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seminar briefing no5



MENTAL HEALTH ECONOMICS AND POLICY IN A GLOBAL CONTEXT

Edited by Jon Sussex, Office of Health Economics

This briefing presents the main points made in presentations and discussions at an international conference held at the London School of Economics and Political Science on 30th May 2003. The conference was organised by Martin Knapp and David McDaid of LSE Health and Social Care, with the assistance of Jon Sussex of the Office of Health Economics and Rachel Jenkins of the Institute of Psychiatry, London. Financial support was provided by the UK Department for International Development. The conference was chaired by Professor Norman Sartorius, former Director of Mental Health at the World Health Organization.

List of Contributors

Daniel Chisholm – Mental health economist in the Global Programme on Evidence for Health Policy and the Department of Mental Health and Substance Dependence, WHO, Geneva.

Rachel Jenkins – Professor and Director of the WHO Collaborating Centre at the Institute of Psychiatry, London.

Martin Knapp – Professor of Social Policy and Director of the Personal Social Services Research Unit, London School of Economics and Political Science.

Jon Sussex – Associate Director of the Office of Health Economics, London.

Harvey Whiteford – Kratzmann Professor of Psychiatry at the University of Queensland; consultant with the Human Development Network of the World Bank.

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1 Introduction

The purpose of the conference was to locate and promote the role of health economics in mental health policy in low and middle income countries. Health economists have a growing voice in health policy development. But just as it is only recently that mental health policy specifically has been highlighted on the global stage, with the WHO's 2001 World Health Report, so too has the economics of mental health only comparatively recently started to claim attention on the global policy stage.

The conference brought together approximately 100 economists, health professionals and policy makers from a great many countries. The participants heard and discussed presentations from prominent practitioners in the field of mental health economics and policy in a global context. Highlights from those presentations and discussions are set out in the remainder of this briefing. Together, they amount to a primer in mental health economics and policy in low and middle income countries.



Office of Health Economics
12 Whitehall London SW1A 2DY
Telephone: +44 (0)20 7930 9203
Facsimile: +44 (0)20 7747 1419
www.ohe.org

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2 Economic issues in mental health for low and middle income countries

Martin Knapp

There are three topics or concepts in the title for this conference: mental health, economics and low income countries. The focus of the conference is on the, currently very small, intersection of those three. The large and growing public health burden imposed by mental health problems across the globe has been well documented. Mental health systems in low and middle income countries remain seriously under-developed and under-resourced. In the last 15 to 20 years there has been a growing amount of work on economic aspects of mental health services. But nearly all of that has been in high income countries – in Europe, North America and Australasia – with very little elsewhere.

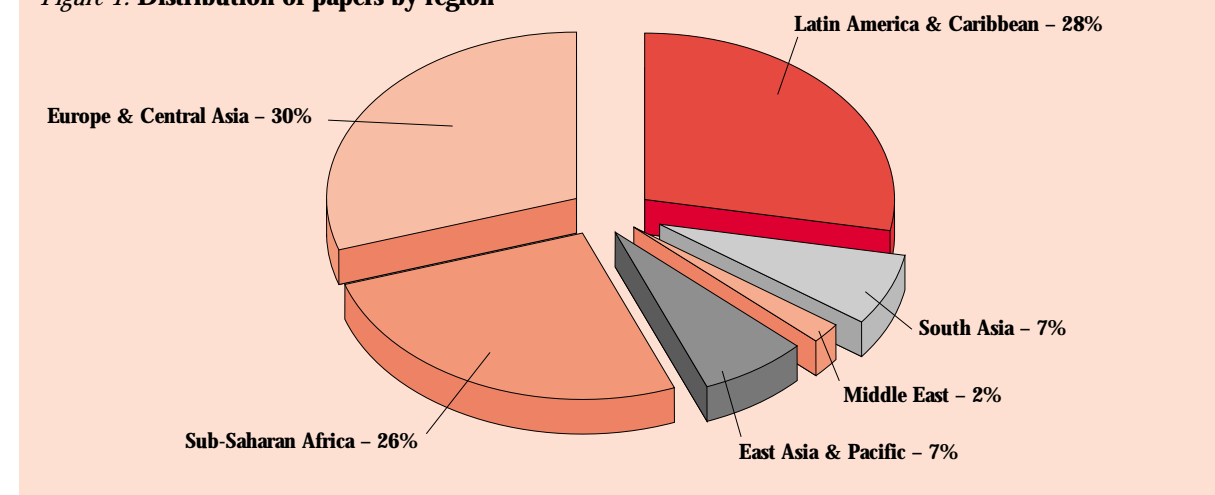
2.1 What is mental health economics and why are we interested?

The starting point, as for economics generally, is that resources are scarce. In mental health the pressures on those resources come from demography, changes in social and family composition, changes in labour market participation rates, medical technology, growing expectations, etc. Resources are insufficient to satisfy all possible demands. That generates a need for choice. Economists try to help decision makers throughout the health system to get the best outcomes per dollar spent.

There are many economic issues in mental health but the following nine are particularly important to policy and practice:

- macroeconomic impacts;
- the economic implications of mortality, disability and quality of life;

Figure 1: Distribution of papers by region



- employment and productivity;
- how services are financed;
- expenditure levels and patterns;
- service distribution and access to services;
- social exclusion and (in)equity;
- incentives to deliver services and to demand or request services; and
- the enormous issue of the cost-effectiveness of different types of intervention.

2.2 Evidence base

Safi Afghan, Sarah Byford (both Institute of Psychiatry), Damian Walker (London School of Hygiene and Tropical Medicine) and I have recently undertaken a systematic review of published mental health economic evaluations in developing countries. We have used the ICD 10(V) definition of mental health, the World Bank definition of developing countries and a broad definition of economic evaluation. On that basis we have identified 47 relevant papers.

Figure 1 shows the distribution of papers according to geographic region covered and Figure 2 according to diagnostic group or mental health problem. There is a spread of topics but schizophrenia dominates and there is very little outside the 18 to 65 age group. The types of treatment covered in the literature are also varied (Figure 3). Drug treatments are the most commonly covered category; but some evaluations focus on psychological treatments; some on hospitals; some on community based services. So, although the literature is small, we see a broad spread by region, diagnostic group and intervention type.

