

# World Psychiatry

OFFICIAL JOURNAL OF THE WORLD PSYCHIATRIC ASSOCIATION (WPA)

Volume 6, Number 1



February 2007

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## The World Psychiatric Association (WPA)

The WPA is an association of psychiatric societies aimed to increase knowledge and skills necessary for work in the field of mental health and the care for the mentally ill. Its member societies are presently 130, spanning 113 different countries and representing more than 180,000 psychiatrists. The WPA organizes the World Congress of Psychiatry every three years. It also organizes international and regional congresses and meetings, and thematic conferences. It has 65 scientific sections, aimed to disseminate information and promote collaborative work in specific domains of psychiatry. It has produced recently several educational programmes and series of books. It has developed ethical guidelines for psychiatric practice, including the Madrid Declaration (1996). Further information on the WPA can be found on the website [www.wpanet.org](http://www.wpanet.org).

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## World Psychiatry

World Psychiatry is the official journal of the World Psychiatric Association. It is published in three issues per year and is sent free of charge to psychiatrists whose names and addresses are provided by WPA member societies and sections. State-of-the-art, research and mental health policy papers are welcome for publication in the journal. The relevant proposals should be sent to the office of the Editor.

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Published by Elsevier Masson s.r.l., Via P. Paleocapa 7, 20121 Milan, Italy.

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**World Psychiatry is indexed in PubMed, Current Contents/Clinical Medicine, Current Contents/Social and Behavioral Sciences, and Science Citation Index.**

# The WPA-WHO Joint Statement on the Role of Psychiatrists in Disasters Response

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We would like to draw the attention of psychiatrists across the world and members of the international health community at large to the enclosed WPA-WHO Joint Statement on the Role of Psychiatrists in Disasters Response. This is the first in a planned series of periodic statements of the largest international organizations in psychiatry and public mental health regarding major global issues in our field.

Massive disasters have been taking place with increasing frequency over recent years and are challenging the world community to understand better such phenomena and their natural and man-made causes as well as their general health and psychosocial consequences on the affected populations. The need to respond thoughtfully and effectively to disasters is the responsibility of all concerned at local, national and international levels. In regard to the psychosocial impact of massive disasters, the WHO Department of Mental Health and Substance Abuse and the WPA, among other institutions, have been developing, through their various structures, relevant procedures, educational aides, and service on site.

It is recognized that psychiatrists have an appropriate role to play within coordinated disasters response efforts. The optimization of such role is the concern of the WPA, which has established an Institutional Program on Disasters Response to work in conjunction with its Section on Disasters and Mental Health and several local Disasters Task Forces. The WHO is also contributing to this endeavor as part of its broad public mental health responsibilities.

In line with the above, the WPA and the WHO prepared the enclosed Joint Statement on the Role of Psychiatrists in Disasters Response and announced it at the WPA Regional Conference in Lima, Peru on November 30, 2006. We hope it will enhance the effectiveness of overall efforts in this increasingly important area.

## WPA-WHO JOINT STATEMENT ON THE ROLE OF PSYCHIATRISTS IN DISASTERS RESPONSE<sup>1</sup>

The WPA and the WHO would like to draw the attention of the international community of psychiatrists to the needs of people affected by disasters, the key actions to be

<sup>1</sup> This statement is consistent with forthcoming Inter-Agency Standing Committee (IASC) Guidance on Mental Health and Psychosocial Support in Emergency Settings, to which WPA contributed. The IASC, established by the UN General Assembly, is the highest-level humanitarian forum for coordination, policy development and decision-making.

potentially taken by psychiatrists, and the value of their collaboration with public health agencies.

Emergency situations can have devastating psychological and social effects on individuals, families, communities and societies and tend to be associated with elevated rates of a broad range of mental disorders among affected populations. Moreover, disasters can severely disrupt social structures and ongoing formal and informal care of persons with pre-existing disorders.

Because disasters are associated with numerous types of social and mental health problems, it is not surprising that psychiatrists and aid agencies offering help often offer diverse and numerous types of responses. This help is usually offered at a time when normal health and social services are either overwhelmed or have stopped working altogether. To avoid chaos and to increase the chance of populations receiving the best possible support, it is important (a) to set priorities regarding how to respond to the disaster and (b) to coordinate all mental health and psychosocial support responses across sectors with agencies and professionals from diverse backgrounds.

Psychiatric societies at national and local levels must help in stimulating and organizing psychiatrists' contributions. To facilitate and guide these contributions, WPA has developed structures such as an Institutional Program on Disaster Response, a scientific Section on Disasters and Mental Health and disaster specific local task forces, which are producing educational resources in various languages as well as training and service protocols<sup>2</sup>. Interaction and coordination of local psychiatric societies and pertinent WPA structures with corresponding governmental and intergovernmental organizations is strongly recommended. Attention should also be given to recent WHO publications on this matter.

Priority activities by psychiatrists working *in the acute phase of a disaster* (i.e., when daily mortality is elevated above baseline) include:

- *Working together with all aid agencies to establish broad-based mental health and psychosocial support with maximal participation of assisted communities.* In large scale disasters many psychosocial support activities are organized by aid agencies that work in the “protection”, “social sector” or “health sector”. Con-

<sup>2</sup> For current WPA guidelines see: Mezzich JE. WPA and disaster response: new policies and actions. *World Psychiatry* 2006;5:1-2.

sulting affected populations and coordination among sectors is essential to facilitate optimal support.

- *Maintaining access to care for people with acute and serious mental disorders in the community.* Psychiatrists play a major role in training and supervising primary health care (PHC) workers to care for people with severe mental disorders in fixed or emergency PHC clinics in disasters. Most people with severe mental disorder in a disaster will have a pre-existing disorder, but there will also be people who have severe disaster-induced mood and anxiety disorders, including severe presentations of acute stress reaction/posttraumatic stress disorder and there will be numerous presentations of severe medically unexplained somatic complaints.
- *Protecting and caring for people with severe mental disorders and other mental and neurological disabilities living in institutions.* People living in institutions are among the most vulnerable people in society, and they are especially at risk in emergencies, where they risk being left without care and without protection from the effects of the disaster. Psychiatrists play a key role to ensure ongoing care and protection.

- *Advocating with aid workers in other sectors to address the social determinants of mental health, e.g.,* advocating that shelter is organized in such manner that displaced families and communities can live together to maintain social cohesiveness; advocating that areas around toilets in camps are well-lit as to avoid sexual violence against women; advocating for family tracing to avoid child separations, advocating that adults and adolescents become involved in concrete, purposeful, common interest activities to avoid passivity; advocating that all health workers treat their patients with dignity.

After the acute disaster, psychiatrists play a major role in the (re)building of community mental health services to address the increased prevalence of mental disorders in affected populations. To maximize population coverage, trauma-focused care may be best integrated into general health and mental health services. These services could have a dual function – routine in normal times and disasters intervention in emergency periods. Disasters not only provide tragedy but also unprecedented impetus and opportunities to enhance personal and community resilience and perspectives and also strengthen the overall mental health system.

