

# Challenges for the international application of mental health economics<sup>1</sup>

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## INTRODUCTION

An accumulating body of evidence has emerged, particularly over the last five years, which clearly demonstrates the massive, and previously underestimated, burden that mental disorders impose upon individuals, families and whole communities throughout the world (World Bank, 1993; Ustün & Sartorius, 1995; Desjarlais *et al.*, 1995; Murray & Lopez, 1996). A number of responses are therefore required by decision-makers at both national and international levels if this burden of disease is to be challenged, among them political will, enhanced public awareness and the inputs of dedicated professionals. The launch of a 'Nations for Mental Health' initiative, led by WHO, is one such early response, to be enacted at country level in order to improve the mental health and psychological well-being of the world's under-served populations (Jenkins, 1997).

The increasing recognition of mental health as a significant public health issue has also led to additional demands for resources that are already stretched. There is therefore a requirement to demonstrate that investment is needed and worthwhile, which translates into generating evidence on affordable and cost-effective mental health care and prevention strategies. Such an evidence base is an important step in convincing governments and international agencies that additional mental health resources, most notably in training, drugs and basic infrastructures, will generate significant health gain and other benefits. Unfortunately, however, there is currently a dearth

of cost and outcome data upon which to base these decisions, as is made clear in the WHO's strategy on mental health policy and care (Gulbinat *et al.*, 1996):

*Health policy decision makers are looking for cost-effective options in the organisation of mental health care at a time when international comparative studies of mental health services are extremely limited, indeed almost non-existent.*

International mental health care policy is consequently faced with a dilemma, which is that despite the abundance of epidemiological and clinical evidence pointing to the need for investment, there is a lack of *economic* evidence to guide or support these investment decisions. This in turn prompts the question of what are the key policy-orientated objectives and methodological principles that mental health economics as a sub-discipline must pursue in order to usefully inform international mental health policy dialogue and resource allocation?

## POLICY AND RESEARCH AGENDAS

For economic contributions to mental health policy and planning to be informative, analyses and evaluations need to be 'hitting the right buttons'. This is not to suggest that work to date has been addressing the wrong issues, but makes the point that keeping up with and responding to new policy challenges is a constant and flexible process. Awareness of new and existing strategies and policies, through information networks as well as published literature, is therefore fundamental to responsive planning and resourcing of research, particularly given the inevitable lag that exists between policy or practice developments and completed evaluations of those developments. Policy and research priorities of individual countries or regions may of course be focused on a particular set of issues, which can limit or

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Table I. – Illustrative mental health policy and research priorities for different regions of the world.

Level of economic development	Prevailing features of mental health system	Policy and research priorities
<b>Industrialised countries</b> (e.g. N. America, W. Europe)	Relatively well-resourced; Market-based reforms; Community-based services; New psychotropic drugs	Relative cost-effectiveness of older vs newer drugs and psychological therapies; managed care; hospital diversion
<b>Middle-income countries</b> (e.g. E. Europe)	Resources poorly distributed; Hospital-based services; Poor perception of psychiatry (repression of the past)	Hospital vs community based care; Prevention of alcohol abuse; Mental health promotion
<b>Low-income countries</b> (e.g. E. & W. Africa, S. Asia)	Very poorly resourced; Low policy priority; Very limited availability of access to treatment and services	Availability of key, low-cost drugs; Integrating MH into primary care; Mobilisation of local resources; Demonstrating need for MH care

constrain contributions to a more international set of concerns. For example, assessing the relative cost-effectiveness of older versus newer anti-depressants is not particularly relevant in countries where the availability of *any* anti-depressants is at issue. By way of illustration, table I provides a set of policy and research issues that individual countries at different stages of economic development may relate to.

