Meeting the challenge of funding and allocating resources to mental health across Europe: developing the Mental Health Economics European Network

DAVID MCDAID[1,2], MARTIN KNAPP[1,3], CLAIRE CURRAN[1], THE MHEEN GROUP[4]

[1] *Personal Social Services Research Unit, LSE Health and Social Care, London School of Economics and Political Science, London (United Kingdom)*
[2] *European Observatory on Health Systems and Policies, London School of Economics and Political Science, London (United Kingdom)*
[3] *Centre for the Economics of Mental Health, Institute of Psychiatry, King's College, London (United Kingdom)*
[4] *The MHEEN Group during Phase I of the project included: Austria - Ingrid Zechmeister, Vienna University of Economics and Business Administration; Belgium - Hilde Dierckx and Katrien Kesteloot, Catholic University of Leuven; Denmark - Lise Juul, Nordjyllands Amt, Bronderslev; Finland - Pekka Rissanen, Tampere School of Public Health; France - Jean Pierre Lepine, Fernand Widal Hospital, Paris and Isabelle Gasquet, Paul Brousse Hospital, Paris; Germany - Reinhold Kilian and Thomas Becker, University of Ulm; Greece - Owen O'Donnell, University of Macedonia and Athanassios Constantoupoulos, Mental Health Centre, G. Gennimatas Hospital, Attica; Iceland - Kristinn Tómasson, Administration of Occupational Safety and Health, Reykjavik; Ireland - Eamon O'Shea, National University of Ireland, Galway; Italy - Francesco Amaddeo, University of Verona; Luxembourg - Kasia Jurczak, London School of Economics; Netherlands - Silvia Evers, University of Maastricht; Norway - Vidar Halsteinli, SINTEF, Trondheim; Portugal - Monica Duerte-Oliveira, Technical University of Lisbon; Spain - Luis Salvador-Carulla, PSICOST, Jerez; Sweden - Linus Jonsson, Stockholm Health Economics; UK - Martin Knapp, David McDaid and Claire Curran, London School of Economics an Political Science; Mental Health Europe, Brussels - John Henderson, Pascale Van Den Heede, Roxana Radulescu, Mary Van Dievel.*

SUMMARY. **Aims** – There is growing demand for economic analysis to support strategic decision-making for mental health but the availability of economic evidence, in particular on system performance remains limited. The Mental Health Economics European Network (MHEEN) was set up in 2002 with the broad objective of developing a base for mental health economics information and subsequent work in 17 countries. **Methods** – Data on financing, expenditure and costs, provision of services, workforce, employment and capacity for economic evaluation were collected through bespoke questionnaires developed iteratively by the Network. This was augmented by a literature review and analysis of international databases. **Results** – Findings on financing alone suggest that in many European countries mental health appears to be neglected while mechanisms for resource allocation are rarely linked to objective measure of population mental health needs. Numerous economic barriers and potential solutions were identified. Economic incentives may be one way of promoting change, although there is no 'one size fits all solution. **Conclusions** – There are significant benefits and synergies to be gained from the continuing development of networks such as MHEEN. In particular the analysis can be used to inform developments in Central and Eastern Europe. For instance there is much that can be learnt on both how the balance of care between institutional and non-institutional care has changed and on the role played by economic incentives in ensuring that resources were used to develop alternative community-based systems.

Declaration of Interest: none of the authors have received any financial support that presents a conflict of interest.

KEY WORDS: mental health economics, mental health policy, financing, resource allocation, networks

Received 09.01.2006 – Final revision received 13.01.2006 – Accepted on 13.01.2006.

CONTEXT

The impacts of poor mental health range far and wide. One in four people can expect to experience a significant episode of mental illness during their lifetime (World Health Organization, 2004). While population based prevalence estimates vary considerably depending on country and mental disorder, some estimates suggest that between one quarter and one third of the population in European studies may affected by a mental health problem in any one year period (Wittchen & Jacobi, 2005; Bijl *et al.*, 2003; World Mental Health Survey Consortium, 2004).