# Physical illness in people with mental disorders

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In a few months Cambridge University Press will bring out a comprehensive review of publications documenting the frequency of physical illness in people with schizophrenia (1). Other volumes, dealing with the frequency and types of physical illnesses in people with other mental disorders, will follow, probably in 6-monthly intervals over the next two to three years.

The trigger for the preparation of these reviews has been a personal communication from a physician working with the Doctors without Borders in a Central Asian republic. He felt desperate because he was unable to get sufficient resources to deal with the very high mortality of people with schizophrenia admitted to the central mental hospital in the country: according to his account, one person out of two admitted for schizophrenia was likely to be dead at the end of the year in which he/she was admitted for treatment. Some of the excess mortality would be due, like in other countries, to suicide, but a large proportion of those who would die would have infectious diseases (e.g., tuberculosis) as the main cause of death. Other physical diseases also have a higher prevalence in people with schizophrenia than in persons without it.

People with schizophrenia do not only have higher rates of physical illnesses than those without schizophrenia (2). They also experience greater difficulty in getting adequate health care. Mental hospitals in many countries are often lacking equipment that could help in making the diagnosis of physical illness as well as medications and other material that would make it possible to recognize and treat physical illness. Psychiatrists are reluctant to treat physical illness, perhaps as frequently as doctors in other medical specialties fail to recognize that their patients also suffer from a mental disorder or refuse to provide treatment for it.

The situation is not better in the instance of other mental illnesses. Depressive disorders are often associated with physical illnesses (e.g., cardiovascular diseases or diabetes) (3). People with dementia often have physical diseases and so do people who suffer from other forms of mental disorder or have an impairment of their mental functioning. The high rates of comorbidity of mental and physical disorders are only rarely taken into account in planning health services and in teaching health professionals.

Why people with mental illness are more likely to have a physical illness than the rest of the population is only partially known. Part of the answer to this question may be that some people with mental illness do not pay sufficient attention to their bodies and do not follow elementary rules of hygiene and disease prophylaxis. The fact that they often live in conditions of poverty and are exposed to considerable

dangers of violence and abuse might also explain some of the excess morbidity and mortality from physical illness that they have. The fact that people with mental illness may be abusing alcohol or take drugs and that they are therefore exposed to the health consequences of substance abuse and diseases related to the manner of use of drugs (e.g., hepatitis) may also play a role. There remains, however, a substantial proportion of the excess physical morbidity that is not explicable by the above mentioned factors and it is therefore necessary to suppose that there are factors that facilitate the occurrence of physical illness and are inherent in people who have mental disorders. Changes in the immune system and hormonal unbalance have been mentioned as being among those factors, but it is obvious that more research will be necessary to unravel the puzzle of high rates of physical illness in people with mental disorders.

In many countries psychiatrists have taken off their white coats, shed the symbols of being physicians, forgetting that they are medical doctors – with a particular interest in mental symptoms but still essentially practitioners of a medical discipline. The creation of the specialty of liaison psychiatry is a sad testimony to the fact that only a small proportion of psychiatrists have an interest in dealing in a comprehensive manner with people struck by physical illness. There are no liaison internists, liaison dermatologists nor liaison surgeons: when invited to consult other colleagues, they simply do that without creating a subgroup that will be specially trained to do this. They remain internists or dermatologists or surgeons who advise their colleagues when necessary without being separated from the rest of their discipline. The existence of liaison psychiatrists is an unwise message to the rest of medicine: despite having a medical diploma, only a few among the psychiatrists are sufficiently well trained in medicine to be able to deal with patients who have a mental and a physical disease at the same time.

What should be done about this? First, we should obtain data demonstrating the magnitude of the problem of comorbidity and its consequences in different parts of the world, in different types of services and for different mental disorders. Parallel to the data collection, other courses of action could be taken. These would include a revision of the curricula for training health professionals, at undergraduate and postgraduate level. The implementation of changes of curricula in schools for health personnel takes a long time: it takes an even longer time if there is no pressure to introduce the changes. Introduction of obligatory screening for mental disorders in general health facilities and for physical diseases in mental health services might also increase the awareness of all concerned that action is

needed now. The methods of screening that would be used in this effort will have to be simple and easy to apply: in addition, however, their introduction should be linked to the development of mechanisms that will allow relevant treatment once comorbidity has been diagnosed. Stigma attached to mental illness leads to discrimination of mentally ill people in the health care system: the introduction of a comprehensive model of care might require the application of measures that would also reduce stigma. An important consequence of stigma is the low priority that is given to mental health care, resulting in very low levels of funding for mental health services: the demonstration that the

simultaneous attention to and treatment of mental and physical illness improves the prognosis of both and lowers the cost of treatment might help to change this situation.

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# Mental health care for the elderly in low-income countries: a health systems approach

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*Future development of services for older people needs to be tailored to suit the health systems context. Low-income countries lack the economic and human capital to contemplate widespread introduction of specialist services. The most cost-effective way to manage people with dementia will be through supporting, educating and advising family caregivers. The next level of care to be prioritized would be respite care, both in day centres and in residential or nursing homes. An important prerequisite to improving care for older persons is to create a climate that fosters such advances. Better awareness is a necessary precondition for appropriate help-seeking, and lack of awareness is a public health problem for which population level interventions are needed.*

**Key words:** Elderly, mental health care, low-income countries, health systems approach, awareness, family caregivers

*(World Psychiatry 2007;6:5-15)*

By 1990, a clear majority (58%) of the world's population aged 60 years and over were already to be found living in developing countries. By 2020 this proportion will have risen to 67%. Over this period of 30 years, this oldest sector of the population will have increased in number by 200% in developing countries as compared to 68% in the developed world (1). This demographic transition will be accompanied by unprecedented economic growth and industrialization, and by profound changes in social organization and in the pattern of family life.

For older people, mental health conditions are an important cause of morbidity and premature mortality. Among the neuropsychiatric conditions, dementia and major depression are the two leading contributors, accounting respectively for one quarter and one sixth of all disability adjusted life years (DALYs) in this group (1). In 2005, Alzheimer's Disease International commissioned a panel of experts to review all available epidemiological data and reach a consensus estimate of prevalence in each world region, and numbers of people affected (2). Evidence from well-conducted, representative epidemiological surveys was lacking in many regions. The panel estimated that 24.3 million people have dementia today, with 4.6 millions new cases of dementia annually (one new case every 7 seconds). Numbers of people affected will double every twenty years to 81.1 millions by 2040. Most people with dementia live in developing countries: 60% in 2001, rising to 71% by 2040. Rates of increase are not uniform: numbers are forecast to increase by 100% in developed countries between 2001 and 2040, but by more than 300% in India, China and their South Asian and Western Pacific neighbours.

