Global Mental Health 6

Scale up services for mental disorders: a call for action

Lancet *Global Mental Health Group**

We call for the global health community, governments, donors, multilateral agencies, and other mental health stakeholders, such as professional bodies and consumer groups, to scale up the coverage of services for mental disorders in all countries, but especially in low-income and middle-income countries. We argue that a basic, evidence-based package of services for core mental disorders should be scaled up, and that protection of the human rights of people with mental disorders and their families should be strengthened. Three questions are critical to the scaling-up process. What resources are needed? How can progress towards these goals be monitored? What should be the priorities for mental health research? To address these questions, we first estimated that the amount needed to provide services on the necessary scale would be US$2 per person per year in low-income countries and $3–4 in lower middle-income countries, which is modest compared with the requirements for scaling-up of services for other major contributors to the global burden of disease. Second, we identified a series of core and secondary indicators to track the progress that countries make toward achievement of mental health goals; many of these indicators are already routinely monitored in many countries. Third, we did a priority-setting exercise to identify gaps in the evidence base in global mental health for four categories of mental disorders. We show that funding should be given to research that develops and assesses interventions that can be delivered by people who are not mental health professionals, and that assesses how health systems can scale up such interventions across all routine-care settings. We discuss strategies to overcome the five main barriers to scaling-up of services for mental disorders; one major strategy will be sustained advocacy by diverse stakeholders, especially to target multilateral agencies, donors, and governments. This Series has provided the evidence for advocacy. Now we need political will and solidarity, above all from the global health community, to translate this evidence into action. The time to act is now.

Published Online
September 4, 2007
DOI:10.1016/S0140-6736(07)61242-2

This is the sixth in a **Series** of six papers about global mental health

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Introduction

We believe that scaling-up of services for people with mental disorders is the most important priority for global mental health. Every year up to 30% of the population worldwide has some form of mental disorder, and at least two-thirds of those people receive no treatment, even in countries with the most resources.[1] In the USA, for example, 31% of people are affected by mental disorder every year, but 67% of them are not treated.[2] In Europe, mental disorder affects 27% of people every year, 74% of whom receive no treatment.[3] The proportions of people with mental disorder who are treated in low-income and middle-income countries are even lower than in the USA and UK; for example, a global survey reported that only 11·1% of severe cases of mental disorder in China had received any treatment in the previous 12 months. This survey also reported that, in low-income and middle-income countries, only a minority of treated people (as low as 10·4% in Nigeria) received adequate treatment.[4] Therefore, we argue that the overall volume of services provided to treat people with mental disorders needs to be substantially increased in every country—but especially so in low-income and middle-income countries—so that the available care is proportionate to the magnitude of need.[1] We refer to this process as scaling-up. We call on governments, multilateral agencies, and donors (most of whom frequently ignore mental health), public-health organisations, mental health professionals, and consumer groups that represent mental health stakeholders to act now to make this happen.

This *Lancet* Series on Global Mental Health has presented evidence that mental health is an essential and inseparable component of health. The burden of mental disorders goes well beyond their effect on mental health. Mental disorders are risk factors for, or consequences of, many other health problems; they contribute to mortality (most notably through suicide); and they directly affect progress toward achievement of many of the Millennium Development Goals (MDGs).[5,6] Mental disorders in all world regions are associated with poverty, marginalisation, and social disadvantage. Despite the body of evidence that attests to the importance of mental disorders, health systems around the world face enormous challenges in delivery of mental health care and protection of the human rights of people with severe disorders. Such challenges include scarce financial and human resources, iniquitous distributions (between and within countries), and inefficient allocation.[7] The neglect of mental health cannot be accounted for by scarcity of evidence for effective interventions for mental disorders. Indeed, evidence from low-income and middle-income countries is now good, especially for pharmacological and psychological interventions for depressive and anxiety disorders, and for schizophrenia.[8] Furthermore, these interventions have been shown to be affordable in low-income and middle-income countries,[9] and are just as cost effective as, for example, antiretroviral treatment for HIV/AIDS.[8] Although mental health services have been scaled up to country or regional level in a few places, attainment of core mental health indicators varies widely between and

	World Bank income category	Population (millions)	Government spending on health per person (US$)	Mental hospital beds per 100 000 population		Acute psychiatric beds* per 100 000 population		Staff per 100 000 population†		Package expenditure per year (US$, 2005, millions)		Package expenditure per person (US$, 2005)	
			Current (2003)‡	Current (2006)	Target (2015)	Current (2006)	Target (2015)	Current (2006)	Target (2015)	Current (2006)	Target (2015)	Current (2006)	Target (2015)
Albania	Lower middle income	3·1	49	15·6	4·0	4·4	13·1	25·7	39·5	4·5	13·1	1·43	4·19
Chile	Upper middle income	16·3	137	4·4	3·9	5·8	13·7	30·7	39·5	54·0	134	3·32	8·24
China (Hunan)	Lower middle income	61·7	22	5·7	1·9	0·4	13·1	11·5	39·5	22·3	189	0·36	3·06
Ethiopia	Low income	77·4	3	0·3	1·3	0·0	10·5	2·3	32·5	7·2	123	0·09	1·59
Iran	Lower middle income	69·5	62	6·3	0·8	0·8	10·6	25·9	39·5	85·5	272	1·23	3·92
Morocco	Lower middle income	31·5	24	3·0	1·0	1·1	10·4	9·2	39·5	14·8	91·3	0·47	2·90
Nepal	Low income	27·1	3	0·1	0·4	0·2	11·1	1·0	32·5	3·4	53·3	0·13	1·96
Nigeria§	Low income	27·4	6	3·0	1·0	0·1	9·3	8·9	32·5	4·3	42·9	0·16	1·57
Paraguay	Lower middle income	6·2	24	4·4	2·2	0·0	11·1	6·1	39·5	2·7	16·5	0·44	2·68
Thailand	Lower middle income	64·2	47	18·6	2·5	2·3	13·2	10·2	39·5	80·8	257	1·26	4·00
Ukraine	Lower middle income	46·5	40	26·6	2·3	6·5	20·3	29·9	39·5	134	173	2·88	3·71
Vietnam	Low income	84·2	7	4·5	1·4	0·0	10·9	8·0	32·5	15·4	157	0·18	1·86

