, the primary health worker based in a clinic (probably qualified in general nursing or in auxiliary nursing) will have a role in maintaining data suitable for evaluating services relating to the district in which he or she works. He/she will also have a specific responsibility to closely supervise and continually educate the village health worker, frequently working with that worker in a team relationship. The primary health worker based in a clinic will also be in contact with visiting professionals from the secondary level and
should be capable of presenting cases for advice. They should also discuss the mental health needs of the community serviced and ways to meet these.

The functions noted above mainly concern disease and disease-related situations. However, the primary health worker will have important tasks in the promotion of positive health, well-being and good psychosocial functioning. These tasks will be concerned with some of the following activities:

- to be able to initiate simple programmes leading to personal development such as training in relaxation and recreational techniques; promoting efficient use of leisure time; counselling about personal involvement in community activities; and encouraging generally good recreational (including sporting and exercise-related) activities, when these are indicated.

- the primary health worker should be able to identify individuals, not yet diseased, but vulnerable to health breakdown through faulty lifestyles; dangerous substance abuse behaviours; disadvantages and factors leading to low morale (e.g. in community or in work); and, in the case of children at risk because of negative family characteristics.

- the primary health worker should be able to identify disadvantaged families and deprived families; or families under stress by reason of illness in individual members; or community groups facing negative health consequences by reason of destructive environmental situations such as slum living, ill-planned rural or industrial development; or because of exposure to abnormal or unusual physical deprivation.

- the primary health worker should be capable of utilizing interpersonal techniques and communication skills to mobilize self-help groups; to stimulate mutual support groups; and to involve appropriate voluntary groups and agencies in community activities related to positive community health. This involves not only having specific training in techniques of facilitating group development and group motivation but, wherever possible, being equipped with those interpersonal abilities which would enable the worker to relate easily and with acceptability to many different people and groups.

Finally, all primary level health workers should have the facilities necessary to be mobile. Their role is essentially within the community, not within the clinic office. Bicycles or other cheap and efficient means of transportation should be available and the health worker, even with minimum training, should have the personal attributes necessary to achieve acceptance within a community and a position of respect.

DISTRICT HOSPITAL LEVEL

At the district hospital level (or secondary level), the possible focus for mental health activity could be a nurse with special mental health experience, possibly psychiatrically trained. There might be larger hospitals serving this support function to clinics, which even have a trained psychiatrist in post. This secondary worker, be it psychiatrist or psychiatric nurse has two broad functions:
(a) To function as a health professional in diagnosing, treating, and following up patients referred from the primary level.

(b) To function as an educator and social facilitator for primary health workers and other sectors within the district.

With regard to (a), the secondary health worker, be he or she a psychiatrist or a nurse with special experience in mental health, will be based in a health centre or in a district hospital. There will probably be a small number of beds for the inpatient management of referred cases, and there would usefully be a day hospital. Outpatient clinics will be necessary in the specific mental health area, but it is also important that the secondary worker be involved in general health clinics because of the prevalence of psychiatric problems in general outpatients.

However, in this setting the secondary health worker should be in the role of a consultant to general health workers rather than inundated with diagnostic and treatment demands. It follows, therefore, that a vital part of the role of the secondary health worker is the constant interaction with general doctors and nurses which is aimed at establishing and maintaining mental health skills in these general hospital personnel. The secondary level mental health worker should be a medical and therapeutic resource (in the area of mental health) within the health centre or hospital. This worker needs to be competent in the diagnosis of most types of psychiatric disorders; to be competent in the deployment of most techniques of treatment, including drugs, E.C.T., psychotherapeutic counselling and the non-pharmacological management of functional complaints.

In some cases the health worker may be a psychiatrist, but more frequently, nurses with psychiatric experience have shown themselves capable of assuming this role. Part of the medical requirement is the maintenance of adequate records, particularly records of long term patients returned to the community who will require both service from the primary worker and checking up by the secondary worker that such service is being provided and is appropriate. The secondary professional will also be required to visit the primary level on a regular basis, as a consultant with regard to specific cases, and as a supervisor in respect of skills and practices at the primary health level.