Mental health practitioners have some of the most efficacious interventions in biomedicine (3). For late-life depression we have antidepressants and stepped care, multidisciplinary interventions (4-7). For dementia, psychoso-

cial interventions for caregivers (8), behavioural management strategies (9,10), nurse-led collaborative care (11) and (more equivocally) the cholinesterase inhibitor drugs (12) have all been shown to be at least moderately effective. Our limitation is more in having the resources or systems to deliver effective interventions to those who might benefit, both in the community and in care homes (13,14). This is most marked in developing countries, where there are very few psychiatrists or other mental health professionals. The World Health Organization (WHO)'s Mental Health Atlas (15) surveyed the resources available and found fewer than one psychiatrist per 100,000 population across India, China and much of the rest of South and South East Asia, and fewer than one psychiatrist per million population in most of sub-Saharan Africa. For the foreseeable future, a generally accessible national specialist service is beyond reach. The WHO's recommendation is that mental health services be integrated into primary care, but this has been little implemented. Centralized hospital-based services provide limited care to small numbers of patients with serious mental illness; for the rest the burden of care falls upon the family, the community, and traditional healers. Awareness and understanding of common mental disorders is low at all levels of society. People with mental illness are often stigmatized, and neither recognized nor treated appropriately by health services. A "health systems approach" to service development recognizes the socio-cultural and regional factors that modulate health perceptions, illness presentations, and interactions between the potential consumers and providers of health care services (16), analyzing local socio-demography, patterns of disease, culturally determined beliefs and practices, existing resources, prevailing government policy and macro and microeconomic conditions. This context should then inform the prioritization, design and delivery of new services.

## A HEALTH SYSTEMS APPROACH

### Attitudes towards older people

In many developing countries, older persons are accorded great respect, both within the extended families that they head, and in society as a whole. These attitudes may also be held by immigrant families in developed countries, though it is important not to be oversimplistic in mythologizing “ethnic” viewpoints in culturally mixed societies (17).

In Ghana, for example, the aged enjoy high status as mediators and experts on social problems, folklore and tradition: “the elderly were regarded as a symbol of deity, an affront to an older person was an affront to the gods requiring costly expiation” (18). This system of beliefs is widely held across the African continent. In South Eastern Asia, the Confucian moral principle of supporting, loving and respecting the elderly is traditionally rooted in the family and practised throughout society, not only in China but also for example in Japan and Thailand (19). The related concept of “filial piety” demands respect, honour and duty of care from the son towards the parents. In India, older persons are venerated, a typical formulation being that “parents are next to God; the family must respect and treat them well” (20). Others though have identified an inherent fatalism in traditional Indian attitudes towards ageing. The Hindi phrase *sathiyana*, customarily translated as senility, more literally means “sixtyish” (21), simultaneously conveying the concept of advanced chronological age and inevitable decline (22). The final stages in the classical cycle of life, Vanaprastha and Sanyasa, encourage a “disengagement” of older persons, allowing both preparation for death and a seamless intergenerational transfer of goods, property and power (23). For older Indians, the sociological and psychological influence of these principles is still profound and pervasive (24). Indeed, viewed through this prism, Western sensibilities can seem mystifying to Indian commentators: “People (in rural India) are not scared of death. They took it as inevitable. Lacking medication for illness in old age, there is relatively less medicated survival compared to the situation in the industrially advanced world. The nursing homes of the West sometimes give the impression that they are waiting rooms for the dead before they are buried” (23).

In focus group discussions carried out in South India, many older participants felt that respect for them was on the wane (20): “the values that were taught by our elders about oneself and towards others are now being purposely forgotten, resulting in more hardships in later life and less respect towards older people”. In Japan, it has been suggested that “respect for the elderly may be more symbolic than substantial”: recent research suggests a preponderance of negative over positive stereotypes (19).

### Living arrangements

In most developing countries, older people, whether or

not widowed, typically live with their families in multi-generational households. The concept of living alone is alien and dreaded. For example, only 8% of older Chinese men and 10% of women live alone, more than two-thirds live with children, rising to four-fifths of the oldest old (25). Eighty-eight percent of Ghanaians live with younger relatives (18). In the United Kingdom, conversely, only 25% of older persons live with younger family members, most living alone (35%) or with their spouse (40%) – interestingly, historical evidence suggests that extended multi-generational family units have always been the exception, children always having tended to leave home and set up their own household when they marry.

Traditional family and kinship structures are widely perceived as under threat from the social and economic changes that accompany economic development and globalization (26). In Japan (subject to rapid and relatively recent industrialization and economic development), until recently 87% of older people lived with younger relatives. However, the numbers of elderly persons living alone increased steadily from 0.6 million in 1975 to 3.2 million in 2001, and households with elderly couples living alone increased from 0.9 million to 4.5 million over the same period. The education of women and their increasing participation in the workforce reduce both their availability for caregiving and their willingness to take on this additional role. Populations are increasingly mobile, as education, cheap travel and flexible labour markets induce children to migrate to cities and abroad to seek work. In India, Venkoba Rao has coined an acronym to describe this growing social phenomenon: PICA, Parents in India, Children Abroad. Two million Ghanaians left the country in the economic catastrophe of the 1980s; 63% of older persons have lost the support of one or more of their children. Declining fertility has also had an impact: its effects are perhaps most evident in China, where the one-child family law leaves increasing numbers of older people, particularly those with a daughter, bereft of family support. In sub-Saharan Africa, the ravages of the HIV/AIDS epidemic have “orphaned” parents as well as children.

### Family support

All over the world, the family remains the cornerstone of care for older people who have lost the capacity for independent living, whether as a result of dementia or other mental disorder. However, stereotypes abound and have the potential to mislead. Thus, in developed countries, with their comprehensive health and social care systems, the vital caring role of families, and their need for support, is often overlooked. Conversely, in developing countries, the reliability and universality of the family care system is often overestimated; older people are among the most vulnerable groups, in part because of the continuing myths that surround their place in society (26). The 10/66 Dementia Research Group’s multicentre pilot study (27) was the first sys-



tematic, comprehensive assessment of care arrangements for people with dementia in the developing world, and of the impacts upon their family caregivers. The findings were similar to those in the developed world as reported in the EUROCARE study, with data from 14 European countries (28). In both settings, most caregivers were older women caring for their husbands or younger women caring for a parent, and caring was associated with substantial psychological strain. However, some aspects were radically different: people with dementia in developing countries typically live in large households, with extended families. Larger families are associated with lower caregiver strain; however, this effect is small, applies only where the principal caregiver is co-resident and indeed seems to operate in the opposite direction where the caregiver is non-resident, perhaps because of the increased potential for family conflict. Arguably, the greatest obstacle to providing effective support and care for older persons with mental illness and their families in developing countries is the lack of awareness of the problem amongst policy makers, health care providers and the community. As in ethnically mixed Western communities (17), mythologizing the caring role of the family evidently carries the risk of perpetuating complacency.