Data reproduced from Chisholm and colleagues.[13] *Beds in district general hospital settings. †Full-time equivalent staff, which is the sum of input time by psychiatrists, medical officers, psychologists, psychiatric and general nurses, occupational therapists, social workers, community health workers, and primary health-care workers. §WHO-AIMS data for six (of the 36) provinces/states of Nigeria. ‡National Health Accounts estimates, from the World Health Report, 2006.[20]

Table 1: **Selected summary indicators for a core mental health care package**

within countries, and most countries have no mechanisms to monitor progress.[10] Mental health system reform faces barriers in low-income and middle-income countries, but we have discussed possible solutions, such as collaboration between advocates for people with mental disorders, and strengthening of their advocacy with consistent and consensual calls for action.[11]

Many possible avenues for action have been identified: for example, the World Health Report in 2001 outlined ten specific strategies for reform.[12] Our call for action has been guided by these strategies, by the evidence presented in this Series, and by discussions initiated by the *Lancet* Global Mental Health Group at a meeting in London (September 1–2, 2006). We were committed to ensuring that the call should be specific and practicable. Although we acknowledge that strengthening of general health services (eg, interventions which improve perinatal care) would help prevent and reduce suffering associated with mental disorder, we have reached the conclusion that action to scale up services for people who already suffer from mental disorders is most urgently needed. This scaling-up should consist of a basic, evidence-based package of services for core mental disorders. Three questions are critical to the implementation of our call for action. What resources are needed for the scaling-up process? How can progress towards these goals be monitored? What should be the priorities for mental health research? We address these questions and discuss strategies for achieving the goal to scale up services.

What resources are needed?

The coverage of evidence-based services for people with mental illnesses is extremely low in most low-income and middle-income countries.[1,4] We calculated the resource needs and costs associated with the scaling-up of a core package of mental health interventions in low-income and middle-income countries; the methods and data sources for this costing exercise are reported elsewhere.[13] We aimed to allow comparisons between countries and between estimates for scaling up mental health services and services for other diseases.[14,15] To assess the overall cost to scale up a core mental health care package, we first defined the health conditions and interventions to be included in the package, then estimated current levels of coverage and need in the populations of interest, set targets for increasing these levels, and calculated the resulting year-on-year resource costs to reach these targets. We estimated costs for a 10-year period, from 2006 until 2015, which is the target date for attainment of the MDGs; all costs have been expressed as the equivalent of US$ in 2005.

We selected three mental disorders (schizophrenia, bipolar affective disorder, and depressive episode), as defined in the WHO International Classification of Diseases (ICD-10),[16] and one risk factor for disease (hazardous alcohol use, defined as more than an average of 20 grams of pure alcohol per day for women, or 40 grams per day for men). These four conditions were selected because of their contribution to the burden of disease, their responsiveness to known interventions, and the availability of data on service provision and resource requirements for intervention.[8,12,17,18] Treatment for patients with schizophrenia and bipolar affective disorder consists of antipsychotics and mood stabiliser drugs, respectively; some of these patients also receive psychosocial care and support. We modelled scaling-up

of treatment coverage in clusters of provinces via a district-based service model centred around mental health units with inpatient, outpatient, and outreach services. People with depression are treated with antidepressants, psychosocial treatment, or both; those with hazardous alcohol use are given brief psychological interventions. We modelled scaling-up of coverage of these services via a primary health and hospital outpatient care-based service model (with opportunistic screening, treatment, and follow-up).[13]

We selected 12 countries for which data from the WHO-Assessment Instrument for Mental Health Systems (AIMS) had been collected.[19] This ensured availability of up-to-date information on, for example, numbers of hospital beds, residential-care places, and outpatient users. We calculated service coverage and rates of utilisation in the population for people with mental disorders in general, and also for selected ICD-10 disease categories, including psychosis and mood disorders.[16] These 12 selected countries encompass a wide range of geographical, cultural, and socioeconomic settings (table 1). One country, Chile, has an upper middle-income level; seven have lower middle-income levels (Albania, China (Hunan province), Iran, Morocco, Paraguay, Thailand, and Ukraine); and four are low-income countries (Ethiopia, Nepal, Nigeria, and Vietnam).

Despite the sparse coverage of services for people with schizophrenia and bipolar affective disorder in many low-income countries, we set a high target, of 80%, for improvement of coverage, since these two conditions give rise to substantial disability and vulnerability. We set much lower targets for coverage for services for hazardous alcohol use and depression (25% and 33%, respectively). These targets are in line with levels achieved in high-income countries, and reflect well established challenges to treatment of these conditions, such as case identification, access, and willingness to receive care.