## STRATEGIES AND FRAMEWORKS

If economic contributions to international mental health care are to be appropriately targeted on key policy issues and pursued in a consistent manner, there is an evident need for an overall framework or strategy within which inputs can be made. At the most general level, economic considerations already comprise part of the WHO's strategy (Gulbinat *et al.*, 1996), the goals of which are:

1. to survey existing sources of data, information and knowledge;
2. to establish a multinational information resource based on a common framework;
3. to conduct needed studies, including comparative studies of financing, costs, service utilisation and cost-effectiveness.

Implementation of this broad agenda, however, requires more detailed consideration of the necessary *principles and procedures that underpin such efforts*. There is in fact broad agreement on the essential methodology that underpins the economic evaluation of health care programmes (Drummond *et al.*, 1997; Gold *et al.*, 1996), and a number of texts

specific to mental health care evaluation have also recently emerged (Knapp, 1995; Hargreaves *et al.*, 1997). Costs and outcomes are linked through the process of prevention or care, although both are also strongly influenced by a myriad of external factors. For example, the success of a new community-based programme may be influenced by the particular *combination* of resources brought to bear on the process or the flair or commitment of those responsible for its development. Such 'non-resource' characteristics neither have a readily or sensibly defined cost, nor can they be viewed as outcomes in their own right. One approach that brings the various resource and non-resource inputs and outputs of an evaluation is the *production of welfare*, which attempts to encompass the many and often complex linkages between needs, costs and outcomes (see Knapp, 1995, Chapter 1). The production of welfare approach comprises three principal stages: i) the definition, identification and prioritisation of need; ii) the employment and combination of resources such as staff and capital in a bid to meet need; and iii) the achievement of outcomes (table II).

## METHODOLOGICAL ISSUES IN MULTINATIONAL STUDIES

Conceptual and definitional consensus is an important and necessary first step towards a *standardised approach to the assessment of costs and outcomes*, but is by no means sufficient to ensure that similar methods are used *in practice*. In fact, there is little value in searching for a single, universal form of economic evaluation, since the precise form that

Table II. – *Evaluative framework: the production of welfare.*

<i>Needs/Objectives</i>	<i>Inputs</i>	<i>Outputs</i>
<b>Intermediate</b>	<b>Resource (can be costed)</b>	<b>Intermediate</b>
Provision of basic mental health services in community	Staff, capital, provisions	Volume and quality of care
<b>Final</b>	<b>Non-resource (cannot be costed)</b>	<b>Final</b>
Patient health and welfare	Personalities, attitudes and experiences of principal actors	Positive changes in the mental health of patients

Source: Knapp, 1995.

Table III. – *A checklist for assessing economic evaluations.*

1. Was a well-defined question posed in answerable form?
2. Was a comprehensive description of the competing alternatives given?
3. Was the effectiveness of the programmes or services established?
4. Were all the important and relevant costs and consequences for each alternative identified?
5. Were costs and consequences measured accurately in appropriate physical units?
6. Were costs and consequences valued credibly?
7. Were costs and consequences adjusted for differential timing?
8. Was an incremental analysis of costs and consequences of alternatives performed?
9. Was allowance made for uncertainty in the estimates of costs and consequences?
10. Did the presentation and discussion of study results include all issues of concern to users?

Source: Drummond *et al.*, 1997.

an evaluation takes will depend on the nature of the problem under investigation, the study's perspective and the feasibility of measuring all identified costs and consequences. Rather, the requirement is for transparency in the approach that has been adopted, and adherence to a number of guiding principles. One such set of guiding principles can be found in table III (Drummond *et al.*, 1997, Greenhalgh, 1997). Over and above pursuit of these principles, there is a further set of issues that specifically arise from the conduct of multi-site or comparative international studies, which merit additional comment.