### **Government policy: the role of state vs. the role of family**

In the European Union, government policy varies widely, from states that assume a statutory responsibility to provide comprehensive care on demand (e.g., some Scandinavian countries) to those that provide negligible services and place a legal responsibility on families to provide financial and practical support (e.g., some Southern European countries). Worldwide, there is a tendency for governments that have less developed centralized welfare and benefit systems to bolster traditional family care arrangements through coercive legislation or fiscal or social incentives. Thus, in the People's Republic of China, the Communist Party enshrined the Confucian principle in the 1980 Marriage Law, giving parents who have lost the ability to earn the right to claim support from their children. Breaches are theoretically punishable by up to five years imprisonment. Social incentives have been popular in South East Asia: in countries with social housing programs, such as Singapore and Hong Kong, family caregivers of older persons find themselves prioritized on the housing waiting list. In Japan, the legal sanction compelling children to care for parents has been repealed, and in 2001 a mandatory, public long-term care insurance system has been introduced, to which every citizen aged 40 and over contributes premiums. The system entitles people who require care as they age to choose from a range of services and providers, including home-based, community-based and institutional care options paid for by the government, but requiring a co-payment by the patient.

National culture and service availability are important

in determining the proportion of older people who live in institutional settings, and therefore the levels of disability and needs of the population of older people living in the community. In a recent European study (29), for example, recipients of community care in France and Italy were very physically dependent compared with the other areas in Europe. Italian older people received the least average hours of formal care and those in France the most. Italian participants had the lowest rates of psychiatric diagnosis, and a similar rate of pre-existing diagnosis of dementia to other areas, despite having the highest proportion of people with cognitive impairment. This suggests there may be particularly high levels of undiagnosed psychiatric, including cognitive, morbidity in Italy.

### **Sources of income for older people**

Many, but by no means all economically developed countries have made provision for universal pension schemes, disability living allowances, and caregiver benefits. These can make a crucial contribution to easing the plight of people with dementia, and those who care for them. In low-income countries, a small minority of older persons have even a basic subsistence pension. More comprehensive non-contributory schemes are needed, but unlikely to be feasible in the near future under even the most optimistic predictions. This is unfortunate, for an older person's pension, however nugatory, can make an important guaranteed contribution to the family budget.

For these reasons, older people in developing countries often work for as long as their health permits. In 1990 the United Nations estimated that, in developing regions of the world, 45% of those aged 60-64 years and 28% of those aged 65 years or over were engaged in paid work. Additionally, they may supervise grandchildren while parents work, they care for adult children with disabilities, they engage in voluntary work and in informal education of younger generations. With the onset of disability, older people are instead dependent on their children for housing, food, and money, as well as personal care. One of the key findings from the 10/66 Dementia Research group's caregiver pilot study (27) is that caregiving in the developing world is associated with substantial economic disadvantage. A high proportion of caregivers have to cut back on their paid work to care. Many caregivers need and obtain additional support and, while this is often informal unpaid care from friends and other family members, paid caregivers are also relatively common. People with dementia in developing countries are heavy users of health services, and associated direct costs are high. Compensatory financial support is negligible; few older people in developing countries receive government or occupational pensions, and virtually none of the people with dementia in the 10/66 Dementia Research group's caregiver pilot study received disability pensions. Caregivers are commonly in paid employment,

and almost none received any form of caregiver allowance. The combination of reduced family incomes and increased family expenditure on care is obviously particularly stressful in lower income countries where so many households exist at or near to subsistence level. This may be literally beyond the limited resources of some families. In the absence of a safety net, lack of family support arising from whatever cause can be catastrophic. Indigence is a clear and documented problem (26). The extent to which people with dementia suffer this fate is as yet unknown.

### **Knowledge, attitudes and beliefs**

Alzheimer's Disease International and its member national societies have identified raising awareness of dementia among the general community and among health workers as a global priority (30). There has been relatively little formal study of the extent of awareness in developing countries. One index is that of media coverage: in one of its earliest ventures, the 10/66 Dementia Research Group reported a search of Indian broadsheet newspapers (The Times of India and the Hindu), which failed to unearth a single article about the disease (31). While much remains to be done, the growth of awareness in some developed countries has been striking: in the United Kingdom, a similar search of the columns of just one national newspaper revealed 57 articles over an 18 month period, covering dementia from many different perspectives. Similarly, the Alzheimer's Society and other charities concerned with older people in the United Kingdom have campaigned effectively for improvement in benefits and less successfully for availability of drugs to treat dementia.

Three recent studies from India tend to agree regarding the extent of awareness in the different communities studied (with a mixture of focus group discussion and open-ended interviews) (20-22). First, the typical features of dementia are widely recognized, and indeed named "Chinnan" (literally childishness) in Malyalam language in Kerala (22), "nerva frakese" (tired brain) in Konkani language in Goa (20), and "weak brain" in Hindi in Banares (21). However, in none of these settings was there any awareness of dementia as an organic brain syndrome, or indeed as any kind of medical condition. Rather, it was perceived as a normal, anticipated part of ageing. In Goa, the likely causes were cited as "neglect by family members, abuse, tension and lack of love" (20). In Kerala, it was reported that most caregivers tended to misinterpret symptoms of the disease and to designate these as deliberate misbehaviour by the person with dementia (22).

This general lack of awareness has important consequences. First, there is no structured training on the recognition and management of dementia at any level of the health service. Second, in the absence of understanding regarding its origins, dementia is stigmatized: for example, sufferers are specifically excluded from residential care, and

often denied admission to hospital facilities. Third, there is no constituency to place pressure on the government or policy makers to start to provide more responsive dementia care services (22). Fourth, while families are the main caregivers, they must do so with little or no support or understanding from other individuals or agencies. Behavioural symptoms of dementia (wandering, calling out, making accusations) may be taken by outsiders as *prima facie* evidence of neglect or abuse. Caregivers then face a double jeopardy: the strain of care heightened by the stigma and blame that attaches to them because of the disturbed behaviour of their relative. This notion is supported by the open-ended responses of some caregivers, in the 10/66 Dementia Research Group's pilot study, to the question "What do you find most difficult about looking after your relative?" (32): "Family members think we are the cause for his illness – they think we deserve all that is happening to us. Other than family, we don't really care"; "She keeps wanting to go home. She feels cheated and deceived. She behaves like a child and greets me instead of me greeting her. She behaves embarrassingly. We continue locking the door every time. We feel ashamed; it is a useless life".

Such evidence argues powerfully for the benefits of broad dissemination of appropriately structured information about dementia.

### **Community services**

Until recently, there has been surprisingly little information regarding the nature of services available for people with dementia in developing countries, the extent of help-seeking and the effectiveness of care. Even now, with the rising interest in epidemiological research, generalizable quantitative data is not available. Nevertheless, it seems clear that dementia in the developing world tends to be a hidden problem. Affected families rarely present to health services, which are ignorant of most cases in their community. However, lack of help-seeking should not be presumed to reflect a lack of need. K.S. Shaji, working with the 10/66 Dementia Research Group in Kerala, Southern India, commented of the caregivers of the 17 older persons with dementia: "Many caregivers expressed a wish to know more about the disease and its management. Most said that they would be interested to attend meetings of support groups or training programs for caregivers. However, none of the people with dementia were in regular contact with any health care facility. Visits to outpatient care facilities were perceived as neither feasible nor useful. None of the caregivers ever received any advice from anybody regarding management of their relatives at home. They said that they were learning from their own experience and were unhappy not to be receiving any help from health professionals. They had not come into contact with any non-governmental or governmental agency that offered special services for people suffering from dementia" (22).