Table 1 summarises indicators for the core mental-heath care package in the 12 selected low-income and middle-income countries, at existing and at target levels of coverage. As coverage expands, the supply of mental health services will need to change: for example with increases in acute psychiatric admissions, outpatient and community-care visits, and community residential-care facilities. These service needs will translate into large-scale investments in service infrastructure and human-resource deployment. These increases will be offset only by an expected reduction in the number of mental hospital beds needed as countries move towards community-based models of service delivery. Total current expenditure per person on the delivery of the core package of interventions is as low as $0·10–0·20 in low-income countries. In the one upper middle-income country included in our analysis, Chile, where salaries and inpatient-care costs are higher than the other selected countries, total expenditure is more than $3.

If target coverage is to be reached within the next 10 years, total expenditure (from new and existing allocations) in the four low-income countries included here (Ethiopia, Nepal, Nigeria, and Vietnam) would need to rise at least ten-fold (to about $2 per person per year by 2015). Total expenditure would need to rise between three-fold and six-fold (to around $3–4 per person per year) in lower middle-income countries such as Morocco, Thailand, and Iran. In the only upper middle-income country (Chile) included in the analysis, the estimated cost is $8·24 per person. The figure shows the year-on-year extra investment, over and above existing allocations, that would be needed per head of population to reach target levels of coverage. For most countries, this model suggests an initial period of large-scale investment of $0·30–0·50 per person per year (mainly for construction or renovation of acute inpatient and outpatient facilities), followed by gradual spending increases per person of $0·10–0·25 per person per year as more provinces are covered.

Although such investments are not large in absolute terms, they are nevertheless substantially higher than the existing budgets allocated to mental health, especially in countries with large constraints on resources, where the projected building and refurbishment costs alone would consume over 10% of the entire health budget. In such settings, additional money (from domestic sources, international donors, or both) is therefore likely to be needed; in other countries, such as Albania or Ukraine, the challenge will be reallocation of existing resources and capital.

The scope and limitations of our costing exercise should be emphasised. The small set of countries we selected might not be representative of resource needs in other low-income and middle-income countries. Equally, some uncertainty inevitably remains about estimates of epidemiological need, treatment coverage, service utilisation, and prices, despite use of best available data. Together with unavoidable variations in how the package would actually be formulated and implemented in

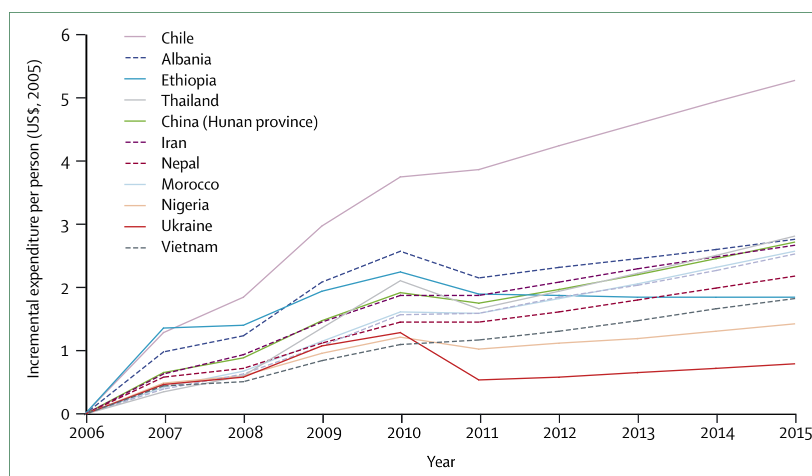

Figure: **Incremental expenditure for a core package of mental health interventions, 2006–15**

	Proposed indicators	Existing indicators*	Sources of data
Core indicators			
Ensure that national and regional health plans pay sufficient attention to mental health	1: Presence of official policy, programmes, or plans for mental health, either including or accompanied by a policy on child and adolescent mental health	Atlas, AIMS (1.1.1, 1.2.1)	National government
Invest more in mental health care	2: Specified budget for mental health as a proportion of total health budget	Atlas, AIMS (1.5.1)	National government
Increase trained staff to provide mental health care	3: Mental health and related professionals per 100 000 population	AIMS (4.1.1)	National government and professional bodies
Make basic pharmacological treatments available in primary care	4: Proportion of primary health-care clinics in which a physician or an equivalent health worker is available, and at least one psychotropic medicine of each therapeutic category (antipsychotic, antidepressant, mood stabiliser, anxiolytic, and antiepileptic) is available in the facility or in a nearby pharmacy all year long	AIMS (3.1.7)	National government
Increase the treatment coverage for people with schizophrenia	5: People treated each year for schizophrenia as a proportion of the total estimated annual prevalence of schizophrenia	AIMS (2.2.4.2, 2.4.4.2, 2.6.5.2)	National government and statistical oracademic organisations
Secondary indicators			
Balance expenditure in hospital and community services	6: Proportion of total mental health expenditure spent on community-based services, including primary and general health-care services	AIMS (1.5.2)	National government
Provide adequate basic training in mental health	7: Proportion of the aggregate total training time in basic medical and nursing training degree courses devoted to mental health	AIMS (3.1.1, 3.2.1)	National government and professional bodies
Distribute staff equitably between urban and rural areas	8: Proportion of psychiatrists nationally who work in mental health facilities that are based in or near the largest cities	AIMS (4.1.7)	National government
Ensure least restrictive practice	9: Involuntary admissions as a proportion of all annual admissions	AIMS (2.4.5, 2.6.6)	National government
Protect the human rights of people with mental disorder	10: Presence of a national body that monitors and protects the human rights of people with mental disorders, and issues reports at least every year	AIMS (1.4.1)	National government, professional bodies, and civil-society groups
Reduce the suicide rate	11: Deaths by suicide and self-inflicted injury rate	WHO Mortality database[32]	National government and statistical organisations

*Atlas=WHO Mental Health Atlas.[17] AIMS=WHO Assessment Instrument for Mental Health Systems.[19] Figures in parentheses are AIMS indicator numbers.

