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Economic barriers to better mental health practice and policy

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Mental health systems in many countries are seriously under-developed, yet mental health problems not only have huge consequences for quality of life, but – particularly in low- and middle-income countries – contribute to continued economic burden and reinforce poverty. This paper discusses economic barriers to improving the availability, accessibility, efficiency and equity of mental health care in low- and middle-income countries. Six sets of barriers are identified: an information barrier, resource insufficiency, resource distribution, resource inappropriateness, resource inflexibility and resource timing. Overcoming these barriers will be a major task, although there is no shortage of suggestions for action. The paper discusses broadening the evidence base, improving mental health literacy, tackling stigma, improving financing mechanisms, prioritizing and protecting mental health care budgets, emphasizing mental health promotion through the development of resilience, exploring routes to improved equity, experimenting with new arrangements for purchasing and delivering services, improving coordination between agencies and professionals at both macro- and micro-levels, building alliances between public and private sectors, and training and mobilizing primary care services to improve identification and treatment of mental health problems.

Key words: mental health, low-income countries, barriers to effectiveness, economics

Introduction

The sizeable and growing public health burden imposed by mental health problems across the world has been well documented (Murray and Lopez 1996; Whiteford et al. 2001; WHO 2001a), as have low treatment rates (Kohn et al. 2003). Mental health problems have considerable negative consequences for quality of life, and in many countries, particularly low- and middle-income countries, they also contribute to continued economic burden and sub-optimal productivity at the individual and national levels, through their reinforcing relationships with poverty (Saraceno and Barbui 1997; Bir and Frank 2001). Moreover, some of the most serious mental health disorders have their onset in early adulthood when people might be expected to be at their most economically active (Ustun 1999).

Tackling this public health burden is a global challenge, for mental health systems in many countries remain seriously under-resourced and under-developed (Tausig and Subedi 1997; WHO 2001a). It has been calculated that almost 90% of global health expenditure occurs in high-income countries which have only 16% of the world population (Schieber and Maeda 1997). This disparity in expenditure is likely to be worse in the area of mental health because one-third of countries do not have a specific mental health budget, while 36% of those countries that do, allocate less than 1% of their public health budget to mental health (WHO 2001b). There is a widespread view that mental health problems in low-income countries could and should be tackled at the primary care level (Institute of Medicine 2000), but on the basis of the current functioning of primary health care, there is only limited evidence to support such an approach, and there are almost no economic data (de Jong 1996; Chisholm et al. 2000; Srinivasa Murthy et al. 2005).

Evidence-based planning, decision-making and practice can help improve the health status and quality of life of people with mental health problems, and also improve efficiency and equity in resource allocation. But the evidence is far from complete, and it tends to apply almost exclusively to North America, Western Europe and Australasia (Joint Statement 2004). Of course,

we must be very careful about what we interpret as an 'evidence base', and we must be equally careful not to assume that it is only 'western' technologies and interventions that offer effective ways to prevent or treat mental illness (McKenzie et al. 2004). And in even the most generously resourced health system, there are numerous barriers to the implementation of evidence-based mental health care (Lawrie et al. 2001; Wells et al. 2002), among them financial resource constraints. Financing systems create both the resource base and the economic incentives and disincentives that affect the implementation of accountable, high quality, effective mental health care policies in all kinds of health system.

The purpose of this paper is to discuss the most common and challenging economic barriers to improved mental health care, and particularly to discuss their relevance in low- and middle-income countries. Our definition of 'barriers' is similar to the concept used by, for example, Wells et al. (2002): 'factors that increase risks for [mental health] disorders, worsen their course or impact, or lead to inefficient use of health care or societal resources' (p. 658). As well as inefficiency we would add inequity as an undesirable outcome to be avoided, although one that is perhaps less universally embraced as a system-wide objective (McDaid et al. 2005). We then discuss approaches that might help to overcome some of these barriers.

Economic barriers

The common element running through all of the issues discussed below is the multi-levelled, multi-faceted barrier of scarcity: there are not enough resources available in the right places or at the right times, or allocated appropriately, to meet the mental health needs of populations. Scarcity is endemic but it is not equally experienced. As we argue below, this resource scarcity takes many forms, and obviously interferes with the relationship between funding, services, processes and user and societal outcomes.

There are economic barriers in all health care systems. We shall refer to them generically as *resource barriers* because their impacts are most commonly and most immediately felt at the resource end of the care or treatment process. In what follows we shall discuss them under the six headings of information barriers, resource insufficiency, resource distribution, resource inappropriateness, resource inflexibility and resource timing. These barriers are summarized in Box 1.

As we argue below, although common to a great many health care systems across the world, these barriers may be more obstructive in *mental* health contexts. Moreover, compared with high-income countries, the effects of these barriers may be amplified in low- and middle-income countries because of a range of contextual factors. These latter include: multiple demands on limited resources, ineffective infrastructures for raising revenue, underdeveloped structures for delivering services, widespread unemployment, individual and national poverty, low national productivity, corruption in public and private systems and unsupportive (or differently directed) political priorities. The effect of each barrier on mental health care can thus be seen as the product of cultural, political, historical as well as economic influences.

