



Challenges and priorities for global mental health research in low- and middle-income countries

Symposium report

The Academy of Medical Sciences

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Background and introduction

The World Health Organization (WHO) estimates that 450 million people worldwide suffer from mental or behavioural disorders or psychosocial problems, and that one person in four will be affected by a mental disorder at some stage of life. Mental and neurological disorders account for 14% of the global burden of disease and contribute 28% of the burden of disease attributed to non-communicable diseases.¹ Thus, the burden of mental illness is very substantial and studies show that the prevalence of mental disorders is likely to rise even further in coming years. By 2030, it is estimated that unipolar depressive disorder will become the second leading cause of health burden, and by 2040 approximately 81.1 million people will be living with dementia.²

The burden of mental and neurological conditions falls particularly heavily upon low- and middle-income countries (LMIC), given that they account for over 80% of the world's 6.7 billion people. Yet many LMIC, including 15 out of 19 African countries for which data were available, allocate less than 1% of their health budgets to addressing mental illness,³ and a significant proportion of individuals with mental illness do not receive treatment.⁴

Additionally, despite the current and predicted trends, mental health has been a comparatively neglected and under-resourced area of research for many years, and resources and capacity for mental health research remain low. Between 1992 and 2001, for instance, researchers from LMIC contributed just 5% of the mental health research-related articles to the internationally indexed literature,⁵ and performed fewer than 14% of the clinical trials for new mental health interventions.⁶ As a result, there is a lack of research specific to the socio-cultural, economic, and infrastructural contexts of different LMIC, which limits the development of evidence-based interventions that can inform localised priority-setting and policymaking processes.⁷

Nevertheless, despite the low capacity for mental health research in LMIC, there is a growing body of evidence from studies around the world characterising the burden of mental illness and identifying clinically effective and affordable treatments that can be tailored to the appropriate contexts of LMIC. In order to showcase the latest findings from this research, the Academy of Medical Sciences held a one-day symposium on the topic of 'Challenges and priorities for mental health research in low- and middle-income countries' on 4 September 2008 at the Royal Society in London.

The symposium aimed to:

- Highlight the latest research activities in global mental health.
- Raise awareness of the burden of mental health in LMIC.
- Identify barriers to addressing mental illness.
- Identify areas where greater action may be required.

The symposium included presentations by leading national and international experts in the field and a panel discussion with key funders of global mental health research. The symposium was introduced by Sir Michael Rutter CBE FRS FBA FMedSci, Vice President of the Academy of Medical Sciences, and Sir Andy Haines FMedSci, Director of the London School of Hygiene and Tropical Medicine. The meeting was grouped into three sessions: research and development of effective treatment and care; translating research into policy and practice; and funders' perspectives on global mental health research. Speakers' presentations addressed a number of mental health research issues across a range of contexts, such as depression in India, schizophrenia in Ethiopia and mental illness in emergency settings. Funder perspectives were given from the Medical Research Council, Wellcome Trust and Department of Health for England. A symposium programme can be found in the Annex.

The meeting was attended by around 90 invited researchers, clinicians, charity representatives, medical funders, medical publishers, stakeholders and policymakers, enabling perspectives to be shared on a range of topics.

We are extremely grateful to the symposium speakers and attendees for their thoughtful presentations and remarks. This report seeks to capture key themes and issues raised during the symposium and is intended for researchers, policymakers, research funders and other stakeholders.

Key areas covered by presentations and discussion at the symposium that are considered in this report are:

1. Epidemiology of major mental disorders.
2. Global mental health research capacity.
3. The treatment gap in mental health and the impact of stigma.
4. Management of mental illness through task shifting.
5. Mental health in emergency settings.
6. The translation of research to policy and practice for health sector reform.

¹ Prince M, et al. (2007). *No health without mental health*. The Lancet **370**, 859-876.

² Ferri CP, et al. (2005). *Global prevalence of dementia: a Delphi consensus study*. The Lancet **366(9503)**, 2112-7.

³ Compared to 5% in over half of European countries; see World Health Organization (2001) *Atlas mental health resources in the world*. World Health Organization. Geneva.

⁴ Thornicroft G (2007). *Most people with mental illness are not treated*. The Lancet **370(9590)**, 807-808, Wang PS, et al. (2007). *Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO world mental health surveys*. The Lancet **370**, 841-850, Kohn R, et al. (2004). *The treatment gap in mental health care*. Bulletin of the World Health Organisation **82(11)**, 858-66.

⁵ Saxena S, et al. (2006). *The 10/90 divide in mental health research: Trends over a 10-year period*. British Journal of Psychiatry **188**, 81-82.

⁶ Patel V, et al. (2007). *Treatment and prevention of mental disorders in low-income and middle-income countries*. The Lancet **370**, 991-1004.

⁷ Global Forum for Health Research and WHO (2007). *Research capacity for mental health in low- and middle-income countries: Results of a mapping project*, Saxena S, et al. (2004). *Brief report - mental health research on low- and middle-income countries in indexed journals: a preliminary assessment*. The Journal of Mental Health Policy and Economics **7(3)**, 127-31.

