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The Project Team and Partners

Atlas is a project of WHO Headquarters, Geneva, supervised and coordinated by Dr Shekhar Saxena. Dr Benedetto Saraceno provided vision and guidance to this project. The first set of publications from this project appeared in 2001. The Mental Health Atlas-2005 represents the project's updated and revised edition.

Key collaborators from WHO Regional Offices include: Dr Therese Agossou, African Regional Office; Dr Caldas de Almeida and

Dr Claudio Miranda, Regional Office for the Americas; Dr Ahmad Mohit and Dr R. S. Murthy, Eastern Mediterranean Regional Office; Dr Matthijs Muijen and Dr Wolfgang Rutz, European Regional Office; Dr Vijay Chandra, South-East Asia Regional Office; and Dr Xiangdong Wang, Western Pacific Regional Office. They have contributed to planning the project, obtaining and validating the information from Member States and reviewing the results.

WHO Representatives and Liaison Officers in WHO Country Offices were responsible for collecting and validating the information received from Governments.

Ministry of Health officials in Member States provided the information and responded to the many requests for clarification that arose from the data.

The World Psychiatric Association provided data from some countries through their member associations.

A number of experts in countries assisted the Ministries in obtaining and providing information. They also provided relevant literature and reports to support the data.

In the course of the project, a number of colleagues at WHO provided advice and guidance. Significant among them are: Dr Tom Barrett, Dr Myron Belfer, Dr José Bertolote, Dr Dan Chisholm, Dr Michelle Funk, Dr Itzhak Levav, Dr Vladimir Poznyak, Dr Leonid Prilipko and Dr Mark van Ommeren.

Dr Pratap Sharan was the overall project manager for the Mental Health Atlas-2005. Ms Sogol Noorani assisted with completing the project beginning in September 2004. Dr Sujatha Chandrasekaran, Dr Emily Daley, Dr David Hong, Ms Olga Kupcova, Ms Yen-Ying Liu, and Ms Christina Westhoff assisted in updating the database and in its validation during their internship in the Department. Ms Maria Villeneuve and Ms Elmira Adenova assisted with the translation of material. Ms Grazia Motturi and Ms Rosemary Westermeyer provided administrative support; in addition Ms Rosemary Westermeyer assisted with proofreading and overall production. The contribution of each of these team members and partners, along with the input of many other unnamed people, has been vital to the success of this project.

The graphic design of this volume has been done by Ms Tushita Bosonet.

Preface

We are pleased to present Mental Health Atlas-2005.

The primary responsibility of the World Health Organization is to provide technical assistance to its Member States in matters related to health. However, this responsibility cannot be fulfilled satisfactorily if the Organization lacks basic information about the existing infrastructure and resources available for health care within countries. Unfortunately, until recently, this has been the case with mental health. Although substantial information was available about the burden that mental and behavioural disorders place on society, very little was known about the resources on hand in different countries to alleviate these problems. Most of the information available about mental health resources is related to a few high-income countries. For the vast majority of countries, there was almost no information available. Furthermore, because available studies had used different units of measurement, the information that was accessible was not comparable across different countries or over time.

In 2000, the World Health Organization launched Project Atlas to address this gap. The objectives of this project include the collection, compilation and dissemination of relevant information about mental health resources in different countries.

The first set of publications from the project appeared in October 2001 and was titled, Atlas: Mental Health Resources in the World, 2001 and Atlas: Country Profiles on Mental Health Resources in the World, 2001. The Mental Health Atlas-2005 is the second edition from the project, and it provides aggregate results as well as country profiles on mental health. Atlas 2005 is the result of complete updating of information from countries, supplemented by a search of relevant literature and reports of WHO and other international and national organizations. One significant addition is the inclusion of information on epidemiology of mental disorders for all low and middle income countries; this is likely to enhance the usefulness of the Mental Health Atlas-2005 as the most comprehensive reference source for global mental health information.

The country profiles confirm what mental health professionals working in these countries have known for a long time: that mental health services are grossly inadequate when compared to the needs for mental health care. The value of the Atlas therefore is that it replaces impressions and opinions with facts and figures. The profiles attempt to give a clear picture of existing resources and crucial needs in countries around the world. They also provide a baseline for monitoring changes over time. By using uniform definitions and units of measurement they encourage consistency of reporting.

A note of caution! Although great care has been taken to ensure the reliability of the data presented in the country profiles, it is possible that some errors may have crept in. We see Project Atlas as an ongoing activity of WHO, where more accurate information will become available as the concepts and definitions of resources become more refined and data sources become more organized and reliable.

Overall, we hope that the Mental Health Atlas-2005 will assist health planners and policy-makers within countries to identify areas that need urgent attention. The profiles can also help to set realistic targets by enabling comparisons of strengths and weaknesses across countries. Researchers will find the Atlas 2005 data useful for health service research. We also hope that mental health professionals and non-governmental organizations will continue to use the Mental Health Atlas in their efforts to advocate for more and better resources for mental health.

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A faint, light gray world map is visible in the background of the page, showing the outlines of continents and countries.

Section I

Introduction

Methodology

Limitations

Global and Regional Results

Comparison of Data between 2001 and 2004

Introduction

Project Atlas was launched by WHO in 2000 in an attempt to map mental health resources in the world. These data are needed at the country level to assess the current situation and to assist in developing plans and at the regional and global levels to develop an aggregate picture of the available mental health resources and the overall needs. The project thus responds to WHO's objectives as set out in the World Health Report 2001 (WHO, 2001) and in recent resolutions from the governing bodies of WHO on mental health (EB109.R8 on strengthening mental health and its affirmation by WHA55.10).

The analyses of the global and regional data collected in 2001 were compiled and presented in the publication – Atlas: Mental Health Resources in the World (WHO, 2001b); and individual country profiles and some further analyses were presented in Atlas: Country Profiles on Mental Health Resources in the World, 2001. Mental Health Atlas-2005 is the second set of publications from the project, and it presents aggregate results as well as individual country profiles on mental health.

This new edition includes updated and revised information on themes published in Atlas 2001. Atlas 2005 also includes information on new Member States (Timor-Leste) and more Associate Member States, Areas and Territories (e.g. West Bank and Gaza Strip). The general information section has been strengthened considerably, particularly through inclusion of a subsection on epidemiology. And the qualitative information in the country profiles, particularly for low- and middle-income countries is much enriched, as a result of a systematic search on mental health services. This has also led to highlighting issues particularly relevant to these countries, e.g. the issue of migration of trained manpower to high-income countries.

Section I of this publication describes the methodology used, as well as the global and regional analyses. It also explains the limitations of the Atlas data. The global and regional analyses are organized into 16 broad themes. Each theme begins with a definition of the terms used and is followed by a description of the significant findings. The results are presented in tabular form, each followed by a short explanation. The analyses include data received from all 192 WHO Member States. The main limitations of the data are listed after the explanation of the methodology. The specific limitations of each variable are discussed at the end of each theme.

Section II of this publication provides short descriptive profiles for each country. The profiles were generated by computer from the database. This would explain the language for the profile being repetitive in some areas. The countries are arranged in alphabetical order. The profiles of the WHO Associate Members, Territories and Areas include only those which had responded to the questionnaire sent to them as a part of the project. The profiles begin with some general information about each country. The statistics relating to the land areas of each country were obtained from the United Nations (2004) database and other appropriate sources. Only approximate figures are given, as the intention was to provide an estimate of the size of the country – of relevance to a profile on mental health resources – and not accurate figures. The figures for population, gender ratio and ratio of children and elderly in the total population are largely based on United Nations estimates in 2004. The life expectancy, healthy adjusted life expectancy (HALE) and health budget figures were taken from the World Health Report 2004 (WHO, 2004a). Income groupings of countries are based on World Bank 2004 data. However, the GNP/capita for the different countries was obtained from a variety of sources, including the World Bank database. The figures on literacy rate are largely based on UNESCO (2004) data. However, these databases do not always provide information about each country. In such cases, data from different sources, e.g. other international organizations and from countries themselves were included. The final subsection of the general information section in profiles of low- and middle-income countries summarizes epidemiological information available in international databases. The data provided in the general information section should not be read as the official figures for the country but taken as indicative.

The profiles on mental health cover general country information as well as summary epidemiological data. The subsequent section on mental health resources includes the broad areas of policy and legislation; finance; mental health facilities, including disability benefits, primary care and training facilities, and community care facilities; distribution of psychiatric beds and professionals; non-governmental organizations; information gathering systems; specific programmes for special sectors of the population; therapeutic drugs and any other information that was made available. Additional sources of information include documents and literature that provided important details about epidemiology and mental health resources in the country. Some qualitative information was obtained from those documents. There is some variation in the quantity of information available for each country depending on the information gathered. Attempts have been made to provide complete references wherever possible, but some citations have remained incomplete due to lack of information.

Methodology

Information for this project was collected in a series of stages or steps.

The initial questionnaire was drafted in 2001 through a process that involved consultations with Regional Offices of WHO and other mental health experts to determine the main subjects about which information was required. Following these consultations, a questionnaire was drafted at WHO Headquarters. A glossary of the terms used in the questionnaire was also prepared to assist the respondents. The definitions used in the glossary are simply working definitions for the purpose of this project and are not official WHO definitions. The draft questionnaire and glossary were discussed with the Regional Offices of WHO and selected mental health experts whose suggestions were then incorporated. The questionnaire was then pilot tested in two countries – one developed, the other developing – and the difficulties presented by both the glossary and questionnaire were once again discussed and amended appropriately. The final questionnaire covered mental health policies, programmes, legislation, mental health budgets, disability benefits, facilities for mental health in primary and community care, number of psychiatric beds and mental health professionals, involvement of non-governmental organizations in mental health, information gathering systems in mental health, special programmes for sub-populations and therapeutic drugs. The aim was to gather basic information from as many countries as possible without going into excessive detail. Once the English version of the questionnaire was finalized, it was translated into four other official languages of WHO: Arabic, French, Russian and Spanish. Responses were obtained through the focal points for mental health in the Ministries of Health in each WHO Member State, Associate Member and Area through WHO Regional Offices. The focal points were requested to complete the questionnaire using all possible sources of information and to follow the definitions provided in the glossary so as to maintain uniformity of the information. They were also requested to provide supporting documents wherever possible.

For Atlas 2005, a comprehensive literature search on mental health services and resources, focussing on low- and middle-income countries was conducted with the help of a librarian specialized in systematic searches. Subject heading based searches on Medline (1996 – February 2004) and Embase Psychiatry (1996 – February 2004) were used. The initial search combining terms 'health services' and 'mental health' yielded 13 726 and 12 438 articles in Medline and Embase, respectively. The resulting searches in each database were then combined with terms for each country in turn. Certain countries were excluded to make the search manageable and to prioritize low- and middle- income countries. WHO member states which are classified as high-income by the World Bank and which are also OECD members were excluded from this search, i.e. Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Republic of Korea, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Taiwan, United Kingdom, United States of America. For each country the country name was used (e.g. China) in addition to a stem derived from the nationality or language, e.g. Chin\$.mp. Terms for nationality and language were obtained from UN Bulletin "Terminology" No.347/Rev.1 and dictionaries. Certain country names were not available as subject headings in one or both databases so over-inclusive search terms were used e.g. Micronesia to search for articles about Tuvalu. The mean number of articles initially obtained for each country was 8.5 (range 0 to 148). Articles were organized using the Windows Reference Manager 10 programme. The abstracts were reviewed separately by two researchers to eliminate unrelated studies, i.e. (1) studies on ethnic populations in developed countries, (2) articles on unrelated populations, e.g. American Indians for a search on India, (3) articles unrelated to services, e.g. efficacy studies on drug, (4) studies examining mental symptoms/disorders as factors affecting services for physical diseases, and (5) services for physical disorders in mentally ill populations. As many articles as possible were retrieved electronically using the WHO online library, the Google search engine and freemedicaljournals.com (including "PubMed"). Additional articles were obtained from the WHO library print holdings. Abstracts of other articles were used.

A comprehensive literature search on epidemiological data of mental health related issues, focussing on low- and middle-income countries was also conducted. Potential terms related to epidemiology, mental health and country (WHO Member States, except all high-income countries) were identified and 4 databases – Medline, Embase Psychiatry, Cinahl and Sociofile – were searched using subject headings (these headings were "exploded" to encompass all subordinate terms) in the first three databases and using keywords derived from its thesaurus for Sociofile. Specificity and sensitivity of the initial search strategy were addressed using abstracts for 4 countries, leading to a step-wise refinement of the search strategy. Specificity was examined by comparing the number of relevant articles to the number of irrelevant ones for each search strategy in each database. To confirm sensitivity, articles derived with the search strategy were compared to the total number of articles for that country. As an additional check on sensitivity, the articles obtained for one country were cross-checked with a researcher who had worked extensively in that country. Income status of WHO member states was examined on basis of current World Bank Classification (in effect until 1st July 2003). A set of criteria similar to the one for mental health services was developed for the elimination of non-mental health/non-epidemiology articles. About two-fifths of the remaining (more than 25 000 abstracts) on epidemiology of mental health in relation to low- and middle income countries were reviewed by two researchers to establish reliability in the elimination process.

In addition to these literature searches, information was obtained from documents received from countries, travel reports submitted by WHO staff, feedback from experts and member associations of the World Psychiatric Association. Additional inputs were also obtained from country data collected by the WHO Offices of the Eastern Mediterranean Region, European Region and American Region.