These mental health disorders can have many consequences across all domains of life. Individuals are more likely to have physical health problems and excess mortal-

Address for correspondence: David McDaid, LSE Health and Social Care, London School of Economics and Political Science, Houghton Street, London, WC2A 2AE (United Kingdom).
Fax: +44-020-7955.6803
E-mail: d.mcdaid@lse.ac.uk

ity (Harris and Barraclough, 1998), and family relationships can suffer (Kessler *et al.*, 1998; Thornicroft *et al.*, 2004). There is a strong relationship between poor mental health and social deprivation (Eibner *et al.*, 2004; Fryers *et al.*, 2005; Office of the Deputy Prime Minister, 2004). The profound levels of stigma, ignorance and subsequent discrimination associated with mental health problems can limit education and employment opportunities, leading to a descent into poverty (Marwaha & Johnson, 2004). There is also a greater risk of becoming homeless or of coming into contact with the criminal justice system. The long-term impacts on children with mental health problems can also be significant: they may suffer from neglect and their schooling may be disrupted, and their contacts with health care and criminal justice systems in adulthood may be much higher than in the general population. (Scott *et al.*, 2001; Knapp *et al.*, 2002; Chen *et al.*, 2006; McCrone *et al.*, 2005).

The economic costs of mental health problems are also high; very conservatively estimated in several EU countries to be 3-4% of GNP (Gabriel & Liimatainen, 2000). In fact, the majority of quantified costs occur *outside* the health sector, being due to lost employment, absenteeism, poor performance within the workplace and premature retirement and death (McDaid *et al.*, 2005). Typically studies have estimated that these non-health care costs account for between 60% and 80% of the total economic impact of major mental health problems (Thomas & Morris, 2003; Knapp *et al.*, 2004b).

The growing recognition of these many impacts of poor mental health and the recognition that resources for services are not limitless has led - somewhat belatedly, and certainly very unevenly across countries - to recognition of the need to pay attention to the broad costs of mental illness and the pursuit of cost-effectiveness in the ways that resources are used in treating and supporting people with mental health problems. In turn this has generated demands for economic analyses and insights to support clinical and strategic decision-making.

The supply response from economists has been at least as uneven as the pattern of demand. In European countries such as the Netherlands, Sweden and the UK - and, looking farther afield, in Australia, Canada and the US - there are large, vibrant, rapidly evolving communities of health economists. A few of the economists in these countries - generally a rather disappointingly small few - have ventured into a mental health area. In a few regions of Germany, Italy and Spain there have been important economic studies in the mental health area. Elsewhere, the availability of evidence from economic evaluation is very patchy indeed and across all countries comparatively little has been done to analyse the performance of mental health systems from an economic perspective.

It was against this background that the *Mental Health Economics European Network* (MHEEN) was established in 2002. Its broad objective was to establish a base for mental health economics information and subsequent work in 17 countries. The Network has since been extended to 31 countries. The initial phase was modestly but imaginatively funded by the European Commission and jointly coordinated by the *Personal Social Services Research Unit* (PSSRU) at the London School of Economics and the Brussels-based NGO Mental Health Europe/Santé Mentale Europe.

DEVELOPMENT OF THE MHEEN NETWORK

The aim was to have a network of representatives - at least one from each country - with expertise and/or experience of health economics and with personal work or commitment to the economics of mental health. People could be recruited from research, educational, government or other institutions, and in the event we were fortunate to be able to draw on a wide range of organisational links and people.

One of the particular challenges in establishing the Network was to find individuals both with skills in health economics and an interest or understanding of mental health related-issues. In the initial 17 country Network it was eventually possible to recruit people in eight countries who had knowledge of both health economics and mental health, with the other Network members bringing a mixture of knowledge of health economics or mental health together with enthusiasm to build knowledge in the other area. These same challenges were faced again as we expanded the Network to 31 countries.