1. Epidemiology of major mental disorders

Substantial variations in the course, outcome and burden of mental illness arise through differences in health system capacity, inequities in the workforce, and socio-cultural factors. Yet, to date, the majority of epidemiological studies have been performed in high-income countries (HIC) and few have captured epidemiological data in different community settings or ethnic groups in LMIC.

Even within the same country, the incidence of neuropsychiatric disorders may vary substantially. In the UK, for instance, population-based case-control studies indicate that the incidence of schizophrenia varies between 20/100,000 people in London to 7.2/100,000 in Bristol, whilst similar studies performed in São Paulo, Brazil show an incidence of 7.9/100,000, despite similarities with London in terms of population density, levels of violence and inequities in wealth.⁸ Assessment of the incidence of all psychoses indicates similar differences between regions; 49/100,000 in London, 10/100,000 in Bristol but 15.8/100,000 in São Paulo.

Similarly, large screening studies performed in the rural Butajira District of Ethiopia demonstrate the prevalence of schizophrenia to be 466

cases per 100,000 of the population, whilst studies performed in semi-nomadic and isolated islander populations in southern and South Central regions show that there are no cases of schizophrenia at all.⁹ Nevertheless, the latter islander population has a high prevalence of bipolar disorder.¹⁰ Thus, a sound understanding of the variations in incidence and prevalence of different mental disorders in specific populations is key to assessing local priorities and providing appropriate interventions.

Current epidemiological studies highlight the rising prevalence of dementia, particularly in LMIC. Estimates made by the 10/66 research group¹¹ show that the prevalence of dementia is greater than has previously been shown using the Diagnostic and Statistical Manual of Mental Disorders - fourth edition (DSM-IV) criteria. There are currently over 24 million people living with dementia worldwide, and it is estimated that prevalence will rise to approximately 82 million people by 2040. The burden is predicted to fall predominantly on middle-income countries; the rate of increase in prevalence is estimated to be 300% in India, China, areas of south Asia and the western Pacific, but 100% in HIC.¹²

⁸ Morgan C, et al. (2006). *First episode psychosis and ethnicity: initial findings from the AESOP study*. *World Psychiatry* **5**, 40-46; Menezes PR, et al. (2007). *Incidence of first-contact psychosis in São Paulo, Brazil*. *British Journal of Psychiatry* **51**, s102-6; Kirkbride JB, et al. (2006). *Heterogeneity in incidence rates of schizophrenia and other psychotic syndromes*. *Archives of General Psychiatry* **63**, 250-258.

⁹ Alem A, et al. (2008). *Clinical course and outcome of schizophrenia in a predominantly treatment-naïve cohort in rural Ethiopia*. *Schizophrenia Bulletin* (epub ahead of print); Beyero T, et al. (2004). *Mental disorders among the Borana semi-nomadic community in Southern Ethiopia*. *World Psychiatry* **3**(2), 110-4.

¹⁰ Fekadu A, et al. (2004). *Bipolar disorder among an isolated island community in Ethiopia*. *Journal of Affective Disorder* **80**, 1-10.

¹¹ <http://www.alz.co.uk/1066/>

¹² Ferri CP, et al. (2005). *Global prevalence of dementia: a Delphi consensus study*. *The Lancet* **366**(9503), 2112-7.

2. Global mental health research capacity

As the burden of mental and neuropsychiatric disorders rises in coming years, there will be a growing requirement for a cadre of researchers to monitor trends, to assess the health burden, and to develop novel interventions and packages of care. Yet, evidence demonstrates an overall scarcity of human resources for mental health, and more significantly, an immense inequity in the distribution of skilled human resources for mental health across the world.

Notwithstanding the lack of skilled specialists in LMIC, a global mapping study conducted by the WHO and Global Forum for Health Research found that capacity for mental health research in the majority of LMIC is minimal.¹³ A quarter of LMIC countries have no mental health researchers at all, and a further quarter of LMIC have five or fewer researchers in total. Research output from LMIC has suffered as a result: an analysis of research output between 1992-2001 indicates that many low-income countries published almost no research papers at all and that fewer than 4% of all health-related publications involve mental health.¹⁴ Thus, little of the published mental health research is directly pertinent to infrastructural and societal contexts of individual LMIC, precluding the development of mental health policies based on robust evidence and local priorities.

There is much that can be done to strengthen capacity in particular research areas. The provision of incentives for young researchers, such as reliable career pathways, training opportunities and the development of wider networks and collaborations, play an important role.

Additionally, there is a pressing need to improve research funding for individual studies; one third of mental health researchers in LMIC are not funded and just over half of those that are funded receive less than USD10,000 per year. Mental health researchers in LMIC have little access to resources, such as research networks, fellowships, technical support or well-resourced libraries.¹⁵

Global surveys of mental health researchers in LMIC indicate that major challenges facing researchers are perceived to be:

- A lack of funding.
- The shortage of trained staff.
- Difficulties in the provision of training owing to poor institutional infrastructure.
- Constraints on researchers' time owing to service delivery and teaching commitments.
- The absence of a strong research 'culture' in many countries.
- Weak peer networks and collaborations.