Box 1. Economic barriers

Information barriers

- limited evidence base
- difficulties of transferring services research findings

Insufficiency of resources

- poor economic conditions
- vulnerable currency
- low priority
- low willingness/ability to pay
- poor stewardship

Resource distribution

- concentration in urban areas
- highly institutionalized services
- neglect of particular disorders

Resource inappropriateness

- services do not match needs
- dominance of large institutions
- over-investment in expensive technology

Resource inflexibility

- centralized budgets
- 'benefit trap' disincentives
- poor coordination across agencies
- 'silo budgeting'

Resource timing

- supply inelasticity
- training delays
- capacity-constrained systems

Information barriers

Although clinical, economic and services research over the last two or three decades has made impressive contributions to the mental health evidence base, almost all of that evidence stems from and relates to a small number of high-income countries and the kinds of services and treatments they offer. Some of it, and particularly psychopharmacological research, should generally apply with equal validity to people with mental health problems in low- and middle-income countries. However, Soltani et al. (2004) caution that 'diagnostic categories for common mental disorders, usually developed in Western countries, may have limited validity' (p. 65) in other parts

of the world, and Patel et al. (2003) warn that variance in culture and health systems may affect key parameters such as rates of medication adherence. The brain chemistry action of medications may not differ significantly across populations, but if situational factors influence whether patients take their medications, or if religious or other beliefs influence a patient's willingness to accept a chemical basis for their illness, then the potential for such action will vary.

It is somewhat harder to generalize from studies of service arrangements and from economics research. It is hard – perhaps foolishly heroic – to generalize from country to country because mental health systems, socio-demographic structures, cultural contexts, personal preferences, political priorities and economic incentives can be so very different. Generalizing the evaluation results of a service intervention in Maryland to the mental health system of Malawi is simply not sensible without a lot of qualifying assumptions. Nor does a cost-effectiveness evaluation carried out in Barcelona necessarily have relevance in Bogota or Baku.

The generalizability problem concerning research on services and economics is distinct from, but adds to, the familiar challenge of deciding whether findings from an experimental service, such as that in a highly constrained randomized controlled trial, apply in the wider context (in the 'real world'). This is the standard efficacy/effectiveness distinction and debate.

Over and above these generalizability difficulties, there is the substantial barrier facing many clinical and system-level decision-makers that they do not have access to the evidence base. In low-income countries, 'the major problem is ignorance and unawareness of physicians of the many existing RCTs and systematic reviews. These limitations ultimately force the practice of medicine using lower levels of evidence such as experts' opinions and outdated textbooks' (Soltani et al. 2004, p. 65). Moreover, a basic lack of epidemiological data limits the ability of decision-makers to build a top-down framework to allocate and distribute resources according to need.

Insufficiency of resources

It is well known that low- and middle-income countries allocate lower proportions of their national resources to health care, but the global disparity is much more marked when we look at expenditure on *mental* health services and treatments. A recent estimate put the percentage of the total health budget spent on mental health as 1.5% in low-income countries, 2.8% in middle-income countries and 6.9% in high-income countries (WHO 2003d). Figures such as these do not tell the whole picture, because some mental health treatment and support will be provided from generic health budgets such as those allocated to primary care. It is highly unlikely, however, that the mental health funding proportion from these generic sources will greatly alter the overall picture of very low provision in low-income countries (see below). In addition, there is very poor integration of mental health services into general health care in most countries.

An obviously very fundamental problem in most low-income countries is therefore the chronic insufficiency of resources to meet mental health needs. The case for a higher level of funding clearly needs to be considered carefully on the grounds of need, cost-effectiveness, equity and human rights. But it is important to be realistic. First and almost tautologically, there will never be enough resources to meet all mental health needs. Secondly, the 'rule of rescue' will always be an enormous influence in poor countries prone to major epidemics, natural disasters or other major public health problems. Mental health budgets might therefore face unexpected threats even though the longer-term consequences might include substantial growth in the incidence of, for example, post-traumatic stress disorder.

Generally, under-funding or resource insufficiency arises for one or more of a number of reasons:

- poor economic conditions;
- vulnerable currency;
- low priority attached to mental health by government or other key funders;
- low willingness to seek or pay for treatment;
- poor stewardship within countries.

If the economic conditions in a country are poor – a low GDP or low disposable incomes – there are obviously fewer resources available for allocation to health care. For example, Mongolia, a low-income country according to World Bank criteria, reported spending 4.3% of GDP on health, with 5% of this budget dedicated to mental health (figures from the WHO). Even though the Mongolian government has the political will to support mental health care, in absolute terms the resources available are small. Similarly, Iran – as a lower middle-income country according to World Bank criteria – has limited absolute resources even though it reported that 4.4% of GDP was expended on health and 3% of this budget was dedicated to mental health (WHO 2001b). In India, 5% of general government expenditure is allocated to the health care system, but more than 80% of total health expenditure is out-of-pocket (Srinivasa Murthy et al. 2005). Not only is access to public sector care very limited in such countries, but poverty prevents people with long-term mental health problems or their families from affording the newer medications or certain other treatments. Access to medications in many parts of the world is very limited: 'almost 20% of countries do not have at least one common antidepressant, one anti-psychotic and one antiepileptic in primary care' (WHO 2003d, p. 39). Poorer countries generally do not provide disability benefits to people with mental health problems (WHO 2003d). These challenges might be exacerbated as a perverse consequence of World Bank or International Monetary Fund (IMF) financial support for a country. A condition of support might be reduction of public

expenditure, which could disproportionately hit health financing and provision for poorer groups (Benson 2001; Homedes and Ugalde 2005) with mental health care particularly vulnerable.