Activities in the first phase of work - which ran from 2002 to 2004 - were grouped around a number of themes: financing; expenditure and costs; provision, services and workforce; employment; and the capacity for economic evaluation. Bespoke structured questionnaires were developed iteratively by the group to refine the exact tasks to be undertaken on each theme. Work across the whole group and in subgroups was intended to provide a learning opportunity for some members, while for others there were opportunities to transfer knowledge and methodology from one country to another and to seek the benefits of concerted action. While it is not possible here to report in detail the findings from all aspects of the first phase of work, we have chosen to highlight some issues related to the situation and challenges to be faced in financing and allocating resources to mental health; fuller details on all aspects of the project will be available in a special issue of the *Journal of Mental Health* devoted to MHEEN to be published later in 2006.

FUNDING FOR MENTAL HEALTH

A major challenge in many countries is to ensure that mental health needs receive a fair share of societal or collective attention, and that the preventive interventions, treatments and services that can meet those needs receive their fair share of available health system funding. An early task in the first phase was to gain an understanding of levels and patterns of funding for mental health services in each country, including the proportion of total health expenditure allocated to mental health. Estimates of expenditure on mental health services were sought across the Network, although in five countries no estimates could be obtained, which in part reflects the difficulties of collecting or aggregating information in systems where health care is devolved to local governments, as for instance in Spain (Salvador-Carulla *et al.*, 2006).

What is undoubtedly clear is that in many countries in Europe mental health care appears to be under-funded. Despite the high prevalence, substantial contribution to the global burden of disability, strong association between deprivation and mental illness, and the growing body of cost-effectiveness evidence, e.g. (Barrett *et al.*, 2005; Chisholm *et al.*, 2004; Knapp *et al.*, 2004a; Lothgren, 2004a, b; Romeo *et al.*, 2005) the proportion of total health system expenditure devoted to mental health care is often very small. Using data from MHEEN for Network countries supplemented by data from the WHO Atlas on Mental Health (World Health Organization, 2005a) only four countries in 52 European countries report spending more than 10% of their health budget on mental health, with the lowest reported levels of under 2% in some of the newly independent states of the former Soviet Union. Expenditure on mental health within the health care budget is at its highest levels in the UK and Luxembourg with spending in excess of 13% (McDaid *et al.*, 2004). Caution should be exercised however, as it is difficult to make robust comparisons between countries because of differences in accounting procedures and in the way that services are classified and grouped. There may also be differences in the way that privately funded treatments are reported.

A related activity of the MHEEN group was to examine the methods or routes for funding mental health care in Western Europe. These appear to differ little from those used to generate funding for health care in general (Knapp *et al.*, submitted for publication b). Funding relies largely on taxation and social insurance, respecting the principles of solidarity and universality. But this does not necessarily mean that such systems operate equitably. Systems where there is high reliance on out-of-pocket payments at the point of need (such as in Portugal) are likely to be inequitable. Out-of-pocket payments may be particularly inappropriate for people with mental health problems, who may already be unwilling to come into contact with services because of fears of being stigmatised by the community, and who are already disadvantaged economically by the effects of chronic illness.

Supplemental private insurance in most European countries continues to play a minimal role in providing coverage for mental health services. Evidence from the US, where the private health insurance market is most well developed, illustrates the difficulty that mental health has in achieving parity with physical health, leading to unequal access to insurance coverage for mental health treatment. This may be of greater significance for phase II of MHEEN, if - as might be expected - the crisis in public health systems means that private insurance is playing an increasingly important role in the transition economies of central and eastern Europe. Of more significance in the 17 original Network countries has been the shifting of some services out of the health and into the social care system where some principles of universality and solidarity may not apply, with not all services being available nationwide and perhaps subject to means testing.