A lack of access to information can also act as a barrier to the dissemination of LMIC-derived research in international journals, since a greater awareness of the latest cutting-edge research can improve the quality of submitted manuscripts. The reliance on maintaining high impact factors by many journals can also create a bias in favour of publications from well-resourced researchers in HIC. Training programmes and partnerships between journals, institutions or researchers in the South and/or North (South-South or North-South partnerships) can provide important support and guidance.

¹³ Global Forum for Health Research and WHO (2007). *Research capacity for mental health in low- and middle-income countries: Results of a mapping project.*

¹⁴ Saxena S, et al. (2006). *The 10/90 divide in mental health research: trends over a ten-year period.* British Journal of Psychiatry **188**,81–82.

¹⁵ Global Forum for Health Research and WHO (2007). *Research capacity for mental health in low- and middle-income countries: Results of a mapping project.* http://www.globalforumhealth.org/Site/002_What%20we%20do/005_Publications/021_Mental%20Health.php

3. The treatment gap in mental health and the impact of stigma

Over two thirds of people with a mental illness obtain no treatment, whether in high or low-income countries. Even in the high-income setting of Europe, survey data indicate that 74% of people needing mental healthcare receive no treatment from mental health specialists over a given 12-month period. In comparison, just 8% of people with diabetes mellitus receive no care in Europe.¹⁶ Worldwide, the average proportion of those who do not receive any treatment (the 'treatment gap') lies between 50 and 60% for many mental disorders such as depression, anxiety and bipolar disorder, whilst approximately one third of schizophrenia patients may be untreated.¹⁷ Patients who may be male, married, less-educated, and at the extremes of age or income receive comparatively less treatment compared to their counterparts.¹⁸ The stark contrast in treatment prevalence for physical and mental disorders in HIC and LMIC is shown in Table 1.

Access to mental health treatment in LMIC is limited by a number of factors, including cost, scarcity of community- and hospital-based services, stigma, and shortages in the workforce. In many cases, treatment is sought from traditional healers rather than clinical facilities that may be out of reach.

The costs of treatment pose a significant barrier. Publicly funded mental health care can be difficult to access by rural communities in LMIC, and a substantial proportion of the available human resources are limited to the private sector. Out-of-pocket treatment expenses can exacerbate poverty and lead to further inequities in access to care. The impacts of such costs can be significant over the long-term, given the chronic nature of mental illness, and its association with unemployment and lower socio-economic status. Health insurance schemes can also be problematic since they may exclude mental health benefits, limit access to those without employment, and fail to insure pre-existing conditions.¹⁹

The flow of skilled professionals from LMIC to HIC has led to marked inequities in the distribution of the global health workforce,²⁰ such that the lack of human resources in LMIC poses a further barrier to the provision of mental health treatment in LMIC. Comparisons between high- and low-income countries shows that there may be up to a 200-fold difference in the number of available psychiatrists, nurses, psychologists and social workers. There are, on average, just 5 psychiatrists per million people in LMIC, compared to 40 psychiatrists per million people in the UK. Chad, Eritrea and Liberia, which have

Table 1. Proportion of people with physical or mental disorders who obtain treatment in low- and middle-income countries.

	Treatment Prevalence (%)	
	High Income	Low and Middle Income
Physical Disorders		
Diabetes	94	77
Asthma	78	51
Heart Disease	65	44
Mental Disorders		
Depression	29	8
Bipolar Disorder	29	13
Panic Disorder	33	9

Adapted from Thornicroft G, symposium presentation.

national populations of 9, 4.2 and 3.5 million respectively, each have just one psychiatrist, whilst Rwanda, Afghanistan and Togo each have just two.²¹ The WHO estimates that between 2001 and 2004, the number of psychiatrists in South-East Asia fell by 40%, and that the number of psychiatrist nurses fell by 60%.

Inequities are evident between countries but also between regions, with particular disparity between rural and urban areas. There are often few incentives for skilled professionals to live in rural areas, where a large portion of people in LMIC tend to reside.²²

Thus, whilst there is evidence of cost-effective treatment in LMIC, the ability to scale-up evidence-based treatment strategies is limited by the lack of skilled mental health manpower.

In many ways, the stigma associated with mental illness can prevent people from seeking treatment and thus contribute to the treatment gap. The extent of community support given to people with mental illness and their caregivers can also be affected, which can further contribute to feelings of social isolation.

Surveys performed in Ethiopia highlight that 75% of people with schizophrenia perceive themselves to be stigmatised and over a third would conceal the illness of a relative from their social contacts due to feelings of shame and fear of discrimination. Studies performed in a range of LMIC also show that people with dementia, and their caregivers, are stigmatised.

Stigma can have important consequences beyond impacts on access to treatment. Recruitment of staff to mental health services in LMIC can be affected by the stigma of being associated with people with mental illness. A health worker survey performed in an emergency setting in Sierra Leone demonstrated evidence of prejudice against those with mental illness; including suggestions that such individuals are 'lazy', 'stupid', 'violent', 'should be tied up' and 'should not vote'. Difficulties may also be encountered in recruiting individuals with mental disorders to RCTs in LMIC. In cases where individuals are recruited, some programmes refrain from using terms associated with mental illness to avoid any negative impact on intervention outcomes that may arise through the associated stigma.