Overall, the quality of the published literature on economic evaluation of mental health interventions in developing countries is poor. Of course, the quality of many economic evaluations in high income

Figure 2: Papers by diagnosis

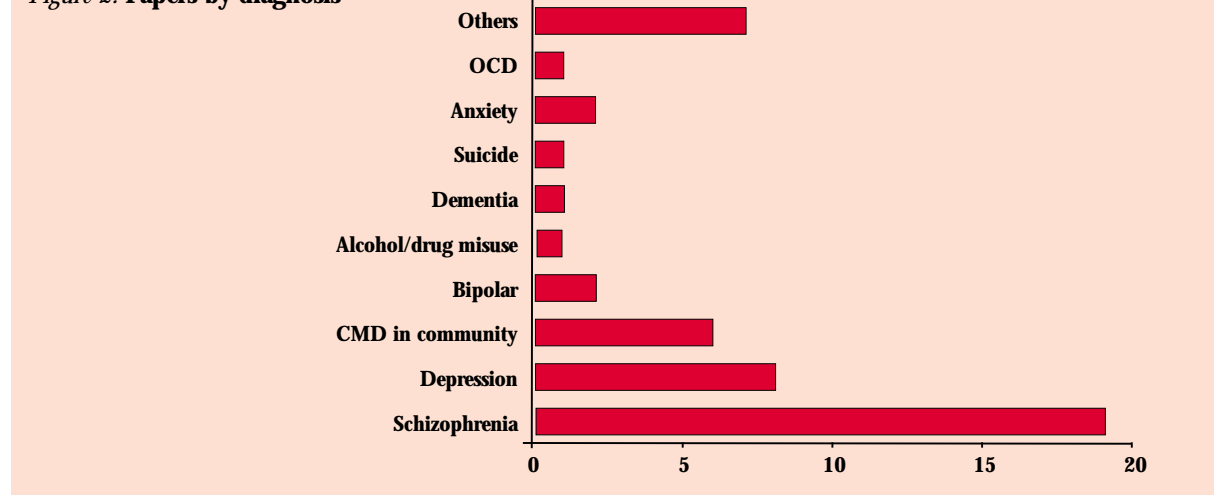
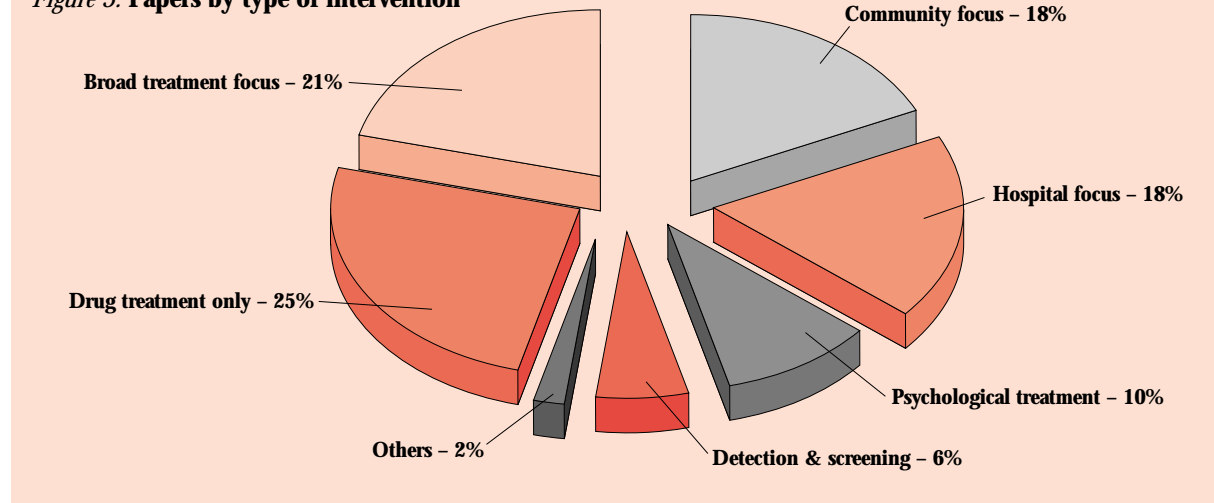


Figure 3: Papers by type of intervention



countries is very poor as well, so it is not just a regional issue. There are, for example, very few full economic evaluations that properly measure outcomes and have good measurement of costs. Outcomes measures rarely include family and productivity impacts, yet these are of enormous importance in mental health. There are few randomised controlled trials and many evaluations lack even a control group. Fewer than 30% of the studies we found state the perspective taken, whether societal or from the viewpoint of the health service, patient or family. Where the perspective is stated, it is often quite narrow.

2.3 Economic barriers to improving mental health

The lack of strong evidence is one barrier to implementing policies and practices to improve mental health in low and middle income countries, but there are many other barriers too.

One of the most obvious problems is a lack of resources. In most developing countries for which data are available, less than 1% of an, already small, total health budget is allocated specifically to mental health. There are also vast differences between countries; e.g. even in Western Europe the share of the total health budget allocated for mental health ranges from 4% to 13%.

Reasons for the lack of resources allocated to mental health in developing countries include:

- low national income;
- weak and fluctuating currencies, leading to rising and fluctuating prices of imported medicines;
- low priority attached at national level to meeting mental health needs, either because those needs are not recognised, or because they are seen as of low impact or relevance given the general state of the country, or because the 'rule of rescue' dominates leading to resources being focused to meet emergency needs to save lives;
- low willingness or ability among individuals to seek treatment; maybe because of social stigma;

- if individuals are expected to pay for some of their health care, a low willingness or ability to pay for treatment.

Another barrier is often a poor geographical distribution of mental health services in a country. There are two aspects of that. First, in many countries the psychiatrists and specialist mental health services are concentrated solely in the major cities. By contrast, particularly in parts of Eastern and Central Europe, services in the form of asylums might be located in remote rural areas, making it very difficult for social integration of patients. There is also inequitable distribution of services across socio-economic, age, gender, ethnic or religious groups. Resources are often poorly distributed across diagnoses or needs, not prioritised according to cost-effectiveness or some disability adjusted life year (DALY) based argument.

A fourth barrier to improving mental health care is that the resources and services available do not match those that are needed or those that are preferred. An example may be the dominance of large asylums in some countries. Furthermore, it is often difficult to determine the preferences between services of people with mental health problems.

Even if the resources are there, they may not be responding appropriately and promptly to the needs of individuals. This rigidity can result from:

- highly bureaucratized decision making processes;
- information about people's needs being unavailable or not reaching those who need it;
- low incentives to be responsive. For example, if a country has high unemployment there may be little incentive to develop work schemes for people with mental health problems.

Inefficiency can also result if the response to providers who prove able to reduce the costs of achieving a particular set of health outcomes is to cut their budgets.