The updated draft country profiles were then sent to the focal points for mental health in the Ministries of Health in each WHO Member State, Associate Member and Area. The focal points were requested to verify the profile and update it based on all sources of information available with them. They were also requested to provide supporting documents wherever possible. Throughout this process the Project Team was in contact with the Regional Offices and focal points. Clarifications were provided where necessary and regular reminders were sent requesting completion and submission of the verified profiles. The majority of Member States, Associate Members, Areas and Territories have already verified the information in the country profiles. The verification of country profiles of the Democratic People's Republic of Korea, Grenada, the Netherlands, Saint Kitts and Nevis and the United Arab Emirates were still being awaited from the respective Ministries of Health at the time of going to print.

For the purpose of analysis, some continuous variables were grouped into categories based on distribution. Frequency distribution and measures of central tendency (mean, median and standard deviations) were calculated as appropriate. Countries have been grouped by WHO Regions and World Bank income categories based on GNP/capita (World Bank, 2004) for analysis.

Limitations

The data collected in the course of this project have a number of limitations. These should be kept in mind when viewing the results.

While best attempts have been made to obtain information from countries on all variables, some could not provide specific details on a few issues. The most common reason for the missing data is that such data simply do not exist within the countries. It is hoped that these information gaps will be filled in the future. The extent of missing data can be gleaned from the number of countries that have been able to supply details. Each individual chart contains the number (N) of countries, out of a total of 192, whose data could be included in the chart.

The project has used working definitions arrived at through consultations with experts. The aim was to strike a balance between the definitions that are most appropriate and those that the countries currently use. At present, definitions for mental health resources like policy, primary care facilities, community care facilities, health information systems vary from country to country. As a result, countries may have had difficulty in interpreting the definitions provided in the glossary and in reporting accurate information.

Some countries may have had difficulty in providing information about the mental health budget because mental health care in their country is integrated within the primary care system, as recommended by WHO. Most of the questions were framed, so that countries could respond with 'yes' or 'no'. Although this helped in increasing the rate of responses, it failed to take into account differences in coverage and quality. Thus, information related to implementation of policies, programmes or legislation, type of disability benefits, distribution of resources among rural and urban settings, quality of services available at primary or community level, proportion of financing for rural or urban settings, quality of services available for special populations, quality of services provided by non-governmental organizations and quality of information gathering systems cannot be gauged from this data. Attempts have been made to incorporate qualitative data from several sources, but this is still limited. The information collected on the number of psychiatric beds and professionals gives the average figure for the country but does not provide information about distribution across rural or urban settings or distribution across different regions within the country.

Some of the limitations of the Atlas 2001 data, that were due to the fact that they had been collected primarily from Government sources, have been partially removed by incorporating other sources of information. Apart from the verification provided by Governments, the country profiles of the Atlas 2005 are based on information from the literature, epidemiological information, WHO reports on country projects and travel reports of WHO staff. Another rich source of country information has been the pilot trial within 10 countries using a newly developed WHO Assessment Instrument for Mental Health Systems (WHO-AIMS). However, it is still possible that information about the private sector especially that related to availability of psychiatric beds and mental health professionals may be incomplete and may not be representative of the actual figures for the country. Some details may also be missing because the respondents did not have access to the information. This is especially true of the sections on mental health financing and the availability of drugs at primary care level. Some of the data may be old and it is hoped that countries will help WHO to update the information as new data becomes available. While all possible measures have been taken to compile, code and interpret the information given by countries using uniform definitions and criteria, it is possible that some errors may have occurred due to inaccuracies of the data. WHO requests the mental health focal points within the Ministries of Health of Member States to point out any errors for correction in subsequent publications.

Project Atlas is an ongoing activity of WHO and as more accurate and comprehensive information covering all aspects of mental health resources become available and the concepts and definitions of resources become more refined, it is hoped that the database will also become better organized and more reliable.

The information provided in the profiles should be viewed as the best information available with WHO from all sources combined and not as the official viewpoint of the Member States.

Global and Regional Results

The global and regional analyses are organized into 16 broad themes. These include policies, programmes, legislation, finance, primary care, psychiatric beds, professionals, special programmes in mental health and information gathering systems. The working definitions used for key terms in the questionnaire are given at the beginning of each thematic section. The results of the analyses are presented for the world and for the six WHO Regions. The Member States included in each of the WHO Regions are as follows:

Africa: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, South Africa, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.

Americas: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, United States of America, Uruguay, Venezuela.

Eastern Mediterranean: Afghanistan, Bahrain, Djibouti, Egypt, Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen.

Europe: Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, United Kingdom, Uzbekistan.

South-East Asia: Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste.

Western Pacific: Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, Japan, Kiribati, Lao People's Democratic Republic, Malaysia, Marshall Islands, Micronesia (Federated States of), Mongolia, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Tonga, Tuvalu, Vanuatu, Viet Nam.

In addition to the Member States, information on mental health is also available from 11 Associate Members, Areas and Territories; this information is given as profiles in Section III, but is not included in the global and regional analyses.

MENTAL HEALTH POLICY

Definitions

- *Mental health policy:* a specifically written document of the Government or Ministry of Health containing the goals for improving the mental health situation of the country, the priorities among those goals and the main directions for attaining them.

A Mental health policy may include the following components:

- *Advocacy:* a combination of individual and social actions designed to raise awareness and to gain political commitment, policy support, social acceptance and health systems support for mental health goals.
- *Promotion:* a process of enabling people to increase control over the determinants of their mental well-being and to improve it.
- *Prevention:* all organized activities in the community to prevent the occurrence as well as the progression of mental disorders, including the timely application of means to promote the mental well-being of individuals and of the community as a whole, and the provision of information and education.
- *Treatment:* relevant clinical and non-clinical care aimed at reducing the impact of mental disorders and improving the quality of life of patients.
- *Rehabilitation:* care given to persons with mental disorders in the form of knowledge and skills to help them achieve their optimum level of social and psychological functioning.

1. Presence of mental health policies in each WHO Region and the world

WHO Regions	Countries (%)	Population coverage* (%)
Africa	50.0	69.4
Americas	72.7	64.2
Eastern Mediterranean	72.7	93.8
Europe	70.6	89.1
South-East Asia	54.5	23.6
Western Pacific	48.1	93.8
World	62.1	68.3

N = 190 *population according to UNO, 2004.

An analysis of the data gathered by Project Atlas shows that only 62.1% of countries, accounting for 68.3% of the population, have a mental health policy. In the African Region only 50.0% of countries have a policy. About one third of the population in the African Region is not covered by a mental health policy. Some countries, however, do have such a policy in draft form, but it has yet to be approved by the Government.

2. Year of initial formulation of the mental health policy

Years	Countries (%)
Up to 1960	6.1
1961 – 1970	0.9
1971 – 1980	7.9
1981 – 1990	22.8
1991 – 2000	53.5
After 2000	8.8

N = 114

3. Year of initial formulation of the mental health policy since 1990

Years	Countries (%)
1991 – 1992	16.9
1993 – 1994	19.7
1995 – 1996	9.9
1997 – 1998	18.3
1999 – 2000	21.1
2001 – 2002	5.6
2003 – 2004	8.5

N = 71

Some 62.3% of countries have formulated their policies since the 1990s. Of these, about one-tenth have done so since 2001.

Most countries that report having a policy also have all the essential components incorporated into them. Treatment issues are covered by 98.1% of countries, prevention by 95.3% of countries, rehabilitation by 93.4% of countries, promotion by 91.4% of countries and advocacy by 80.4% countries. Intersectoral collaboration, collaboration with NGOs, provision of social assistance, human resource development, improvement of community care facilities especially for the underserved (e.g. Maoris in New Zealand) are some of the other components also included in the policies of some countries.

There was a significant association between the presence of a mental health policy and that of a number of different variables: substance abuse policy (χ^2 41.8, $p < 0.01$), a national mental health programme ($\chi^2 = 31.6$, $p < 0.01$), disability benefits ($\chi^2 = 12.1$), primary care training facilities in mental health ($\chi^2 = 22.9$, $p < 0.01$), community care facilities in mental health ($\chi^2 = 7.80$, $p < 0.01$) and presence of NGO activities in mental health ($\chi^2 = 11.2$, $p < 0.01$).

The data on mental health policies have several limitations. Many countries, e.g. in the European Region, might not have a stated policy, but may have a well-developed action plan for mental health. These have not been taken into account in the present analysis. Also, data are not available about the degree to which policies or plans have been implemented. So, it may be possible that although a country reports having a mental health policy, because of incomplete implementation the benefits of the policy may have failed to reach most of the population. The present data refer only to the year when they were initially formulated.

NATIONAL MENTAL HEALTH PROGRAMME

Definitions

- *National mental health programme*: a national plan of action that includes the broad and specific lines of action required in all sectors involved to give effect to the policy. It describes and organizes actions aimed at the achievement of the objectives. It indicates what has to be done, who has to do it, during what time frame and with what resources.
- *Community-based care*: any type of care, supervision and rehabilitation of mental patients outside the hospital by health and social workers based in the community.

4. Presence of national mental health programmes in each WHO Region and the world

WHO Regions	Countries (%)	Population covered*(%)
Africa	76.1	82.9
Americas	76.5	87.9
Eastern Mediterranean	90.9	97.6
Europe	52.9	64.5
South-East Asia	72.7	98.1
Western Pacific	63.0	98.9
World	69.6	90.9

N = 191 *population according to UNO, 2004.

In the world 69.6% of countries, accounting for a population of 90.9%, have a national mental health programme.

5. Year of initial formulation of the national mental health programme

Years	Countries (%)
Up to 1960	2.4
1961 – 1970	2.4
1971 – 1980	7.9
1981 – 1990	26.0
1991 – 2000	51.2
After 2000	10.2

N = 127

6. Year of initial formulation of the national mental health programme since 1990

Years	Countries (%)
1991 – 1992	10.3
1993 – 1994	6.4
1995 – 1996	14.1
1997 – 1998	19.2
1999 – 2000	33.3
2001 – 2002	15.4
2003 – 2004	1.3

N = 78

Some 61.4% of the programmes were formulated since the 1990s. Of these, one-sixth were formulated since 2001.

7. Countries in each WHO Region where the national mental health programme was formulated after 1990*

WHO Regions	1991-2004 (%)
Africa (N = 34)	73.6
Americas (N = 24)	58.5
Eastern Mediterranean (N = 20)	30.0
Europe (N = 25)	76.0
South-East Asia (N = 7)	42.9
Western Pacific (N = 17)	64.7

*from all countries with a national mental health programme

Although in the European Region only 52.9% of countries have a programme, most of these programmes (76.0%) have been formulated since the 1990s. On the other hand, although 90.9% of countries in the Eastern Mediterranean Region have a programme, 70% of those were formulated before 1990.

8. Presence of community care for mental health in each WHO Region and the world

WHO Regions	Countries (%)
Africa	56.5
Americas	75.0
Eastern Mediterranean	68.2
Europe	79.2
South-East Asia	50.0
Western Pacific	66.7
World	68.1

N = 185

Community care facilities exist in only 68.1% of countries, covering 83.3% of the world's population. In the African, Eastern Mediterranean and South-East Asia Regions, such facilities are present in about half the countries. The population coverage is not uniform and is often restricted to a few areas within the country. This is the case in China, India, Paraguay and Zambia.

9. Presence of community care in each income group of countries

Income Group of Countries*	Countries (%)
Low	51.7
Lower Middle	51.9
Higher Middle	90.9
High	97.4

N = 181 * groups are based on GNP/capita of the countries: low (<\$755), lower middle (\$756-\$2995), higher middle (\$2996-\$9265), high (>\$9266). Source: World Bank, 2004

Across different income groups, community care facilities in mental health are present in 51.7% of the low income countries and in 97.4% of the high income countries.

There were also significant differences between income group and the presence of community care facilities within countries.

Examples of available community care facilities include day-care centres, therapeutic and supervised residential services, crisis residential services, sheltered homes, clubhouses, community mental health services for children and adolescents or the elderly, agricultural psychiatric rehabilitation villages, etc. Comprehensive community care facilities, including the majority of those mentioned above, are found only in the high income countries. The majority of the low income countries and countries belonging to the African, South-East Asia and Western Pacific Regions have limited resources and can afford only a few of these facilities and then only in limited areas.

Some of the European countries that have reported not having a national programme, do have well-developed action plans at state or provincial levels. These are not accounted for in the overall figures. It is possible that some countries that do not appear to have a national mental health programme may have individual programmes directed at specific areas of need. The data presented here refer only to the initial formulation of the programme and not to revisions or updates. The information given here pertains only to the existence of the programmes and not to their implementation. In some countries, community care facilities may only be available in a few areas. Or, they are available as pilot projects and not throughout the whole country as reported, e.g. in India. Further information is required about the quality of care provided through community facilities and the type of personnel involved in providing mental health care at the community level.

MENTAL HEALTH LEGISLATION

Definitions

- *Mental health legislation*: legal provisions for the protection of the basic human and civil rights of people with mental disorders and deals with treatment facilities, personnel, professional training and service structure. Mental health legislation includes provisions concerned with the restraint and protection of individual patients, regulation of compulsory admission, discharge procedures, appeals, protection of property, etc.
- *Disability benefits*: benefits that are payable, as part of a legal right, from public funds in cases of mental disorders that reduce a person's capacity to function.