### Scope or perspective of studies

The most appropriate perspective to adopt in economic analyses is often a societal one, such that costs and benefits of all agencies are taken into account; in reality, the majority of economic evaluations of health care technologies adopt a more narrow perspective, typically the health service provider (or purchaser). This practice is largely attributable to the difficulties associated with quantifying 'indirect' and 'intangible' costs. Placing a (monetary) value

on an 'intangible' cost such as the anguish experienced by the family of an individual who has developed schizophrenia or dementia is extremely demanding (although health state preference techniques such as 'willingness to pay' do offer the prospect of improved opportunities for meaningful estimation). There are also difficulties establishing the value of 'indirect' costs, such as lost employment or productivity. For example, what is an appropriate value to attach to the lost employment opportunities of a schizophrenic with no work experience or training? In relation to chronic mental health conditions, the inclusion of these costs in the analysis, which can be three or four times greater than direct treatment costs, will enhance the cost-effectiveness of the intervention under investigation and provide stronger justification for additional funding. However, resource-constrained governments, particularly in developing regions, may be reluctant to commit significant additional public resources for treatment services when the benefits of that investment are in part couched in terms of improved private and household incomes (rather than short-term savings to government budgets).

### Measurement of resource utilisation

The conduct of a study in more than one country or culture introduces a further dimension to the identification of services that may be used by sampled populations, primarily due to the unique set of service structures, processes and arrangements that characterise each country's health (and social) care system. Thus, once the objectives, design and scope of an international study have been established, it is necessary to develop a set of service utilisation components that meet the dual requirement of being locally/nationally meaningful whilst at the same time being internationally comparable. This needs to be followed by the process of translation (as required) and the subjection of any service receipt schedule to cross-cultural validation. The validation process for resource utilisation measures is a less formal and more qualitative exercise than that considered necessary for clinical scales, and is focused on achieving semantic equivalence of terms between sites. This can take place either through informal dialogue and discussion with principal investigators and other interested parties, or through the conduct of 'focus groups' that enable the peculiarities of particular health and social care systems to be drawn out.

### Measurement and analysis of service costs

Collection and estimation of service costs across different countries is complicated by the shortage of good quality cost data, the diverse accounting rules and budget categories that exist, and the alternative payment mechanisms to health care providers. Many health systems operate on a 'fee for service' basis, but these fees or charges may not reflect the true opportunity cost of a service and therefore need to be treated with great caution. Estimation of opportunity costs should ideally be based on marginal valuation, but this is often prevented by the lack of suitable data upon which to base such calculations (particularly capital and overhead elements).

For investigation of pooled cost data, it is necessary to work in a common currency (such as USD). Simple use of exchange rates is not advisable, however, owing to the volatility of certain currencies, plus the different 'purchasing power' of different countries represented in a study. It is therefore necessary to adjust the costs of services in individual countries by a

conversion factor, such as a 'purchasing power parity', which reflects the *relative* cost of health services in particular sites. This mechanism has the intentional effect of equalising the worth of health care service inputs/costs across the various sites. Analysis of pooled individual service cost data also needs to take account of the potential effect of site-level characteristics such as the relative availability of or access to certain services. Multi-level or random effects modelling techniques provide one statistical response to this type of data set, which is so typical of international comparative studies.

### CONCLUSION

Economic analysis can provide new insights and valuable contributions to pressing mental health policy concerns at national and international levels. At both levels of policy, there is a need to generate cost-effectiveness evidence that can inform and support resource allocation decisions regarding new initiatives and interventions. There are presently many gaps in this evidence base, so a primary objective for future research activities must be to begin the task of filling in these existing gaps in knowledge. It is perhaps not surprising, but nevertheless paradoxical, that there is least evidence where arguably it is most needed, namely in assessing the impact of low-cost drugs and mental health training among primary health care workers on the currently underserved mentally ill populations of low-income countries. In filling these gaps in knowledge, it is also important that what are now widely agreed principles for the conduct of economic evaluation are pursued. Failure to do so can only weaken the validity of such information to policy-makers and consequently tarnish future demands for such data. Finally, it is clear that international comparative studies of mental health care pose additional challenges to the conduct of economic analysis; this points to the need for continuing development and refinement of techniques that allow for the culturally-sensitive assessment of economic costs, organisational structures and health-related outcomes.

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