In the second role (b) there is a need for specialized training in social and behavioural science, community planning, and the organization and evaluation of services. Such training tends to be lacking in professional curricula at the present time and this requires urgent development. The secondary health worker is the major source for a continuing educational input for primary staff. This worker is required to have competence in teaching simple skills, and to be familiar with various technologies which can be used by the primary health worker - such as diagnostic and management flow charts etc. As noted, he or she will also be required to deploy such skills in interaction with general medical staff. In addition, as the specialist mental health worker in a district, it is this worker who will be required to interact with local authority and local government officers; with representatives of other sectors such as community and social development, education, agriculture, housing etc. and be capable of acting as a competent spokesperson for the needs of the mentally ill and for the mental health and behavioural needs of the community.
Because of the need to develop mental health services within the community and at the primary level, it is important that all health personnel involved in mental health care, whether generic or specialized, should receive appropriate training. Such training, or at least the more practical aspects of it, is unlikely to be obtained at the tertiary or teaching hospital level. It is desirable therefore that professionals in training - medical students, postgraduate psychiatrists, psychiatric nurses, doctors and nurses receiving a mental health orientation - should spend the bulk of their practical training time at the secondary health level with experience also at the primary level. In supervising such practical experience, the secondary level health worker will have a key role. It will be part of that role to organize teaching in district hospitals and also in primary health clinics; to supervise clerkships; and to interact with teachers from the tertiary level charged with the main responsibility for such training programmes.

In summary, then, the role of the secondary health professional is a three-way one - downwards to the primary health level; horizontally to other hospital (health centre) staff, to government authorities and to other sectors; and upwards to tertiary-level teaching staff and their trainees.

SPECIALIZED LEVEL

At the tertiary level is to be found the national resource of specialist psychiatrists, neuropsychiatrists, psychologists, psychiatric nurses and social workers. Little will be said about these - their role has been well established by tradition. The mistake that has often been made is to suppose that that role includes the total mental health care for a country. Such a supposition is fallacious. In fact this has not been the traditional role of tertiary specialized staff in developed countries where, because the primary health care level has generally been well advanced (in the form of general practitioners) the tertiary level practitioner has always been capable of devoting much of his or her time to teaching, the administration of health services, and to research. The vast bulk of mental health work therefore should take place at the primary and secondary levels of care. The only exception to this is where economic constraints necessitate the concentration of complex diagnostic technology in one place, in which case tertiary level staff will be concerned with the assessment of complex psychiatric and neuropsychiatric problems. However, these are small in number. In the same category are highly specialized problems, such as forensic problems, which may well require a centralized tertiary level pattern of assessment and care. This will vary with the level of development.

In some instances one might expect a shift from tertiary to secondary and primary care. For example, drug dependency may be considered. In an early stage of development, when there may be little knowledge as to the drugs of dependence in a given society, and even less knowledge as to how these might be managed, there may be reason to concentrate patients with such problems in a well-equipped tertiary facility where the clinical and theoretical issues can be studied intensively. However, as knowledge develops, and management programmes are worked out the emphasis should then shift to providing services based on knowledge deriving from such high-level national research. This process of development from central inquiry to peripheral implementation is frequently forgotten about and thus central structures become permanent and peripheral treatment remains absent.
Even at the tertiary level, there is increasing evidence to suggest that specialized psychiatric hospitals, whether for the care of acute or chronic patients, are unnecessary. Their traditional functions can be incorporated in the specialized general or teaching hospital for acute patients, with more chronic problems being dealt with in the community, in villages, or in specialized domestic-type hostels.