Table 2: **Selected mental-health targets, with core and secondary indicators**

countries, this uncertainty suggests that our final estimates should be viewed as indicative of the range of investment that is likely to be needed in countries at different levels of economic development to achieve targets for intervention coverage. These targets were set in line with those of high-income countries (on the grounds of equitable access to needed care), but might need to be revised downwards if sufficient new resources cannot be mobilised. Other low-income and middle-income countries can use our methods and analysis to estimate their own need, coverage, and resource requirements.[13] Finally, we acknowledge that this exercise did not address the costs of scaling-up of services for mental disorders that affect children.

What indicators should be used to monitor progress?

Following the dictum that what cannot be measured is difficult to improve, reliable and valid indicators need to be used to monitor progress on mental health. The Health Care Quality Indicators Project of the Organisation for Economic and Community Development (OECD) has proposed three criteria with which to judge health-related indicators: importance for health, scientific soundness, and availability of data.[21] Some countries now routinely use such indicators for specific conditions, typically with the aim of improving the quality of care.[21–23] The MDGs set the overarching framework for global health improvement, with a hierarchy of health-related goals, targets, and indicators; however, these goals do not explicitly address mental disorder.[22] Targets need to be transparent and adaptable.[24] They should also be amenable to measurement at individual, local, and national levels.[25] No consensus yet exists about which mental health indicators should be used routinely at any of these levels.[26]

We set out to identify a set of core mental health indicators, designed to monitor attainment of targets related to scaling up the coverage of basic, evidence-based services for mental disorders. The aim was to allow each country to measure its own progress towards agreed targets and to compare its status with that of other countries.[27–30] We propose a format that uses broad goals, specific targets, and measurable indicators, similar to that of the MDGs.[31]

We initially identified 16 potential indicators. Members of the *Lancet* Global Mental Health Group did a Delphi exercise[32] to rate each of these indicators against six criteria: meaningfulness to health planners; acceptability

to stakeholders; validity; reliability of source of information for the indicator; comparability over time; and sensitivity to change. Each criterion was rated on a ten-point scale. From this exercise we have selected five core indicators, and six secondary indicators (table 2).[17,19,33] We propose that the five core indicators be used to assess how well national mental health systems provide services to people with mental disorders, and that the six secondary indicators be used to assess health systems that have attained expected targets for some or all of the core indicators. Taken together, these 11 indicators address the four most important overarching goals: (1) sufficient planning and investment for mental health care; (2) a sufficient workforce to provide mental health services; (3) consistency of mental health care inputs and processes with best practice and human-rights protection; and (4) improved outcomes for people with mental disorders.

Our five primary and six secondary indicators are clear, simple, feasible, and likely to be reliable and valid. Most low-income and middle-income countries already collect relevant data, through, for example, the WHO's Atlas project[17] and WHO-AIMS assessments.[19] Other countries will need to introduce systems to gather relevant data. However, the absence of such information systems must not be an excuse for not scaling up services. Taken together, these indicators will provide a broad picture of the progress made by a country or region over time, and will provide a meaningful comparison of progress between countries. We acknowledge that the usefulness of these indicators should be continually assessed, and that new indicators might need to be introduced for health systems that make good progress with scaling up services. Equally, existing indicators might prove to be unreliable or insufficiently sensitive to change; for example, questions remain about variability in the reliability of reported national rates of suicide and the extent to which these can be reduced by health-system actions.

What are the priorities for mental health research?

Research has a critical role to play in response to the public-health challenge of mental disorders. The development of evidence-based health policies and practice in low-income and middle-income countries, and the maturation of clinical medicine and public health, are stunted by the fact that only 10% of the world's medical research addresses the health needs of the 90% of the global population who live in low-income and middle-income countries.[34–36] The adverse effect of this gap is potentially greater for mental health, which is heavily influenced by sociocultural factors and for which current practice and evidence is dependent on cultural norms from high-income countries, especially Europe and the USA. Three recent studies have reported that only 3–6% of mental health research in high-impact and indexed medical journals is from low-income and middle-income countries.[35,37,38] Overall, the financial resources made available for global mental health research remain pitiful. Panel 1 outlines the major international sources of funding for mental health research. Most major donors that we approached either did not fund mental health research, or did not record their mental health research funding.

The Child Health and Nutrition Research Initiative (CHNRI) has developed a systematic method to identify priorities for health-research investment that can be applied at global and national levels and for different purposes.[40] The method uses five criteria: the likelihood that the research option will generate new knowledge in an ethical way; the likelihood that the intervention based on this knowledge will be effective for reduction of the burden of disease; the likelihood that the intervention will be affordable, deliverable, and sustainable; the maximum potential for reduction of disease burden; and the predicted effect of the intervention on equity. In the CHNRI approach, scores for each competing research option are computed in a highly structured, transparent, and systematic way by experts with different backgrounds. This limits the potential for personal bias to affect the final score. The methodology has already been used to identify research priorities aimed at reduction of global child mortality and setting of child-health priorities at the country level in South Africa.[41] Since this method avoids