¹⁶ Thornicroft G (2007). *Most people with mental illness are not treated*. *Lancet*, **370**, 807-808, Alonso J, et al. (2007) *Population level of unmet need for mental healthcare in Europe*. *The British Journal of Psychiatry*, **190**, 299-306, Wang PS, et al. (2007). *Use of mental health surveys for anxiety, mood and substance disorders in 17 countries in the WHO mental health surveys*. *The Lancet* **370**, 841-850.

¹⁷ Kohn R, et al. (2004). *The Treatment gap in mental health care*. *Bulletin of the WHO* **82**, 858-866, World Health Organization (2005). *Mental health atlas 2005*. http://www.who.int/mental_health/evidence/mhatlas05/en/index.html

¹⁸ Wang PS, et al. (2007). *Use of mental health surveys for anxiety, mood and substance disorders in 17 countries in the WHO mental health surveys*. *The Lancet* **370**, 841-850

¹⁹ Dixon A, et al. (2006). *Financing mental health services in low- and middle-income countries*. *Health Policy and Planning* **21(3)**, 171-182.

²⁰ WHO (2006). *The World Health Report 2006: working together for health*. <http://www.who.int/whr/2006/en/>, Pang T, et al. (2002). *Brain drain and health professionals. A global problem needs a global solution*. *BMJ* **324**, 499-500.

²¹ World Health Organization (2005). *Mental Health Atlas*. http://www.who.int/mental_health/evidence/mhatlas05/en/index.html

²² Saraceno B, et al. (2007). *Barriers to improvement of mental health services in low-income and middle-income countries*. *The Lancet* **370**, 1164-1174.

4. Management of mental illness through task shifting

A number of studies have sought to assess the role of communities in the provision of mental health interventions to overcome the shortage of skilled professionals in LMIC. A growing body of data now demonstrates that affordable and clinically effective interventions can be provided by mobilising members of the community, and by redistributing tasks among healthcare teams - a process termed 'task shifting'.

Task shifting involves the transfer of specific tasks from highly qualified health workers to health workers that have received less training and have fewer qualifications, in order to make more efficient use of the available resources for health in LMIC.²³ Studies indicate that this approach can show benefits in managing episodes of childhood illness,²⁴ improving outcomes from malaria and acute respiratory infections, and in facilitating the delivery of HIV services.²⁵

A number of randomised controlled trials (RCTs) have demonstrated the impact of task shifting on mental illness in LMIC:

- The provision of a stepped care programme for the treatment of depression in Goa, India, increases adherence to medication and reduces suicide attempts and deaths.²⁶
- Group interpersonal therapy is highly efficacious for the treatment of depression in adults in rural Uganda,²⁷ and improves depression symptoms in adolescent girls surviving war and displacement in northern Uganda.²⁸
- Cognitive behavioural therapy (CBT) delivered by Lady Health Workers in rural Pakistan markedly improves post-natal depression. Benefits evident in children whose mothers received CBT include reduced episodes of diarrhoea and a greater likelihood of receiving immunisations.
- The use of community-based rehabilitation for people with schizophrenia in rural India improves outcomes and compliance with treatment compared to the provision of outpatient care alone.²⁹

- Community programmes improve the mental health of individuals caring for people with dementia.³⁰

Treatment strategies that include task shifting to community health workers may involve a 'stepped' programme of delivery. Such programmes involve the provision of evidence-based treatments such as psychoeducation, interpersonal therapy and/or pharmaceutical drugs by a health counsellor in collaboration with a mental health specialist. Thus, members of the community can act as health counsellors and patients are only referred to specialists as the final option in a package of care. Such an approach has had substantial benefits in treating depression in India and Chile. One study demonstrated that 70% of a group of patients treated for depression using a stepped care programme in Santiago, Chile, recovered, compared to 30% of a patient group treated as usual, at an increased cost of just 216 additional Chilean pesos per depression-free day. As a result, stepped care has been integrated into primary care systems for the treatment of depression in Chile.³¹

In scaling up community-based approaches such as these, the role of specialists thus becomes redefined as mental health services are reformed in LMIC.³² A greater role for training and supervision of community health workers is required, with a reduced focus on one-to-one clinical activity. Such approaches overcome the shortage of trained psychiatrists and show clear promise in reducing the treatment gap in LMIC.

In addressing the growing burden of conditions such as dementia, there is a need to provide appropriate packages of care for both the person with dementia and the care giver. Case studies show that the extent of dependency in low-income settings can be almost as high as in high-income settings. However, many do not have access to family-derived social care, particularly in areas where fertility rates

have declined, or where there are high levels of migration from rural to urban areas, away from the family home. People with dementia in LMIC may therefore face additional expenses of paid carers and health services, such that some families are forced to spend up to 10% of the per capita GNP on healthcare.³³