It should be emphasized that resources for mental health ought to go more into the development and training of general health workers and in providing for mental health professionals (especially psychiatrists and nurses) to supervise and otherwise support the primary health workers and others in the periphery. Rather than to build and staff centralized psychiatric facilities, the health authorities should be encouraged to think of putting psychiatric wards in general hospitals, and even then this must be accompanied by plans for how such units will support the bulk of mental health activities to take place at the periphery (e.g. training for peripheral workers, job descriptions altered, provision of transport for supervisory visits).

To encourage intersectoral collaboration and community involvement may require the provision of funds to facilitate workshops at both national and peripheral levels, bringing together a broad cross-section of those concerned with mental health. The mentally disturbed are often detained in the first instance, in police cells, the moderately mentally retarded may be first detected in school, the government employee drinking excessively may be under threat of dismissal from his supervisor, etc. Both local and national coordination of provision for mental health needs is therefore essential.

Alcohol problems for instance require a response from many sectors. The health sector should be able to point out the adverse consequences of alcohol consumption and will need to respond to the medical needs of alcohol abusers. A national policy on the control of alcohol problems, however, requires action by many others (e.g. in the control of licensing; police in the enforcement of laws and regulations - sales, consumption, blood alcohol levels in drivers; treasury in the use of taxation to control use, etc.) A national workshop bringing together the many people involved has been found to be very useful and the funds for this need to be made available.
ANNEX 5
EXAMPLES OF CALCULATION OF NEEDS FOR
NATIONAL MENTAL HEALTH PROGRAMMES

INTRODUCTION

In this annex an example, based on theoretical figures, of how to calculate structural requirements (human resources, beds and medication) is given. All calculations have been based on a hypothetical population of 500,000, of which 170,000 are children below 15 and 330,000 are above 15. In regions with a different age population distribution, corrections should be made.

Prof Gavin Andrews’ unpublished manuscript The Tolkien Report 1994: a model for matching the available workforce to the demands of services, as well as its forerunner was the source of inspiration for this type of exercise. However, Andrews’ paper was geared to the reorganization of an already existing system, which might explain differences between his approach and the one presented here.

At a bare minimal level, the main goals which could justify such an exercise are:

1. To provide comprehensive medical and psychological care to all people with severe mental illness, associated with severe functional impairment and disability.
2. To establish an administrative framework to coordinate mental health care at a regional and country level.

The size of a region

A service for mental health needs to be planned for a particular population. For this reason, a decision is needed regarding the size of the population for which plans are made. The following characteristics should guide the choice of size for planning purposes.

1. The population lies in an authentic "natural" or administrative area.
2. It is of a size big enough so that actions will be cost effective whilst having a wide range and a variety of services.
3. It is of small enough size so that it is easily managed.
4. Services are easily accessible to all the population. Ease of transport should also be a key, using the type of transport which is most widely used by the population. Where transport is difficult, the area covered should be correspondingly reduced.

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15 This ANNEX has drawn heavily from an unpublished WHO manuscript prepared by Dr A. Munitz and Dr J. Orley on National Mental Health Programmes: suggested goals and standards.
Taking the above factors into account, it was decided to examine possible plans for a region of 500,000 population, as mentioned above. Planning figures should be adjusted for different populations and age distributions. It must be pointed out that though the prevalence of mental illness is similar in adults and children (1), the proportion with severe mental illness rises sharply in adolescence.

For the sake of these calculations, let us consider a model which includes only a few mental disorders, e.g. schizophrenia, major depression, acute psychoses, anxiety disorders and childhood disorders. The morbidity figures used to frame the following calculations are taken from the American National Co-morbidity Survey (NCA figures, in Table 1). In spite of the fact that evidence to date indicates that it is not expected that morbidity varies greatly between nations, countries may wish to carry out their own epidemiological studies and use them to supplement these national data from the USA.

There are however other conditions that are included within the scope of mental health services in some countries, particularly dementia, mental retardation, epilepsy and drug/alcohol dependence; there is no doubt that these conditions show a high rate of psychiatric morbidity and co-morbidity. For dementia and drug/alcohol dependence, epidemiological data are more variable: rates of dementia vary greatly according to the age structure of the country; drug/alcohol-related problems vary according to the variations in the use of these substances between countries.