In Goa too, primary health care doctors said that they were not consulted, and had little or no direct experience of the problem in their community (20). This experience contrasted with that of the local multi-purpose health workers, who both recognized the dementia vignette and identified many of their active community caseload as sufferers.

Developing country health services are generally ill-equipped to meet the needs of older persons. Health care, even at the primary care level, is clinic-based: the older person must attend the clinic, often involving a long journey and waiting time in the clinic, to receive care. Even if they can get to the clinic, the assessment and treatment that they receive 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, in our experience, the diagnosis of dementia is often made specifically to exclude older persons from receiving care. Thus, for example, in a Soweto township, nurses in a community clinic 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.

## Residential care

Residential care homes are widespread in many developed countries. Most older people living in 24-hour care settings in the United Kingdom and the United States have dementia (33), although this condition may not have been formally diagnosed and indeed the setting may purport to exclude those with dementia (34,35).

One study in care settings in the United Kingdom interviewed staff, family and residents about the care home experience (36): many valued choice and autonomy and still wanted activity, although this was not always available. "I'm boring... I like to do things, make things and fix things" (83-year-old woman, severe cognitive impairment). "I try and take her up there to paint because she loves it so much... I feel I've achieved something" (60-year-old female care assistant).

As yet, care homes are rare in developing countries. Governments, as part of their policy to bolster traditional family care arrangements, have either not encouraged or officially discouraged their development. However, in the most rapidly developing regions, their numbers are rising fast. In the initial stages of their development, homes are run by government or by charities to cater for those few older persons who have no family to care for them. In India (20), older persons entered such homes when they were relatively well, usually because they lacked a family to care for them in the event of deteriorating health, or because

they feared becoming a burden on their relatives, feared inadequate support, and therefore wished to maintain their independence from the family. This constellation has been reported in two previous Indian ethnographic studies (21,37); it has been referred to as "dependency anxiety" (37). In Goa, residents of old age homes described their reasons for moving into residential care (20). In a few cases, chronic deteriorating health or acute episodes of illness were mentioned as reasons for admission. However, in many cases the older persons were in good health, and "approaching age" or worries about ability to look after oneself in the future underpinned the move. Many of the residents had no family to look after them. However, many had families who were either unwilling or unable to support them. This theme was reflected in the many residents who complained that their family never visited them after their admission to the home. Residents had experienced being "shuffled from family to family"; at least in the old age home they had security. Many residents expressed bewilderment that their families seemed to have forgotten them after their admission. Goan old age homes, as a rule, did not admit those with permanent disabilities and specifically excluded those with dementia. Thus, there was no local continuing care provision for those with dementia, or for those who lacked both family support and financial means (20). The homes themselves were adequate in some respects, but concerns were expressed about the isolation of residents from their families and from their local community, and at the lack of structured activities. These homes undoubtedly represent a transitional phase in what is likely to become an extended network of public and private sector facilities.

## THE WAY AHEAD

### Awareness

An important prerequisite to improving care for older persons is to create a climate that fosters such improvement. Since 1984, Alzheimer's Disease International, the international non-governmental organization that supports people with dementia and their caregivers worldwide, has built and strengthened Alzheimer associations throughout the world, so they are better able to meet the needs of people with dementia and their families. The organization has now 77 national members, an increase of 50% in less than a decade, with most new members being developing country associations. National associations create a framework for positive engagement between clinicians, researchers, caregivers and people with dementia. They raise funds, disseminate information, and act as powerful advocates with government, policy makers and media. Better awareness is a necessary precondition for appropriate help-seeking, and lack of awareness is a public health problem for which population level interventions of this kind are most appropriate.

## A role for research

Within both the developed and developing world, while there has been huge increase in knowledge about diverse aspects of mental health of older people (35), there remains a need for affordable systems to translate these advances consistently into individual patient benefit. The 10/66 Dementia Research Group is a network of researchers from developing countries that draws attention through its title to the relative paucity of population-based research into dementia in the developing world. Only 10% of research effort is targeted at those developing regions where currently two-thirds of those with the disorder are thought to live (31). More good quality epidemiological and health services research, appropriately disseminated, can help to generate awareness, shape health and social policy, and encourage the development of better services for those with mental disorders and their caregivers (38).

## Prevention

Prevention, where it can be achieved, is clearly the best option. Primary preventive interventions can be highly cost-effective, given the enormous costs associated with the care and treatment of those with dementia. The primary prevention of dementia is a relatively neglected area. Evidence from the developed world suggests that risk factors for vascular disease, including hypertension, smoking, type II diabetes, obesity and hypercholesterolaemia, may all be risk factors for Alzheimer's disease (39-43) as well as vascular dementia (44). The epidemic of smoking in developing countries, and the high and rising prevalence of type II diabetes in South and South East Asia, should therefore be particular causes of concern. It is as yet unclear whether the improvements in control of hypertension, diet and exercise, and particularly the decline in smoking seen in the developed West, which has led to rapid declines in mortality from ischaemic heart disease and stroke, will lead to a later decline in the age-specific incidence of dementia and Alzheimer's disease (2). Many of these preventive measures are also likely to improve general health (45).

## Service development

There are gross disparities in resources within and between developed and developing countries. New drug treatments are very expensive. Cholinesterase inhibitors for Alzheimer's disease are beyond the reach of all but the richest families in most developing countries. State funding of these drugs in some developed countries is also becoming restricted, because, though their efficacy in controlled trials is well established, doubts remain as to their cost-effectiveness (46). The same would be true for most selective serotonin reuptake inhibitors and "atypical" antipsychotic

drugs, which are generally favoured in the West for use in older patients because of their better safety and side-effect profiles. The advent of a disease modifying, as opposed to symptomatic, treatment for Alzheimer's disease would introduce similar ethical concerns regarding accessibility to those that have arisen in relation to the management of HIV/AIDS in low income countries. Equity is also an important issue within developing countries. Access to care is often entirely dependent upon means to pay. Quite apart from economic constraints, health care resources are grossly unevenly distributed between rural and urban districts. Most specialists, indeed most doctors, work in cities. Provision of even basic services to far-flung rural communities is an enormous challenge.