10. Presence of law in the field of mental health in each WHO Region and the world

WHO Regions	Countries (%)	*Population coverage (%)
Africa	79.5	94.4
Americas	75.0	89.1
Eastern Mediterranean	57.1	70.8
Europe	91.8	90.1
South-East Asia	63.6	95.9
Western Pacific	76.0	13.9
World	78.0	69.1

N = 173 *population according to UNO, 2004

In the world, 78.0% of countries accounting for 69.1% of the population have laws in the field of mental health. In the Eastern Mediterranean Region only 57.1% of countries have laws in the field of mental health compared with 91.8% of countries in the European Region.

11. Year of initiation of the latest law in the field of mental health

Years	Countries (%)
Up to 1960	15.9
1961 – 1970	8.7
1971 – 1980	10.1
1981 – 1990	12.3
1991 – 2000	40.6
After 2000	12.3

N = 138

12. Year of initiation of the latest law in the field of mental health since 1990

Years	Countries (%)
1991 – 1992	6.8
1993 – 1994	5.5
1995 – 1996	8.2
1997 – 1998	28.8
1999 – 2000	27.4
2001 – 2002	17.8
2003 – 2004	5.5

N = 73

13. Countries in each WHO Region with initiation of the latest law in the field of mental health after 1990*

WHO Regions	1991 – 2004 (%)
Africa (N = 30)	30.0
Americas (N = 34)	58.4
Eastern Mediterranean (N = 13)	46.2
Europe (N = 47)	76.6
South-East Asia (N = 6)	16.7
Western Pacific (N = 18)	38.9

*from all countries with laws in mental health

More than half of the existing legislation is recent and has been enacted since 1990. Of this, one-fourth were enacted after 2000. Whereas in the European Region 76.6% of the legislation was enacted since the 1990s, in the South-East Asia Region the figure is only 16.7%. What is striking is that about 16% of the legislation dates from before 1960, when the majority of the current effective methods for treating mental disorders were not available.

14. Presence of disability benefits in each WHO Region and the world

WHO Regions	Countries (%)
Africa	45.5
Americas	90.9
Eastern Mediterranean	85.7
Europe	100
South-East Asia	81.8
Western Pacific	65.4
World	77.8

N = 185

Disability benefits are reported to exist in 77.8% of countries covering a population of 93.0%. They exist in only 45.5% of countries in the African Region compared with 100% of countries in the European Region.

15. Presence of disability benefits in each income group of countries

Income Group of Countries*	Countries (%)
Low	55.2
Lower Middle	88.7
Higher Middle	78.8
High	100

*World Bank, 2004

Only 55.2% of countries in the low income group provide disability benefits for mental health, compared with all countries in the high income group. There were also significant differences for this comparison.

The data on legislation and disability benefits have certain limitations. Some countries do not have separate mental health legislation, although some issues may be covered as a part of wider health legislation. Information on the degree of implementation of the legislation or the extent and effectiveness of it is not available. Some countries have a number of laws on mental health but only the most recent law and its year of enactment were mentioned. Although many countries report about having disability benefits for people with mental disorders, information on the exact kind of disability benefits and their coverage is not available from all countries surveyed. Thus, information about the type of benefits provided or about the sector of the population that benefits is lacking.

SUBSTANCE ABUSE POLICY

Definition

- *Substance abuse policy*: a specifically written document of the Government or Ministry of Health containing goals of prevention and treatment activities related to the use, abuse and dependence of alcohol, prescription and non-prescription including illicit drugs.

A substance abuse policy is vital to facilitate the planning and improvement of services for the management of people suffering from substance use disorders. The existence of a policy helps to prioritize issues related to substance use and provides direction to governmental or non-governmental organizations to work towards a common goal – the improvement of the services and resources directed towards helping patients affected by substance use disorders. The policy should be comprehensive enough to address the existing problems of the country and should cover both alcohol and illicit drugs.

16. Presence of a substance abuse policy in each WHO Region and the world

WHO Regions	Countries (%)
Africa	50.0
Americas	72.7
Eastern Mediterranean	77.3
Europe	86.3
South-East Asia	72.7
Western Pacific	53.8
World	68.8

N = 189

A substance abuse policy exists in 68.8% of countries of the world, covering a population of 77.1%. However, fewer countries in the African Region (50.0%) and Western Pacific Region (53.8%) have a policy. Almost 30% of countries in the Region of the Americas do not have a substance abuse policy though they have the highest prevalence of both alcohol and drug related disorders, as was found in the GBD, 2000 analysis.

17. Year of initial formulation of the substance abuse policy

Years	Countries (%)
Up to 1960	1.7
1961 – 1970	4.2
1971 – 1980	6.7
1981 – 1990	24.2
1991 – 2000	59.2
After 2000	4.2

N = 120

18. Year of initial formulation of the substance abuse policy since 1990

Years	Countries (%)
1991 – 1992	5.3
1993 – 1994	9.2
1995 – 1996	25.0
1997 – 1998	27.6
1999 – 2000	26.3
2001 – 2002	3.9
2003 – 2004	2.6

N = 76

19. Countries in each WHO Region that formulated a substance abuse policy after 1990*

WHO Regions	1991-2004(%)
Africa (N = 21)	71.5
Americas (N = 21)	66.7
Eastern Mediterranean (N = 16)	37.5
Europe (N = 43)	74.5
South-East Asia (N = 7)	57.1
Western Pacific (N = 12)	41.6

*from all countries with a substance abuse policy

The years since the 1990s saw the formulation of 63.4% of the policies. Of these, 6.5% were formulated since 2001. In the European Region, 74.5% of the policies were formulated since the 1990s compared to only 41.6% and 37.5% of the policies in the Western Pacific and Eastern Mediterranean Regions, respectively.

While some countries may have reported no policy, they may actually have individual plans or programmes for dealing with drug abuse or dependence. In spite of our efforts, it is possible that some countries may have reported the existence of substance abuse policies because they have legislation on substance abuse. This could be because a number of countries do have narcotics related legislation. However, specific details about the substances covered by substance abuse policy, the dates on which the policies were revised and the extent of their implementation are not available.

THERAPEUTIC DRUGS

Definitions

- *Therapeutic drug policy*: a written commitment, endorsed by the Minister of Health or the Cabinet, to ensure accessibility and availability of essential therapeutic drugs. It contains measures for regulating the selection, purchase, procurement, distribution and use of essential and appropriate drugs, including those for mental and neurological disorders. It can also specify the number and types of drugs to be made available to health workers at each level of the health service according to the functions of the workers and the conditions they are required to treat. Under the national policy, drugs may be supplied free of charge to all or selected groups.
- *Essential list of drugs*: the officially approved list of essential drugs that the country has adopted. It is usually adapted from the WHO Model List of Essential Drugs.

20. Presence of a therapeutic drug policy/essential list of drugs in each WHO Region and the world

WHO Regions	Therapeutic Drug Policy/ Essential List of Drugs (%)
Africa	93.5
Americas	90.9
Eastern Mediterranean	95.2
Europe	81.6
South-East Asia	100
Western Pacific	85.2
World	89.3

N = 187

Some 89.3% of countries in the world, covering a population of 91.1%, reported the existence of a therapeutic drug policy or essential list of drugs. In the European Region 81.6% of countries have either one or other of them. All countries in the South-East Asia Region have either a policy or an essential list of drugs.

21. Year of initial formulation of the therapeutic drug policy/essential list of drugs

Years	Countries (%)
Up to 1960	1.5
1961 – 1970	2.2
1971 – 1980	10.3
1981 – 1990	19.1
1991 – 2000	61.0
After 2000	5.9

N = 136

22. Year of initial formulation of the therapeutic drug policy/essential list of drugs since 1990

Years	Countries (%)
1991 – 1992	9.9
1993 – 1994	14.3
1995 – 1996	19.8
1997 – 1998	26.4
1999 – 2000	20.9
2001 – 2002	5.5
2003 – 2004	3.3

N = 91

Two-thirds of the policies or essential lists of drugs were formulated since the 1990s. Of these, one-tenth were formulated since 2001.

Information about availability, most common basic strength and cost of a specific list of drugs was sought.

23. Availability of therapeutic psychotropic drugs in primary care

Drug	Countries (%)
Carbamazepine (N = 185)	91.4
Ethosuximide (N = 183)	37.2
Phenobarbital (N = 185)	93.0
Phenytoin (N = 183)	77.0
Sodium Valproate (N = 184)	67.4
Amitriptyline (N = 184)	86.4
Chlorpromazine (N = 186)	91.4
Diazepam (N = 186)	96.8
Fluphenazine (N = 183)	70.5
Haloperidol (N = 184)	91.8
Lithium (N = 185)	65.4
Biperiden (N = 184)	43.5
Carbidopa (N = 180)	51.1
Levodopa (N = 181)	61.9

N = 180-186.

Among anti-epileptics, phenobarbital is available in 93.0% of countries and phenytoin in 77.0% of countries. Amitriptyline, an anti-depressant, is available in 86.4% of countries. Among anti-psychotics, chlorpromazine is available in 91.4% of countries but fluphenazine in only 70.5% of countries. Lithium, a mood stabilizer, is available in 65.4% of countries. Carbamazepine and sodium valproate which although are anti-epileptics can also act as mood stabilizers and are available in 91.4% and 67.4% of countries, respectively. Anti-Parkinson drugs are available in a lesser number of countries, with biperiden available in only 43.5% of countries.

Although the availability reported by countries is high, it should be kept in mind that these drugs are neither available in all primary care centres of a country nor are they easily available at all times. Thus, effectively, the availability of these drugs would be much lower than that reported.

24. Availability of three* essential therapeutic psychotropic drugs at primary care level in each WHO Region and the world

WHO Regions	Countries (%)
Africa	67.4
Americas	62.9
Eastern Mediterranean	50.0
Europe	62.7
South-East Asia	63.6
Western Pacific	81.5
World	65.1

N = 192 *phenytoin, amitriptyline and chlorpromazine

In the world, 65.1% of countries report having each of the three drugs: amitriptyline (an anti-depressant), chlorpromazine (an anti-psychotic) and phenytoin (an anti-epileptic). In the African Region all three of these drugs are available in 67.4% of countries.

The cost of the aforementioned three drugs varies widely within different WHO Regions and income groups. In order to make a simple comparison, the cost of drugs for treating mental disorders for one year using an average maintenance dose was calculated for all countries.

25. Comparison of median per year expenditure for treating depression with amitriptyline (150mg/day) within different WHO Regions

WHO Regions	Median cost (USD)
Africa	34.38
Americas	21.90
Eastern Mediterranean	60.12
Europe	78.40
South-East Asia	36.14
Western Pacific	54.09

26. Comparison of median per year expenditure for treating psychotic disorders with chlorpromazine (400mg/day) within different WHO Regions

WHO Regions	Median cost (USD)
Africa	49.06
Americas	100.30
Eastern Mediterranean	48.98
Europe	100.45
South-East Asia	28.47
Western Pacific	47.23

27. Comparison of median per year expenditure for treating epilepsy with phenytoin (300mg/day) within different WHO Regions

WHO Regions	Median cost (USD)
Africa	20.59
Americas	42.38
Eastern Mediterranean	34.11
Europe	33.95
South-East Asia	22.34
Western Pacific	44.13

Across different WHO Regions, the cost of treatment for one year using amitriptyline (150 mg/day) varies from \$21.90 in the Eastern Mediterranean Region to \$78.40 in the European Region; for chlorpromazine (400 mg/day), the cost varies from \$28.47 in the South-East Asia Region to \$100.45 in the European Region; and for phenytoin (300 mg/day), the cost varies from \$20.59 in the African Region to \$44.13 in the Western Pacific Region.

28. Comparison of median per year expenditure for treating depression with amitriptyline (150mg/day) in different income groups of countries

Income Group of Countries*	Median cost (USD)
Low	50.37
Lower Middle	49.60
Higher Middle	35.48
High	89.13

*World Bank, 2004

29. Comparison of median per year expenditure for treating psychotic disorders with Chlorpromazine (400mg/day) in different income groups of countries.

Income Group of Countries*	Median cost (USD)
Low	47.89
Lower Middle	35.84
Higher Middle	108.62
High	155.20

*World Bank, 2004

30. Comparison of median per year expenditure for treating epilepsy with phenytoin (300mg/day) in different income groups of countries

Income Group of countries*	Median cost (USD)
Low	16.43
Lower Middle	27.65
Higher Middle	35.04
High	44.35

*World Bank, 2004

Across different income groups the median cost for one year of treatment with amitriptyline (150 mg/day) varies from \$35.48 in the higher middle income group to \$89.13 in the high income group; for chlorpromazine (400mg/day), the cost varies from \$35.84 in the lower middle income group to \$155.20 in the high income group; and for phenytoin (300mg/day), the cost varies from \$16.43 in the low income group to \$44.35 in the high income group. From the analysis of cost it is apparent that low income countries which have a GNP/capita that is at least one-twelfth that of high income countries pay only half the cost for treatment of depression (with amitriptyline) and epilepsy (with phenytoin) and one-fourth of the cost for the treatment of psychosis (with chlorpromazine).

BUDGET FOR MENTAL HEALTH CARE

Definition

- *Specified budget for mental health*: the regular source of money, available in a country's budget, allocated for actions directed towards the achievement of mental health objectives.