Morbidity

This plan is aimed to provide care for patients with severe mental disorders associated with severe impairment of function and disability. It is assumed that the region is made up of 330,000 people above the age of 15 and 170,000 below that age. The following table reflects the expected morbidity.

Table 1. Expected morbidity (according to NCA figures, using population over 15 years as base)

<table>
<thead>
<tr>
<th>Disorders</th>
<th>Prevalence (%)</th>
<th>Total number expected in population</th>
<th>Expected percentage of severe cases</th>
<th>Expected number of severe cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>0.5</td>
<td>1,700</td>
<td>100</td>
<td>1,700</td>
</tr>
<tr>
<td>Acute Psychosis</td>
<td>1.3</td>
<td>2,100</td>
<td>100</td>
<td>2,100</td>
</tr>
<tr>
<td>Major depression</td>
<td>10.3</td>
<td>30,000</td>
<td>20</td>
<td>6,000</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>17.2</td>
<td>12,500</td>
<td>5</td>
<td>600</td>
</tr>
<tr>
<td>Total</td>
<td>29.3</td>
<td>46,300</td>
<td>-</td>
<td>10,400</td>
</tr>
</tbody>
</table>
Accepting the above analysis, it is expected that in region with 500,000 people adequate mental health services should be available to at least 10,400 people (about 2% of the population) at any given time in any given year.

SERVICE STRUCTURE

In terms of services, it is assumed that all patients spend most of their lives outside hospital. Nevertheless, hospital places are needed and for this we divide the need into "acute beds" and "medium/long stay beds". The former are designed for short stays, to deal with crises and relapse, in which stabilization is effected to a sufficient degree for treatment to be continued on an outpatient basis. The need for medium/long stay beds has also been calculated.

Psychiatric beds needed

In order to calculate these, the following formula has been applied:

\[
\text{Beds} = \frac{\text{no. of severe cases} \times \% \text{ needing hospitalization} \times \frac{\text{average stay}}{365}}{100}
\]

Acute care beds

Table 2. Beds needed for acute psychiatric care.

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Percentage in need of hospitalization per year*</th>
<th>Average length of hospitalization (days)*</th>
<th>Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>50</td>
<td>21</td>
<td>56</td>
</tr>
<tr>
<td>Acute psychosis</td>
<td>30</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Major depression</td>
<td>5</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>19.4</td>
<td>90</td>
</tr>
</tbody>
</table>

* These figures are merely taken as possible examples. Where a country has alternative figures, they can be used to recalculate the resources required.

In the above table 15% is added for rotation of beds. (factor = 1.15)

---

16 The "rotation factor" allows for a period in which a bed is unoccupied between a discharge and a new admission.
Medium length stay beds

The assumption is that 5% of patients suffering from schizophrenia will need medium/long stay beds with an average length of stay of 180 days. The correction factor for rotation is taken as 5% (1.05). At this level no special facilities for rehabilitation are being considered. It is assumed that a policy of short hospitalization followed by intensive care is pursued.

![Number of beds needed:](image)

\[
1700 \times 5 \times 180 \times 1.05 = 45 \text{ beds}
\]

\[
100 \times 365
\]

When this is translated into the total number of beds needed (135 acute and medium length stay) we arrive at a figure of 0.3 beds/1000 population, only for patients with schizophrenia, major depression and acute psychoses. Again, if planners wish to change the assumptions, then new figures can be calculated for bed requirements.

Outpatient services needed

It is assumed that patients with mental disorders will be seen firstly by general health workers in PHC. We also know that, unless these have received adequate training, identification rates are extremely low and management is far from appropriate. Therefore, in the first instance all PHC facilities should be prepared to care for people with certain priority disorders.