Where family-derived social care is available, the development of interventions for caregivers can have significant impacts on the mental health of both the caregiver and person with dementia. Measures of caregiver strain in LMIC can reach levels similar to those seen in high-

income country settings.³³ In part, this is due to difficulties in care management, stigma and feelings of shame associated with caring for a person with dementia, which can lead to social isolation. The provision of interventions such as basic education, training in different aspects of care, role-play and supervision of care giving, has been shown to improve knowledge and psychological morbidity, and to reduce strain and depression in caregivers. In addition, interventions for carers affect the person with dementia by improving mood, delaying nursing home placement and reducing mortality.³⁵

- ²³ Lewin SA, et al. (2007). *Lay health workers in primary and community health care*. Cochrane Collaboration. WHO (2008). *Task shifting. Global recommendations and guidelines*. <http://www.who.int/healthsystems/TTR-TaskShifting.pdf>
- ²⁴ Huicho L, et al. (2008). *How much does quality of child care vary between health workers with differing durations of training? An observational multicountry study*. *The Lancet* **372**, 910-916.
- ²⁵ WHO (2008). *Task Shifting. Global recommendations and guidelines*. <http://www.who.int/healthsystems/TTR-TaskShifting.pdf>
- ²⁶ Patel V (2008). Unpublished data presented at the Academy of Medical Sciences Symposium, *Challenges and priorities for global mental health research in low- and middle-income countries*.
- ²⁷ Bolton P, et al. (2007). *Interventions for depression symptoms among adolescent survivors of war and displacement in northern Uganda: a randomized controlled trial*. *JAMA* **298**(5), 519-27, Bolton P, et al. (2003). *Group interpersonal psychotherapy for depression in rural Uganda: a randomized controlled trial*. *JAMA* **289**(23), 3117-24.
- ²⁸ Bolton P, et al. (2007). *Interventions for depression symptoms among adolescent survivors of war and displacement in northern Uganda*. *JAMA* **298**(5), 519-527.
- ²⁹ Chatterjee S, et al. (2003). *Evaluation of a community-based rehabilitation model for chronic schizophrenia in rural India*. *The British Journal of Psychiatry* **182**, 57-62.
- ³⁰ Dias A, et al. (2008). *The effectiveness of a home care program for supporting caregivers of persons with dementia in developing countries: a randomised controlled trial from Goa, India*. *PLoS One* **3**(6), e2333, Gavriolva S, et al. (2008). *Helping carers to care - the 10/66 research group's randomised control trial of a caregiver intervention in Russia*. *International Journal of Geriatric Psychiatry* (epub ahead of print)
- ³¹ Araya R, et al. (2003). *Treating depression in primary care in low-income women in Santiago, Chile: a randomised controlled trial*. *The Lancet* **361**(9362), 995-1000, Araya R, et al. (2006). *Cost-effectiveness of a primary care treatment program for depression in low-income women in Santiago, Chile*. *The American Journal of Psychiatry* **163**(8), 1379-87.
- ³² Saraceno B, et al. (2007). *Barriers to improvement of mental health services in low-income and middle-income countries*. *The Lancet* **370**, 1164-1174.
- ³³ Prince M and the 10/66 Dementia Research Group (2004). *Care arrangements for people with dementia in developing countries*. *International Journal of Geriatric Psychiatry* **19**(2), 170-7.
- ³⁴ Ferri CP, et al. (2005). *Behavioural and psychological symptoms of dementia in developing countries*. *International Psychogeriatrics* **16**(4), 441-59.
- ³⁵ Gavriolva S, et al. (2008). *Helping carers to care - the 10/66 research group's randomized control trial of a caregiver interbention in Russia*. *International Journal of Geriatric Psychiatry* (epub ahead of print) Dias A, et al. (2008). *The effectiveness of a home care program for supporting caregivers of persons with Dementia in developing countries: A randomised controlled trial from Goa, India*. *PLoS One* **3**(6), e2333.

5. Mental health in emergency settings

Conflict, disasters and humanitarian emergencies affect millions of people worldwide. Internal displacement, the destruction of social networks, human rights abuses and civilian insecurity contribute much to mental ill health. The co-ordination and management of mental health care to dislocated or dispersed populations in emergency settings presents major challenges. Indeed, health systems may collapse (including surveillance and assessment systems), supplies of essential medicines may be disrupted, health workers are often absent, and information and governance systems may suffer.

Audit data indicates that the percentage of individuals presenting to community-based mental health services with a severe mental disorder following an emergency situation can reach over 25%. Such figures may rise to up to 95%, if epilepsy and substance abuse are included, as evident in Sierra Leone in 2002. Surveys conducted following the tsunami in Aceh in 2004, and following the earthquake in Pakistan of 2005, show that a greater proportion of people presented with psychotic disorders than stress-related disorders. Such figures are based on clinical audit of newly established services rather than population surveys, but they indicate that the management of mental illness in emergency settings must encompass a range of different needs and interventions, including the management of severe neuropsychiatric disorders.

Effective management and treatment of mental disorders during emergencies can be provided through a layered system of complementary supports to meet the needs of different groups:³⁶

- The primary tier involves re-establishing security and providing shelter, food, water and healthcare to improve the wellbeing of the majority. The provision of such services in ways that involve the community and in ways that are socially and culturally sensitive is a key consideration.
- The provision of community and family supports improves the mental health of a further, but smaller, proportion of those affected. Such support involves assistance in accessing key community and family supports, through the tracing of relatives, education and involvement in community groups.
- Focused non-specialised supports can be mobilised for a smaller group that requires more focused interventions that can be delivered by trained workers from the community or primary health care.
- The highest tier in the intervention pyramid involves clinical mental health services for the small proportion of individuals suffering from severe mental disorders, whose needs exceed the capacity of primary healthcare services.