Resource dislocation is the penultimate barrier to improving mental health care, i.e. dislocated or poorly coordinated services, particularly where many agencies are involved in meeting the comprehensive needs of individuals across health care, social services and education services. That might happen at a macro-level within countries, or at a micro-level working with individual patients. Silo budgeting is a common feature. Dislocation problems may well grow as mental health care shifts from hospital to community.

The final barrier is resource timing. Here, the problem is that efficiency and practice improvements do not work their way through to cost savings or better health for some time. This may be due to "supply inelasticity". Supply does not respond very quickly to changes in policy, to changes in available budgets or

to changes in preferences for services or interventions. An obvious problem could be shortages of suitably trained staff or of particular medicines. There might also be a lack of information on the pay-offs, particularly the longer term pay-offs, of changing the use of resources. Finally, in capacity constrained systems (i.e. almost everywhere), changing ways of working may be thwarted because any resources freed up in one service would then be used by hitherto under- or untreated people rather than being made available for investment in new services.

The essential problem behind all of the barriers to improving mental health care is scarcity of resources. That is why it is appropriate and helpful to bring an economic perspective to the attempt to overcome these barriers.

2.4 What does this mean for mental health economics research?

There is a clear need for more and better studies in low and middle income countries that include economics, but there are challenges. Transferring between countries the results of economic studies is difficult, particularly between high and low income countries. Major differences can exist in any or all of:

- demography and epidemiology;
- culture, and its implications for the meaning of health and quality of life;
- societal preferences;
- health care financing arrangements;
- availability of health care and other services;
- incentives to individuals and organisations;
- unit costs;
- perspectives adopted in decision-making.

The second problem is that studies can be difficult to organise and perhaps also costly to undertake, especially given the shortage of health economics expertise.

Thirdly, pooling quantitative data can be valuable and informative, but it is tricky to do. In Western Europe a current initiative is attempting to develop a framework for data collection and to pool basic data to compare financing systems, levels of expenditure on mental health, the costs of services, employment, the climate for economic evaluations, and how resources are allocated. This is the Mental Health Economics European Network funded (since November 2002) by the European Commission and covering the 15 EU member states plus Iceland and Norway. Pooling experiential data is costly to do but can also be very informative.

Thus the need for research is clear. But it is not an excuse for inaction.

3 Responding to the burden of mental illness

Harvey Whiteford

3.1 The nature of the burden

Neuropsychiatric disorders are not a homogeneous group and, depending on the type of disorder, the way in which the response should be mounted is likely to differ. Some disorders have low prevalence but are very disabling, such as schizophrenia. Other disorders have high prevalence, such as depression, but on average are less disabling than some of the lower prevalence disorders. Mental illness may also be taken to include substance abuse and neurological disorders, especially epilepsy.

Countries are not homogeneous either, which is another reason for responses to differ – between the established market economies, the transitional economies in Eastern Europe and middle and low income countries.

Unlike cancer, heart disease or infectious diseases, the burden of neuropsychiatric disorders is predominantly one of morbidity or disability rather than premature mortality. If you die prematurely the health system does not bear much burden in providing care for you, but if you develop a disabling illness and live for a long time, health systems incur a lot of costs. Worse, mental disorders strike young people just as they are about to enter the most productive time of their life. Figure 4 shows how the peak burden of mental illness in Australia is in the 15 to 24 age group. That is bad news for the economy as well as for the individuals concerned and their families.

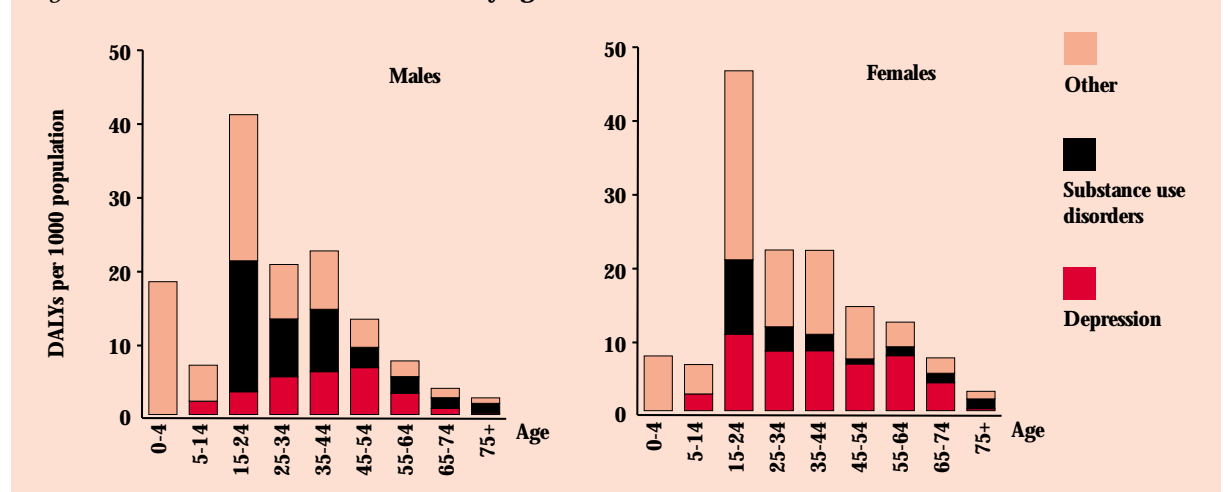
Arguably the largest component of economic burden derives from people being unable to fulfil the role that society has allocated to them or which they have

chosen. This burden includes absence from work, work cutback (reduced effort or effectiveness at work) and losses in non-wage production. The most significant non-wage production activity is raising children. Disabling mental illnesses result in productivity loss across all these areas. Australia has a population of just under 20 million and every month in Australia anxiety disorders cause 2.7 million person days out of role; nerve disorders 2.1 million; and substance abuse 1.1 million (Australian Bureau of Statistics, 1997). Most of that illness is not treated, even in Australia, which has a National Health System and where there is little out of pocket expense in using health care.

US data suggest that the five leading causes of absenteeism and work cutback are, in order: anxiety disorders; peptic ulcers; chronic sleep problems; immune disorders; depression. For mental disorders, the number of work cutback days – when you are at work but cannot do your job properly – is five times the number of days lost through absenteeism (Kessler and Frank, 1997). So if you just count people not turning up to work, you grossly underestimate the productivity loss associated with mental disorders. Furthermore, according to a US study, treatments for migraine, anxiety and depression result in the greatest long-term percentage improvement in productivity (Berndt et al., 1998).