For those cases in need, referral should be made to a higher complexity level. There should be at least three of these, providing an adequate geographical coverage to the 500,000 population. The main tasks of these specialized mental health care centres are fourfold: (i) to provide direct care to patients either referred by PHC facilities or coming directly to the centre; (ii) to follow-up patients discharged from psychiatric beds; (iii) to provide supervision to staff in PHC facilities; and (iv) to provide assistance to other community agencies, such as schools, prisons, etc.

Outpatient care load

In order to estimate the outpatient load let us assume that patients will have to be seen every 20-30 days, on average. Therefore the number of contacts, for each disorder, is given as follows:

\[
\text{outpatient care load} = \frac{365 \times \text{number of patients}}{25}
\]
For schizophrenia: \( (365 \times 1700) / 25 = 24,820 \)
For acute psychoses: \( (365 \times 2100) / 25 = 30,660 \)
For major depression: \( (365 \times 6000) / 25 = 87,600 \)
For anxiety disorders: \( (365 \times 600) / 25 = 8,760 \)
For childhood disorders: \( (365 \times 120) / 25 = 1,752 \)

Total: 153,532

The outpatient care load for the five types of disorders mentioned above amounts to a total of 153,532 contacts per year.

**HUMAN RESOURCES' REQUIREMENTS**

**Human resources for acute care beds**

We have calculated that 90 acute beds are needed (Table 2). They could be taken account of by three 30 bed units. Human resources required for an acute 30 bed unit (with around 11 admissions per week, each with an average stay of 19.4 days) are:

- 1 Head of unit - psychiatrist
- 2 Psychiatrists (1 can be interchanged with a clinical psychologist or a psychiatric clinical officer)
- 1 Social worker
- 15 Nurses (0.5 nurse/bed)

Total for 90 beds:

9 Psychiatrists (out of which 3 can be clinical psychologists or psychiatric clinical officers)
3 Social workers
45 Nurses

**Human resources for medium/long stay unit**

It was calculated that 45 beds would be needed for medium/long stay, which could compose a clinical unit. Human resources requirements are:

---

17 These calculations refer only to professional mental health staff. Maintenance, kitchen, laundry, secretarial staff etc. should be added to the figures shown below.
1 Head of unit (any mental health professional)
1 Psychiatrist
1 Social worker
14 Nurses (0.3 nurse/bed)
2 Occupational therapists

Human resources for outpatient facilities

For the 153,532 outpatient contacts per year approximately 37 mental health workers will be needed, assuming that each health worker will see an average of 80 patients per week (16 patients per day\^18, 5 working days per week). To this should be added another 8-10 workers (30%) to account for administrative work, holidays, leave, continuing education, or more than that if home visits and other outreach activities are envisaged.

Ideally each outpatient facility should have, in addition to the auxiliary personnel, at least:

1 Psychiatrist (In some countries this function is carried out by specialized Psychiatric Clinical Officers (non physicians)).
1 Nurse
1 Social worker
1 Occupational therapist
1 Clinical psychologist

Managerial requirements at regional level

1 Psychiatrist - chief regional mental health professional
1 Nurse
1 Economist
1 Epidemiologist
1 Quality assurance professional *
1 Coordinator of mental health education *.

* These can be drawn from any level of qualified mental health professional and the functions can be carried out by other senior staff at this level.

---

\^18 The number of patients seen per day, as well as the interval between visits may vary greatly, depending on the local level of human resources and local standards of good clinical practice. Also, the number of mental health workers needed to see this number of outpatients may vary greatly depending on which proportion of these patients are seen and taken care of by general health care personnel.
Table 3. Total human resources needed for a region of 500,000 people