Secondly, vulnerability of the currency, itself partly linked to the poor state of the national economy, might contribute to resource insufficiency: the costs of importing medical equipment and medications will rise when exchange rates fall. This might appear to affect mental health services less than other parts of a health care system because the former tend to be 'low-tech' in terms of capital and other equipment and prostheses, and because medications have historically accounted for quite modest proportions of total expenditure in comparison with other diagnostic groups. Nevertheless, funds might be redirected away from mental health care to allow other treatment areas to be protected. And drug costs have remained low mainly because – until relatively recently – there had been few medication 'revolutions' in psychiatry, and so most medicines were generic. Recent psychopharmacological developments, including new classes of drugs for treating depression, schizophrenia, Alzheimer's disease and child behavioural disorders, have increased the drug bill as a percentage of total health expenditure (e.g. see Knapp et al. 2004). Asymmetric regulation in private health care markets – constraints imposed by government or market forces on the selling price of treatments and services, but no or lesser constraints on the purchase price of medications – can add to the difficulties.

This leads to a third and worryingly pervasive reason for resource insufficiency: the low priority attached to the alleviation of mental health problems. Political and economic imperatives affect the proportion of GDP allocated to mental health and/or the ability to raise revenue to fund care (Jenkins 1997).

- Very few resources at the national planning level in Nepal are devoted to mental health, with government priorities clearly focused on health programmes to reduce infant mortality, since Nepal's infant mortality is among the highest in the world and life expectancy among the shortest (Tausig and Subedi 1997).
- In countries with high unemployment (such as in Zambia where unemployment is around 40%), there may be reluctance to treat individuals with mental health problems if it is believed that productivity will not be increased as a result of improved health outcomes.
- In Ethiopia, one of the countries most affected by HIV/AIDS, there are few resources available for mental health. For a population of over 55 million, there is only one mental hospital with 390 beds, a small number of psychiatric nurses who provide community support at regional hospitals and virtually no services in primary care (Alem et al. 1999; Alem 2000).

In other countries, low priorities might follow from under-recognition of the prevalence and impact of mental health needs, but a major factor is the stigma surrounding mental health problems that could affect individual behaviour and societal responses (McDaid et al., forthcoming). Data from a survey of the general public in Germany revealed a much lower willingness to allocate funding to mental health than to other disease areas (Matschinger and Angermeyer 2004). In their report, *Investing in mental health*, the World Health Organization (WHO) points out that a global median of 2% of health care budgets is spent on neuropsychiatric disorders that account for 13% of the global disease burden (WHO 2003d). Without cost-effectiveness evidence, we do not know whether such an allocation is efficient, but at face value it certainly appears unbalanced.

Poor recognition of the mental health burden is a particular problem in low-income countries, and the difficulties in obtaining care are amplified if there is no publicly established pre-payment scheme to support those needing long-term mental health care (Dixon et al. 2006). People with mental health problems may be unwilling to seek or pay for treatment. Stigma, ignorance, cultural considerations and low personal incomes are among the contributory factors.

Even in a well-resourced mental health system such as Australia's, only one-third of all people with a mental disorder consult for treatment (Andrews et al. 2001). In the US, '30% to 50% of adult primary care patients with depression do not have their condition recognised or treatment initiated' (Wells et al. 2002, p. 658). The shortfall could be much greater in other countries. Surveys by the WHO World Mental Health Survey Consortium (2004) found that 36% to 50% of people with serious mental illness in 'developed countries' and 70% to 85% in 'less developed countries' had received no treatment in the previous 12 months (see also Kohn et al. 2003). Results from a demonstration community mental health project that integrated mental health into the primary health care system in four sites – two in Bangalore, India and two in Rawalpindi, Pakistan – suggest that cost of care was a barrier to access for between 22% and 76% of people at the start of the programme. By the end of the programme, these percentages had decreased in three sites and were unchanged in the fourth (James et al. 2002).

A service is of no value if no one wants to use it or no one can afford it. An evidence-based treatment – one that can improve the health status or quality of life of people with mental health problems – is of no value if a collectively financed health system cannot afford to provide it, or if the fees paid are below the cost of providing it. In Kenya there is a cost-sharing process in which the patient pays for mental health drugs, but where the policy is that the charge should be waived if the patient cannot afford to pay. Unfortunately, because the charges are rarely waived, the onus is on the patient and family to provide the necessary drugs. Long-term mental health problems undermine the ability of families to afford treatment. In Bulgaria, for example, households with a mentally ill member were earning 63% of the national average household income, while Suleiman et al. (1997) in Nigeria

found that, compared with a cohort with diabetes, more working days were lost by patients with schizophrenia and their relatives, and overall treatment costs were lower (Beeharry et al. 2002). In turn, poverty might itself increase the risks of morbidity, although the causal pathways have been disputed (Araya et al. 2001; Patel and Kleinman 2003).

Another challenge – indeed one that obviously has enormous and growing relevance well beyond just the mental health system – is the loss of skilled workers to high-income countries (Padarath and Ntuli 2004; Whelan et al. 2004). Investments in poorer countries generate their dividends in the richer nations of the world.

Finally, resource insufficiencies are magnified by poor stewardship: examples include overly bureaucratic departments, failure to plan for the needs of the population, reactive responses to public dissatisfaction, exclusive focus on legislation and regulation rather than health policy development, and tolerance of corruption, such as condoning illicit fee collections by public employees (WHO 2000). There is no reason to believe that mental health is immune from these difficulties.