Data produced for the WHO Commission on Macroeconomics and Health showed that the employment effects of clusters of psychiatric symptoms in developing countries are larger than in developed countries (Bir and Frank, 2001). The costs of medical care can drive whole families into poverty. In developing countries, out of pocket payments for medical care, if any is accessible, are often large. Social insurance is limited and mental disorders are rarely covered where there is such insurance. There are few social welfare systems for the poor, so people have to

Figure 4: DALY burden of mental illness by age and sex, Australia 1996



sell their productive assets to pay for care. If they sell their productive assets, people fall, with their families, into poverty. Once people are very, very poor they are totally unable to access medical care if there are any out-of-pocket expenses. They often find it harder to get back to work because they are still ill or disabled, and they are locked into the poverty trap.

No country is so poor that mental health care ceases entirely to be a matter of importance.

3.2 WHO Commission on Macroeconomics and Health

The WHO Commission on Macroeconomics and Health (CMH) reported in 2001 (CMH, 2001). It captured headlines for the case it made for greatly increased investment in health globally. A less publicised finding, however, was that health is not an automatic consequence of economic development. A second point the CMH made was that health and education are key contributors to economic development. They estimated that a 10% improvement in life expectancy is associated with additional economic growth of 0.3-0.4% per year (CMH, 2001). Making people healthier also makes them wealthier. Bloom and colleagues (2001) support this. They find, from inter-country comparison of macroeconomic data, that poor health significantly damages worker productivity and that the positive effect of health on aggregate output is consistent with the size of effect found by microeconomic studies.

The CMH made many recommendations (CMH, 2001), among them:

- universal access to basic health services. The trick there for economists is the meaning in practice of "universal". The trick for health people is "basic". Are mental health services included?
- a focus on diseases of the poor. Do they include mental illnesses?
- a strong role for public financing or provision of services. Does that include mental health services?

By 2020 neuropsychiatric disorders are expected to constitute about 15% of the total world disease burden as measured by DALYs (WHO, 2001). This compares with 10% due to infectious diseases and 3% to HIV/AIDS. Though impressive this is not by itself sufficient to warrant the inclusion of mental health care in any package of essential health services. Account must also be taken of whether cost-effective treatments are available. If not, there is no point using scarce resources on mental health services. However, as Daniel Chisholm points out later, increasing evidence of cost-effective mental health treatments is becoming available.

Turning to the second and third of the CMH recommendations highlighted above, the WHO World Health Report 2000 (WHO, 2000) followed Musgrove (1999) in recommending nine criteria for judging the appropriateness of public, as opposed to private, financing of health care generally. One of these criteria is whether the diseases afflict the poor. I will therefore consider that question as I go through the nine criteria in turn for the specific case of mental health.

3.3 Public funding of mental health care?

1 *Are mental health services a public good¹?*

A public good is something where one person's use does not deplete the amount available for everybody else and which is not excludable, i.e. nobody can be prevented from using it. National defence is a public good; so is street lighting. Mental health services are not.

2 *Are there externalities associated with mental disorder?*

Externalities in the present context are where the effects of mental illness, or the treatment or prevention of it, affect somebody else who does not have the illness. If a person suffers a mental illness which is untreated and as a result they commit a crime, then the victim(s) of that crime experience a cost externality from the untreated mental illness. Conversely, the prevention of such crime might be an external benefit from treatment of some mental illness. So there are externalities associated with at least some mental disorders.

3 *Do mental disorders inflict catastrophic costs on the individual and their families?*

For some mental disorders they certainly do (Knapp, 1997; Chisholm et al., 2000).

4 *Do mental disorders affect the poor disproportionately?*

This is a critical argument. There is increasing evidence that they do (Patel and Kleinman, 2003), but many policy makers around the world act as if mental disorders mainly afflict middle and high income people.

¹ A 'public good' is strictly defined as one where the marginal cost of providing an additional unit is zero. The amount of such a good that I consume has no impact on the amount available for anyone else to consume because the marginal cost of producing more is zero.

5 *Is private demand for mental health care adequate?*

Even if they have insurance or the means to buy care services and medicines out of pocket, do people know that they have treatable mental illness and do they know where to go for relief? It is well established that private demand in many parts of the world, including in some developed countries, is not adequate. It is certainly even less adequate in many developing countries where symptoms of psychiatric illness are not considered to be related to illness but rather to other factors such as spirituality or personal weakness. Mental health literacy and stigma result in people not demanding mental health care even when they could benefit from it.

6 *Do cost effective interventions exist for mental health care?*

Yes, we now have data that demonstrate the cost-effectiveness of treating at least some disorders in developing countries (Araya et al., 2003; Patel et al., 2003).

7 *Can the care be insured?*

Due to stigma, adverse selection and moral hazard, insurance systems do not work well for mental disorder. Therefore insurance must be mandated by government, if possible. If they can avoid it, private insurance companies will not insure people with mental disorders or a family history of mental illness, or who have had psychiatric treatment in the past. That is adverse selection. Moral hazard – meaning that if you have insurance you will over-use health care services because you will not bear the costs – is really only a problem in high income countries. The role for government is to mandate the coverage of treatment for mental disorders and substance abuse in any insurance system.

8 *Does the rule of rescue apply?*

A reason for public provision may be that without a treatment you will die. For suicide prevention and possibly for some other conditions the rule of rescue does apply to mental health.

9 *If provision is in the private sector, is there a role for government regulation?*

For mental health, the answer is "yes". Quality assurance is one reason for government regulation, especially since some mental health care is given regardless of the patient's consent. The other main reason is information asymmetry: the doctor

knows much more than the patient about the health care they are getting. The patient has to rely on the doctor's advice. Patients may well be less informed in some developing countries than in countries with strong consumer movements and channels of information. So governments have a role ensuring that health care professionals act in patients' best interests, and helping consumers to be better informed.

Box 1 summarises for mental health care the application of the WHO's nine criteria for judging whether public funding is appropriate. For eight of the nine, and hence overall, the implication is that there is indeed a public role in funding mental health care.

Box 1 – Is there a role for public funding of mental health care?

- **Is mental health care a public good – NO**
- **Externalities associated with mental disorder – YES**
- **Does mental illness inflict catastrophic costs – SOMETIMES**
- **Affect the poor disproportionately – SOME EVIDENCE**
- **Cost-effective interventions – FOR SOME DISORDERS**
- **Is private demand for mental health care adequate – NO**
- **Can mental health care be insured – YES, BUT WITH REGULATION**
- **Does the rule of rescue apply – YES, FOR SUICIDE**
- **Role for government in private sector provision – YES**

3.4 The World Bank approach

Governments can intervene in several different ways, by:

- providing *information*,
- *regulating* provision of services;

- *mandating* provision of services;
- *funding*; or
- *providing* services.