Future development of services for older people needs to be tailored to suit the health systems context. "Health systems" here can be taken to include macroeconomic factors, social structures, cultural values and norms, and existing health and welfare policy and provision. Low-income countries lack the economic and human capital to contemplate widespread introduction of specialist services: multi-disciplinary staff and community services backed up with memory clinics, outpatient, inpatient and day-care facilities. Nevertheless, services comprising some of these elements are being established as demonstration projects. They have an important role in raising awareness often out of all proportion to the cover of the service which they are able to deliver. Quite apart from their visibility to policy makers, they can play a key role in exposing generations of doctors and paramedical staff to training and experience in this field. A counterargument would be that such new developments entrench existing inequities and draw resources away from cheaper public health initiatives whose benefits could be distributed more generally. Some low-income countries with particularly striking achievements in health service development (Cuba is one example) have made it a principle that no service development be introduced in one area, or for one sector of the population, that could not be introduced for all. The real problem arises if this model is seen as the end rather than the beginning of service development. Specialists – neurologists, psychiatrists, psychologists – are far too scarce a resource to take on any substantial role in the first-line care for people with dementia. The focus must be upon primary care. Many developing countries have in place comprehensive community-based primary care systems staffed by doctors, nurses and generic multi-purpose health workers. The need is for: a) training in the basic curriculum regarding diagnostic and needs based assessments; b) a paradigm shift beyond the current preoccupation with simple curative interventions to encompass long-term support and chronic disease management; c) outreach care, assessing and managing patients in their own homes, because people with dementia are unlikely to seek health-related support despite their wide range of health needs and their relative inability to look after themselves. The content of such a multiprofessional educational programme has been summarized (47).



**Table 1** Minimum actions required for dementia care (according to Alzheimer's Disease International)

<b>Ten overall recommendations</b>	<b>Scenario A: Low level of resources</b>	<b>Scenario B: Medium level of resources</b>	<b>Scenario C: High level of resources</b>
1) Provide treatment in primary care	Recognize dementia care as a component of primary health care. Include the recognition and treatment of dementia in training curricula of all health personnel. Provide refresher training to primary care physicians (at least 50% coverage in 5 years).	Develop locally relevant training materials. Provide refresher training to primary care physicians (100% coverage in 5 years).	Improve effectiveness of management of dementia in primary health care. Improve referral patterns.
2) Make appropriate treatments available	Increase availability of essential drugs for the treatment of dementia and associated psychological and behavioural symptoms. Develop and evaluate basic educational and training interventions for caregivers.	Ensure availability of essential drugs in all health care settings. Make effective caregiver interventions generally available.	Provide easier access to newer drugs (e.g., anticholinesterase agents) under public or private treatment plans.
3) Give care in the community	Establish the principle that people with dementia are best assessed and treated in their own homes. Develop and promote standard needs assessments for use in primary and secondary care. Initiate pilot projects on development of multidisciplinary community care teams, day care and short-term respite. Move people with dementia out of inappropriate institutional settings. Promote public campaigns against stigma and discrimination.	Initiate pilot projects on integration of dementia care with general health care. Provide community care facilities (at least 50% coverage with multidisciplinary community teams, day care, respite and inpatient units for acute assessment and treatment). According to need, encourage the development of residential and nursing home facilities, including regulatory framework and system for staff training and accreditation.	Develop alternative residential facilities. Provide community care facilities (100% coverage). Give individualized care in the community to people with dementia.
4) Educate the public	Support nongovernmental organizations in public education.	Use the mass media to promote awareness of dementia, foster positive attitudes, and help prevent cognitive impairment and dementia.	Launch public campaigns for early help-seeking, recognition and appropriate management of dementia.
5) Involve communities, families and consumers	Support the formation of self-help groups. Fund schemes for nongovernmental organizations.	Ensure representation of communities, families, and consumers in policy-making, service development and implementation.	Foster advocacy initiatives.
6) Establish national policies, programmes and legislation	Revise legislation based on current knowledge and human rights considerations. Formulate dementia care programmes and policies: - legal framework to support and protect those with impaired mental capacity; - inclusion of people with dementia in disability benefit schemes; - inclusion of caregivers in compensatory benefit schemes. Establish health and social care budgets for older persons.	Implement dementia care policies at national and subnational levels. Establish health and social care budgets for dementia care. Increase the budget for mental health care.	Ensure fairness in access to primary and secondary health care services, and to social welfare programmes and benefits.
7) Develop human resources	Train primary health care workers. Initiate higher professional training programmes for doctors and nurses in old age psychiatry and medicine. Develop training and resource centres.	Create a network of national training centres for physicians, psychiatrists, nurses, psychologists and social workers.	Train specialists in advanced treatment skills.
8) Link with other sectors	Initiate community, school and workplace dementia awareness programmes. Encourage the activities of nongovernmental organizations.	Strengthen community programmes.	Develop occupational health services for people with early dementia. Provide special facilities in the workplace for caregivers of people with dementia. Initiate evidence-based mental health promotion programmes in collaboration with other sectors.
9) Monitor community health	Include dementia in basic health information systems. Survey high-risk population groups.	Institute surveillance for early dementia in the community.	Develop advanced monitoring systems. Monitor effectiveness of preventive programmes.
10) Support more research	Conduct studies in primary health care settings on the prevalence, course, outcome and impact of dementia in the community.	Institute effectiveness and cost-effectiveness studies for community management of dementia.	Extend research on the causes of dementia. Carry out research on service delivery. Investigate evidence on the prevention of dementia.



The resource implications of chronic disease management may be enormous; every developed country has seen increasing proportions of its health budgets consumed in this way. Developing countries such as India and China, witnessing previously unprecedented rates of demographic ageing, are certain to be profoundly affected, the only question being the extent to which they are able proactively to manage the change.

For many low-income countries, the most cost-effective way to manage people with dementia will be through supporting, educating and advising family caregivers. This is already happening to some extent in developed countries, where, as elsewhere, the majority of care in dementia is from the family. This may be supplemented by paid home-care workers; however, to date most of the growth in this area has been that of untrained paid carers operating in the private sector. In Beijing, educated women from rural areas travel to the city to be hired as live-in carers for older persons and send remittances to their family of origin. They may be recruited from an agency, or from a street where they gather for hire by private arrangement. The typical monthly cost for this service is one tenth of the typical cost of a residential care home place. The direct and indirect costs of community care fall upon the family. Some governmental input, whether in terms of allowances for people with dementia and/or caregivers, or subsidized care, would be desirable and equitable. The next level of care to be prioritized would be respite care, both in day centres and (for longer periods) in residential or nursing homes. Such facilities could act also as training resource centres for caregivers. Day-care and residential respite care are more expensive than home care, but nevertheless basic to a community's needs, particularly for people with more advanced dementia.

Residential care for older people is unlikely to be a priority for government investment, when the housing conditions of the general population remain poor. Nevertheless, even in some of the poorest developing countries (e.g., China and India), nursing and residential care homes are opening up in the private sector to meet the demand from the growing affluent middle class. In West Beijing, approximately 1% of older people now live in such facilities. Good quality, well-regulated residential care has a role to play in all societies, for those with no family supports, and for those where family support capacity is exhausted, both as temporary respite and for provision of longer-term care. Absence of regulation, staff training and quality assurance is a serious concern in developed and developing countries alike. Important priorities would include a system of registration and inspection of homes, training of careworkers, and provision of medical services for residents.

At their 20th annual conference held in Kyoto, Japan, Alzheimer's Disease International released a Kyoto Declaration, benchmarking progress in ten key areas using a framework developed by the WHO (Table 1). A key element of this framework is that it identifies three levels of at-

tainment, for countries with low, medium and high levels of resources, hence suggesting a feasible, pragmatic series of actions and objectives for health systems at all levels of development.