Resource distribution

Resource insufficiency is clearly the most pressing challenge for mental health care across much of the world, but there are other difficulties. One is poor distribution, which might refer to geographical distribution, the type of services provided, or the types of disorders for which services are provided. It is often the case that mental health services are concentrated in urban areas, with few services available in more rural areas. Although not a problem unique to low-income countries (Rost et al. 1999), distance from the major conurbations is often correlated with access to specialist treatment:

- In Nepal in 1997, Kathmandu was the only location where modern mental health services were available within the country (Tausig and Subedi 1997). There were 13 trained psychiatrists, all working in the capital.
- Specialist mental health services in Botswana are only located in the capital city and regional areas. Rural areas rely on primary care clinics, visits from psychiatric nurses and traditional healers (Ben-Tovim 1987; Sidandi et al. 1999).
- Similarly, in Costa Rica, mental health workers are concentrated in urban areas with rural regions understaffed (Gallegos and Montero 1999).
- In some rural provinces in South Africa, there is only one public psychiatrist for a population of 5 million (WHO 2003d).
- Tanzania has only 10 psychiatrists, four of whom are working in the main hospital in Dar es Salaam (Njenga 2002; Ngoma et al. 2003).
- A mental health training programme for health workers and villages in Ghana was initially successful, increasing the referral of patients by 300%. However, the supply of psychotropic medications to the district hospital was irregular and people were not able to afford the travel costs to attend a specialist hospital to obtain the medication (WHO 2005a). The effectiveness of the training programme was undermined by the inability to access basic treatment in the community.

The Nepalese experience illustrates the effect of poor distribution of resources across services. In 1997 the complete modern mental health service consisted of one 40-bed acute care facility and allied outpatient department in Kathmandu. There were also two 12-bed wards at the general hospital in Kathmandu, this latter facility staffed by British psychiatrists. There were 4–5 beds in the military hospitals and the two regional hospitals. A small community mental health programme has also been established at three regional hospitals. A separate line for mental health services in the national health budget was established in 1984. This money supported the psychiatric ward at the general hospital, the acute care hospital and the training of two psychiatrists in India each year (Tausig and Subedi 1997).

Another distributional problem arises when mental health services are highly institutionalized. The distribution problem has two facets in this case. First, many of these asylums are remote from centres of population and further isolate the already 'contained/excluded' residents. Secondly, large proportions of available mental health resources are locked up (sometimes all too literally) in institutions, with the clinicians or managers in charge often very reluctant to support policy moves to community care. For example, some of the former Eastern Bloc countries relied heavily on mental hospitals to deliver mental health services, and there has been resistance to changes in policy that emphasize community models of care (Tomov 1999). In circumstances where closure of a psychiatric institution is not followed by development of new community-based services, it is perhaps not surprising that clinicians are unhappy to support a policy of hospital closure, but resistance is not always grounded in such enlightened concerns.

The logic for concentrating resources in large psychiatric hospitals or universities can appear quite compelling. Large institutions may help to attract well-qualified, articulate mental health professionals who can be convincing advocates for funding to be distributed towards areas of work in which they are interested. However, as is the case in many countries, when historical patterns of expenditure are used to guide future expenditure, funding reinforces institutional care (for example, by continuing to fund the same number of inpatient beds). The funding for psychiatric hospitals in Japan was based on a points system that provided financial incentives for long-term admissions. Reform of the mental health system necessitated the inclusion of financial measures that favoured community care and provided financial penalties for lengthy hospital admissions (Shinfuku 1998).

Public health models have drawn attention to the inefficiencies and inequities associated with the reliance

on institutional models of mental health care. More generally, it might even be argued that the allocation of funding to secondary rather than primary care may represent a misallocation of resources. Developments in Cuba illustrate how mental health services can evolve, making the transition from an asylum or hospital model in the mid 1980s to the promotion of a community mental health model that is integrated with primary care in the 1990s (WHO 2003a).

The WHO World Mental Health Survey Consortium (2004) found high rates of untreated prevalence across a range of countries, as we have already noted. But it also found that 'a majority of people in treatment in most of the countries were subthreshold cases... The fact that many people with subthreshold disorders are treated while many with serious disorders are not shows that unmet need... is not merely a matter of limited resources but that misallocation of treatment resources is also involved' (p. 2588).

Distributional problems might also arise when it comes to defining what is to be included under the mental health budget. Internal competition for funding – the extent to which different disorders are able to attract funding – may determine how mental disorder is defined. For example, in some countries there is debate about whether learning or intellectual disability ('mental retardation' in North American parlance) should be included under mental health. Few people would doubt that the needs of people with mental health problems and learning disability differ markedly, but there are fears that if the latter are not included under a broad mental health umbrella, the few services that are available may disappear. The counter argument has been that if learning disability is included under the mental health umbrella, then fewer funds and services would be available for people with severe mental disorders.

Health systems in low-income countries are also generally poorly equipped to meet the needs of older people. Health care, even at the primary care level, is often clinic-based. To receive care, older people must attend the clinic, often involving long journeys and long waits in the clinic. Even if they can get to the clinic, the assessment and treatment offered there is orientated towards acute rather than chronic conditions. The perception is that the former may be treatable, the latter intractable and not within the realm of responsibility of health services. Indeed the diagnosis of dementia is often made specifically to exclude older persons from receiving care (Prince and Trebilco 2005). Nurses in a community clinic in a Soweto township were trained to discriminate between dementia and delirium. Cases of delirium were referred to hospital for treatment of the underlying acute disorder, whereas cases of dementia were returned home for family care. In Goa, psychiatry interns were advised not to admit older people with dementia for fear that their families might be reluctant to take them back, and older people with dementia were specifically excluded from a residential care home run by nuns (Prince and Trebilco 2005).

At the other end of the care spectrum, there has been poor recognition of the mental health needs of children and adolescents (WHO 2005c). In two-thirds of countries it is not possible to identify an institution or a governmental entity with a clearly identifiable responsibility for child mental health programmes. In the majority of countries outside of Europe and the Americas it is difficult to identify a system of services for child and adolescent mental health. The few services available in developing countries are delivered mainly through hospitals and other custodial settings. Community-based mental health alternatives are sparse. Furthermore, the service gap relative to need observed in high-income countries, although much lower than in low-income ones, is still very high.