Panel 1: Funding for global mental health research

We gathered data from bilateral agencies (the UK Department for International Development [DfID], the US Agency for International Development [USAID], and the Australian Agency for International Development [AusAID]); multilateral agencies (WHO and the European Commission); and research institutions and private donors (the Wellcome Trust, the Gates Foundation, and the US National Institute of Mental Health [NIMH]). We aimed to ascertain whether funding from these sources for mental health research over the past decade was identifiable, and, if so, to assess the proportion of overall health research and mental health research funding which was devoted to mental health in low-income and middle-income countries. Many agencies we approached either did not fund mental health research (eg, the Gates Foundation) or did not keep track of mental health research funding (DfID, European Commission, AusAID, and USAID). DfID, which spends about 16% of its bilateral budget specifically on health, funded for the first time in 2005 a 5-year research programme consortium to promote policy-relevant research on mental health and poverty in developing countries.[39] We were able to obtain figures for mental health research funding for the NIMH and the Wellcome Trust—which are possibly the two largest funders for mental health research worldwide. Overall, in 10 years (1994 to 2004), the Wellcome Trust spent about 5% of its total mental health research funding (US$ 55 600 604, at 2007 exchange rate), on global mental health. NIMH receives, on average, about 5% of the total budget of the US National Institutes of Health. From 1998 to 2006, the NIMH spent about 7% of its total research funding on extramural global mental health. Funding for research groups in non-US developed countries accounted for a large share of this. Thus, in 2006, although the NIMH spent 5·4% of its total extramural research funding (US$57 300 188), on global mental health, mental health research that was related to low-income and middle-income countries made up only about 0·6% of the total non-AIDS research-grant portfolio.

> *Panel 2:* **Priorities for global mental health research**
>
> **Research priorities for depressive disorders, anxiety disorders, and other common mental disorders (CMD)**
> - Cost-effectiveness trials of interventions for CMD in primary and secondary care
> - Research on social interventions designed to reduce risk of CMD (eg, microfinance and interventions for gender-based violence and other forms of interpersonal violence)
> - Research on health policies and systems to scale up effective strategies for detection and treatment of CMD in primary care and other routine health-care settings
> - Effectiveness of innovative and simple cognitive and behavioural strategies for treatment of CMD that can be administered by general physicians and community-health workers
> - Health systems and epidemiological research to determine the economic and hidden costs of untreated CMD, and assess the benefits of reduction of disability or days out-of-role for people with CMD
>
> **Research priorities for alcohol-use and other substance-abuse disorders**
> - Research on health policies and systems to determine the most effective intersectoral (social, economic, and population-based) strategies to reduce consumption in high-risk groups (especially men)
> - Effectiveness of early detection and treatment methods that are brief and culturally appropriate, and that can be implemented by non-specialist health workers in the course of routine primary care
> - Effectiveness of new and innovative brief interventions for prevention of alcohol abuse, especially in adolescents and young adults
> - Health systems and epidemiological research on how to quantify the economic benefits of reduction of disability or days out-of-role for people with substance-abuse disorders
> - Effectiveness of different settings for delivery of substance-use interventions (such as schools, religious institutions, community groups, and health-care settings)
>
> **Research priorities for child and adolescent mental disorders**
> - Training, support, and supervision needed to enable existing maternal and child health workers to recognise and provide basic treatment for common maternal, child, and adolescent mental disorders
> - The effectiveness and cost-effectiveness of school-based interventions, including in schools for children with special needs
> - Research on health policies and systems to integrate the management of mental disorders in children and adolescents with existing management programmes for physical diseases
> - The effectiveness of new culturally appropriate community interventions for child and adolescent mental disorders
> - Research on health policies and systems to scale up feasible, effective, and cost-effective parenting and social-skill interventions in early childhood care
>
> **Research priorities for psychotic disorders**
> - Research on health policies and systems to develop effective and cost-effective methods for delivery of family interventions in low-resource settings to decrease relapses of psychotic disorders
> - Effectiveness and safety of dispensation of antipsychotic medication by general community-health workers to reduce relapse and admission rates
> - Effectiveness of affordable models of community-based treatment and rehabilitation services that are culturally appropriate and sustainable
> - Research on health policies and systems to identify barriers to access to care (such as stigma), and to increase access to care, especially early in the course of these disorders
> - Effectiveness of partnerships with non-governmental and voluntary organisations to rehabilitate patients with chronic schizophrenia and other psychoses

many of the limitations of early priority-setting methodologies,[42,43] we applied it to identification of priorities for mental health research.

The rationale, conceptual framework, and application guidelines have been described in greater detail elsewhere.[40] In the first step, the *Lancet* Global Mental Health Group, whose members represent both academic and civil-society perspectives on global mental health, generated research questions. The context was defined as global mental health over the next 10 years. We focused on the disease burden for four disorders: schizophrenia and other psychotic disorders, major depressive disorder and other common mental disorders, alcohol abuse and other substance abuse disorders, and child and adolescent mental disorders. Three members of the *Lancet* Global Mental Health Group (MT, VP, and SS) coordinated the process and synthesised the questions. 24 members formed the technical working group, and scored all research options. Every option was scored against the five CHNRI criteria, with three questions per criterion according to the conceptual framework.[41] This yielded five intermediate scores per research option. In the final step, we merged research questions that were deemed to overlap or be similar. The leading five research questions per disorder are shown in panel 2. Eight of the 12 research options that received the highest priority scores address either health policy and systems research involving existing interventions, or epidemiological research to inform priority setting.