<table>
<thead>
<tr>
<th>Type of professional</th>
<th>Inpatient</th>
<th></th>
<th>Outpatient</th>
<th>Administrative</th>
<th>Total</th>
<th>Rate (per 10,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute care</td>
<td>Medium/long stay</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical psychologists</td>
<td>-</td>
<td>1</td>
<td>6</td>
<td>-</td>
<td>7</td>
<td>.14</td>
</tr>
<tr>
<td>Nurses</td>
<td>45</td>
<td>14</td>
<td>21</td>
<td>1</td>
<td>95</td>
<td>1.9</td>
</tr>
<tr>
<td>Occupational therapists</td>
<td>-</td>
<td>2</td>
<td>6</td>
<td>-</td>
<td>8</td>
<td>.16</td>
</tr>
<tr>
<td>Psychiatrist / Psychiatric Clinical Officer</td>
<td>9</td>
<td>1+</td>
<td>6</td>
<td>1</td>
<td>17</td>
<td>.34</td>
</tr>
<tr>
<td>Social workers</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>-</td>
<td>10</td>
<td>.2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>57</td>
<td>19</td>
<td>45</td>
<td>2</td>
<td>137</td>
<td>2.74</td>
</tr>
</tbody>
</table>

MEDICATION NEEDED: AMOUNT AND COSTS\(^9\)

The following calculation takes into account the needs for all the population in the region. It assumes the use of drugs in the essential drugs list of WHO (12).

Antidepressants

The number of patients in the community is assumed to be 6000 of which:

- 10% are treated 365 days/year
- 20% are treated 180 days/year
- 20% are treated 90 days/year
- 50% are not treated

\(^9\) Specific costs were calculated based on figures from an unpublished WHO manuscript *The cost of some psychotropic and anticonvulsant medicines*, with figures provided by the WHO Drug Action Programme.
Using a standard dose of 150 mg tricyclics, the annual need of antidepressive drugs is:

\[
6000 \left(0.1 \times 365 + 0.2 \times 180 + 0.2 \times 90\right) \times 150 = \frac{6.3 \times 10^6 \text{ 25 mg tablets per year}}{25}
\]

The cost of amitriptyline is US$ 6 / 1000 tablets of 25 mg.

Therefore the cost of antidepressants for the region can be estimated as:

\[
\frac{6.3 \times 10^6 \times 6}{10^3} = \text{US$ 37,800 / year}
\]

**Antipsychotic drugs**

Assuming that 70% of the population would use an oral preparation (average 10 mg Haloperidol/day) and 30% a sustained release preparation (25 mg/3 weeks fluphenazine decanoate), the following estimations can be made.

The total number of people suffering from psychosis is 3800. Assuming that the equivalent of 80% are on antipsychotic drugs throughout the year, the number of treated patients would be 3000 for a full year. The cost of haloperidol is US$ 7/1000 tablets of 5 mg and the cost of 25 mg vials of fluphenazine decanoate is US$ 0.8/25 mg vial.

The total estimated cost of antipsychotics is US$ 23,300 per year.

---

**Number of 5 mg haloperidol tablets needed:**

\[
3000 \times 0.7 \times \frac{10 \times 365}{5} = 1.53 \times 10^6 \text{ tablets}
\]

Estimated cost of haloperidol:

\[
\frac{1.53 \times 10^6 \times 7}{10^3} = \text{US$ 10,700}
\]

**Number of 25 mg vials of fluphenazine decanoate needed:**

\[
3000 \times 0.3 \times \frac{365}{21} = 15.64 \times 10^3 \text{ of 25 mg vials per year}
\]

Cost of fluphenazine decanoate:

\[
15.75 \times 10^3 \times \frac{8}{10} = \text{US$ 12,600 per year}
\]
Antiparkinsonian drugs (only for use in conjunction with antipsychotics)

Assuming 50% of patients on antipsychotics would need antiparkinson medication, that the average dose is 10 mg daily, and that the cost of biperiden is US$5.30 / 1000 tablets of 5 mg, the following estimates can be made:

<table>
<thead>
<tr>
<th>Number of 5 mg tablets of biperiden needed per year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000 × 0.5 × 10 × 365 = 51.1 × 10⁶ tablets / year</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>The cost of biperiden is US$ 5.3 per 1000 tablets of 5 mg.</td>
</tr>
<tr>
<td>Estimated cost of biperiden:</td>
</tr>
<tr>
<td>1.1 × 10⁶ × \frac{5.3}{1000} = US$ 5800</td>
</tr>
</tbody>
</table>

Mood stabilizing drugs

Assuming that 10% of people with acute psychoses (particularly mania) are on lithium carbonate (i.e. about 200 people) and assuming an average dose of 1.2 gm/day, the following estimates can be made.