Problems concerning the allocation of resources and the selection and distribution of services are even more evident in developing countries that face civil and political unrest. In these situations, the need to prevent fragmentation of services, ensure that people with acute emotional distress are able to access psychological first aid, and maintain basic treatment for people with pre-existing mental disorders is paramount (WHO 2003c).

Resource inappropriateness

Inappropriate use of resources is linked to, but not exactly the same as, poor distribution. By inappropriateness we mean the situation where the services available do not match the services needed or preferred, quite possibly because those needs and preferences are poorly appreciated. A good example is the dominant resource position of large psychiatric asylums in many mental health systems across the world, often colonial relics, starved of funding and decaying since independence. While undoubtedly seen at the time as the appropriate service responses to mental health needs, offering asylum from a hostile world (Shorter 2006), these large, imposing, heavily institutional and often geographically remote facilities still accommodate large numbers of distressed people. But they often do so under conditions of very poor quality care and often human rights abuses. For example, the National Human Rights Commission in India investigated 37 public mental hospitals that housed 18 000 people. People were frequently required to sleep on the floor, and in some male wards people were required to urinate and defecate in an open drain. Water availability was a problem in over 70% of the hospitals, resulting in a lack of safe drinking water and washing facilities (National Human Rights Commission of India 1999).

In cost terms, mental hospitals account for a high proportion of available mental health budgets while supporting a relatively small proportion of total population psychiatric morbidity or need (WHO 2003d). Nevertheless, when hospital quality is desperately poor, the alternative, community-based arrangements can appear very expensive. This situation is sometimes exacerbated by perverse funding formulae: in Russia

psychiatric hospitals with more than 1000 beds are more generously financed than smaller hospitals (Atun et al. 2004).

Some of the investments in mental hospitals are 'sunk costs', in the sense that they have little value in any alternative use, which might prove to be an economic barrier to the replacement of the old hospitals with more suitable community-based care. Even if the closure of a hospital or other large facility might eventually release resources that could fund other mental health service developments, the management of facility closure takes time and will need extra short-term resources. There could be both 'hump' costs – initial investment in the new facilities to get them underway – and double-running costs to resource both the old and the new services in parallel for a few years until the old service has fully closed down (Knapp 1990). As well as this economic barrier, hospital closure may be resisted for a number of other reasons: because alternatives are less convenient for staff, because a large psychiatric hospital may be the main or only employer in its locality, because stigma may encourage families to resist community care, or because medications may be free in hospital but not outside (as in Georgia, for example; Begiashvili et al. 2004).

Moreover, one of the quandaries highlighted above is that closing a large psychiatric inpatient facility might not necessarily mean that the released resources are protected for mental health uses: leakage of mental health funds into other areas of the health care system seems to be all too common. For example, the mental hospital in Samoa was closed in the mid 1990s with the aim of integrating services more closely with primary care and enhancing community services. However, savings from the closure appear to have been redirected into the general health budget. Similarly, Hungary has seen a 50% decline in the number of beds in mental hospitals with little development of community services (Harangozò and Kristòf 2000). Over-utilization of beds in Romania is clearly related to the lack of alternative community services. Where countries are actively promoting mental health in primary care settings – as in Iran and Thailand, for example – the 'leakage' of resources appears not to have been so marked.

Another possible 'inappropriateness' challenge, for which we have only anecdotal evidence, is the investment in expensive new technology that can benefit only the few at the expense of somewhat more prosaic but effective services for larger numbers. One example suggested to us from some Asian countries is where psychiatrists and neurologists responsible for dementia care prioritize clinic-based technologies, such as scanners and specialist memory clinics, over basic community outreach and support services.

Resource inflexibility

Inflexibility of resources is one source of market failure. More generally, the problem arises where services are too rigidly organized and resources are not used to treat people in ways that are considered (by them or by others) to be best for them. Inflexible or highly unresponsive resourcing can be a problem in a system in which the collection of funds is highly centralized and allocation decisions are made centrally. Bureaucratic processes often make it difficult to redirect funds rapidly – part of the stewardship problem mentioned earlier – and information shortfalls, as we have already seen (particularly in relation to the evidence base), might get in the way of redirection that is equitable and/or efficient.

Devolved budgets, purchasing and decision-making have the potential to be more sensitive to user needs and preferences, but that potential will only be realised if devolved agents have access to more and better information than central agents. They may have fewer technical resources to process what information they glean and less financial cushion in the event of mistaken decisions. On the other hand, centralized funding might be able to offer economies of scale, reducing costs for the 'end user'. However, whether centralized or devolved responsibility best promotes innovation is another issue. Inflexible funding can mean that inefficient services are continued, even where evidence suggests an alternative, because the funding flow is such that funds are not diverted to the newer or the most efficient services. The highly centralized mental health services of the former Soviet republics were of poor quality, and the monopoly of the A Snezhensky school for the training of psychiatrists provided the preconditions for the widespread abuse of psychiatry associated with the Soviet regime (Polubinskaya 2000).

Devolution and decentralization of services and budgets have the potential to be positive but need to be carefully planned. For example, responsibility for public mental hospitals in Indonesia has been transferred from central to provincial government as part of the 2001 decentralization policy. While the aim of this policy was to increase local control, few provincial governments had experience in mental health and no incentives were included to ensure the continuation of mental health services (WHO 2003b).