The limitations of our priority-setting exercise include a risk of bias due to consensus, but we sought to minimise this by use of a clear theoretical framework with multiple endpoints; a transparent procedure (in which all rationales can be viewed and challenged); independent scoring; quantitative scores; an established and systematic method; and participation of a broad range of mental health professionals and stakeholders.

This Series has highlighted the relative paucity of trials that assess interventions for the treatment or prevention of mental disorders in low-income and middle-income countries, and especially to assess the effectiveness of scaled-up interventions.[8] The results of our priority-setting exercise indicated that funding should concentrate on research to address this evidence gap—ie, research to develop and assess interventions for people with mental disorders that do not need to be be delivered by mental health professionals, and to assess how health systems can scale up such feasible and effective interventions across all routine-care settings.[44] This finding contrasts with trends in the allocation of most research funding, and with the stated priorities of organisations such as the US National Institute of Mental Health, which reported, for example, that its main priority for research in child and adolescent mental health was the development of new interventions.[45] Even new and highly effective pharmacological treatments would need well functioning

Panel 3: Global mental health—the call for action

To scale up services for mental disorders we ask that:

1. Government ministries should identify and scale up a priority package of service interventions or components that can form the backbone of a national mental health system that provides effective interventions and human-rights protection
2. International donors, multilateral and lending agencies, and governments of high-income countries—especially those that benefit from the so-called brain drain—must place mental health on their priority agenda for health assistance to low-income and middle-income countries, and match this pledge with substantial increases in resource allocation
3. Government ministries should place mental health service development on a more secure financial footing:
   - they should prepare detailed financial plans that not only assess the existing and projected service needs of their populations but also appraise constraints in human and other resources
   - they should increase budget allocations for mental health, and aim to attain a minimum level of investment within 10 years of US$2 per head in low-income countries and $3–4 in lower middle-income countries
4. Government and intergovernmental agencies must strengthen their data-collection and monitoring mechanisms, and entrust the task of monitoring and reporting to national or regional committees with intersectoral representation
5. National and international stakeholders in health research, such as research councils, donors, and universities, must increase resources for priority research in mental health, build research capacity, and improve the dissemination of findings from such research

Panel 4: Stakeholders and their responsibilities to scale up services for mental disorders in low-income and middle-income countries

Governments of low-income and middle-income countries

- Update mental health plans and policy as appropriate
- Use consensus-based national mental health plans as proposals to international donors to fund start-up costs of services
- Designate a senior public-health manager in the Ministry of Health with a specific role to oversee implementation of the national mental health plan
- Promote adoption and implementation of national mental health legislation in accordance with international human-rights instruments
- Allocate a greater share of available financial resources for health for scaling-up of mental health services, including a specific primary mental health care component
- Implement new human-resource development programmes in mental health
- Monitor progress through recommended indicators
- Strengthen mental health perspectives for assessment of the health consequences of macroeconomic policies
- Strengthen policies with proven benefits for the prevention of mental disorders (eg, taxation of alcohol)

Governments of high-income countries

- Increase resource allocation for mental health in international-development funding and technical assistance
- Invest in capacity building for mental health in low-income and middle-income countries

Mental health professional groups (eg, psychiatric societies)

- Move from a focus on interventions for individuals to a population-wide focus, to support the planning and implementation of scaling-up of services
- Advocate for a national mental health system that provides a strong evidence-based framework for effective interventions and human-rights protection
- Actively support and supervise mental health care in primary care and collaboration with community-based agencies
- Actively enable reduction of long-term mental hospital beds and development of community mental health programmes
- Promote the priority research agenda in mental health
- Strengthen public-health perspectives in higher training for mental health professionals

(Continues on next page)

health systems to deliver them, and psychosocial interventions to accompany them, if they were to be effective.[46] Increased research funding would be wasted without capacity building for mental health research in low-income and middle-income countries.[47] The effect of government and university efforts to stem the so-called brain drain and strengthen mental health research is evident in Brazil,[48,49] which now enjoys a dynamic mental health research infrastructure, including one of only a handful of indexed psychiatric journals published from low-income and middle-income countries.

We identified research about child mental disorders in our list of priorities, and hope that, as services for adult mental disorders are scaled up, such evidence will inform scaling-up of services for this important demographic group.

Finally, WHO should help to network researchers and research institutions and to facilitate provision of international training materials. We call on donors and agencies that are committed to global-health research to scale up the resources available for mental health research in proportion to the burden of mental disorders in low-income and middle-income countries.

Call for action

The coverage of services for people with mental disorders in most low-income and middle-income countries is grossly deficient.[1,4,7,10] Most attempts to enhance coverage have been inadequately planned and resourced. Many training, pilot, and demonstration programmes have been conducted in small geographic areas, but generally without any plans for sustainability or scaling-up. As a group of concerned scientists, public-health professionals, and mental health advocates, we call for action to scale up coverage of services for mental disorders, and to strengthen protection of the human rights of those with mental disorders. Our call targets global-health stakeholders—governments, multilateral and bilateral

agencies, donors (who have frequently ignored mental health), mental health and public-health practitioners, researchers, civil society, and consumers. This call is presented in panel 3. The responsibilities of specific stakeholders to achieve this call are set out in panel 4. We now discuss the strategies and implications for implementation of our call.