The Inter Agency Standing Committee (IASC) guidelines on mental health and psychosocial support in emergency settings³⁷ provide a multi-sectoral framework to enable the effective co-ordination of responses, to identify best practice, to highlight potentially harmful approaches and to describe how different approaches may be complementary to one another.

However, much remains to be done. Little research has been performed on the outcomes of interventions carried out in emergency settings, with much of the research focused on post-traumatic stress disorder.³⁸ Epidemiological research is particularly difficult in emergency settings since many people with mental illness are abandoned, medical supplies are disrupted, health records may be destroyed, health workers are absent from the area, and care systems and institutions may be unavailable or destroyed. Where the research conditions are appropriate, there may be a bias in the reporting of mental illness to mobilise further assistance. In addition, follow up studies may be precluded by the mobility of populations, and emergencies may occur in

combination affecting the research parameters. Operational research is playing an increasingly important role in emergency situations, but there are limited resources and skills available and priority areas of research are not necessarily clear in all settings. Gathering data is crucial to improve clinical practice and case management, but there may be little time for ethical review and funds need to be rapidly allocated to research projects. In addition to epidemiological studies, evaluations of models of delivery and different types of interventions are needed.

In order to develop capacity for research and the provision of treatment, there is a need to provide appropriate training programmes in the field. At least 96 hours of theoretical training, combined with regular on-the-job training within the health worker setting for a minimum of six months, is usually required for health workers to be able provide mental health care alongside other health services. Ideally, there would be sufficient capacity for research and mental health service delivery to be conducted by separate cadres.

³⁶ Inter Agency Standing Committee (2007). *IASC guidelines on mental health and psychosocial supporting emergency settings*. http://www.who.int/hac/network/interagency/news/iasc_guidelines_mental_health_psychosocial_upd2008.pdf

³⁷ Inter Agency Standing Committee (2007). *IASC guidelines on mental health and psychosocial supporting emergency settings*. http://www.who.int/hac/network/interagency/news/iasc_guidelines_mental_health_psychosocial_upd2008.pdf

³⁸ Patel V (2007). *Treatment and prevention of mental disorders in low-income and middle-income countries*. *The Lancet* **370**, 991-1005.

6. Translating research into policy and practice for health sector reform

Much remains to be done to combat negative views of mental health research in LMIC and to stimulate the use of evidence in policymaking. Research may be viewed as a time-consuming activity, not critical to improvements in health, and governed by self-motivated priorities. To date, support for LMIC-derived mental health research and treatment provision by international donors and multilateral agencies has been comparatively low, which has limited the generation of research directly relevant to practice in LMIC.

A combination of activities should be employed to overcome the gap between research and action, including:

- Raising awareness of the burden of mental illness and the availability of cost-effective treatments.
- Increased communication of the benefits of research.
- Improved relationships between researchers and policymakers.
- Increased advocacy through the dissemination of research findings and mobilisation of communities.
- Greater support for research capacity strengthening in both rural and urban areas to provide a greater pool of evidence to inform policy.

Experience from Chile indicates that the use of robust scientific evidence, combined with persistent public advocacy, civic education and media pressure, can facilitate the uptake of research into practice. Communication of findings from RCTs and cost-effectiveness

studies enabled a stepped care programme for the treatment of depression to be integrated into primary health care in Chile through recognition of depression as a key health priority.

Within governmental ministries of health, far-reaching appraisals of health systems provide important prerequisites to evidence-based reform. For instance, a broad appraisal of mental health services may indicate a need to decentralise planning and implementation to a district level, or a need to alter spending frameworks by introducing health insurance schemes or user charges. Experience from Tanzania indicates that the implementation of health sector reform can improve mental health services by:

- Strengthening capacity in human resources.
- Allocating a greater proportion of the health budget to mental health.
- Ensuring that adequate supplies of medicines are available.
- Improving infrastructure.
- Improving education of civic society and donor agencies.
- Developing policy guidelines and codes of practice for mental health professionals.
- Raising awareness of mental health amongst local councils and regional or district health management teams.

A combination of research to assess the mental health burden and cost-effective treatment delivery strategies - and a robust appraisal of barriers to improved services, current treatment provision and available budgets for mental health - underpin the health sector reform process.

In summary: implications for global mental health research

Mental disorders constitute a significant proportion of the global health burden, both directly and indirectly, by placing individuals at greater risk, and worsening the outcomes, of communicable and non-communicable diseases and injury. The mental health burden disproportionately affects LMIC, where the majority of the world's population reside, but scarce resources are available to address mental health in these countries.

As such, there is a pressing need for co-ordinated efforts in LMIC to address the mental health burden. In particular, there is a need to:

- Strengthen mental health research capacity.
- Scale up resources and existing cost-effective interventions for the management of mental illness in LMIC, accompanied by appropriate evaluations.
- Communicate the findings of research to civic society, policymakers and global health donors.