A special case of the inflexibility problem is the 'benefit trap'. Some middle-income countries use social security or welfare benefits to compensate mental health service users or their families for disability or loss of earnings. In the Russian Federation, individuals with mental health problems may receive one of three levels of disability pension dependent on their symptoms and ability to participate in the labour market (McDaid et al. 2006). Improvements in symptoms may lead to loss of eligibility for certain benefits in cash or kind (such as subsidized accommodation and free transport). If families providing care at home lose benefits when their relatives are admitted to hospital, they may be reluctant to accept the change of care plan even if it promises better treatment. For the individual with mental health problems, successfully achieving part-time work may mean a loss of benefits that is not fully compensated by the salary now earned. The complexities

of re-establishing benefit entitlements should a job come to an end (perhaps because of symptomatic relapse) may be another barrier.

The stigma of mental illness can add a further complication to the benefit trap. In the Russian Federation if an individual is classified as being incapable of work and thus receives the highest level of benefit, they have little incentive to apply for a reassessment of disability status. Even if their status is changed so that they can officially apply for work (meaning that their benefits are reduced), the chances of employment are slim as rehabilitation information that must be provided to potential employers allows them easily to identify individuals with mental health problems.

In countries with high unemployment, improvement in a person's symptoms may entail transferring from disability benefits to unemployment status, with any associated loss of benefit acting as a disincentive to recovery. The launching of the Australian National Mental Health Reform programme in 1992 was strongly influenced by the finding that federal social welfare expenditure on people with mental disorders was almost A$2 billion in 1991, compared with the combined state expenditure on mental health services of less than A$1 billion (Whiteford 2001). We should note, however, that this 'benefit trap' is unlikely to have relevance in low-income countries for the simple reason that no benefits are paid.

Inflexibility can also arise because the services delivered by a range of agencies are poorly coordinated, and because consistent, comprehensive or coherent funding is not provided to meet all of an individual's needs. Sustainability is a related challenge. In the West Bank and Gaza, fragmentation of services and poor communication between government services and NGOs reduces the effectiveness of mental health interventions. The same would appear to be the case in Bosnia Herzegovina since 1995. Despite the millions of dollars spent annually by donors and NGOs on psychosocial/mental health activities, the mental health system in most areas is unable to provide mental health treatment in primary health care, community support for people with severe mental disorders or quality psychosocial support in the school system for children and adolescents who were faced with trauma and other loss during the conflict (Van Ommeren, personal communication).

A particularly endemic and awkward challenge is 'silo budgeting', which arises when monies earmarked for one use are not transferable to another. This remains a fundamental challenge in the UK and US, for example (Kavanagh and Knapp 1995; New Freedom Commission on Mental Health 2003). As countries come to rely less on psychiatric inpatient facilities and more on community-based options, it might be expected that the flow of funds would follow the movement of patients, with more going to community-based care or other areas (especially social welfare, housing and maybe also criminal justice). Similarly, as a country's overall commitment to mental health grows – and with it, the better recognition of the diversity and multiplicity of individual needs – so again it might be expected that non-health expenditures would become relatively more important. In order to effect change, there will usually be a need to shift funds from one service or agency to another. But funding adjustments of this kind will often not happen because budgets are not easily renegotiated, and inter-agency transfers are strongly contested. Similarly, professional rivalry, budget protection and narrowly defined (external or internal) performance assessment could each leave one agency unwilling or unable to spend more from their own budget in order for another agency to achieve savings and/or greater effectiveness.

Resource timing

Timing problems occur when efficiencies and improvements in practices will not work their way through to cost savings or improved health outcomes for more years than the decision-maker has on their horizon. Timing problems also occur when a new practice is introduced as an old practice is being phased out, resulting in a doubling up of services and a doubling up of funds needed to run two services simultaneously (see above in relation to psychiatric hospital closure, for instance).

Supply inelasticity is a source of both inflexibility and timing problems. It occurs in mental health care systems when those supplying or providing a service are not able or willing to respond efficiently to changes in demand. Clinical conservatism may be one explanation. Supply inelasticity may occur even when funds are available if there is a short-term or transitional problem of a lack of suitable professionals, treatment facilities or other resources. Supply inelasticity might also occur where there is a shift in demand for services, for example from older to newer antipsychotics, but without the ability on the side of the service provider to provide enough of the newer drugs. The unaffordability of the newer drugs is endemic (Srinivasa Murthy et al. 2005), and the World Trade Organization (WTO) agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) does not cover psychotropic drugs.

If a country has less than one psychiatrist per million population, as in most of sub-Saharan Africa, or if there are almost no psychologists or other staff trained in some of the psychosocial interventions for which there is good evidence of effectiveness and cost-effectiveness in better resourced health systems, even a dramatic increase in mental health funding may still not lead to improved access to suitable services for some time. This supply inelasticity barrier – which may be only a question of time delay, but no less serious for that – could be quite acute in some mental health systems (Kohn et al. 2003). A similar problem emerges in the transfer of resources from bed-based to community services.

While there may be a commitment to the development of community services, there is a necessary delay for the

training of staff (WHO 2005b). The paucity of skilled mental health practitioners in low-income countries constitutes a severe resource limitation, a problem exacerbated by the migration of skilled professionals to countries offering better salaries and quality of life. The realistic challenge for low-income countries is therefore to develop their generic health services to deliver mental health care, both prescribing drugs and carrying out simple psychological interventions, while not overlooking the efficacy of indigenous responses to need (McKenzie et al. 2004). Only thus can greater treatment elasticity be achieved, since it will take too much time and money to train sufficient specialists to take on these roles.