The World Bank takes the view that currently the government role is unbalanced, with too much emphasis on public sector provision of health care. It argues that the other four roles are much more important than that the government directly provides services itself (Beeharry et al., 2002).

The World Bank recommends an integrated approach, which grafts mental health onto existing priority areas such as health sector reform, HIV programmes and maternal and child health. In support, the Bank provides analytical as well as financial assistance, including collecting information on mental health as part of general health questionnaires, and analysing the role of good mental health in building social capital. Other areas of World Bank analysis include a review of the politically sensitive area of female genital mutilation to determine the long-term psychological and social consequences. In areas where there has been conflict, the World Bank is looking at the cost-effectiveness of psycho-social interventions (in Algeria, Burundi, Gaza, Uganda, Cambodia and Nepal).

World Bank loans are helping with the integration of mental health care into primary health care in Bosnia, West Bank and Gaza and Lesotho. Instead of a silo mental health programme, the aim is to increase the capacity of general primary health care systems to diagnose and treat mental illness, because that is building onto an existing structure. Other loans are aiding countries, including Albania, Lithuania and Rumania, by moving away from institutional care and expanding community mental health services. Mental health policy development at Ministry of Health level is being supported in Zambia, Trinidad and Tobago, Lesotho and Turkey. Other, broader, projects also have a mental health component – e.g. the psycho-social component of a social action project in Burundi and technical support to the Afghanistan Health Project and to the legal and judicial reform project in Sierra Leone.

In conclusion, the response to mental health needs must be sophisticated, and valuable information is increasingly available to guide that response. There is a clear role for government involvement in mental health care, although the current emphasis on public provision of services – rather than funding, mandating, regulating and providing information – is questionable. Finally, mental health care should be seen as an integrated part of health care in general and not as a separate programme.

4 Mental health policy tools

Rachel Jenkins

4.1 Rationale for action

The UK Department for International Development (DfID) is systematically increasing the attention it gives to mental health. DfID's primary concern is with the alleviation of poverty, so why should it care about mental health? Because mental illness:

- causes a heavy burden;
- contributes to poverty;
- differentially affects the poor;
- impedes the achievement of other health and development targets; and
- is under-emphasised in current work to tackle poverty.

The burden of morbidity and premature mortality from mental illness is familiar. WHO and World Bank estimates of the global burden of disease show neuropsychiatric disorders accounting for 13% of all DALYs lost in 1990 and an expected 15% by 2020; and representing 28% of years of life lived with a disability (Murray and Lopez, 1996).

There are some problems with DALYs, although they remain a very useful metric. The disability weighting is a personal disability weighting and omits family and social burden, which we know is very important in mental illness. The epidemiological figures are merely estimates in many countries and sometimes are clearly wrong; e.g. the DALY disease burden figures currently imply that suicide barely exists in sub-Saharan Africa. We know there is double counting because of the co-morbidity within mental disorder, but there is also probably even greater under-counting because of the co-morbidity between mental and physical illness. If you have a stroke you will be registered in the DALY figures as somebody with a stroke, but you are highly likely to have accompanying depression as well. Finally, DALYs do not include the premature mortality from physical illnesses that arise through mental illness.

There are plenty of reasons why mental illness is a cause of poverty. There is the lost production from people with mental illness who cannot work or who are ill but remain at work. There is lost production from premature suicide, and lost production from the carers of people with mental illness. If the state has to support the dependents of a mentally ill person, or the rest of society has to, then that is another cause of poverty. There are the direct and indirect costs for the families of caring. There is the enormous impact on children in emotional, cognitive and physical terms, which leads to

childhood conduct and emotional disorders, which contribute to educational failure and subsequent unemployment and illness in adult life. This is an area where we desperately need more economic studies, especially in low income countries.

Mental illness differentially affects the poor. We know that there are higher rates of mental illness linked to low income, lack of education, unemployment, low social status, hunger and indebtedness. Poverty is a cause of mental illness both in its own right and indirectly. For example, poorer people have more adverse life events and have unsafe and unhygienic living conditions.

Mental illness makes it difficult to achieve other development goals. Improved mental health will help reduce poverty. Infant and child mortality can be reduced through improved treatment of mothers' post-natal depression – depressed mothers are less likely to take their children for immunisations, and to comply with hygiene requirements, anti-diarrhoea programmes and fluid replacement for infants with diarrhoea. Studies do not yet exist about the link between maternal mental health and maternal mortality, to my knowledge, but one can plausibly argue that improving the treatment of depression is likely to reduce unhealthy behaviours such as smoking and high risk sexual activity, and support better nutrition, and hence subsequent mortality in mothers. This is another area that we simply need more research in.

So the rationale for action is compelling: positive mental health will contribute to social, human and economic capital. The burden of disorders is very high. We do have effective interventions (Institute of Medicine, 2001; Shah and Jenkins, 2000).

4.2 Tools

To help policy making and implementation we have developed two tools for DfID (Jenkins, 2003; Jenkins et al., 2002):

- a guide for DfID country officers; and
- a web database of mental health country profiles.

The content of the guide is summarised in Box 2. The guide emphasises that national mental health policy and strategy should integrate with overall national health policy. There are countries where excellent mental health policies have been developed, yet remain unimplemented because they were never integrated with the overall national health policy, so that no budget streams were attached, and key players were not involved. The mental health strategy needs to be integrated with the general health sector reform

Box 2: Structure of guide for DfID country officers

- **Rationale for action**
- **Definitions and concepts**
- **Global burden of disease**
- **Treatment and service approaches**
- **Cost-effectiveness**
- **Relationship with poverty**
- **Achievement of Millennium Development Goals**
- **Current challenges in poor countries**
- **Strengthening health systems capacity**
- **Scope of mental health services**
- **Strengthening primary health care**
- **Strengthening specialist services**
- **Strengthening the community**

strategy; with the package of essential medicines and other health interventions. Mental health needs to be built into health information systems; into the curriculum for all generic health workers as well as the mental health professionals; and into any country level work on the burden of disease (Jenkins, 2001).

A national mental health policy should also be integrated with overall government policies, not just with the health policy. That is, it should be linked to the policies of the ministries of finance, education, social welfare, justice, employment, housing, etc. It should be integrated with the poverty reduction strategy and the economic recovery plan.