(Continued from previous page)

Public-health professional groups (eg, government departments, public-health academics, and international and local non-government organisations)

- Include mental health in health-systems development, capacity development for public-health practitioners and research
- Expand programmes for people with disability (such as community-based rehabilitation) to include mental disabilities
- Integrate mental health perspectives into public-health programmes for other health conditions
- Promote the priority research agenda in mental health

Service users and family-member groups

- Become mobilised to advocate for an improved national mental health policy and plan which provides effective interventions and human-rights protection
- Network with other user and health movements to support implementation of the improved national mental health plan
- Strengthen family-support networks and service development

Social-sector stakeholders (eg, Departments of Social Welfare and Education)

- Facilitate the provision of social support (housing, work, social networks) for people with mental disorders, building on local resources and adding external resources as needed
- Facilitate livelihoods and interventions for inclusion of people with mental disorders in their local communities
- Development of school mental health programmes that include interventions for both mental health promotion and for early detection and inclusion of children with mental disorders

Human Rights groups

- Monitor and protect the human rights of the mentally ill
- Advocate for the rights of people with severe mental disorders—especially those living in mental hospitals—and for mechanisms to protect those rights

UN agencies

- Advocate for an improved national mental health system that provides effective interventions and human rights protection
- Initiate or increase technical assistance and resource allocation to countries to address mental health service development
- Provide international leadership to agree on implementation strategies for development of services in low-income and middle-income countries
- Improve coordination between UN agencies for mental health interventions

World Bank, other development banks, donor agencies in high-income countries, philanthropists

- Solicit technically sound proposals and appropriately fund scaling-up of mental health services (especially funding for start-up costs)
- Integrate scaling-up of mental health with existing development and health programmes
- Invest in strengthening capacity of service users and family groups for advocacy and support networks

Research funding agencies

- Increase resources for priority mental health research in health systems and for scaling-up of interventions
- Develop capacity for sustained public mental health research in low-income and middle-income countries

We estimate that the extra cost, over a ten-year period, to increase coverage of the core package specified is not large in absolute terms: it would require an additional investment of around $0·20 per person per year for low-income countries, and $0·30 for lower middle-income countries, which would result in a target expenditure of $2 and $3–4 per head, respectively. Such investment is not large or startling when compared with estimated funding requirements for tackling other major contributors to the global burden of disease; for example, the full estimated costs of scaling up a neonatal health-care package to 90% coverage have been put at $5–10 per capita,[14,15] and the cost of providing universal access to basic health services has been estimated to exceed $30 per person per year.[50,51] Thus, the development or upgrading of mental health services in low-income and middle-income countries need not be derailed on the grounds that it will make unreasonable or excessive demands on future budgetary allocations. Rather, national and international health agencies and donors need to change the priority given to mental health. A considered plan of action and investment should take into account local barriers to progress and development, and address the key issues of human resources for health and human rights. Our call for the coverage of services to be increased is directed to many partners, but the primary responsibility rests with governments and the multilateral and donor agencies that shape national health policies in low-income and middle-income countries, especially the WHO, the World Bank, and other donors and lending agencies. We also call on high-income countries, notably the UK, US, Canada, and Australia, which have been the main beneficiaries of the brain drain of mental health professionals from low-income and middle-income countries, to play a leading part in provision of resources to meet this call for action.[52] However, more funding will not be enough. Funding needs to be distributed equitably and used efficiently—and we call on the public-health and mental health professional communities in low-income and middle-income countries to be active partners to enable this to happen.

In this Series we identified five key barriers to service development.[11] Our call for action is bound to fail unless we can find strategies, such as those in panel 5, to overcome these key barriers.

The first barrier is the absence of mental health from the public-health priority agenda. If governments allocate only a pittance for mental health within their health budgets, and if donor interest is lacking, financing of mental health is threatened. Indeed, some donors have set health priorities that exclude mental health, despite demand for mental health coverage from countries and communities. WHO's spending on mental health has

consistently remained below 1% of total programme spending, though spending in total has increased. Although several multilateral agencies, such as the World Bank and UN agencies, have mentioned mental health (often under the broad umbrella of psychosocial interventions) as an important need, most have neither committed sustained support for mental health action, nor coordinated efforts to help countries attain basic mental health goals. We are gravely concerned that, despite the evidence reviewed in this Series, mental health does not figure in any of the major new global-health initiatives launched in recent years[53] that have funding of several billion dollars. We concur with concerns that the opportunities presented by this massive increase in financial resources for global health could do more harm to health systems than good unless the goals are broadened to strengthen basic health systems to address a range of common health problems.[54] Absence from the public-health priority agenda has serious implications for implementation of mental health policies, because mental health reform[11] requires political will to overcome political risks when reforms threaten the interests of unions, professional groups, or specific government departments.

Unified and concerted advocacy is necessary to create political will; such advocacy must target political leaders, governmental and non-governmental agencies, and donors. This advocacy effort must strengthen collaboration with users of mental health services and their families; these potentially powerful groups have frequently not been engaged as equal partners, and have not been effectively mobilised in mental health advocacy. This Series provides a strong evidence base to inform this advocacy drive. Our call for action—to scale up services for mental disorders—provides a coherent, evidence-based, and consistent message for advocacy.

The second barrier is the organisation of mental health services. Thus, present mental health services are largely centralised, with inadequate human rights protection and weak links with community mental health and general-health services. All centralised systems resist change. The power, influence, and funds for mental hospitals need to be systematically and substantially reduced as part of the reform of mental health systems. However, funding for centralised mental hospitals should be reallocated towards establishment of a comprehensive range of mental health services, including development of acute psychiatric units in general hospitals, accessible psychiatric outpatient clinics, integration of mental health into primary health care, and community-based residential care and day services. Other strategies to overcome this barrier include incentive arrangements to overcome vested interests that might block change; training and supervision for staff at different levels of the health system; and provision of adequate resources to work in communities. Development of community-based services will inevitably mean that concurrent running costs for mental hospitals will have to be met during the establishment of community-based services.