<table>
<thead>
<tr>
<th>Estimated number of 300 mg tablets needed per year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 × 1200 × 365 = 0.5 × 10⁶</td>
</tr>
<tr>
<td>300</td>
</tr>
<tr>
<td>The cost of 60 tablets lithium carbonate 300 mg is US$ 4.</td>
</tr>
<tr>
<td>Estimated cost of lithium carbonate:</td>
</tr>
<tr>
<td>0.5 × 10⁶ × \frac{4}{60} = US$ 19.466</td>
</tr>
</tbody>
</table>

Given the relatively high cost (US$ 100 per patient per year) and the need for monitoring blood levels, serious thought has to be given to the use of lithium when resources are scarce.
Antianxiety drugs

Assuming that an equivalent of 1% of the population are being treated with benzodiazepines continuously for approximately six months, by an average equivalent dose of 10 mg diazepam daily and that the cost of diazepam is US$ 3/1000 × 5 mg tablet, the following estimates can be made.

Number of 5 mg diazepam tablets needed annually:

\[
\frac{500,000 \times \frac{1}{100} \times 10 \times 180}{5} = 1.8 \times 10^6 \text{ 5 mg tablets per year}
\]

Estimated cost of diazepam:

\[
1.8 \times 10^6 \times \frac{3}{10^3} = \text{US$ 5.400 per year}
\]

Total cost

The total estimated annual cost of psychotropics in US$ is:

- Antidepressants: 37,800
- Antipsychotics: 23,300
- Mood stabilisers: 19,500
- Antiparkinsonian: 5,800
- Antianxiety drugs: 5,400

Total: 91,800

This would mean a cost of: \( \frac{91,800}{500,000} \) / person / year = US$ 0.18 / person / year

POSSIBLE LOCATION OF FACILITIES

Assuming that there is a shortage of human resources, mental health centres could be developed around the district hospital which will serve as a community centre, rather than an isolated psychiatric inpatient unit. This centre would have several functions: hospitalization of acute patients, follow up and outpatient care for complicated cases, hospital liaison service and participation in the educational programmes which should be initiated at district level. The acute beds could also be sited in wards within a district hospital (serving some 150-200,000 people). It is suggested that the medium/long stay beds should be located in a district hospital. Each acute unit should contain 20-40 beds. There is a need for only one medium/long stay unit.
Outpatient services should be established in the community. They should give care to people with complicated ambulatory mental health problems, shortly after discharge from the hospital and crisis intervention. This should serve as an interface between the community and the acute unit. The hospital unit and the outpatient facility could form a mental health centre. One person in charge of mental health education for the community could be placed here. It is recommended that a psychiatric outreach team should also be established.

CONCLUSION

This annex tries to give concrete estimates of the minimal requirements for services to people with severe mental illness in a catchment area of 500,000 people. It describes the organization of services, the number of beds, the human resources needed and the cost of medication. As this is at a minimal level, countries should not be satisfied when they have achieved these standards but should strive to improve services and reach a higher level. Similar exercises for different levels of services (e.g. intermediate and high) could also be performed, when required; in this case the indicators (e.g. length of stay, professionals per population) must be changed accordingly.

The figures can be adjusted according to the variations of epidemiology, structure of other health services and local priorities.

The fact that three important patient categories, dementia, mental retardation and substance abuse are not included in these estimates should be borne in mind. Each of these merits a similar study.