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# A review of compulsive buying disorder

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*Compulsive buying disorder (CBD) is characterized by excessive shopping cognitions and buying behavior that leads to distress or impairment. Found worldwide, the disorder has a lifetime prevalence of 5.8% in the US general population. Most subjects studied clinically are women (~80%), though this gender difference may be artifactual. Subjects with CBD report a preoccupation with shopping, pre-purchase tension or anxiety, and a sense of relief following the purchase. CBD is associated with significant psychiatric comorbidity, particularly mood and anxiety disorders, substance use disorders, eating disorders, and other disorders of impulse control. The majority of persons with CBD appear to meet criteria for an Axis II disorder, although there is no special "shopping" personality. Compulsive shopping tends to run in families, and these families are filled with mood and substance use disorders. There are no standard treatments. Psychopharmacologic treatment studies are being actively pursued, and group cognitive-behavioral models have been developed and are promising. Debtors Anonymous, simplicity circles, bibliotherapy, financial counseling, and marital therapy may also play a role in the management of CBD.*

**Key words:** Compulsive shopping, compulsive buying, impulse control disorders

*(World Psychiatry 2007;6:14-18)*

Compulsive buying disorder (CBD) was first described clinically in the early 20th century by Bleuler (1) and Kraepelin (2), both of whom included CBD in their textbooks. Bleuler writes: "As a last category Kraepelin mentions the buying maniacs (oniomaniacs) in whom even buying is compulsive and leads to senseless contraction of debts with continuous delay of payment until a catastrophe clears the situation a little – a little bit never altogether because they never admit to their debts" (1). Bleuler described CBD as an example of a "reactive impulse", or "impulsive insanity", which he grouped alongside kleptomania and pyromania.

CBD attracted little attention throughout the 20th century except among consumer behaviorists (3-6) and psychoanalysts (7-9). Interest was revived in the early 1990s, when clinical case series from three independent research groups appeared (10-12). The disorder has been described worldwide, with reports coming from the US (10-12), Canada (5), England (4), Germany (6), France (13), and Brazil (14).

The appropriate classification of CBD continues to be debated. Some researchers have linked CBD to addictive disorders (15), while others have linked it to obsessive-compulsive disorder (16), and still others to mood disorders (17). While not included in DSM-IV (18), CBD was included in DSM-III-R (19) as an example of an "impulse-control disorder not otherwise specified". Research criteria have been developed that emphasize its cognitive and behavioral aspects (10). Some writers have criticized attempts to categorize CBD as an illness, which they see as part of a trend to "medicalize" behavioral problems (20). Yet, this approach ignores the reality of CBD, and both trivializes and stigmatizes attempts to understand or treat the disorder.

## EPIDEMIOLOGY

Koran et al (21) recently estimated the point prevalence

of CBD to be 5.8% of respondents, based on results from a random telephone survey of 2,513 adults conducted in the US. Earlier, Faber and O'Guinn (22) had estimated the prevalence of CBD to fall between 2% and 8% of the general population of Illinois. Both research groups had used the Compulsive Buying Scale (CBS) (23) to identify compulsive buyers. Other surveys have reported figures ranging from 12% to 16% (24,25). There is no evidence that CBD has increased in prevalence in the past few decades.

Community based and clinical surveys suggest that 80% to 95% of persons with CBD are women (10-12,23). The reported gender difference could be artifactual: women readily acknowledge that they enjoy shopping, whereas men are more likely to report that they "collect". The report of Koran et al (21) suggests that this may be the case: in their survey, a near equal percentage of men and women met criteria for CBD (5.5% and 6.0%, respectively). However, Dittmar (26) concluded from a general population survey in the United Kingdom, in which 92% of respondents considered compulsive shoppers were women, that the gender difference is real and is not an artifact of men being underrepresented in samples.

The age of onset of CBD appears to be in the late teens or early twenties (11,12,27), though McElroy et al (10) reported a mean age at onset of 30 years. It may be that the age of onset corresponds with emancipation from the home, and the age at which people first establish credit accounts.

There are no careful longitudinal studies of CBD, but the majority of subjects studied by Schlosser et al (12) and McElroy et al (10) describe their course as continuous. Aboujaoude et al (28) suggested that persons with CBD who responded to treatment with citalopram were likely to remain in remission during one-year follow-up, a finding that suggests that treatment could alter the natural history of the disorder. The authors' personal observation is that subjects with CBD typically report decades of compulsive shopping

behavior at the time of presentation, although it might be argued that clinical samples are biased in favor of severity.

There is some evidence that CBD runs in families and that within these families mood, anxiety, and substance use disorders are excessive. McElroy et al (8) reported that, of 18 individuals with CBD, 17 had one or more first-degree relatives (FDRs) with major depression, 11 with an alcohol or drug use disorder, and three with an anxiety disorder. Three had relatives with CBD. Black et al (29) used the family history method to assess 137 FDRs of 33 persons with CBD. FDRs were significantly more likely than those in a comparison group to have depression, alcoholism, a drug use disorder, "any" psychiatric disorder, and "more than one psychiatric disorder". CBD was identified in 9.5% of the FDRs of the CBD probands (CBD was not assessed in the comparison group). In molecular genetic studies, Devor et al (30) failed to find an association between two serotonin transporter gene polymorphisms and CBD, while Comings (31) reported an association of CBD with the DRD1 receptor gene.

## CLINICAL SYMPTOMS

Persons with CBD are preoccupied with shopping and spending, and devote significant time to these behaviors. While it might be argued that a person could be a compulsive shopper and not spend, and confine his or her interest to window shopping, this pattern is uncommon. The author's personal observation is that the two aspects – shopping and spending – are intertwined. Persons with CBD often describe an increasing level of urge or anxiety that can only lead to a sense of completion when a purchase is made.

The author has been able to identify four distinct phases of CBD: 1) anticipation; 2) preparation; 3) shopping; and 4) spending. In the first phase, the person with CBD develops thoughts, urges, or preoccupations with either having a specific item, or with the act of shopping. In the second phase, the person prepares for shopping and spending. This can include decisions on when and where to go, on how to dress, and even which credit cards to use. Considerable research may have taken place about sale items, new fashions, or new shops. The third phase involves the actual shopping experience, which many individuals with CBD describe as intensely exciting, and can even lead to a sexual feeling (12). Finally, the act is completed with a purchase, often followed by a sense of let down, or disappointment with oneself (21). In a study of the antecedents and consequences of CBD, Miltenberger et al (32) reported that negative emotions (e.g., depression, anxiety, boredom, self-critical thoughts, anger) were the most commonly cited antecedents to CBD, while euphoria or relief from the negative emotions were the most common consequence.

Individuals with CBD tend to shop by themselves, although some will shop with friends who may share their interest in shopping (11,12). In general, CBD is a private pleasure which could lead to embarrassment if someone

not similarly interested in shopping accompanied them. Shopping may occur in just about any venue, ranging from high fashion department stores and boutiques to consignment shops or garage sales. Income has relatively little to do with the existence of CBD: persons with a low income can still be fully preoccupied by shopping and spending, although their level of income will lead them to shop at a consignment shop rather than a department store.