Resource Allocation

Another related task of MHEEN has been to look at the way in which pooled funds raised through social insurance or taxation are allocated to mental health services. Even when the level of funding collected either through taxation or insurance for mental health is commensurate with the level of need and the availability of effective interventions there could still be a need for action. The allocation of services and payments for them may not be appropriate.

With few exceptions, in tax based systems budgets were determined on the basis of historical precedent or political judgement rather than on the basis of an objective measure of population health needs. This is unlikely to target resources to areas where they have the greatest chance of being effective and may also allow inequities to persist, for instance if resources continue to be concentrated in major cities, neglecting rural areas within a country. Even when budgets are supposedly earmarked for mental health there were few safeguards to ensure that resources were in fact not spent on other non mental health related services.

One exception to this pattern can be seen in England where a resource allocation formula is used to determines how health care funds are distributed to local services purchasers. This is based on an index that combines a number of indicators of population need together with evidence on patterns of mental health care need from the Health

Survey of England. (Glover, 2004). While local purchasers remain are free to spend more or less on mental health than determined by this mental health needs allocation, in providing services, they must ensure that services are available that meet the needs of the National Service Framework for Mental Health, meaning that resources are targeted in a more evidence-based way to mental health.

One possible way to improve the allocation of resources is through the use of DRG (Diagnosis Related Group) tariffs, which reimburse service providers for mental health-related services in both social insurance and tax dominated countries. Using DRGs is not without challenges - the Network reported that DRG tariffs have not always fully taken into account all of the costs associated with chronic mental health problems. Some have subsequently been the subject of careful adjustment, but without such revision they may do little to tackle the continued under-funding of services.

Barriers to appropriate allocation of resources

One key barrier to an appropriate allocation of resources to mental health can be public attitudes. Mental health is not a topic which commands great attention from the public. One recent population survey in Germany reported that only 10% and 7% of respondents placed schizophrenia and depression, respectively, within their top three disease areas where budgets would be protected compared with 89% prioritising cancer, 51% HIV/AIDS and 49% cardiovascular disease. This low priority was attributed in part to ignorance that conditions could be treated, a belief that they were self-inflicted, and an underestimation of individual susceptibility to mental illness (Matschinger & Angemeyer, 2004).

While changing such attitudes may realistically only be achieved in the very long term, a number of organisational barriers which are perhaps more amenable to change have been identified both in Europe and elsewhere. (Knapp *et al.*, 2006). For instance available funds may be poorly distributed, with funds directed to services which do not match what is needed. A clear example is the dominant position in many systems of large psychiatric asylums in central and eastern Europe, where funding in some countries remains linked to bed occupancy rates (McDaid *et al.*, in press). In cost terms, these hospitals account for high proportions of available mental health budgets while supporting small proportions of the total population in need. Funding mechanisms and the organisation of care or support arrangements may also be inflexible, leaving service planners unable to respond to differences in individual needs or community circumstances. Another barrier is the challenge of co-ordinating service delivery between agencies working in different sectors under different budgetary rules.

USING ECONOMIC INCENTIVES TO PROMOTE CHANGE

A key aspect of the ongoing work of MHEEN is to look at how economic incentives can be used to promote change. Incentives can help address the challenges of both the apparent low level of funding and the way in which available resources are allocated to different mental health-related services. One key issue to make the case for greater investment even more compelling is to continue to build and strengthen the evidence base on the cost-effectiveness, not only of treatments for mental health disorders, but also interventions to promote good mental well-being, for instance in the workplace or in school. A key complementary activity is to develop capacity for both the conduct and the interpretation of mental health economic studies across Europe, as well as facilitating greater exchange of information.

Potential mechanisms for improving the way in which existing budgets for mental health are used may include making agencies or individual case managers at a local level directly responsible for budgets. Another possibility may be the creation of joint budgets for mental health across sectors to overcome some of the problems of budget fragmentation. Clearly if we truly want services to meet needs then it is important to help empower service users to have a greater say on how budgets are allocated. 'Direct payments' (consumer-directed care) where individuals are given cash with which to purchase some or all of their services, is one interesting approach that requires careful evaluation.