Within these general requirements, a country's mental health policy must be tailored to the specific situation in that country or it runs the risk of not meeting the country's needs and not being implementable.

Turning to the second tool: each mental health country profile on the web database we have built up is a detailed situation assessment and analysis. It provides a background for setting priorities for policy development and a reference point for monitoring the implementation of the policy. It seeks to maximize the use of information and expertise that already exists but that has hitherto

been relatively inaccessible. We hope that it will flag up crucial information gaps, that it will develop local ownership of the reform process, as more and more people become involved, and help develop working partnerships across the different discipline sectors and, ultimately, countries. We want the database to give policy makers easy access to information that will aid policy development, and for it to be a reference source for researchers, UN agencies, NGOs and others.

Compiling a country profile is too big a task for one person. The first phase is undertaken by a small but multi-professional and multi-sectoral group which then steers the whole process of producing the profile. They assemble a much wider group to whom they allocate responsibility for different parts of the profile. The assembled profile is then reviewed by all contributors.

Some bits will be fairly clear-cut, although even hard data in some countries can be controversial, e.g. whether official suicide statistics are accurate. But other data are softer, e.g. concerning issues of stigma or the extent of user involvement in mental health policy. There we recommend that focus groups are held to verify and validate the views that are put into the country profile or, where there remains substantial disagreement, to record that fact.

Country profiles have been completed for: Azerbaijan, Bulgaria, Chile, Egypt, Georgia, India, Kenya, Kyrgyz, Lithuania, Nepal, Pakistan, Tanzania, Thailand, Uganda and Zambia. Other countries are continually being added and a website is under development which will combine all the profiles in a single database. Further information is available on the web at www.world-mental-health.org. CD-ROM or paper versions are intended to be produced so that the profiles can be used where access to the internet, or even to a personal computer, is impractical.

Common policy goals that would be signed up to in most places include:

- promotion of mental health;
- prevention of mental disorders;
- improving health and social functioning of people with mental illness;
- delivering services for early detection, care, treatment and rehabilitation;
- reducing premature mortality;
- reducing stigma.

There are some broad policy decisions to be taken, for which you need broad information, such as: how much money should be spent; the balance between public and private care; between primary and secondary care; between health and social care; the proportions to be spent on promotion, prevention, treatment and rehabilitation; and the relative

importance of public policies on mental health as opposed to general health policies.

Then there is rather narrower information needed for more specific decisions, such as: which drug or psychological treatment to use; what kind of service structure to have; and what training package will be best. Narrowly focused information is easier to obtain. The systematic review is usually the instrument of choice, although there is the major problem that the bulk of such studies are for high income countries.

For the broad information, experimental trials are either very difficult or impossible, e.g. to look at the interplay between health, welfare, criminal justice, education and environmental policy. So the task here is to try and find a comprehensive strategy for synthesizing the information we have from multiple sources, disciplines and perspectives. There is already a lot of expertise around on general health system design and reform, but there has been much less focus until recently on mental health policy, mental health systems and the way they articulate, or not, with the general health system and with broader social policy.

So we need information that is both quantitative and qualitative, in a form which is as organised and accurate as possible, triangulated by multiple viewpoints, accessible and usable and hopefully owned by the key stakeholders. The problem is that that information is currently very patchy, disorganised, inaccurate, usually not triangulated or discussed with the key stakeholders and not always accessible outside government or between government ministries.

The country profiles tackle this. They collect and present local information in a standardised way to provide a tool for reviewing existing mental health policy, to alert and inform policy makers, health care professionals and other stakeholders. The systematic format of the profiles enables international sharing of information. There are four domains of information within each profile:

- 1 *context*, e.g. societal organisation and culture, public policy, specific current mental health policy, stewardship, population need and demand;
- 2 *resources* looks at the financial and human inputs and the physical and service models that they are combined with;
- 3 *provision* describes the processes of care delivery;
- 4 *outcomes* describing changes in health, social functioning and quality of life.

Feedback from countries where profiles are being tried out has been positive. They are finding it helpful in capturing the local issues, the continuing and the emerging problems that have been under-addressed, and the specific challenges they imply. The profiles have helped them develop mental health policy with

multi-sectoral and multi-disciplinary involvement. So we hope that the country profile is extending rapid assessment methodology to mental health at a national level; that it is integrating multiple methodologies and data sources; and that it is a usable tool.

5 Using cost-effectiveness analysis – the WHO CHOICE project *Daniel Chisholm*

This section describes a process for using cost-effectiveness analysis to evaluate mental health programmes at the level of whole populations (in countries or even world regions). The context for incorporating economic considerations into international mental health policy is that while the burden of neuropsychiatric disease is very high, the resources available to address that burden are extremely low. Given the consequent tension between the need for and the availability of mental health care, plus the fact that effective interventions do exist, the job of cost-effectiveness analysis is to show how much of the burden can be reduced or averted, by doing what, and at what cost.

One way to begin to do that is by identifying mental health interventions which are effective and might be cost-effective, estimate their expected costs and effects in different settings and then compare results with interventions for other leading contributors to global disease burden, e.g. malaria, HIV. Is the cost-effectiveness of depression care, for example, in the same ball park as interventions for other chronic, non-communicable diseases?

Such a process, however, is constrained by the paucity of good data on the costs and effects of different health care interventions, especially in low and middle income countries. It would take a lot of research effort and associated resources to generate the robust evidence that we would all like. Furthermore, the mental health economic studies done so far are by no means homogeneous. They use slightly different methods or make different assumptions. Some analysts include productivity effects, others do not; some analysts discount, others do not; some comparisons of new treatments are against placebo, others are against usual current practice – and what is current practice varies enormously from Lagos to London to Lima.

The result is confusing for policy makers. When they see a list of the results of cost-effectiveness studies, behind them there are a lot of differing assumptions or slight differences in methodology which make it difficult to compare results, even more so when comparing across different disease areas. Yet policy still needs to take account of cost-effectiveness.

So we need to think whether there are short-term responses that can be made which, while not perfect, may nevertheless help to inform policy making.

That is the starting point for the WHO's 'CHOosing Interventions that are Cost-Effective' (CHOICE) project (Tan Torres et al., 2003; website: www.who.int/evidence/cea). One of the key characteristics of CHOICE is that it compares new and current interventions with what would happen if there were no intervention at all. It is therefore able to assess what is being achieved currently as well as how much more could be achieved by scaling up interventions or introducing new strategies.