A greater understanding of how best to develop and evaluate interventions for people with mental disorders, delivered by non-mental health professionals in a range of settings, would be welcome. Indeed, there is a growing body of research from LMIC demonstrating clear benefits from task shifting and the mobilisation of communities to provide interventions. Effective packages of care that facilitate management of chronic neuropsychiatric disorders such as dementia, and include interventions for caregivers, will also be required. Moreover, as the evidence base for effective interventions grows, research that evaluates mechanisms by which health systems can scale up feasible and efficacious interventions in routine care settings will become increasingly necessary. In the future, a greater focus on epidemiological research may also be required to characterise the causes, outcomes, and burden of mental

illness in different communities, ethnic groups and socio-economic settings. To date, the majority of epidemiological research has been carried out in HIC.

In order to overcome the impact of stigma, there may be scope for researchers and donors involved in HIV/AIDS research to exchange knowledge and experience. Improved communication between researchers and policymakers in LMIC will also raise awareness of the burden of mental disorders and facilitate evidence-based priority setting and policymaking processes.

A greater focus on mental health research and care in fragile states and emergency settings will be an important consideration. Millions of people worldwide are affected by conflict and disasters, yet there is little capacity for research in humanitarian settings. Studies that assess epidemiology, the effectiveness of interventions, models of delivery, and best clinical practice are required in a range of emergency settings, whilst capacity for enhanced training is needed, to ensure that treatments are provided appropriately.

Underpinning all of the activities described above is a need to address the scarcity of human resources for mental health. Improved opportunities for researchers, greater support for research, and comprehensive training programmes are needed to improve the proportion of mental health research carried out in LMIC. Both North-South and South-South partnerships will play an important role in this regard. Additionally, in order to overcome the treatment gap in LMIC, there is a need to scale up human resources for mental health treatment and care, in part through the provision of training programmes and financial support for community-based health programmes.

Annex 1: symposium programme

Thursday 4 September 2008

Kohn Centre, Royal Society, 6-9 Carlton House Terrace, London SW1Y 5AG

9:30 Welcome and Introduction

Sir Michael Rutter CBE FRS FRCPsych FBA FMedSci, Vice-President, Academy of Medical Sciences

Research and development of effective treatment and care I

Chair: Sir Andy Haines FMedSci

09:40 Professor Vikram Patel, London School of Hygiene and Tropical Medicine, UK and Sangath Centre, Goa, India
Depression in India

10:00 Dr Atalay Alem, Addis Ababa University, Ethiopia
Schizophrenia in Ethiopia

10:20 Professor Martin Prince, Institute of Psychiatry, UK
Dementia in developing countries

10:40 Discussion

11:05 Tea/Coffee

Research and development of effective treatment and care II

Chair: Professor Vikram Patel

11:25 Dr Lynne Jones OBE, International Medical Corps
Mental illness in conflict and post-conflict settings

11:45 Professor Robin Murray FMedSci, Institute of Psychiatry, UK
Comparisons of psychosis in London and São Paulo

12:05 Dr Shekhar Saxena, World Health Organisation, Switzerland
Global mental health research capacity

12:25 Discussion

12:50 Lunch

Translating research to policy and practice

Chair: Professor Rachel Jenkins

13:45 Professor Ricardo Araya, University of Bristol, UK
Implementation of clinical research in primary care in Chile

14:05 Dr Joseph Mbatia, Ministry of Health, Tanzania
Mental health policy implementation and health sector reform

14:25 Professor Graham Thornicroft FMedSci, Institute of Psychiatry, UK
Health systems research in developing countries

14:45 Discussion

15:10 Tea/Coffee

Panel Discussion: Funders' perspectives on global mental health research

Chair: Dr Richard Horton FMedSci

15:35 Sir Leszek Borysiewicz FMedSci, Chief Executive, Medical Research Council, UK
Dr Jimmy Whitworth, Head of International Activities, Wellcome Trust, UK
Dr Nick Banatvala, Head of Global Health, Department of Health, UK