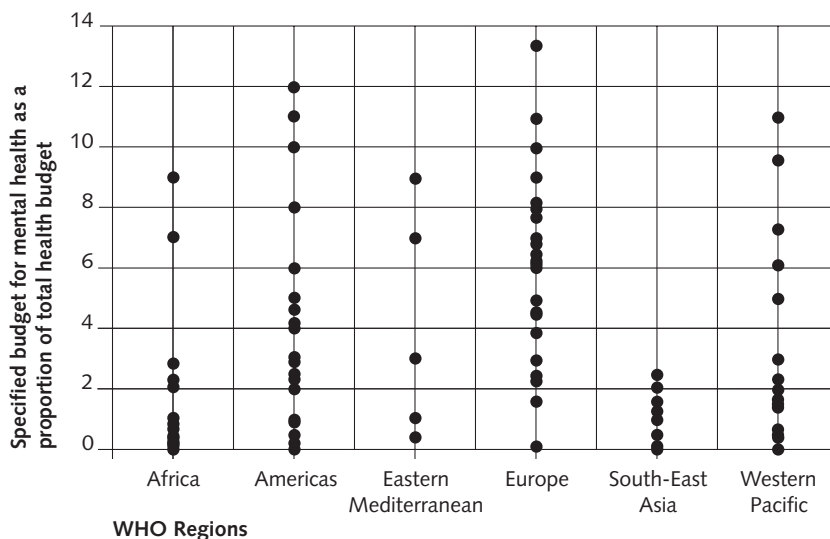
31. Presence of a specified budget for mental health care in each WHO Region and the world.

WHO Regions	Countries (%)
Africa	62.2
Americas	78.1
Eastern Mediterranean	71.4
Europe	70.0
South-East Asia	90.0
Western Pacific	59.3
World	69.2

N = 185

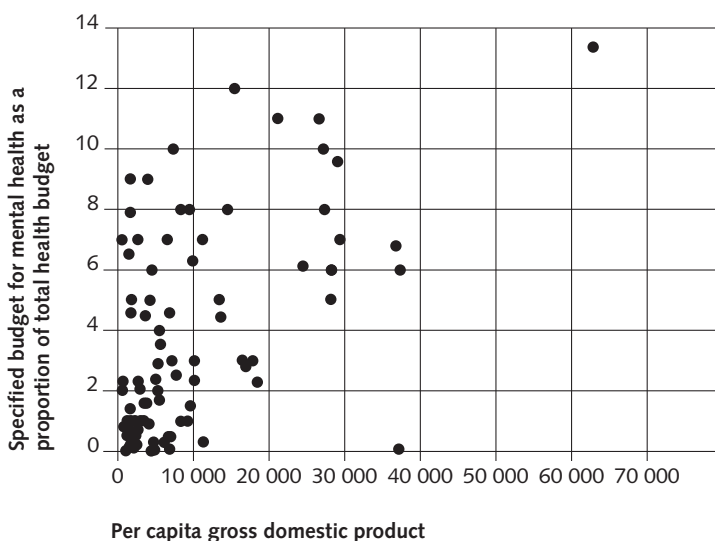
In spite of the importance of a separate mental health budget within the total health budget, 30.8% of countries reported not having a specified budget for mental health care. In the Regions of Africa, Eastern Mediterranean and Western Pacific, such a budget is present in 62.2%, 71.4% and 59.3% of countries. On the other hand, 78.1% of countries in the Americas Region have a specified budget for mental health care.

32. Specified budget for mental health as a proportion of total health budget in each WHO Region (N = 101)

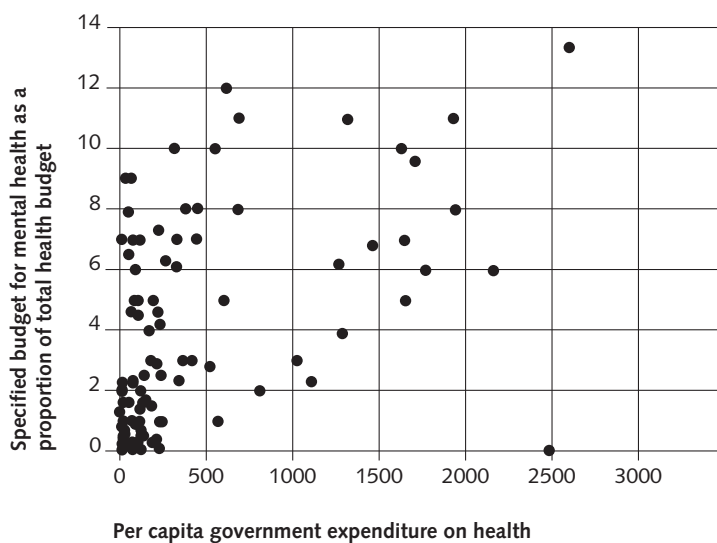


Although only 101 countries have provided information on the actual budget for mental health, this nevertheless covers about 4.8 billion people. Of the 101 countries 20.9%, covering a population of more than 1 billion, spend less than 1% of the total health budget on mental health. In the Regions of Africa and South-East Asia, 70.0% and 50.0% of countries, respectively, spend less than 1% of their health budget on mental health care. More than 61.5% of countries in the European Region spend more than 5% of their health budget on mental health care.

33 a. Specified budget for Mental Health as a proportion of total health budget by GDP/capita (I\$) (N = 86)



33 b. Specified budget for Mental Health as a proportion of total health budget by Per Capita Government Expenditure on Health (I\$) (N = 101)



Among low income countries, 29.2% accounting for a population in excess of 0.5 billion spend less than 1% of their budget on mental health care. While, among high income countries, only 0.7% accounting for a population of about 5 million people, spend less than 1% of their health budget on mental health care.

Many European Region countries report that while they do not have a national budget specifically for mental health care, they do allocate budgets to each province or state under their mental health programmes. In many countries mental health is a part of the primary health care system making it difficult to ascertain the budget for mental health care.

The number of countries that reported a specified budget for mental health as a proportion of their total health budget is relatively small. Many countries, especially in the European Region, do not have a separate mental health budget. However, they make financial allocations for mental health within the overall health budget at federal or state level. Some countries have a federal system where individual states are responsible for health expenditure. These countries were not able to provide aggregate figures. It is also possible that some countries have provided the budget allocations for their national mental health programmes. Again, some countries like Austria were unable to provide specific information about the mental health budget as mental health care is fully integrated within the primary care system, as advocated by WHO, and no separate budget exists for mental health. Information is also lacking about budget allocations to Government or non-governmental sectors, for rural or urban sectors and for distribution of budgets for different services and resources. In view of all these limitations the data on mental health budgets should be viewed as preliminary and indicative, even at the country level.

METHODS OF FINANCING MENTAL HEALTH CARE

Definitions

- *Out-of-pocket payment*: money spent by the consumer or the consumer's family as the need arises.
- *Tax based funding*: money for mental health services raised through taxation: either through general taxation or through taxes earmarked specifically for mental health services.
- *Social insurance*: everyone above a certain income level is required to pay a fixed percentage of their income to a government-administered health insurance fund. In return, the Government pays for part or all of the consumer's mental health services, should they be needed.
- *Private insurance*: the health care consumer voluntarily pays a premium to a private insurance company. In return, the insurance company pays for part or all of the consumer's mental health services, should they be needed.
- *External grants*: money provided to countries by other countries or international organizations.

The most important source of financing mental health has been reported by 180 countries.

34. Methods of financing* mental health care in each WHO Region and the world

WHO Regions	Mode of finance	Most common method of financing Countries (%) a)	Second most common method of financing Countries (%) b)
Africa	Out-of-pocket payment	38.6	40.0
	Tax Based	54.5	16.0
	Social insurance	0	16.0
	Private insurance	4.5	16.0
	External Grants	2.3	12.0
Americas	Out-of-pocket payment	12.9	25.0
	Tax Based	74.2	25.0
	Social insurance	6.5	40.0
	Private insurance	3.2	10.0
	External Grants	3.2	0
Eastern Mediterranean	Out-of-pocket payment	15.8	57.1
	Tax Based	68.4	21.4
	Social insurance	5.3	7.1
	Private insurance	0	14.3
	External Grants	10.5	0
Europe	Out-of-pocket	0	28.9
	Tax Based	55.1	23.7
	Social insurance	44.9	26.3
	Private insurance	0	21.1
	External Grants	0	0
South-East Asia	Out-of-pocket payment	30.0	50.0
	Tax Based	70.0	25.0
	Social insurance	0	0
	Private insurance	0	0
	External Grants	0	25.0
Western Pacific	Out-of-pocket payment	18.5	37.5
	Tax Based	70.4	18.8
	Social insurance	3.7	25.0
	Private insurance	0	12.5
	External Grants	7.4	6.3
World	Out-of-pocket payment	17.8	36.4
	Tax Based	62.8	21.5
	Social insurance	14.4	22.3
	Private insurance	1.7	14.9
	External Grants	3.3	5.0

a) N = 180 b) N = 121 *based on information provided by countries

World-wide, out-of-pocket payment is the most important method for financing mental health care in 17.8% of countries. In 62.8% of countries the most important method is tax based; in 14.4% of countries: social insurance; in 1.7% of countries: private insurance; and in 3.3% of countries external grants from international organizations and other countries. Across all Regions, tax based financing is the most important financing method in half to almost three-quarters of the countries. Out-of-pocket payment is the most important method of financing in 38.6% of countries in the African Region, in 30% of countries in the South-East Asia Region and in 18.5% of countries in the Western Pacific Region. Out-of-pocket payment is not the primary method of financing mental health in any country in the European Region. In the European Region social insurance is the primary method of financing in 44.9% of countries and in the Americas Region in 6.5% of countries, compared to none in the African and South-East Asia Regions and only 3.7% and 5.3% of countries in the Regions of the Western Pacific and Eastern Mediterranean, respectively. Private insurance and external grants are primary sources of financing in very few countries across the world.

Of the 121 countries that provided details on the second most important method of financing mental health care, 36.4% of countries use out-of-pocket payment, 21.5% tax based, 22.3% social insurance, 14.9% private insurance and 5.0% external grants. Out-of-pocket payment is the second most used method of financing mental health care in 40.0% of countries in the African Region, 25.0% of countries in the Region of the Americas, 57.1% of countries in the Eastern Mediterranean Region, 28.9% of

countries in the European Region, 50.0% of countries in the South-East Asia Region and 37.5% of countries in the Western Pacific Region. Social insurance, as the second most important method of financing is used by 40.0% of countries in the Region of the Americas and more than 25.0% of countries in the European and Western Pacific Regions. Importantly, 16.0% of countries in the African Region report using social insurance as the second most common method of financing mental health. In the South-East Asia Region, no country uses social insurance to finance mental health care, not even as the second most common method of financing.

The methods of financing across different income groups also vary.

35. Primary method of financing* mental health care in each income group of countries

Income Group of Countries**	Mode of finance	Most common method of financing Countries (%) a)	Second most common method of financing Countries (%) b)
Low	Out-of-pocket payment	42.9	35.5
	Tax Based	50.0	32.3
	Social insurance	0	16.1
	Private insurance	3.6	3.2
	External Grants	3.6	12.9
Lower Middle	Out-of-pocket payment	16.0	37.1
	Tax Based	72.0	8.6
	Social insurance	8.0	31.4
	Private insurance	0	17.1
	External Grants	4.0	5.7
Higher Middle	Out-of-pocket payment	0	39.1
	Tax Based	63.6	26.1
	Social insurance	30.3	17.4
	Private insurance	0	17.4
	External Grants	6.1	0
High	Out-of-pocket payment	0	32.3
	Tax Based	64.9	22.6
	Social insurance	32.4	22.6
	Private insurance	2.7	22.6
	External Grants	0	0

a) N = 176 b) N = 120 *based on information provided by countries **World Bank, 2004

Across different income groups, tax based care is the primary method of financing mental health in all countries irrespective of their income. Out-of-pocket payment is the primary method in 42.9% of low income countries compared to none in the higher middle income and high income countries. Social insurance is the primary method in 32.4% of high income countries, 30.3% of higher middle income countries and 8% of lower middle income countries. No low income country uses social insurance as its primary method of financing mental health care. Private insurance and external grants are used by a limited number of countries.

Across different income groups, out-of-pocket payment is the second most important financing method in 35.5% of low income countries, 37.1% of lower middle income countries, 39.1% of higher middle income countries and 32.3% of high income countries. Taxes are an important secondary method of financing in 32.3% of low income countries, 8.6% of lower middle income countries, 26.1% of higher middle income countries and 22.6% of high income countries. Social insurance is an important secondary financing method in only 16.1% of low income countries. Private insurance is the second most important method in 22.6% of countries belonging to the high income group and more than 17% of countries belonging to the middle income groups.

The most relevant point to emerge is that although tax based financing is the most important method of financing in the mental health sector, out-of-pocket payment is also a major method of financing. The latter is considered to be an unsatisfactory method for financing mental health care. Unfortunately, it is a common method in low income countries and in some of the poorest Regions of the world – the African, Eastern Mediterranean and South-East Asia Regions. Social insurance and private insurance is more important in the European Region and high income countries. Insurance plays almost no part in financing mental health care in the South-East Asia Region and a minimal part in the Regions of Africa and Western-Pacific. In the Region of the Americas, although tax based financing is the most important, out-of-pocket payment and both social and private insurance are also important methods of financing mental health care.