CHOICE uses a consistent set of tools and methods, not just when looking at a cluster of interventions for mental health, but across the whole range of health care interventions. That permits comparisons of the relative cost-effectiveness of different intervention strategies right across the health care sector.

CHOICE is concerned with population-level cost-effectiveness. It can be seen as complementary to the global burden of disease work. You start with the burden of a disease in different regions of the world (expressed in a summary measure of population health such as disability-adjusted life years or DALYs), and then ask how much that figure might be reduced by an effective intervention. The intention is eventually to be able to calculate such estimates for any of WHO's member states, but at this initial stage results are pitched at the aggregated level of 14 epidemiological sub-regions of the world. Within each of these sub-regions there is of course considerable potential variation in terms of local treatment practices, epidemiology, and demography. That is a major but unavoidable limitation of this early work, which ongoing country-level work is now addressing.

Costs are compared across regions by expressing them in 'international dollars', which are based on the idea of purchasing power parity. That is, one international dollar should buy the same quantity of health care resources in China as in the US.

To find good quality data on resource use – hospital visits, primary care contacts, medicines etc. – in mental health care in different countries remains a substantial challenge. Very little empirical information is available, because typically trials have not included an economic component, although that situation is beginning to change (Patel et al., 2003). As a stop-gap we undertook a multinational Delphi consensus study, consulting the expert opinion of 60 psychiatrists in several developing countries, to get some feel for what range of resources is needed for different disorders (Ferri et al., 2004). We presented the experts with a number of different treatment scenarios and

asked them: "For that treatment, what would you expect in terms of hospitalisation, primary care, etc?" We have adopted a similar approach to estimate the resources required at the programme level, particularly for campaigns of preventive interventions.

In estimating effectiveness we are using the number of DALYs averted as a result of the intervention, whilst recognising a number of limitations associated with this approach. This involves estimating, for example, the health experience of the population without health care for schizophrenia and then with it – e.g. prescribing of neuroleptic drugs. The difference is the amount of health burden that could be relieved.

The four psychiatric conditions assessed to date are schizophrenia, bipolar affective disorder, depression and panic disorder. Each is a significant contributor to regional estimates of disability and disease burden. Work has also been undertaken on heavy alcohol use as a risk factor for disease.

Table 1 shows, for the example of schizophrenia, the inputs needed to run these disease models. We are drawing on the WHO global burden of disease work and on a number of WHO longitudinal studies. Health state valuation weights are those that have been used in both the 1990 and 2000 global burden of disease work. Those weights are currently in the process of being revised.

For the disease areas listed above, we have looked at the interventions for which there is an evidence base. While many people in Africa, Asia and Latin America may make use of indigenous practitioners, we have no evidence base for either the cost or the effectiveness

of that set of interventions. We do have information, however, for the kind of basic therapies that you would expect in terms of pharmacology, psycho-social interventions and case management strategies. But the evidence we have for the efficacy of treatment is mainly (although not exclusively) from high-, not low- or middle-, income countries.

Taking the example of schizophrenia, the main benefit of intervention is reduction in the level of disability experienced by sufferers. Current schizophrenia treatments, however, have no preventive effect on the first onset of the disease, however, nor do we have clear evidence about their impact on long-term recovery. For depression, we are certainly looking at a reduction in disability during a depressive episode, but our main measure of outcome here is a reduction in the duration of episodes (Chisholm et al., 2004). For heavy alcohol use, we have a whole range of measures. If we have a personal intervention like brief physician advice in primary care, we are looking to reduce disability and increase the rate of remission or recovery. For other public health policies like taxation or advertising bans on alcoholic beverages, one expects to reduce the number of people who become heavy alcohol users in the first place.

Our preliminary results permit broad conclusions of the following type to be drawn. For illustrative purposes I concentrate on just one region of the world: eastern and southern Africa, with a total population of about 345 million people. Applied to that population, treatments for severe mental disorders (schizophrenia and bipolar affective disorder) could yield around 70,000-140,000 DALYs averted per year (equivalent to 200-400 DALYs averted per million

total population). That is quite a modest population level health gain compared to the up to around 500,000 DALYs that could be averted per year using proactive collaborative care models for treating depression or implementing significant tax increases on alcoholic beverages.

We do not have enough certainty in our cost-effectiveness estimates to make more than broad, order of magnitude statements. But on that basis some of the most cost-effective interventions for reducing mental ill-health and addiction in southern and eastern Africa appear to be those aimed at prevention of heavy alcohol use, through higher taxation and other means, for which the cost per DALY averted is of the order of 100 to several hundred international dollars. By contrast, schizophrenia care in eastern Africa is relatively costly – of the order of 5,000-10,000 international dollars per DALY averted. Schizophrenia is a relatively costly disorder to provide sufficient support and care for and at the same time this would not have an enormous effect on population health in total because you are making a relatively small, albeit important, change to the disability of schizophrenia sufferers. Treatment of depression comes somewhere between prevention of heavy alcohol use and treatment of schizophrenia in terms of cost per DALY averted (800-1,800 international dollars; Chisholm et al., 2004).

Overall, the cost-effectiveness evaluation approach used in the WHO CHOICE project has both strengths and limitations. On the positive side, it enables us to get mental health on the priority-setting agenda in the health sector, something that has been largely absent hitherto. It enables us to say, "mental health interventions, e.g. for depression, are just as cost-effective as interventions for diabetes or hypertension or asthma." That is an important parity argument which says that there is no reason on efficiency grounds for excluding these mental health interventions if other interventions with similar cost-effectiveness are being made widely available.

Another important strength is the fact that we can make comparisons on a methodologically consistent basis. Until now, the cost-effectiveness league tables that have been made available have been undermined by the fact that there are different methods and assumptions behind the studies brought together in them, and so they have lacked clarity and credibility with policy makers.

There are some important limitations to WHO CHOICE, though. The first is that the analysis and information it provides are currently at a very aggregated, regional level (e.g. eastern Africa) rather than for individual countries. But health policies and resources are not implemented and allocated at such

a multinational level. Accordingly, the emphasis now is on contextualising regional results down to the country level (Hutubessy et al., 2004). A major issue concerns the evidence base lying behind the numbers. Is it justifiable to take the results of studies from the US and put them into India? For interventions like antidepressant medicines, such extrapolation is less of a concern, since the medicine's physiological effect on the brain will be similar from one place to another. But extrapolation from one setting to another is much more uncertain for more psychological/psychosocial interventions.

Also, our analysis so far is omitting the time costs incurred by patients and their families. That is something to be worked on in the future.