NEXT STEPS FOR MHEEN

The European Commission has recently awarded the London School of Economics, again working in collaboration with Mental Health Europe and Network partners across Europe, a further grant to fund activities for another two years, and to extend the scope of activities from 17 to 31 countries. MHEEN now includes all 10 new member states, plus candidate countries Bulgaria, Romania and Turkey and EEA country Liechtenstein. The new programme commenced in late 2005 and some details are still to be refined but one important aspect is to look at how economic incentives can and are being used to encourage

system reform, especially in the balance of care in the majority of new partner countries that are still heavily reliant on long-stay institutions. Other areas of work include additional mapping of existing and proposed funding structures and availability of resources for mental health; synthesising information on the costs of mental health problems; looking at the cost-effectiveness of mental health promotion and workplace interventions; sharing economic evidence and looking at how it can be adapted across countries and settings; and capacity building for mental health economics to facilitate greater use of mental health economics in the decision-making process

REFLECTIONS ON THE DEVELOPMENT OF MHEEN

There are significant benefits to be gained from the development of networks such as MHEEN. The MHEEN approach might helpfully serve (with careful adaptation) as a template for the development of economic analysis in similar emerging networks in other areas of the world, for instance the *Socio-Economic Burden of Depression* (SEBoD) group working in a number of countries in south-east Asia (Sartorius, 2004). MHEEN has provided an opportunity for the development of a consistent data base allowing more meaningful comparisons of mental health systems to be made across countries. The impact of differences between systems, for instance in terms of their funding structures, and the consequences when considering different policy interventions can then be fed into national discussions.

Members of the Network have also contributed to supra-national discourse, responding to specific requests for advice and information from bodies such as the European Parliament, European Commission and World Health Organization. New links have also been developed which can act as platform for future work. One example is ongoing collaboration with European researchers and policy makers involved in mental health promotion to look at the cost-effectiveness of implementing promotion strategies. We have emphasised the importance of training to build mental health economics capacity. Network members can then in turn help to develop further some of the skills necessary both to conduct and interpret economic evaluations and in turn provide training to others.

Perhaps most importantly, as we embark upon phase II of MHEEN, western European experiences of mental health economics and related policy analysis can be used to inform developments in Central and Eastern European countries. There is much that can be learnt from analysis, for instance, of how the balance of care between institutional and non-institutional care has changed and the role played by economic incentives in ensuring that resources were (or were not) used to develop alternative community-based systems.

While many synergies have emerged and much goodwill has been generated, co-ordination of such a virtual network as MHEEN where most communication is through electronic means is a key consideration. In our view, it was critical to the success of the network to have an early face-to-face meeting to help establish a group dynamic and a mutual sense of ownership over outputs and activities.

CONCLUSION

Decision makers in Europe are facing both challenges and opportunities in the mental health arena. All 52 member states of the WHO European Region, as well as the European Union and Council of Europe, came together in Helsinki in January 2005 to endorse a Declaration and Action Plan on mental health (World Health Organization, 2005b,c). At the EU level meanwhile, a consultative Green Paper on Mental Health was published in autumn of 2005 (Commission of the European Communities, 2005) and there have also been a number of recent reports produced on mental health. (Commission of the European Communities, 2004; Jane-Llopis & Anderson, 2005; Henderson *et al.*, 2004).