The third barrier, which is related to the second one, is that although integration of mental health care into primary health care is a popular policy recommendation and some serious implementation efforts have been made in the past, mental health care has not yet been integrated in most countries. Primary health-care systems in many low-income and middle-income countries are excessively burdened, and there is a need for regular supervision and specialist support for primary mental health care. Therefore, innovative models of primary health-care service provision, which have

***Panel 5:* Goals and strategies to scale up services for people with mental disorders**

Place mental health on the public-health priority agenda

- Develop and use uniform and clearly understandable messages for mental health advocacy
- Conduct advocacy in a coordinated manner with key stakeholders, including service users
- Educate decisionmakers within governments and in donor and multilateral agencies about the importance of mental disorders to public health and the cost effectiveness of mental health care

Improve organisation of mental health services

- Develop national policies, plans, and legislation to enable decentralisation of resources and development of services in the community
- Address incentive arrangements to overcome vested interests that block change
- Provide the funds for concurrent running costs for mental hospitals and community services, while infrastructure for community services is being developed
- Organise international technical support to share lessons from countries that have experienced successful mental health reform

Integrate the availability of mental health in general health care

- Develop innovative models to ensure mental health care in primary health care, with low-cost human resources for screening and provision of interventions, and strengthening close links to specialist services
- Provide a specific mental health budget in primary health care to fund additional human resources, essential psychotropic medications, and specialist supervision
- Appoint and train mental health professionals specifically to support and supervise primary health-care staff

Develop human resources for mental health

- Improve quality of mental health training, to ensure that it is practical and occurs in community or primary-care settings
- Increase and diversify the professional and specialist workforce
- Expand the non-specialist workforce to incorporate, where possible, ex-service users and their family members
- Provide the financial means for ongoing supervision of trained workers

Strengthen public mental health leadership

- Provide short courses and exchange opportunities for leaders in mental health and public health
- Appoint general public-health leaders to mental health leadership positions if necessary
- Provide core training in public mental health to all university students trained in mental-health care and to graduate degree students in public health, community development, and public administration

additional human resources for screening patients and for provision of ongoing support and supervision of primary health-care providers, need to be implemented. For example, Chile has implemented a pioneering model for treatment of depression in primary care.[8] Mental health professionals will need to be retrained on their role as trainers and supervisors in this process, as will primary health-care staff in the recognition and management of mental disorders. Primary health-care budgets should therefore have a specified mental health care component to fund supervision by mental health specialists, in addition to funding of essential psychotropic drug and psychosocial treatments.

The fourth barrier is caused by the very inadequate human-resource base for scaling up mental health interventions. We propose concurrent and systematic training of more specialist professionals and expansion of the non-specialist professional workforce. Countries need to increase their capacity to train mental health professionals and to enhance the scope and quality of essential mental health training in their general-health professionals. This capacity building will require appointment of mental health specialists, who are designated to train and supervise workers in primary and general health-care settings. The non-formal workforce, such as community volunteers and people with mental disorders and their family members, must be included as valuable resources who can supplement formal mental health care.

The final barrier is likely to be the scarcity of effective public mental health leadership in most countries. Mental health professionals who assume positions of power within the ministries and departments of public health all too often have insufficient knowledge and skills to plan population-level interventions. On the other hand, public-health leaders in most low-income and middle-income countries tend to lack essential mental health knowledge. More short courses and exchange opportunities should be made available, but we also need to develop more public-health skills in mental health leaders, and mental health skills in public-health practitioners, in a sustainable way. One of the greatest public-health actions in the past century was the establishment of public-health schools at major universities, mostly in high-income countries. Many low-income and middle-income countries are now also expanding their public-health training infrastructure. We strongly recommend that universities and training institutes in all countries integrate mental health into public-health training and establish public mental health courses that cover policy, legislation, organisation of services, prevention, and the epidemiology of mental disorders and their risk factors.

Conclusion

We intend that this Series should provide ammunition for advocacy by stakeholders in global mental health. They must press for the reforms that are urgently needed if people with mental disorders in low-income and middle-income countries are to receive the basic care that is effective, affordable and, above all, morally justified. We know how mental disorders affect the development potential of individuals and communities; we have identified simple and effective treatments for mental disorders; we know that scarce resources are often used inappropriately or are inequitably distributed; we understand better why the necessary reforms have not been implemented; and we have a clear and consistent call for action to scale up services and the strategies needed to guide action in response to this call. As the *Lancet* Global Mental Health Group, we commit ourselves to hosting a Global Mental Health Summit in two years time to take stock of the effect of our call. Change in public health only comes about if three core elements are present: a knowledge base, strategies to implement what we know, and the political will to act.[55] In this Series, we have presented the knowledge base and the strategies to improve mental health. Now we need political will and solidarity, from the global-health community, to put this knowledge to use. The time to act is now.

Contributors

DC, AF, CL, VP, SS, GT, and MT developed the questions addressed in this paper and gathered the information to answer them. Contributions were sought from all members of the *Lancet* Global Mental Health Group in four rounds of reviews and revisions of this manuscript. All authors have seen and approved the final version.

Acknowledgments

The Lancet Global Mental Health Series has been supported by a grant from the John D and Catherine T MacArthur Foundation. BS, SS, MVO and DC are employees of WHO; the views expressed in this article do not necessarily represent the decisions, policy, or views of WHO.

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