Another timing problem arises as a result of capacity-constrained systems. Evidence from research may point to savings that can accrue, perhaps from reduced in-patient services, from the use of a new drug or a particular psychosocial therapy. However, it is probable that the evidence would have been gathered under experimental circumstances and that the savings are not actually yet realised. If one considers reductions in the need for in-patient services, one reason why savings do not occur in the real world could be the 'lumpiness' of capital, just discussed, and another could be supply inelasticity. A third factor could be that the mental health system is already characterized by excess demand for in-patient services, so that reduced need for hospital admission by (say) people with schizophrenia simply allows other people (say, those with severe depression or chronic anxiety disorders) to be admitted. In the face of capacity constraints, system-wide cost-effectiveness improvements might therefore not occur, or at least not in the short term.

Overcoming the barriers

Identifying the barriers to the development of mental health care is the first step in overcoming them and improving the use of scarce resources. If they are not tackled, these barriers could exacerbate problems of inequity, worsen allocative and productive inefficiencies and make it harder for services to respond to the preferences of service users. What steps can be taken to address these challenges?

One important step, referring back to our identification of information barriers, is to improve access to the evidence base (Joint Statement 2004; Soltani et al. 2004). Another is to promote more evidence *gathering* in low- and middle-income countries, particularly services-based or economics evidence that is notoriously hard to generalize from one country to another (and particularly so for preventive and health promotion initiatives). The more information that is available, the more use that can potentially be made of evidence-based decision making, although it might also be necessary to ensure that 'knowledge broking' skills are in place to help interpret the evidence. Therefore, although it sounds obvious, one aim common to rich and poor countries should be to gather more information on what are the various mental health treatments costs and outcomes for individual service users, their families and the wider society. Evidence should also be collected on who gains and who loses from changes to current service arrangements, and on the incentives and disincentives inherent in the mental health care and associated systems. This objective might be achieved through evaluations of broad outcomes, evaluations of cost-effectiveness, stakeholder discussions of funding priorities and allocations, and ongoing transparency in decision-making. Of course, it is always important to consider the cost-effectiveness of devoting resources to research, but there is so very little evidence that is specific to low-income countries that it would be a surprise if the return on well-conducted research did not prove to be substantial.

Another aim must be to expend some resources in improving mental health literacy among service users, families, (general) health professionals, the media and the general public (Jorm 2000), and generally in tackling stigma and discrimination. These would be ambitious aims, for while there are examples of policies and practices that are successful in reducing stigma (Sartorius 2002), many attitudes about mental illness have deep cultural and religious roots.

Serious mental health problems with an early age of onset and a chronic course leave families at risk of catastrophic costs. Prevention of catastrophic costs – one of the desiderata in the World Health Organization's *World Health Report 2001* – suggests the need for pre-payment, risk-pooling financing mechanisms, such as social health insurance or tax-financed arrangements. However, these could prove hard to introduce in countries with less well-established infrastructures of a kind needed for collecting taxes or insurance contributions, and where there are high levels of unemployment or casual employment, which make it difficult to raise revenue or calculate taxable income (Dixon et al. 2006). User charges provide an immediate and flexible source of revenue, but do not protect against catastrophic costs, nor obviously do they have the risk-sharing and potentially more equitable properties of the pooling of resources. The price elasticity of demand for mental health care is not known with any certainty, so that the impact of price increases on user demand for mental health care is also unknown.

Where it is appropriate given the financing system, increasing the resources available for mental health care would certainly not remove all of the barriers, but it would represent an important start. Such an increase might be achieved through an expansion of the overall health budget, through the prioritization of mental health and/or through the protection of mental health funds via ring-fenced budgets. There are, of course, disadvantages as well as advantages in such an approach, for ring-fenced budgets can stop resources flowing *in* as well as out, and can encourage isolationism and reinforce *negative* images of the 'special' nature of mental illness. Mental health

promotion through the development of resilience would clearly be an attractive area for investment.

Among various psychosocial factors linked to protection and promotion in adults are secure attachment; an optimistic outlook on life, with a sense of purpose and direction; effective strategies for coping with challenge; perceived control over life outcomes; emotionally rewarding social relationships; expression of positive emotion; and social integration (WHO 2003d, p. 27). But this is a major challenge in any health system and difficult to prioritize in straitened times. Nevertheless, and again to state the obvious, one general and pervasive need is to persuade governments to give greater priority to meeting mental health needs.

Resource inequity is another major challenge. Information gathering and lobbying on local prevalence data, cost-of-illness studies, disability burden figures, quality of life descriptions, cost-effectiveness evidence and anti-discrimination efforts could all assist. Fairer allocation of resources is likely to be achieved through the reduction of income-related inequity, finding ways of better serving rural areas and encouraging patient decision-making (McDaid et al. 2006). None of these is remotely easy, but might be helped through an equity audit (Who gets what? At what personal cost?), through surveys of service users' needs, satisfaction levels and preferences, as well as by introducing explicit national or regional formulae for the appropriate and transparent allocation of revenue funding and capital investment. Mapping the mixed economy of mental health – both provision and the arrangements for financing – has potentially many uses, as discussed earlier. Such mappings are obviously not solutions in themselves, but they provide a basis for discussions about how to improve the availability, distribution and deployment of resources.

Available resources could be deployed more efficiently in every health system. Although somewhat clichéd, much can be improved by ensuring that money follows the patients. Supportive actions might include proper needs assessments, creating opportunities for patients to be involved in decision making, shifting responsibility for arranging and purchasing services to localities while ensuring that national policies and treatment fidelity are followed, and that good standards are achieved.