The information on the sources of financing for mental health care as presented here has several limitations and should be considered both preliminary and indicative. It is derived only from governmental sources, pertains only to the 'most important' method of financing and is not supported at present by actual numbers. Although working definitions of the terms used were provided, it is possible that some countries may not have used them accurately when providing information. Since mental health financing is a relatively new area of investigation most countries do not have the information required to accurately provide data on this. The ratings provided are the estimates of the respondents and are at best approximations. They are not based on available statistics. There is also a lack of information about the proportion of each category of financing for mental health care. This is because this project only sought information ranked by order of importance on each source of financing. It is hoped that in future as countries become more aware of this issue, more accurate and definitive information on mental health financing sources will be available.

MENTAL HEALTH IN PRIMARY CARE AND TRAINING

Definitions

- *Mental health in primary care*: the provision of basic preventive and curative mental health at the first level of the health care system. Usually this means that care is provided by a non-specialist who can refer complex cases to a more specialized mental health professional.
- *Training of primary care personnel*: the provision of essential knowledge and skills in identification, prevention and care of mental disorders to primary health care personnel.

36. Presence of mental health care facilities and treatment facilities for severe mental disorders in primary care in each WHO Region and the world

WHO Regions	Presence of Mental Health Care in Primary Care (%)*	Presence of Treatment Facilities for Severe Mental Disorders in Primary Care (%)**
Africa	82.6	60.9
Americas	93.9	62.5
Eastern Mediterranean	81.8	63.6
Europe	96.1	68.6
South-East Asia	80.0	44.4
Western Pacific	77.8	51.9
World	87.3	61.5

*N = 189 **N = 187

37. Presence of mental health care facilities and treatment facilities for severe mental disorders in each income group of countries

Income Group of Countries*	Presence of Mental Health Care in Primary Care (%)*	Presence of Treatment Facilities for Severe Mental Disorders in Primary Care (%)**
Low	76.3	55.2
Lower Middle	87.0	44.4
Higher Middle	100	72.7
High	97.4	86.8

*World Bank, 2004 **N = 185 ***N = 183

Mental health facilities at primary level are reported to be present in 87.3% of countries and to cover 96.5% of the world's population. However, in actual fact, the population coverage is lower, as primary care services are not distributed evenly across all countries. They are available in more than 77% of countries in the Eastern Mediterranean and Western Pacific Regions and in around 95% of countries in the Americas and European Region. Across income groups they are present in 76.3% of low income countries and 97.4% of high income countries.

In a separate question, respondents were asked about the availability of treatment facilities for severe mental disorders in primary care settings. These were reported to be available in only 61.5% of countries in the world covering 52.8% of the population. The actual population coverage is in fact lower since it is not uniform. Such facilities are available in only 44.4% of countries in the South-East Asia Region. Even in the Regions of Europe and Americas, they are available in only 68.8% and 62.5% of countries. Across different income groups they are available in 55.2% of low income countries, 44.4% of lower middle income countries and 86.8% of high income countries.

38. Presence of training facilities for primary care personnel in mental health in each WHO Region and the world

WHO Regions	Countries (%)
Africa	58.7
Americas	27.3
Eastern Mediterranean	81.8
Europe	68.8
South-East Asia	90.0
Western Pacific	55.6
World	59.7

N = 186

It is not sufficient to have an infrastructure for mental health care at the primary level without having adequately trained staff to detect mental health problems and manage them effectively. In the world, 59.7% of countries have some training facilities for primary care personnel in the field of mental health. Whereas 90.0% of countries of the South-East Asia Region have some training facilities, the same are available in only 27.3% of countries in the Region of the Americas.

39. Presence of training facilities for primary care personnel in mental health in each income group of countries

Income Group of Countries*	Countries (%)
Low	60.3
Lower Middle	61.1
Higher Middle	55.9
High	66.7

N = 182 *World Bank, 2004

Training facilities are available in 60.3% of low income countries and 66.7% of high income countries.

A Kruskal-Wallis one way ANOVA revealed that there was a significant relationship between the presence of primary care activities in mental health and the number of psychiatrists ($\chi^2= 22.8$, $p<0.01$) and the number of psychiatric nurses ($\chi^2= 19.7$, $p<0.01$). Primary care treatment facilities for mental disorders also showed a significant relationship with the number health professionals, psychiatric nurses ($\chi^2= 7.3$, $p<0.05$), psychologists ($\chi^2= 10.7$, $p<0.01$) and social workers ($\chi^2= 4.1$, $p<0.01$). In all cases there were a greater number of professionals when primary health care and treatment facilities were available.

Although a large number of countries have reported mental health as an integral part of primary care level, the actual implementation of this at ground level is highly uneven. Often the facilities are restricted to particular areas where specific projects are in place and do not extend to the whole country. Treatment facilities for severe mental disorders in primary care settings across different countries also vary greatly. The quality of care provided was not ascertained through this exercise. More information is required about the different personnel involved in the primary care of psychiatric patients. Whereas in some countries primary care is essentially provided by medical assistants, nurses or other primary care workers, in other countries it is provided by primary care doctors. Training also varies across countries. While some have regular and more comprehensive programmes for different types of personnel, others do not. The data, however, do not reflect these differences in quality and coverage of training activities. Some countries might not have reported having regular training facilities for primary care workers because the latter may have been trained in mental health before their job placements or there may be local facilities for training.

PSYCHIATRIC BEDS

Definition

- *Psychiatric bed*: bed maintained for continuous use by patients with mental disorders. These beds are located in public and private psychiatric hospitals, general hospitals and hospitals for the elderly and children.

The mean number of psychiatric beds in the world per 10 000 population is 4.36 (standard deviation (S.D.) 5.47, median 1.6).

40. Median number of psychiatric beds per 10 000 population in each WHO Region and the world

WHO Regions	Median per 10 000 population
Africa	0.34
Americas	2.60
Eastern Mediterranean	1.07
Europe	8.00
South-East Asia	0.33
Western Pacific	1.06
World	1.69

N = 185

The median figures per 10 000 population vary from 0.33 in the South-East Asia Region to 8.00 in the European Region.

41. Median number of psychiatric beds per 10 000 population in each income group of countries

Income Group of Countries*	Median per 10 000 population
Low	0.24
Lower Middle	1.59
Higher Middle	7.70
High	7.50

N = 181 *World Bank, 2004

The distribution of psychiatric beds across different income countries also varies. The mean and median figures per 10 000 population in low income countries are 0.68 and 0.24, respectively, compared with 8.94 and 7.50, respectively, in high income countries.

There are approximately 1.84 million psychiatric beds in the world and 68.6% of them are in mental hospitals.

42. Approximate proportion of psychiatric beds in different settings in each WHO Region and the world*

WHO Regions	Mental Hospitals (%)	General Hospitals (%)
Africa	73.0	21.4
Americas	80.6	10.3
Eastern Mediterranean	83.0	8.8
Europe	63.5	21.8
South-East Asia	82.7	11.2
Western Pacific	60.1	34.5
World	68.6	19.8

* Other beds may be located in private and military hospitals, hospitals for special groups of population, long-term rehabilitation centres, etc.

Across different Regions, South-East Asia has 82.7% of its psychiatric beds in mental hospitals compared with 63.5% in the European Region. In the Region of the Americas 80.6% of the psychiatric beds are in mental hospitals. The Western Pacific Region has the highest proportion of psychiatric beds in general hospitals (34.5%), followed by Europe with 21.8% of their total psychiatric beds in general hospitals. The Americas have 10.3% of their total psychiatric beds in settings other than mental or general hospitals. These include military hospitals, private set-ups, long-term rehabilitation centres, among others.

43. Approximate proportion of psychiatric beds in mental hospitals in each income group of countries

Income Group of Countries*	Mental Hospitals (%)
Low	74.4
Lower Middle	82.7
Higher Middle	78.8
High	55.0

N = 173 *World Bank, 2004

In low income countries 74.4% of the beds are in mental hospitals. Even, in high income countries the figure is 55.0%.

44. Distribution of psychiatric beds per 10 000 population in each WHO Region and the world.

WHO Regions	Psychiatric Beds per 10 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 5	5.01 – 10	>10
Africa	78.3 (83.0)	17.4 (17.0)	4.3 (0.0)	–
Americas	29.0 (22.9)	29.0 (29.8)	16.1 (42.7)	25.8 (3.8)
Eastern Mediterranean	50.0 (58.8)	40.9 (40.0)	9.1 (1.2)	–
Europe	–	25.5 (25.7)	49.0 (45.0)	25.5 (29.3)
South-East Asia	75.0 (94.9)	25.0 (5.1)	–	–
Western Pacific	48.1 (10.8)	37.0 (78.3)	7.4 (0.4)	7.4 (10.1)
World	40.5 (44.7)	27.6 (35.8)	19.5 (12.0)	12.4 (7.5)

N = 185

In 40.5% of countries covering 44.7% of the population there is less than one psychiatric bed per 10 000 of the population. In the South-East Asia Region 94.9% of the population has access to less than one bed per 10 000 population. In the Regions of Africa and the Western Pacific, 83.0% and 10.8% of the population, respectively, have access to less than one bed per 10 000 population. In the European Region 25.7% of the population has access to less than 5 psychiatric beds per 10 000 population.

45. Distribution of psychiatric beds per 10 000 population in each income group of countries

Income Group of Countries*	Psychiatric beds per 10 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 5	5.01 – 10	>10
Low	84.5 (96.0)	12.1 (3.8)	3.4 (0.5)	–
Lower Middle	34.6 (17.3)	44.2 (72.7)	19.2 (4.7)	1.9 (5.5)
Higher middle	12.1 (32.1)	27.3 (28.6)	30.3 (32.1)	30.3 (5.4)
High	2.6 (0)	28.9 (14.0)	36.8 (53.3)	31.6 (33.7)

N = 181 *World Bank, 2004

In 84.5% of low income countries covering a population 96.0%, there is less than one psychiatric bed per 10 000 population. In high income countries more than 10.0% of the population has access to less than 5 psychiatric beds per 10 000 population.

A Kruskal-Wallis one way ANOVA revealed that there was a significant relationship between income groups and the number of psychiatric beds ($\chi^2=79.1$, $p<0.01$). Countries in the high income group also had the highest number of available beds.

There are some limitations in the data for psychiatric beds. The number of beds reported in general hospital settings, private hospital settings or other settings may be incomplete for some countries due to the absence of definite data. The category of 'other beds', includes beds in private hospitals, military hospitals, hospitals for special populations and long-term rehabilitation centres. No information was available on beds in chronic care versus acute care. Some countries may also have reported beds allocated for neurology within the category of psychiatric beds. Information on the distribution of beds in rural and urban settings or for the number of beds for adult, geriatric and child psychiatry is also not available.

PROFESSIONALS

46. Mental health and related professionals per 100 000 population in the world

Professionals	Mean	Median	Standard Deviation (SD)
Psychiatrists	4.15	1.2	6.07
Psychiatric Nurses	12.97	2.0	26.17
Neurologists	2.13	0.3	3.74
Neurosurgeons	0.58	0.2	1.26
Psychologists working in mental health	7.35	0.6	18.1
Social Workers working in mental health	11.58	0.4	44.96

From the table above it is obvious that not only is there a shortage in the number of professionals in the world as a whole, but there is also a wide variation in the number of professionals among different WHO Regions with the Regions of Africa, South-East Asia and Eastern Mediterranean, especially, lacking adequate numbers of different mental health professionals.

PSYCHIATRISTS

Definition

- *Psychiatrist*: a medical doctor who has had at least two years of post-graduate training in psychiatry at a recognized teaching institution. This period may include training in any sub-speciality of psychiatry.

47. Median number of psychiatrists per 100 000 population in each WHO Region and the world

WHO Regions	Median per 100 000 population
Africa	0.04
Americas	2.00
Eastern Mediterranean	0.95
Europe	9.80
South-East Asia	0.20
Western Pacific	0.32
World	1.20

N = 187

The median number of psychiatrists per 100 000 population varies from 0.04 in the African Region to 9.80 in the European Region.

48. Median number of psychiatrists per 100 000 population in each income group of countries

Income Group of Countries*	Median per 100 000 population
Low	0.05
Lower Middle	1.05
Higher Middle	2.70
High	10.50

N = 183 *World Bank 2004

The median figure for low income countries is 0.05 per 100 000 population and that in the high income countries is 10.50 per 100 000 population.

There are approximately 1 800 psychiatrists for 702 million people in the African Region compared to more than 89 000 psychiatrists for 879 million people in the European Region.

49. Distribution of psychiatrists per 100 000 population in each WHO Region and the world

WHO Regions	Psychiatrists per 100 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 5	5.01 – 10	>10
Africa	89.1 (83.8)	10.9 (16.2)	–	–
Americas	28.1 (5.1)	53.1 (47.5)	3.1 (1.5)	15.6 (46.0)
Eastern Mediterranean	54.5 (78.3)	45.5 (22.9)	–	–
Europe	2.0 (7.9)	23.5 (15.1)	31.4 (25.2)	43.1 (51.1)
South-East Asia	100 (100)	–	–	–
Western Pacific	66.7 (12.4)	22.2 (78.5)	7.4 (7.6)	3.7 (1.1)
World	47.6 (46.5)	27.3 (34.0)	10.2 (5.8)	15.0 (13.7)

N = 187

In 47.6% of countries covering 46.5% of the world's population there is less than one psychiatrist per 100 000 population. All countries in the South-East Asia Region and 89.1% of countries (covering 83.8% of the population) in the African region have less than one psychiatrist per 100 000 population.