It is not insignificant that these recent policy developments have all recognised the importance of looking at the economic evidence and have sought inputs from MHEEN members. Economic analysis belongs within the broader policy context, and policy makers need to consider the broad and long-term implications of their decisions. This is especially pertinent when one recalls that neglecting to make decisions can often cost more than taking the appropriate and timely action. There is also much benefit to be derived from greater co-operation and collaboration across countries. Such collaborative endeavour has the ability to improve our understanding of the ways in which different mental health care systems are organised and function, and can help to build common approaches to data collection. Such action could therefore help to improve the generalisability of research, and also contribute by pooling and augmenting access to health economics expertise, which remains very limited in some parts of Europe. Mental health has impacts on many different non-health sectors and a continuing challenge for MHEEN and others will be to engage with these sectors and provide economic evidence that encompasses inputs from and impacts on the social care, housing, education employment and criminal justice systems.

Acknowledgments. The Mental Health Economics European Network Phase I was supported by a grant (SPC.2002397) from the European Commission, Health and Consumer Protection Directorate.

REFERENCES

Barrett B., Byford S. & Knapp, M. (2005). Evidence of cost-effective treatments for depression: a systematic review. *Journal of Affective Disorders* 84, 1-13.

Bijl R.V., de Graaf R., Hiripi E., Kessler R.C., Kohn R., Offord D.R., Üstün T.B., Vicente B., Vollebergh W.A., Walters E.E. & Wittchen H.U. (2003). The prevalence of treated and untreated mental disorders in five countries. *Health Affairs* 22, 122-133.

Chen H., Cohen P., Kasen S., Johnson J.G., Berenson K. & Gordon K. (2006). Impact of adolescent mental disorders and physical illnesses on quality of life 17 years later. *Archives of Pediatric and Adolescent Medicine* 160, 93-99.

Chisholm D., Sanderson K., Ayuso-Mateos J.L. & Saxena S. (2004). Reducing the global burden of depression: population-level analysis of intervention cost-effectiveness in 14 world regions. *British Journal of Psychiatry* 184, 393-403.

Commission of the European Communities (2004). *The State of Mental Health in the European Union*. Commission of the European Communities: Luxembourg.

Commission of the European Communities (2005). *Improving the Mental Health of the Population: Towards a Strategy on Mental Health for the European Union*. Health and Consumer Protection Directorate, European Commission: Brussels.

Eibner C., Sturn R. & Gresenz C.R. (2004). Does relative deprivation predict the need for mental health services? *Journal of Mental Health Policy and Economics* 7, 167-175.

Fryers T., Melzer D., Jenkins R. & Brugha T. (2005). The distribution of the common mental disorders: social inequalities in Europe. *Clinical Practice and Epidemiology in Mental Health* 1, 14.

Gabriel, P. & Liimatainen, M.-R. (2000). *Mental Health in the Workplace*. International Labour Organisation: Geneva.

Glover G. (2004). *Mental Health Care Funding in England*. Centre of Public Mental Health, Durham University: Durham.

Harris E.C. & Barraclough B. (1998). Excess mortality of mental disorder. *British Journal of Psychiatry* 173, 11-53.

Henderson G., Henderson J., Lavaikainen J. & McDaid D. (2004). *Actions against Depression: Improving Mental Health and Well Being by Combating the Adverse Health, Social and Economic Consequences of Depression*. Commission of the European Communities, Health and Consumer Protection Directorate General: Luxembourg.

Jane-Llopis E. & Anderson P. (2005). *Mental Health Promotion and Mental Disorder Prevention. A Policy for Europe*. Radboud University Nijmegen: Nijmegen.

Kessler R.C., Walters E.E. & Forthofer M.M. (1998). The social consequences of psychiatric disorders, III: Probability of marital stability. *American Journal of Psychiatry* 155, 1092-1096.

Knapp M., McCrone P., Fombonne E., Beecham J. & Wostear G. (2002). The Maudsley long term follow up of child and adolescent depression. *British Journal of Psychiatry* 180, 19-23.

Knapp M., Barrett B., Romeo R., McCrone P., Byford S., Beecham J., Patel A. & Simon J. (2004a). *An International Review of Cost-Effectiveness Studies for Mental Disorders*. Fogarty International Centre of the National Institutes of Health: Washington.