To take the work of the CHOICE project down to the level of individual countries is the obvious next step. That should not be an impossibly large task, but rather should be achievable by an enthusiastic, committed small team. Where national data are available, there is some epidemiological work, to check whether the numbers applied at the multi-country, i.e. regional, level make sense at the level of individual countries. Then we need to look at whether efficacy, coverage and adherence are likely to vary significantly between countries. Concerning costs, there may be information available about, for example, average lengths of hospital stay for schizophrenia treatment. So there are some simple adjustments that can be made, which will make this work much more realistic for a specific country.

6 Discussion of priorities

Mental health is an integral part of overall health, and the global burden of mental disorders is large and growing. There is a need for the global donor and research communities to recognise the need for mental health to be included in the global development agenda and for concerted action to be taken to address this challenge. Economics and economists can play their part.

With that in mind, the conference participants were set the task of discussing, first in groups and then in plenary session with inputs from an expert panel, the following three questions on priorities:

- 1 What work on mental health economics should be undertaken as a priority in the next five years in low and middle income countries;
- 2 What is the highest priority to recommend to a Health Minister for improving mental health services in a low income country that currently devotes little of its health care budget to mental health and which has not developed a mental health strategy;

Table 1: Epidemiology of schizophrenia

Data type:	Source:
Incidence Regional range 0.15-0.25 per 1,000	WHO Global Burden of Disease 2000 estimates www.who.int/evidence/bod
Prevalence Regional range 3.5-5.2 per 1,000	WHO Global Burden of Disease 2000 estimates www.who.int/evidence/bod
Remission (10+ years) 10% in established market economies 29% in lower income economies	WHO longitudinal studies (Harrison et al., 2001)
Case fatality (including suicide) 3-5 per 1,000	Harris and Barraclough (1998)
Health state valuation 0.627 untreated	WHO Global Burden of Disease 1990/2000 estimates

3 How to build on the start made by the conference to take forward mental health economics interest in low and middle income countries.

The main points made in response to these questions are set out in the following paragraphs. In many cases, examples exist already of the kinds of actions proposed, but they are few, widely scattered and seldom evaluated.

6.1 Priorities for work on mental health economics in low and middle income countries

- The first and most basic requirement appears to be to try and educate and persuade those in positions of influence in the countries concerned that mental health economics has something to offer. This requires economists to learn how to communicate their ideas to national governments, the World Bank and other international lending organisations, in language that policy makers understand.
- Further analysis of the epidemiology of mental disorders in these countries.
- Providing a toolkit or a framework for countries to start gathering information about access to care, how much money is spent on mental health services, staff and other resources available.
- Better evaluation of the programmes already being invested in. What do we know works well, works okay but not brilliantly, or appears not to work? Evaluations should take into account impacts on economic productivity as well as health states. This includes replication in developing countries of the cost-effectiveness studies that have already been done in the developed world.
- To look closely into generic interventions that work across disorders for schizophrenia, bipolar disorder and so on.
- Evaluating ways to incorporate mental health care into general primary care, e.g. identification and treatment of post-natal depression.
- To devote more attention to the issue of stigma.
- To integrate mental health research programmes and priorities with ongoing health care research programmes in other – e.g. HIV/AIDS – and more general areas.
- Finally, to identify a minimum package of essential mental health care services which would be right for even the lowest of low income countries.

6.2 Highest priorities to recommend to a Health Minister

- The scope for cost-effective action in developing mental health services is large. So a pragmatic

approach is to start with whatever mental health care area appears likely to be both close to the heart of the Minister of Health and a relatively 'easy hit' in terms of likely success. For example, if the minister has a relative who has schizophrenia, that would be the place to start in making a case.

- At a generic level, a priority would be to establish a task force to study, and advise government on the implementation of, mental health care services in the chosen target area. Government officials and advisers need to understand the economic and political benefits as well as the health gains from investing in mental health. Identifying and supporting a champion among senior civil servants and government advisers to promote mental health policy would be valuable.

6.3 Building on the start made by the conference

- To take forward the work started at the conference was widely felt to necessitate the establishment and use of the network created, de facto, by it. Such a network, if active, would expand of its own accord over time.
- Development of the network and of its effectiveness would be enhanced by holding further conferences periodically. The general overview perspective of this first conference was necessary in order to kick the process off. But future global mental health economics conferences should be focused more narrowly on specific topics.
- Information exchange to enable people, when they are not at conferences, to keep up with what their peers around the world are doing and thinking, with what schemes have been implemented, what success they are having, and so on. The internet has a role in that, but must be supported by a back-up system for the many people around the world who cannot access internet based resources. One possible approach is for identified contact people in each country to act as the dissemination point for their colleagues in their own country. Those contact people need to have access to the internet but can use lower tech forms of communication to spread information around their countries.
- Even though knowledge of the subject may be fairly basic at present, it would still be useful to write and distribute a book on mental health economics.
- A simplified manual for ordinary workers on mental health economics in low and middle income countries would be useful. More generally, it is important to train people in mental health economics. Mental health coordinators and the international consultants who advise them are often psychiatrists or other mental health workers. They have not been trained in economics, policy

planning and financing. Consequently they may take the approach that "These are the things we want" without looking into what they are going to cost, and where those resources might alternatively be used, with what benefit per dollar spent.

- Leadership training for mental health workers from these countries, perhaps held in one of those countries, could develop and support local champions, thereby ensuring that much more is achieved.

7 Concluding remarks

The overall context for global mental health is a mixture of good and bad. On the positive side, we have the interest and involvement of powerful and resourceful international organisations including the WHO and the World Bank. Mental health issues are now being taken seriously at an international level. Networks of interested people are building up, as this conference has demonstrated. On the negative side, mental health policies seldom attract a high priority. Stigma continues to attach to mental illness.

Against this background, the conference highlighted major issues and produced numerous interesting suggestions. We need more research into ongoing mental health projects so as to understand what they are achieving and what they cost. There is also a need to switch our research focus from purely mental health to the combination of mental and physical health. There is a clear need to train the people who design and provide care in low and middle income countries. Books and manuals have been mentioned, to summarise the current state of knowledge and how it can be used to improve mental health care policy and practice.

A constant refrain has been that we all need to learn more about how to communicate the ideas generated by economics in mental health policy – to gain the interest and the understanding of people with power and resources. Finally, there is a wish for the network created by and at the conference to stay intact, so that the participants remain in touch with each other and with how economics is being used to develop mental health policy and practice around the world.

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