50. Distribution of psychiatrists per 100 000 population in each income group of countries

Income Groups	Psychiatrists per 100 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 5	5.01 – 10	>10
Low	87.9 (96.5)	10.3 (3.3)	1.7 (0.3)	–
Lower Middle	50.0 (23.4)	35.2 (66.7)	11.1 (3.3)	3.7 (5.6)
Higher middle	24.2 (10.7)	39.4 (44.6)	15.2 (17.9)	21.2 (26.8)
High	–	31.6 (12.1)	18.4 (22.1)	50.0 (65.8)

N = 183

In low income countries, 87.9% of the countries covering 96.5% of the population, have less than one psychiatrist per 100 000 population. Even when available, most psychiatrists are based in large cities and large populations living in rural areas have no access to them.

The data on the number of psychiatrists have certain limitations. Some countries were unable to provide an accurate number of psychiatrists, especially those working in the private sector. Since the source of information in some countries was the national association of psychiatrists, it is possible that psychiatrists who are not members of these associations have not been included. The distribution of psychiatrists within countries is also very uneven with the majority concentrated in urban areas. This distribution creates even greater disparity in their availability than is apparent from the average figures. There are also regional differences in the availability of psychiatrists within a country and this is not reflected in the data.

PSYCHIATRIC NURSES

Definition

- *Psychiatric nurse*: a graduate of a recognized, university-level nursing school with a specialization in mental health. Psychiatric nurses are registered with the local nursing board (or equivalent) and work in a mental health care setting.

51. Median number of psychiatric nurses per 100 000 population in each WHO Region and the world

WHO Regions	Median per 100 000 population
Africa	0.20
Americas	2.60
Eastern Mediterranean	1.25
Europe	24.8
South-East Asia	0.10
Western Pacific	0.50
World	2.00

N = 176

The median number of psychiatric nurses per 100 000 population varies from 0.10 in the South-East Asia Region to 24.8 in the European Region.

52. Median number of psychiatric nurses per 100 000 population in each income group of countries

Income Group of Countries*	Median per 100 000 population
Low	0.16
Lower Middle	1.05
Higher Middle	5.35
High	32.95

N = 172 *World Bank, 2004

Low income countries have a median of 0.16 per 100 000 population, whereas in high income countries the value is 32.95 per 100 000 population.

The Eastern Mediterranean Region has about 6 500 psychiatric nurses for 527 million people, compared with the European Region which has approximately 353 000 psychiatric nurses for 879 million people.

53. Distribution of psychiatric nurses per 100 000 population in each WHO Region and the world

WHO Regions	Psychiatric nurses per 100 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 10	10.01 – 50	>50
Africa	68.9 (48.7)	31.1 (52.1)	–	–
Americas	40.7 (29.8)	37.0 (63.8)	18.5 (6.4)	3.7 (0.1)
Eastern Mediterranean	50.0 (71.6)	31.8 (27.3)	18.2 (1.1)	–
Europe	6.5 (0.7)	23.9 (23.4)	52.2 (48.2)	17.4 (27.7)
South-East Asia	77.8 (94.8)	22.2 (5.2)	–	–
Western Pacific	63.0 (12.1)	18.5 (76.2)	7.4 (3.1)	11.1 (8.6)
World	45.5 (44.0)	27.8 (41.2)	19.9 (8.4)	6.8 (6.4)

N = 176

In the South-East Asia and Eastern Mediterranean Regions 77.8% and 50.0% of the population, respectively, have access to less than one psychiatric nurse per 100 000 population.

54. Distribution of psychiatric nurses per 100 000 population in each income group of countries

Income Group of Countries*	Psychiatric nurses per 100 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 10	10.01 – 50	>50
Low	75.9 (85.9)	20.7 (13.9)	3.4 (0.5)	–
Lower Middle	50.0 (20.1)	35.4 (71.1)	14.6 (8.8)	–
Higher middle	23.3 (51.1)	43.3 (21.3)	30.0 (29.8)	3.3 (0.1)
High	5.6 (0.1)	16.7 (37.8)	47.2 (21.2)	30.6 (41.0)

N = 172 *World Bank, 2004

In 75.9% of low income countries (covering 85.9% of population) there is less than one psychiatric nurse per 100 000 population. Almost 25% of the population in high middle income countries has less than 10 psychiatric nurses per 100 000 population.

55. Comparison of mean number of psychiatrists to psychiatric nurses per 100 000 population in each WHO Region and the world

WHO Regions	Mean number of Psychiatrists per 100 000 population	Mean number of Psychiatric Nurses per 100 000 population
Africa	0.26	1.54
Americas	4.54	9.27
Eastern Mediterranean	1.41	6.22
Europe	10.49	34.49
South-East Asia	0.25	0.71
Western Pacific	1.89	8.65
World	4.15	12.97

The ratio of psychiatrists to psychiatric nurses in the Americas is 1:2, compared with a ratio of 1:5 in the Regions of Africa and Western Pacific.

Many of the limitations of the data on psychiatric nurses are similar to those for psychiatrists. However, there are some more specific limitations for this data. The total number of psychiatric nurses in some countries may actually be less as some countries may have reported general nurses, who work in psychiatric facilities, as psychiatric nurses, even though they may not have psychiatric nursing training. Some countries were unable to provide data on psychiatric nurses as they do not have a separate register for different categories of nurses. To expand the information base on the role of nurses in mental health care, WHO is at present collecting information from all countries under a new project- Atlas-Nursing.

NEUROLOGISTS & NEUROSURGEONS

Definitions

- *Neurologist*: a medical doctor who has at least two years of post-graduate training in neurology at a recognized teaching institution.
- *Neurosurgeon*: a medical doctor who has at least two years of post-graduate training in neurosurgery at a recognized teaching institution.

56. Median number of neurologists and neurosurgeons per 100 000 population in each WHO Region and the world

WHO Regions	Median number of neurologists* per 100 000 population	Median number of neurosurgeons** per 100 000 population
Africa	0.02	0.01
Americas	0.70	0.40
Eastern Mediterranean	0.30	0.20
Europe	4.00	1.00
South-East Asia	0.05	0.03
Western Pacific***	0.00	0.00
World	0.30	0.20

*N = 168 **N = 167 ***the median numbers for the Western Pacific Region are 0 as a number of the smaller countries do not have these professionals

In the Western Pacific Region the median number of neurologists or neurosurgeons per 100 000 population are both zero, because many Pacific islands in this Region do not have any neurologists or neurosurgeons. The mean figures for this Region are 0.67 per 100 000 population (neurologists) and 0.43 per 100 000 population (neurosurgeons). The median figures are also low in the African Region (0.02 neurologists and 0.01 neurosurgeons per 100 000 population) and in the South-East Asia Region (0.05 neurologists and 0.3 neurosurgeons per 100 000 population for both groups of professionals). Even in the European Region which has the highest number of these professionals, the median figures per 100 000 population for neurologists and neurosurgeons are 4.00 and 1.00, respectively.

57. Median number of neurologists and neurosurgeons per 100 000 population in each income group of countries

Income Group of Countries*	Median number of neurologists** per 100 000 population	Median number of neurosurgeons*** per 100 000 population
Low	0.02	0.01
Lower Middle	0.35	0.25
Higher Middle	0.95	0.60
High	3.00	0.90

*World Bank, 2000 **N = 164 ***N = 163

The median figures per 100 000 population in low income countries are 0.02 (neurologists) and 0.01 (neurosurgeons). The corresponding figures for high income countries are 3.00(neurologists) and 0.90 (neurosurgeons).

58. Distribution of neurologists per 100 000 population in each WHO Region and the world

WHO Regions	Neurologists per 100 000 population in each category – countries % (Population covered %)			
	0-0.1	0.11 – 1	1.01 – 5	>5
Africa	88.9 (88.3)	11.1 (11.7)	–	–
Americas	15.8 (2.3)	57.9 (11.4)	21.1 (86.4)	5.3 (0.1)
Eastern Mediterranean	31.6 (26.1)	57.9 (72.7)	10.5 (1.1)	–
Europe	–	16.3 (20.8)	38.8 (50.0)	44.9 (29.2)
South-East Asia	88.9 (96.4)	11.1 (4.0)	–	–
Western Pacific	63.0 (3.0)	14.8 (85.8)	18.5 (11.8)	3.7 (0.1)
World	44.0 (40.5)	23.8 (37.8)	17.9 (17.7)	14.3 (3.9)

N = 168

All countries in the African and South-East Asia Regions have less than one neurologist per 100 000 population.

59. Distribution of neurosurgeons per 100 000 population in each WHO Region and the world

WHO Regions	Neurosurgeons per 100 000 population in each category – countries % (Population covered %)			
	0-0.1	0.11 – 0.5	0.51 – 1	>1
Africa	88.9 (88.4)	8.9 (11.6)	2.2 (0.1)	–
Americas	14.3 (0.1)	38.1 (7.9)	23.8 (3.4)	23.8 (87.6)
Eastern Mediterranean	26.3 (20.5)	52.6 (75.0)	15.8 (4.6)	5.3 (0.1)
Europe	10.9 (0.8)	6.5 (2.5)	47.8 (45.9)	34.8 (50.8)
South-East Asia	77.8 (96.1)	22.2 (3.9)	–	–
Western Pacific	70.4 (12.3)	11.1 (0.7)	11.1 (76.7)	7.4.0 (10)
World	47.3 (43.3)	18.0 (10.3)	20.4 (29.3)	14.4 (17.1)

N = 167

All countries in the Regions of Africa and South-East Asia have less than one neurosurgeon per 100 000 population. More than 90% of countries in the Western Pacific and Eastern Mediterranean Regions also have less than one neurosurgeon.

Some of the limitations of the data on these professionals are similar to those for other professions as highlighted earlier, especially those related to urban and rural variations. Information on neurologists and neurosurgeons in the private sector may not have been reported accurately by some countries. Some countries may have reported information on neurologists and neurosurgeons based on membership figures from professional associations, thereby excluding some neurologists and neurosurgeons who are not members of those associations. More comprehensive data on neurologists and neurosurgeons is available in the WHO Atlas – Country Resources for Neurological Disorders (WHO, 2004b).

PSYCHOLOGISTS WORKING IN MENTAL HEALTH

Definition

- *Psychologist working in mental health*: a graduate from a recognized, university-level school of psychology with a specialization in clinical psychology. These psychologists are registered with the local board of psychologists (or equivalent) and work in a mental health setting.

60. Median number of psychologists working in mental health per 100 000 population in each WHO Region and the world

WHO Regions	Median per 100 000 population
Africa	0.05
Americas	2.80
Eastern Mediterranean	0.60
Europe	3.10
South-East Asia	0.03
Western Pacific	0.03
World	0.60

N = 177

The median number of psychologists per 100 000 population varies from 0.03 in the South-East Asia and Western Pacific Region to 3.10 in the European Region and 2.80 in the Region of the Americas.

61. Median number of psychologists working in mental health per 100 000 population in each income group of countries

Income Group of Countries*	Median per 100 000 population
Low	0.04
Lower Middle	0.60
Higher Middle	1.80
High	14.0

N = 173 *World Bank, 2004

The median distribution per 100 000 population in low income countries is 0.04 compared to 14.0 in high income countries.

62. Distribution of psychologists working in mental health per 100 000 population in each WHO Region and the world

WHO Regions	Psychologists working in mental health per 100 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 10	10.01 – 50	>50
Africa	91.3 (89.7)	8.7 (10.3)	–	–
Americas	32.1 (3.5)	39.3 (10.6)	25.0 (80.3)	3.6 (5.6)
Eastern Mediterranean	72.7 (80.9)	22.7 (19.1)	4.5 (0.1)	–
Europe	26.1 (24.2)	39.1 (56.7)	19.6 (6.2)	15.2 (12.4)
South-East Asia	88.9 (99.9)	11.1 (0.1)	–	–
Western Pacific	84.6 (63.6)	11.5 (35.2)	3.8 (1.1)	–
World	61.6 (66.0)	23.7 (18.4)	10.2 (12.6)	4.5 (3.0)

N = 187

In the world there is less than one psychologist per 100 000 population in 61.6% of countries, accounting for 66.0% of the world's population. Almost the entire population of the South-East Asia Region and 89.7% of the population of the African Region have access to less than one psychologist per 100 000 population.

63. Distribution of psychologists per 100 000 population in each income group of countries

Income Group of Countries*	Psychologists per 100 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 10	10.01 – 50	>50
Low	91.4 (97.5)	8.6 (2.5)	–	–
Lower Middle	69.4 (58.3)	24.5 (26.5)	6.1 (15.2)	–
Higher Middle	44.8 (28.9)	44.8 (44.4)	6.9 (8.9)	3.4 (17.8)
High	13.5 (6.2)	32.4 (41.2)	35.1 (41.8)	18.9 (11.3)

N = 183 *World Bank, 2004

Among low income countries almost all the population has access to less than one psychologist per 100 000. The number of psychologists actually working in the field of mental health may be less than that reported by countries as some may have included in their figures psychologists working in all health and related sectors.