Improved coordination might be obtained by reducing budgetary conflicts between ministries, seeking compensation between budgets for greater overall efficiency and again encouraging patient decision-making. This would certainly be aided through cross-ministry discussions and perhaps even the transfer of funds into joint budgets and the introduction of case management or similar case finding, brokerage and micro coordinated efforts. These arrangements have their own (transaction) costs, of course, and a careful spending balance must be struck between services that deliver mental health care and services that simply coordinate. However, this is only going to be remotely possible in countries that already have some degree of coordination and strategic policy steer. In fragmented multi-provider health care systems with little centralized control (e.g. India and much of Latin America), the challenge is likely to be huge, although may be less daunting a task in individual regions.

In planning the future of multi-provider systems, the important role of private practitioners in many low-income countries needs to be acknowledged. The 10/66 study has found that private clinicians were the most frequent source of dementia care in many low-income countries, and there was a general tendency for increased reliance upon private services (The 10/66 Dementia Research Group 2004). A common problem seemed to be that public, free or low-cost primary health care services (which are open to governmental influence) were relatively unresponsive to the intensive and continuing needs for care of people with mental health conditions and their family carers. Encouraging a market for quality mental health care might be one solution, although experience in countries such as the US is not altogether encouraging. Perhaps the problem lies in part with the protection of some public services from market forces, allowing providers to ignore service user and family preferences.

Successful lobbying might use cost-of-illness studies to demonstrate the national burden of mental health problems, and economic evidence to stimulate investment (Shah and Jenkins 1999; Chisholm et al. 2000). The use of prevalence, disability burden and quality of life descriptions and anti-stigma campaigns may also help to make mental health care more of a political priority. Another approach might be to use expert opinion – perhaps through Delphi exercises – to arrive at targets (Ferri et al. 2004).

All of these initiatives could help tackle what are often deep-seated, pervasive problems. But there is clearly a need for quite fundamental service or system changes. The WHO and others have long argued for the development of mental health expertise and its well-resourced application in primary care settings. Training and mobilizing primary care services, with mental health identification and treatment woven into other tasks as standard responsibilities, may be the only realistic way to deal with the inaccessibility and inflexibility of care:

> *'However basic the staff and the facilities, primary care represents the point of entry for the vast majority of people seeking medical care . . . thus primary care is the logical setting in which brain disorders can begin to be addressed'* (Institute of Medicine 2000, p. 58).

As they are organized and delivered today, primary care services in many low-income countries will not make much of a difference. Too often they are under-resourced, under-skilled and unresponsive to user preferences, and there are very few incentives for any of this to change. A primary-care-based revolution or resolution of

long-standing problems is therefore only an attractive option if governments clearly define the function of primary health care to include mental health, if primary health care workers are given adequate training backed up by specialist care support, and if the necessary medicines are available at the primary health care level. In addition, the overall system of primary health care needs to be strengthened in most countries by increasing levels of staffing, thereby allowing more time to address the mental health needs of patients presenting in that setting, and by improving salaries and hence influencing staff motivation. Addressing stigma and discrimination at a national level is also imperative, as is the medical education of health workers to generate some interest and understanding of mental health prior to entering the workforce.

- Research in primary health care settings suggests that interventions are more likely to be successful if the environment is supportive and increases the degree to which primary care providers feel able (role security) and willing (therapeutic commitment) to provide such interventions (Deehan et al. 1998).
- Another success story comes from Guinea-Bissau in the early 1980s, where four hours of basic training for primary care health workers increased the correct diagnosis of major mental disorders from 31% to 71% and appropriate prescription of medicines from 0% to 75%. It was suggested that for every dollar invested in primary mental health care, more than 50 citizens of Guinea-Bissau were served (de Jong 1996).
- A mental health programme in Rawalpindi, Pakistan, developed in conjunction with the local community, had a number of positive effects: increasing use of primary health care facilities (particularly by males), consistently declining pregnancy rates, increasing use of antenatal clinics (with accompanying reduction in infant and maternal mortality by one-third and one-half, respectively), increasing rates of immunization for children and increasing detection of mental health problems. This led to primary mental health care being assigned specific funding in Pakistan (Rahman et al. 1998).

Investing in mental health training for primary care professionals is no doubt imperative, but economic incentives, such as appropriate reimbursement by government and private insurance schemes, may be important complementary strategies to facilitate change.

Conclusion

Health care, including mental health care, is delivered in an environment of scarce resources throughout the world. Recent global and regional campaigns by the WHO and others, including publication of the *World Health Report 2001* (WHO 2001a), the *Atlas of Mental Health* (WHO 2001b) and the WHO Mental Health Policy and Service Guidance Package (2003a,b,e–j) have helped to raise the profile of mental health problems, as well as promoting best practice and guiding practical developments. Policy makers are thus being offered an unprecedented opportunity, together with unprecedented (albeit still modest) amounts of advice and guidance, to overcome information and economic barriers to the development of mental health care services.

In this paper we have sought to identify the main economic barriers to better mental health care in low- and middle-income countries. One fundamentally important barrier to the implementation of evidence-based policy or practice that seeks to improve efficiency or equity is simply the dearth of reliable, generalizable evidence. Even when cogent evidence is available, it may be inaccessible to all but a select few. It is also important that policy makers can identify and understand the incentives at play within a health care system. Potential economic barriers to the improvement of mental health need to be anticipated when policies and practices are being developed. A highly bureaucratized system may offer few incentives for individual decision-makers to improve resource allocation or the efficiency with which resources are deployed. Actual or potential interconnections between agencies and other parts of a mental health system can be a major hindrance to progress and need to be clarified. There is also a need for greater equity of access to services and their funding, which would help to focus attention on the need for preventive measures. Efforts need to be made – and quite urgently – to address the related problems of resources being inappropriately distributed and inflexibly deployed.

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