16:35 Conclusion

Sir Michael Rutter CBE FRS FRCPsych FBA FMedSci

16:45 Drinks Reception

Annex 2: symposium delegates

Dr Alexandra Argenti-Pillen

Lecturer in Medical Anthropology

University College London

Mr Aleksandr Avramenko

Project Manager

Global Initiative on Psychiatry

Dr M Bangura

South London and Maudsley NHS Foundation Trust

Professor Paul Bebbington

Head of Department, Mental Health Sciences

University College London

Ms Philippa Bird

Research Assistant

Leeds Institute for Health Sciences

Dr Laura Boothman

Policy Officer

Academy of Medical Sciences

Professor David Bradley FMedSci

Professor of Tropical Hygiene Emeritus

London School of Hygiene and Tropical Medicine

Ms Birgit Brandt

Director of Programmes

British Academy

Mr Nigel Brooksby

Managing Director

Sanofi-Aventis

Dr Rob Buckle

Board Programme Manager

Medical Research Council

Ms Rochelle Burgess

MSc Student

London School of Economics

Ms Lucy Butler

Clegg Scholar

Student BMJ

Dr Imran Chaudhry

Consultant Psychiatrist

Dr Frances Cheng

SpR Academic Clinical Fellow

Cambridgeshire and Peterborough Mental Health Trust

Dr Shewly Choudhry

Science Portfolio Adviser

Wellcome Trust

Sir Gordon Conway FRS

Chief Scientific Adviser

Department for International Development

Professor Francis Creed FMedSci

Professor of Psychological Medicine

Manchester Royal Infirmary

Dr Patricia Cuff

Program Officer, Board on Global Health

Institute of Medicine, The National Academies, USA

Dr Alan Dangour

Senior Lecturer

London School of Hygiene and Tropical Medicine

Dr Victoria de Menil

Programme Co-ordinator

Basic Needs

Dr Ama de-Graft Aikins

Research Fellow

University of Cambridge

Dr Mary de Silva

Lecturer in Epidemiology

London School of Hygiene and Tropical Medicine

Dr Pedro Delgado Godinho

Head, Division of Mental Health

Ministry of Health, Brazil

Ms Margriet den Boer

London School of Hygiene and Tropical Medicine

Mr Mark Fenton Editor James Lind Alliance	Dr Patrick Kelley Director, Boards on Global Health and African Science Academy Development Institute of Medicine, The National Academies, USA
Dr Robert Frost Senior Policy Officer Academy of Medical Sciences	Dr Peter Kinderman Professor of Clinical Psychology University of Liverpool
Dr Bruce Gillmer Consultant Clinical Psychologist Northumberland Tyne & Wear NHS Trust	Ms Ingrid King Executive Director Association for Child and Adolescent Mental Health
Dr Pat Goodwin Head of Department, Pathogens, Immunology and Population Studies Wellcome Trust	Professor Betty Kirkwood FMedSci Professor of Epidemiology and International Health London School of Hygiene and Tropical Medicine
Dr Nori Graham Chair Alzheimer's Disease International	Dr Ralph Kohn FRS HonFMedSci Chairman The Kohn Foundation
Professor Brian Greenwood CBE FRS FMedSci Professor of Clinical Tropical Medicine London School of Hygiene and Tropical Medicine	Dr Satinder Kumar Senior Lecturer in Primary Care Brighton and Sussex Medical School
Dr John Hanna Consultant Clinical Psychologist Highgate Mental Health Centre	Ms Hanna Kuper Senior Lecturer London School of Hygiene and Tropical Medicine
Mr Bradley Hillier Manson Unit Médecins sans Frontières	Ms Sue Lawrence PhD student University of London
Dr Robert Holland Vice President, Neuroscience Therapy Area AstraZeneca	Ms Sarah Lock Commonwealth Programme Co-ordinator Nuffield Foundation
Professor Matthew Hotopf Professor of General Hospital Psychiatry Institute of Psychiatry	Dr David Lynn Head of Strategic Planning and Policy Unit Wellcome Trust
Dr Nusrat Husain Senior Lecturer University of Manchester	Dr Georgie MacArthur Policy Officer Academy of Medical Sciences
Mr Ibrahim Kanu South London and Maudsley NHS Foundation Trust	Professor Anthony Mann FRCP FRCPsych FRCGP Professor of Epidemiological Psychiatry Institute of Psychiatry

Mrs Mary Manning
Executive Director
Academy of Medical Sciences

Dr Ana Padilla
Parliamentary Officer
British Psychological Society

Professor Jair Mari
Professor of Psychiatry
Universidade Federal de São Paulo, Brazil

Professor Catherine Panter-Brick
Senior Editor, Medical Anthropology
Social Science and Medicine

Mr David McDaid
Research Fellow
London School of Economics

Professor Eldryd Parry OBE
Former Chairman
THET

Ms Jennie McNamara
President
European Association for Counselling

Ms Gillian Pepper
Director
Newton's Apple

Dr Omer Moghraby
SpR in Child Psychiatry
Institute of Psychiatry

Dr Hynek Pikhart
Lecturer
University College London

Professor Mervyn Morris
Professor of Community Mental Health
Birmingham City University

Dr Guilherme Polanczyk
Post-doctoral Research Fellow
Institute of Psychiatry

Professor Roger Mulder
Head of Department of Psychological Medicine
University of Otago, New Zealand

Professor Stig Pramming
Executive Director
Oxford Health Alliance

Dr Helen Munn
Director, Medical Science Policy
Academy of Medical Sciences

Dr Andrew Purkis OBE
Chief Executive
THET

Mr Michael Murray
Chief Executive
Clifford Beers Foundation

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Professor Geneva Richardson CBE
Professor of Law
King's College London

Mrs Shahwar Sadeque
Consultant

Ms Ruby Siddiqui
Operational Epidemiologist
Médecins sans Frontières

Professor Peter Smith CBE FMedSci
Professor of Tropical Epidemiology
London School of Hygiene and Tropical Medicine

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Manager, Medical Science Policy
Academy of Medical Sciences

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London School of Hygiene and Tropical Medicine

Ms Elizabeth St Clair
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London School of Hygiene and Tropical Medicine

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