As with psychiatrists, some of the limitations of the data on psychologists are similar. However, there are some additional limitations. Although the definition of 'psychologist' was provided to countries, some countries may have used a wider definition that includes all psychologists in the country and not simply those working in mental health settings. Information from some countries could not be analysed as they were unable to provide the specific number of psychologists working in mental health out of the total number of psychologists in the country. No information is available on the number of psychologists working in psycho-diagnostics or in therapeutics or rehabilitation settings.

SOCIAL WORKERS WORKING IN MENTAL HEALTH

Definition

- *Social workers working in mental health*: a graduate from a recognized, university-level school of social work, registered with the local board of social workers (or equivalent) and working in a mental health setting.

64. Median number of social workers working in mental health per 100 000 population in each WHO Region and the world

WHO Regions	Median per 100 000 population
Africa	0.05
Americas	1.00
Eastern Mediterranean	0.40
Europe	1.50
South-East Asia	0.04
Western Pacific	0.05
World	0.40

N = 161

The median number of social workers working in mental health per 100 000 population varies from 0.04 in the South-East Asian Region to 1.50 in the European Region.

65. Median number of social workers working in mental health per 100 000 population in each income group of countries

Income Group of Countries*	Median per 100 000 population
Low	0.04
Lower Middle	0.28
Higher Middle	1.50
High	15.70

N = 157 *World Bank, 2004

The median figures per 100 000 population are 0.04 in low income countries and 15.70 in high income countries.

66. Distribution of social workers working in mental health per 100 000 population in each WHO Region and the world

WHO Regions	Social workers working in mental health per 100 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 10	10.01 – 50	>50
Africa	82.2 (87.6)	13.3 (5.8)	4.4 (6.6)	–
Americas	52.2 (32.6)	30.4 (3.2)	13.0 (63.2)	4.3 (1.0)
Eastern Mediterranean	61.9 (91.0)	33.3 (9.0)	4.8 (0.1)	–
Europe	45.9 (38.5)	18.9 (33.3)	8.1 (0.8)	27.0 (28.2)
South-East Asia	88.9 (86.0)	11.1 (13.6)	–	–
Western Pacific	61.5 (83.6)	30.8 (4.4)	7.7 (12.0)	–
World	64.0 (75.4)	22.4 (10.8)	6.8 (10.5)	6.8 (3.3)

N = 168

In about 64.0% of countries, accounting for about 75.4% of the world's population, there is less than one social worker per 100 000 population. In the African and Eastern Mediterranean Regions more than 85% of the population has access to less than one social worker per 100 000 population, compared to 52.2% of the population in the Americas. Even in Europe, 45.9% of the population has less than one social worker per 100 000 population.

67. Distribution of social workers per 100 000 population in each income group of countries

Income Group of Countries*	Social workers per 100 000 population in each category – countries % (Population covered %)			
	0-1	1.01 – 10	10.01 – 50	>50
Low	92.7 (98.2)	7.3 (1.8)	–	–
Lower Middle	75.0 (78.6)	18.2 (15.8)	6.8 (5.8)	–
Higher Middle	44.4 (67.9)	44.4 (18.9)	7.4 (13.2)	3.7 (1.9)
High	9.7 (0.7)	38.7 (20.0)	19.4 (54.8)	32.3 (24.4)

N = 164 *World Bank, 2004

In low income countries 92.7% of the population has less than one social worker per 100 000 population. In high income countries 38.7% of the population has less than 10 social workers per 100 000.

One of the primary limitations of this data was the interpretation of the definition by different countries. Some countries may have reported social workers working in any health department, although the glossary definition specified that they should be working in a mental health setting. This may have led to over-reporting of social workers in the mental health sector. Information from some countries could not be analysed as they were unable to provide the specific number of social workers working in mental health as a proportion of the total number of social workers in the country. No information is available on the number of social workers in the different mental health settings, e.g. inpatient, outpatient and community services or rural-urban settings.

PROGRAMMES FOR SPECIAL POPULATIONS AND NGOS

Definitions

- *Programmes for special populations*: programmes that address the mental health concerns, including social integration, of the most vulnerable and disorder-prone groups of population such as refugees, people affected by natural and man-made disasters, indigenous people and minorities. Special populations also include people who need special care such as the elderly and children.
- *Non-governmental organizations (NGOs)*: voluntary organizations, charitable groups, service-user or advocacy groups, or professional associations.

68. Presence of mental health programmes for special populations in the world

Mental Health Programmes for Special Populations	Countries (%)
Minority Groups	16.5
Refugees	26.2
Disaster Affected Populations	37.7
Indigenous People	14.8
Elderly Persons	50.5
Children	62.4

N = 182–186

Programmes for indigenous people are to be found in 14.8% of countries, programmes for minority groups in 16.5%, programmes for refugees in 26.2%, programmes for disaster-affected populations in 37.7%, programmes for elderly persons in 50.5% and programmes for children in 62.4% of countries.

69. Regional distribution of mental health programmes for children in comparison to the percentage of child population in each WHO Region and the world.

WHO Regions	Countries* (%)	0-14 years population (%)
Africa	37.0	42.6
Americas	81.3	30.4
Eastern Mediterranean	72.7	34.6
Europe	77.6	19.1
South-East Asia	54.5	32.8
Western Pacific	50.0	32.9
World	62.4	31.3

*N = 186

With 42.6% of its population made up of children below 14 years, the African Region only has programmes for children in 37.0% countries, compared to the European Region where 77.6% of countries have a programme. In the European Region, children below the age of 14 years account for 19.1% of the total population. Programmes for children are also limited in the Western Pacific Region where only 50.0% of countries have such programmes.

70. Availability of mental health programmes for children in each income group of countries.

Income Group of Countries*	Countries (%)
Low	34.5
Lower Middle	73.6
Higher Middle	72.7
High	86.8

N = 182 *World Bank, 2004

Whereas 86.8% of high income countries have a programme, only 34.5% of low income countries have one. Additional information on mental health services for children and adolescents will be available in the Atlas-Child and Adolescents being developed by WHO.

71. Regional distribution of mental health programmes for the elderly in comparison with the percentage of elderly population in each WHO Region and the world.

WHO Regions	Countries* (%)	60+ years population (%)
Africa	15.6	5.0
Americas	77.4	9.0
Eastern Mediterranean	54.5	5.6
Europe	63.3	17.8
South-East Asia	54.5	7.3
Western Pacific	50.0	8.1
World	50.5	9.8

*N = 184

Programmes for the elderly are found in even fewer countries. They range from being present in 15.6% of countries in the African Region and 50.0% of countries in the Western Pacific Region, to being present in 77.4% of countries in the Region of the Americas.

72. Availability of mental health programmes for the elderly in each income group of countries.

Income Group of Countries*	Countries (%)
Low	17.9
Lower Middle	50.9
Higher Middle	66.7
High	89.5

N = 180 *World Bank, 2004

Programmes for the elderly are present in 89.5% of high income countries and in only 17.9% of low income countries.

73. Presence of NGO activity in mental health in each WHO Region and the world

WHO Regions	Countries (%)
Africa	89.1
Americas	90.9
Eastern Mediterranean	85.0
Europe	92.0
South-East Asia	90.9
Western Pacific	77.8
World	88.2

N = 187

NGOs are involved in the mental health sector in 88.2% of countries across the world. Across the Regions, availability varies from 77.8% in countries in the Western Pacific Region to 92.0% in the European Region.

74. Presence of NGO activity in mental health in each income group of countries.

Income Group of Countries*	Countries (%)
Low	84.7
Lower Middle	87.0
Higher Middle	93.9
High	91.9

N = 183 *World Bank, 2004

Across the different income groups the figure varies from 84.7% in the low-income countries to 93.9% in the high-income countries.

Among the various activities carried out by NGOs in different countries, advocacy is carried out in 80.5% of countries, promotion in 79.9% of countries, prevention in 74.2% of countries, treatment in 52.2% of countries and rehabilitation in 82.4% of countries.

Although many countries reported the existence of specific programmes, information on the type and quality of the programmes is not available. Some countries may not have specific programmes, but do have psychiatric facilities catering for special groups. Some countries may have had problems in interpreting the definition of special programmes for sub-populations as they differed from those in their own country. Some countries also had difficulty identifying sub-populations present within their country. Information is also lacking about the degree of implementation of the different programmes when available. Although many countries have reported NGO activities in mental health, it is not clear to what extent they cover the population. Information on the quality and coverage of services of NGOs is lacking. Some of the NGOs mentioned are actually international NGOs working in countries and not necessarily local NGOs.

MENTAL HEALTH INFORMATION GATHERING SYSTEMS

Definitions

- *Annual reporting system*: the preparation of information covering health and health services functions and the use of allocated funds for each year by the Government.
- *Information/data collection system*: an organized information gathering activity for service data. It usually incorporates patient admission or discharge rates, outpatient contacts, community contacts and patients subject to mental health legislation.
- *Epidemiological studies*: research studies focusing on extent and nature of mental disorders.

75. Presence of mental health reporting systems in each WHO Region and the world

WHO Regions	Countries (%)
Africa	57.8
Americas	75.8
Eastern Mediterranean	70.0
Europe	87.8
South-East Asia	100
Western Pacific	77.8
World	75.7

N = 185

Across the world, annual mental health reporting systems exist in 75.7% of countries. In the Regions of South-East Asia and Europe, 100% and 87.8% of countries, respectively have some form of annual mental health reporting system, compared with only 57.8% of countries in the African Region.

76. Presence of mental health reporting systems in each income group of countries

Income Group of Countries*	Countries (%)
Low	62.1
Lower Middle	81.5
Higher Middle	81.8
High	86.1

N = 181 *World Bank, 2004

Across income groups, 62.1% of low income countries have an annual mental health reporting system compared with 86.1% of high income countries.

77. Presence of an epidemiological study or data collection system in mental health in each WHO Region and the world

WHO Regions	Countries (%)
Africa	46.7
Americas	71.9
Eastern Mediterranean	52.4
Europe	73.5
South-East Asia	63.6
Western Pacific	51.9
World	60.5

N = 185

A data collection system or an epidemiological study exists in only 60.5% of countries world-wide. Across the different Regions, they are present in 73.5% of the European Region but only in 46.7% of the African Region. All the other Regions have figures varying between 50-70%.

78. Presence of an epidemiological study or data collection system in mental health in each income group of countries

Income Group of Countries*	Countries (%)
Low	48.3
Lower Middle	59.3
Higher Middle	75.0
High	75.7

N = 181 *World Bank, 2004

Across income groups, a data collection system or an epidemiological study is found in 48.3% of low income countries and in 75.7% of high income countries.

More specific information on epidemiology of mental disorders within low and middle income countries can be found within the individual country profiles of this volume.

Comparison of data between 2001 and 2004

A comparison of data collected in the year 2001 with that updated in 2004 would seem natural. However, this should be done only in the light of certain caveats. First, the data collection exercise on many parameters of mental health resources had not been conducted in many countries before, thus some changes in data occurred because the method of data collection improved and due to efforts into triangulation of data sources, i.e. these changes would reflect improvement in reliability of data rather than change in the actual resource base. Second, the denominator for comparisons in the two data sets (years 2001 and 2004) are different as many countries responded to queries in 2004 that they had been unable to previously and a new member state was added. On the other hand, some countries withdrew pieces of information that they felt were unreliable.

Overall, there was a slight increase in countries with a mental health policy, with a 15.5% decrease (66.7% in terms of population covered) noted in the South-East Asia Region (Table 1-3). This counterintuitive finding is related to the fact that India's National Mental Health Programme serves as a policy document at the level of the Health Ministry. India doesn't have a separate policy document with parliamentary approval. The change was due to availability of more reliable information. No major changes were noted in the figures for national mental health programme (Table 4-7). A heartening feature was that more countries were providing community mental health services (Table 8 and 9) than before. These changes were most marked in the Eastern Mediterranean Region (13.7%) and for higher middle-income countries (13.8%).

Similarly, a slight increase was noted in the number of countries with mental health legislation. This trend was more marked in the African (8.4%) and American (7.1%) Regions (Table 10-13). The figures on population covered (13.9%) in comparison to the number of countries with mental health legislation (76%) is low in the Western Pacific Region because China does not have a comprehensive mental health law; instead, laws relating to mental health issues are spread over various other laws. More countries were providing disability benefits in some form; the changes in this regard were most marked in the Eastern Mediterranean Region (10.7%) and the lower middle-income (9.5%) countries (Table 14 and 15).

No major changes occurred in the number of countries with a substance abuse policy (Table 16-19). The apparent increase in the number of countries that initiated their substance abuse policies after the 1990s is due to improvement in reliability of information due to triangulation of data.

A slight increase in the number of countries with a therapeutic drug policy or an essential drug list pertaining to psychotropics was noted. Major changes were not expected really due to the ceiling effect. Almost 90% of countries in all subgroups had such lists/policies (Table 20-22). Paradoxically a slight decrease (up to 3.6%) seemed to have occurred in the number of countries that made psychotropics available in primary care (Table 23). This was largely due to the fact that some countries had mistakenly mentioned that these drugs were available in primary care setting in 2001, but later they reported that these psychotropics were available only in secondary/tertiary care settings. A 15.5% reduction was noted in the number of countries that made the three essential psychotropics (amitryptiline, chlorpromazine and phenytoin) available in primary care (Table 24). This composite index, suffered as a negative response to any of the three listed drugs, resulted in the overall category being labelled as negative. Some countries, particularly in the European Region mentioned that they have added newer psychotropics to their essential list of drugs to be made available in primary care and are no longer emphasizing the older generation psychotropics. However, this trend was not marked in the African Region. Changes were also noted in the cost of psychotropics (Table 25-30). This was expected because the figure on expenditure on procuring psychotropics is given in dollars and is thus subject to exchange rate fluctuations.