Knapp M., Mangalore R. & Simon J. (2004b). The global costs of schizophrenia. *Schizophrenia Bulletin* 2, 297-293.

Knapp M., Funk M., Curran C., Prince M., Grigg M. & McDaid D. (2006). Economic barriers to better mental health policy and practice. *Health Policy and Planning* 21(3), 157-170.

Lothgren M. (2004a). Economic evidence in anxiety disorders: a review. *European Journal of Health Economics* 5, Suppl 1, S20-25.

Lothgren M. (2004b). Economic evidence in psychotic disorders: a review. *European Journal of Health Economics* 5, Suppl 1, S67-74.

Marwaha S. & Johnson S. (2004). Schizophrenia and employment: a review. *Social Psychiatry and Psychiatric Epidemiology* 39, 337-349.

Matschinger H. & Angemeyer M. (2004). The public's preference concerning the allocation of financial resources to health care: results from a representative population survey in Germany. *European Psychiatry* 19, 478-482.

McCrone P., Knapp M. & Fombonne E. (2005). The Maudsley long-term follow-up of child and adolescent depression. Predicting costs in adulthood. *European Child and Adolescent Psychiatry* 14, 407-413.

McDaid D., Knapp M., Curran C. & MHEEN Group (2004). *Mental Health Economics European Network. Phase I Final Report to the European Commission*. European Commission: Luxembourg.

McDaid D., Curran C. & Knapp M. (2005). Promoting mental well-being in the workplace: a European policy perspective. *International Review of Psychiatry* 17, 365-373.

McDaid D., Samyshkin Y., Jenkins R., Potasheva A.P., Nikiforov A.I. & Atun R (in press). Health system factors impacting on delivery of mental health services in Russia: multi-methods study. *Health Policy* [Epub ahead of print, 2006 Feb 9].

Office of the Deputy Prime Minister (2004). *Mental Health and Social Exclusion. Social Exclusion Unit Report*. Office of the Deputy Prime Minister: London.

Romeo R., Byford S. & Knapp M. (2005). Annotation: Economic evaluations of child and adolescent mental health interventions: a systematic review. *Journal of Child Psychology and Psychiatry* 46(9), 919-930.

Salvador-Carulla L., Garrido M., McDaid D. & Haro J.M. (2006). Financing mental health in Spain: context and critical issues. *European Journal of Psychiatry* 20(1), 29-44.

Sartorius N. (2004). Reducing the social and economic burden of depression (SEBoD) in Asia. *Australasian Psychiatry* 12, Suppl., S1-3.

Scott S., Knapp M., Henderson J. & Maughan B. (2001). Financial cost of social exclusion: follow up study of antisocial children into adulthood. *British Medical Journal* 323, 191.

Thomas C. & Morris S. (2003). Cost of depression among adults in England in 2000. *British Journal of Psychiatry* 183, 514-519.

Thornicroft G., Tansella M., Becker T., Knapp M., Leese M., Schene A. & Vazquez-Barquero J.L. (2004). The personal impact of schizophrenia in Europe. *Schizophrenia Research* 69, 125-132.

Wittchen H.-U & Jacobi F. (2005). Size and burden of mental disorders in Europe - a critical review and appraisal of 27 studies. *European Neuropsychopharmacology* 15, 357-376.

World Health Organization (2004). Changing History. *The World Health Report 2004*. World Health Organization: Geneva.

World Health Organization (2005a). *Atlas. Mental Health Resources around the World*. World Health Organisation: Geneva.

World Health Organization (2005b). *Mental Health Action Plan for Europe. Facing the Challenges, Building Solutions*. World Health Organization: Copenhagen.

World Health Organization (2005c). *Mental Health Declaration for Europe. Facing the Challenges, Building Solutions*. World Health Organization: Copenhagen.

World Mental Health Survey Consortium (2004). Prevalence, severity and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. *Journal of the American Medical Association* 291, 2581-2590.