A slight decrease (2.8%) was noted in terms of the number of countries stating that they had a specific budget line for mental health in their health budgets (Table 31). This trend was most prominent in the American (14.5%) and Eastern Mediterranean (8.6%) Regions. On the other hand, 90% (an increase of 23.3%) South-East Asia Region countries reported that they had a specific budget for mental health. Mild alteration in ordering was observed in terms of methods of financing mental health care (for this comparison the most common and second most common methods of financing countries were combined) (Table 34 and 35). There was a decrease (5.4%) in emphasis on out-of-pocket payment and an increase (7.5%) on emphasis on tax based system in the American Region. A few countries in this region also reported that external grants were important means of financing mental health care. In the Eastern Mediterranean Region, a decrease (10.8%) in emphasis on out-of-pocket payment and an increase in emphasis on a tax based system (8.2%) was noted. In the European Region, a slight shift in emphasis from social insurance (5.2%) to private insurance (5.3%) occurred, while in the Western Pacific Region there was an increase in emphasis on out-of-pocket payment (11.2%) and social insurance (5.7%). In terms of income groups of countries, an increase in emphasis on external grants (5.8%) was noted in low-income countries; a decrease in emphasis on social insurance (8.9%) and an increase in emphasis on private insurance (8.0%) were observed in lower middle-income countries; and a decrease in emphasis on social insurance (8.3%) occurred in high-income countries.

No major changes were observed in terms of availability of mental health services in primary care in WHO regions, but an increase (5.7%) was noted in higher middle-income group of countries. More countries (13.6%) in the Eastern Mediterranean Region had made treatment for severe mental disorders available in their primary care. A similar change was observed for higher middle-income (6%) countries (Table 36-37). A 14.6% decrease in the number of countries providing regular training in mental health care to

primary health care workers was noted in the American Region, largely because clarifications revealed that some countries had provided ad-hoc training in mental health to primary care workers but were not doing so on a regular basis (Table 38-39).

There was a decrease in median number of beds in regions that had high bed-to-population ratios, i.e. American (0.7 per 10 000 population) and European (0.7 per 10 000 population) Regions and an increase in regions with intermediate bed-to-population ratio, i.e. in the Eastern Mediterranean (0.28 per 10 000 population) and Western Pacific (0.08 per 10 000 population) Regions. No change was observed in regions with low bed-to-population ratio, i.e. in the African and South-East Asia Regions. In congruence with the above findings, a decrease in number of beds was noted in high-income countries (1.20 per 10 000 population), an increase in middle-income (both, higher 2.30 per 10 000 population and lower 0.19 per 10 000 population) groups of countries and no change was observed for low-income countries (Table 42-43). The availability of more reliable figures indicated that the proportion of beds in mental hospital setting had been underestimated in the 2001 data, particularly for American (33%) and Eastern Mediterranean (8.3%) Regions and the higher middle-income group of countries (12%). On the other hand, there was a decrease in proportion of mental health beds in the African (5%), European (7%) and Western Pacific (9.2%) Regions and low-income (11.7%) countries. Despite, the upward change in figures for mental hospital beds, a general trend towards an increase (3.9%) in proportion of general hospital beds to total beds was observed; this was relatively more marked for the African (8.6%), European (11.7%) and Western Pacific (11.8%) Regions. It appears that in reports submitted in 2001, some mental health beds were misclassified in the 'other' category; on the other hand, the figures for general hospital beds were more accurate. A comparison of bed-to-population ratios at the two time points showed that in general, there was a decrease (3.4%) in the number of countries with more than 10 beds per 10 000 population and a corresponding increase (2.6%) in the number of countries with 5 to 10 beds per 10 000 population. This largely reflected changes in European (a decrease of 13.3% in the former category and an increase of 10.2% in the latter category) and high-income (a decrease of 11.3% in the former category and an increase of 8.2% in the latter category) countries. Many countries in the American Region reported alterations in their bed-to-population ratios as a result of our efforts at triangulation of data sources. This led to an increase (6.4%) being noted in number of countries with less than one bed per 10 000 population and a corresponding decrease (6.5%) in number of countries with 1-5 beds per 10 000 population. A greater number of countries in the Western Pacific Region reported that they had 1-5 beds per 10 000 population (an increase of 7.4%). This trend was also noted for lower middle-income countries (6.5%). Low-income countries reported a decrease in bed-to-population ratios (the number of countries in the less than one bed per 10 000 population category increased by 6.2%). Higher middle-income countries reported a decrease (5%) in the number of countries with less than one bed per 10 000 population (Table 44-45).

Overall, there was an increase in the number of mental health professionals in the world (Table 46). The greatest increase was noted in the number of psychologists (increase in mean: 0.92 per 100 000 population, increase in median: 0.2 per 100 000 population) (especially in the American and to some extent in the European Regions) and social workers (increase in mean: 2.94 per 100 000 population, increase in median: 0.1 per 100 000 population) (especially in the European Region) engaged in mental health care. But, a number of countries noted that it was difficult to give accurate figures for these two groups of professionals as many psychologists and social workers were dealing with mental health issues along with many other responsibilities. Thus, the figures for these groups of mental health professionals are likely an overestimate. The South-East Asia Region showed a decrease in the number of psychiatrists (by about 40%) and psychiatric nurses (by about 60%). Availability of more accurate figures as well as migration of professionals from these to other regions could be reasons for this trend.

When the median number of psychiatrists per 100 000 population was compared it was seen that an increase had occurred on the European Regions (0.8) and in high-income countries (1.5). Overall, there was a decrease (5.1%) in the number of countries with less than one psychiatrist per 100 000 population and a corresponding increase (5.9%) in number of countries with 1-5 psychiatrists per 100 000 population. This was reflected in the situation in the African (where there was a 6.6% decrease in the former category and a 6.6% increase in the latter category) and American (where there was a 5.2% decrease in the former category and a 6.4% increase in the latter category) Regions. More European countries reported having 1-5 (5.1%), and more than 10 (6.4%) psychiatrists per 100 000 population and fewer European countries reported having 5-10 (9.4%) psychiatrists per 100 000 population. Few changes were noted for low-income countries, but a smaller proportion (12.3%) of lower middle-income countries reported having less than one psychiatrist per 100 000 population and a greater number (14.4%) reported having 1-5 psychiatrists per 100 000 population. Similarly, a lower proportion (8.2%) of higher middle-income countries reported that they had less than one psychiatrist per 100 000 population and a greater number (6.5%) reported that they had more than 10 psychiatrists per 100 000 population. Among high-income countries, more countries stated that they had 1-5 (5.9%) and fewer stated that they had 5-10 (10.2%) psychiatrists per 100 000 population (Table 47-50).

A comparison of median number of psychiatric nurses per 100 000 population revealed an increase (0.75) in the Eastern Mediterranean and a decrease in the European (2.7) and Western Pacific (0.6) Regions. A decrease was also noted for high-income countries (0.55), likely due to more accurate definitions used (Table 51-52). A greater number (13%) of Western Pacific Region countries reported that they had less than one psychiatric nurse per 100 000 population and a correspondingly fewer (16.1%) countries reported that they had 1-10 psychiatric nurses per 100 000 population. A greater number of countries in the American (5%),

Eastern Mediterranean (8%) and European (5.5%) Regions had between 1 and 10 psychiatric nurses per 100 000 population and fewer (5.6%) Eastern Mediterranean countries reported that they had 10-50 psychiatric nurses per 100 000 population. In South East Asia Region, Thailand moved from the category of 1-10 psychiatric nurses per 100 000 population to 10-50 psychiatric nurses per 100 000 population. More (8.7%) lower middle-income group countries reported that they had 1-10 psychiatric nurses per 100 000 population and fewer (5.4%) reported that they had 10-50 psychiatric nurses per 100 000 population. The opposite trend was noted for high-income countries, where 6.6% fewer countries reported having 1-10 and 7.2% more countries reported having 10-50 psychiatric nurses per 100 000 population (table 53-54). The ratio of mean number of psychiatric nurses to mean number of psychiatrists worsened in the South-East Asia Region from 9:1 to 3:1 due to a reduction in the mean number of psychiatric nurses (Table 55).

There was no major change in the median number of neurologists and neurosurgeons in WHO regions, but an increase was observed in the higher middle-income group of countries, where the median number of neurologists increased by 0.45 per 100 000 population (Table 56-57). In the Eastern Mediterranean Region, a greater number (7.9%) of countries reported having 0.1-1 neurologist per 100 000 population and a fewer (7.3%) countries reported having 0-0.1 neurologists per 100 000 population. Fewer (9.7%) countries in the American Region reported having 1-5 neurologists per 100 000 population and more countries (5.3%) in this region reported that they had more than 5 neurologists per 100 000 population. On the other hand, a greater number of countries in the Western Pacific Region reported that they had 1-5 neurologists per 100 000 population (Table 58). More (7.2%) countries in American Region reported having 0-0.1 neurosurgeon per 100 000 population and fewer (9.6%) countries reported that they had more than 0.5 neurosurgeon per 100 000 population (Table 59).

A comparison of median number of psychologists per 100 000 population showed an increase in the Eastern Mediterranean Region (0.4) and in higher middle-income group of countries (1.10) and a decrease in high-income (12.7) countries. The latter result probably reflects the use of tighter definition (Table 60-61). Overall, there was an increase (5.4%) in the number of countries with 1-10 psychologists per 100 000 population and a decrease (6.7%) in the number of countries with less than 1 psychologists per 100 000 population. This trend was supported by figures for the American (6% increase in the former category and a 9.6% decrease in the latter category), European (a 5% increase in the former category and a 5.6% decrease in the latter category) and Eastern Mediterranean (a 18.2% increase in the former category and a decrease of 18.2% in the latter category) Regions and the figures for low-income (a 6.9% increase in the former category and a 6.9% decrease in the latter category) and higher middle-income countries (a 13.8% increase in the former category and a 20.7% decrease in the latter category) and negated to some extent by figures for the Western Pacific Region (a 6.7% decrease in the former category and a 7.3% increase in the latter category) (Table 62-63).

The median number of social workers had decreased in the American (0.9) and European (0.85) Regions and in high-income (9.8) countries (Table 64-65). A greater number of countries in the American Region (14.1%) and in the high-income group (5.5%) reported having 0-1 social workers per 100 000 population and fewer countries in these groups reported that they had 10-50 social workers per 100 000 population (a 10.8% decrease in the American Region and a 9.8% decrease in the high-income group of countries). Similarly, more (7%) countries in the Western Pacific Region reported having 0-1 social workers per 100 000 population and fewer (5.6%) such countries stated that they had 1-10 social workers per 100 000 population. The opposite trend was seen for countries in the Eastern Mediterranean Region (a decrease of 9.5% in the former category and a 9.5% increase in the latter category). In the European Region, also fewer (5.2%) countries reported that they had 10-50 social workers per 100 000 population. Finally, more (5.2%) higher middle-income countries reported having 1-10 social workers per 100 000 population (Table 66-67).

There were no major changes in the overall pattern of services for special populations (Table 68), but there was an increase in services for children and adolescents in the countries of the American (7.1%) and Western Pacific (7.7%) Regions, while a decrease (5.5%) was noted in the South-East Asia Region. Similarly, services for children and adolescents increased in the lower middle-income (13.2%) and higher middle-income (7%) countries (Table 69-70). A similar pattern also emerged for services targeted at the elderly, where more countries in the American (9.7%) and the Western Pacific (11.5%) Regions reported that they had services for the elderly population and fewer (5.5%) countries in the South-East Asia Region reported the presence of such services. Also, a greater number of lower middle-income countries (5.6%) and higher middle-income countries (9.6%) reported the presence of such services (Table 71-72).

Few changes were also noted in the presence of non-governmental organizations (NGOs) in WHO regions. An increase occurred in the number of countries reporting the presence of NGOs in the Eastern Mediterranean (5%) and South-East Asia (10.9%) Regions (Table 73-74).

Regarding mental health reporting systems, a greater number of countries in the African (5.5%), American (8.1%) and South-East Asia (10%) Regions reported their presence, while fewer Eastern Mediterranean (5%) countries reported that they had such systems in place. An increase (9.3%) in the number of countries with such systems was noted in lower middle-income countries, but a decrease (5.1%) occurred in high-income countries (Table 75-76). Similar trends were noted for data collection system/epidemiological studies, where in a greater number of countries in the American (13.8%) and South-East Asia (13.6%) Regions and in the

low- (5%), lower middle- (9.3%) and the higher middle-income (6.4%) categories reported the presence of data collection system/epidemiological study (Table 77-78).

In summary:

- Improvements in the availability of mental health resources within different countries are very small, i.e. no substantial changes can be seen between the data collected in 2001 with that updated in 2004.
- Regional imbalances have also remained largely similar. There are marked differences in the availability of mental health resources, particularly between high and low income countries.
- A modest increase can be noted with regard to the overall availability of certain mental health resources. There was an increase in countries with a mental health policy, mental health legislation and a therapeutic drug policy or essential drug list. Also, more countries are providing community mental health services and disability benefits in some form. Finally, there was an increase in the number of mental health professional in the world, with the greatest increase noted in the number of psychologists and social workers.

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