Typical items purchased by persons with CBD include (in descending order) clothing, shoes, compact discs, jewelry, cosmetics, and household items (11,12,32). Individually, the items purchased by compulsive shoppers tend not to be particularly expensive, but the author has observed that many compulsive shoppers buy in quantity resulting in out of control spending. Anecdotally, patients often report buying a product based on its attractiveness or because it was a bargain. In the study by Christenson et al (11), compulsive shoppers reported spending an average of \$110 during a typical shopping episode compared with \$92 reported in the study by Schlosser et al (12).

Although research has not identified gender specific buying patterns, in the author's experience men tend to have a greater interest than women in electronic, automotive, or hardware goods. Like women, they are also interested in clothing, shoes, and compact discs.

Subjects generally are willing to acknowledge that CBD is problematic. Schlosser et al (10) reported that 85% of their subjects expressed concern with their CBD-related debts, and that 74% felt out of control while shopping. In the study by Miltenberger et al (32), 68% of persons with CBD reported that it negatively affected their relationships. Christenson et al (11) reported that nearly all of their subjects (92%) tried to resist their urges to buy, but were rarely successful. The subjects indicated that 74% of the time they experienced an urge to buy, the urge resulted in a purchase.

CBD tends to occur year round, although it may be more problematic during the Christmas or other important holidays, and around the birthdays of family members and friends (12). Schlosser et al (12) found that subjects reported a range of behaviors regarding the outcome of a purchase, including returning the item, failing to remove the item from the packaging, selling the item, or even giving it away.

In a study of 44 subjects with CBD, Black et al (33) reported that greater severity was associated with lower gross income, less likelihood of having an income above the median, and spending a lower percentage of income on sale items. Subjects with more severe CBD were also more likely to have comorbid Axis I or Axis II disorders. These data suggest that the most severe forms of CBD are found in persons with low incomes who have little ability to control or to delay their urge to make impulsive purchases.

## PSYCHIATRIC COMORBIDITY

Persons with CBD frequently meet criteria for Axis I dis-



orders, particularly mood disorders (21-100%) (27,34), anxiety disorders (41-80%) (10,12), substance use disorders (21-46%) (11,29), and eating disorders (8-35%) (10,27). Disorders of impulse control are also relatively common in these individuals (21-40%) (10,11).

Schlosser et al (12) found that nearly 60% of subjects with CBD met criteria for at least one Axis II disorder. While there was no special "shopping" personality, the most frequently identified personality disorders were the obsessive-compulsive (22%), avoidant (15%), and borderline (15%) types. Krueger (7), a psychoanalyst, described four patients who he observed to have aspects of narcissistic character pathology.

## ETIOLOGY

The etiology of CBD is unknown, though speculation has settled on developmental, neurobiological, and cultural influences. Psychoanalysts (7-9) have suggested that early life events, such as sexual abuse, are causative factors. Yet, no special or unique family constellation or pattern of early life events has been identified in persons with CBD.

Neurobiological theories have centered on disturbed neurotransmission, particularly involving the serotonergic, dopaminergic, or opioid systems. Selective serotonin reuptake inhibitors (SSRIs) have been used to treat CBD (27,34-38), in part because investigators have noted similarities between CBD and obsessive-compulsive disorder, a disorder known to respond to SSRIs. Dopamine has been theorized to play a role in "reward dependence", which has been claimed to foster "behavioral addictions" (e.g., CBD, pathological gambling) (39). Case reports suggesting benefit from the opiate antagonist naltrexone have led to speculation about the role of opiate receptors (40,41). There is currently no direct evidence to support the role of these neurotransmitter systems in the etiology of CBD.

Cultural mechanisms have been proposed to recognize the fact that CBD occurs mainly in developed countries (42). Elements which appear necessary for the development of CBD include the presence of a market-based economy, the availability of a wide variety of goods, disposable income, and significant leisure time. For these reasons, CBD is unlikely to occur in poorly developed countries, except among the wealthy elite (Imelda Marcos and her many shoes come to mind).

## ASSESSMENT

The goal of assessment is to identify CBD through inquiries regarding the person's attitudes and behaviors towards shopping and spending (43). Inquiries might include: "Do you feel overly preoccupied with shopping and spending?"; "Do you ever feel that your shopping behavior is excessive, inappropriate or uncontrolled?"; "Have your shopping desires, urges, fantasies, or behaviors ever been overly time consuming, caused you to feel upset or guilty, or lead

to serious problems in your life such as financial or legal problems or the loss of a relationship?"

Clinicians should note past psychiatric treatment, including medications, hospitalizations, and psychotherapy. A history of physical illness, surgical procedures, drug allergies, or medical treatment is important to note, because it may help rule out medical explanations as a cause of the CBD (e.g., neurological disorders, brain tumors). Bipolar disorder needs to be ruled out as a cause of the excessive shopping and spending. Typically, the manic patient's unrestrained spending corresponds to manic episodes, and is accompanied by euphoric mood, grandiosity, unrealistic plans, and often a giddy, expansive affect. The pattern of shopping and spending in the person with CBD lacks the periodicity seen with bipolar patients, and suggests an ongoing preoccupation.

Normal buying behavior should also be ruled out. In the US and other developed countries, shopping is a major pastime, particularly for women, and frequent shopping does not necessarily constitute evidence in support of a diagnosis of CBD. Normal buying can sometimes take on a compulsive quality, particularly around special holidays or birthdays. Persons who receive an inheritance or win a lottery may experience shopping sprees as well.

Several instruments have been developed to either identify CBD or rate its severity. The CBS (23), already mentioned, consists of seven items representing specific behaviors, motivations, and feelings associated with compulsive buying, and reliably distinguishes normal buyers from those with CBD. Edwards (44) has developed a useful 13-item scale that assesses important experiences and feelings about shopping and spending. Monahan et al (45) modified the Yale Brown Obsessive-Compulsive Scale to create the YBOCS-Shopping Version (YBOCS-SV) to assess cognitions and behaviors associated with CBD. This 10-item scale rates time involved, interference, distress, resistance, and degree of control for both cognitions and behaviors. The instrument is designed to measure severity of CBD, and change during clinical trials.

## TREATMENT

There are no evidence-based treatments for CBD. In recent years, treatment studies of CBD have focused on the use of psychotropic medication (mainly antidepressants) and cognitive-behavioral therapy (CBT).

Interest in CBT has largely replaced earlier interest in psychodynamic therapies. Several competing CBT models have been developed, the most successful involving the use of group treatment (46-49). The first use of group therapy was described by Damon (46). Subsequent group models were developed by Burgard and Mitchell (47), Villarino et al (48), and more recently by Benson and Gengler (49). Mitchell et al (50) reported that their group CBT model produced significant improvement compared to a wait list in a 12-week pilot study; improvement was maintained during a 6-months follow-up. Benson (51) has recently developed a



comprehensive self-help program which combines cognitive-behavioral strategies with self-monitoring. A detailed workbook, a shopping diary, and a CD-ROM are included.

Several self-help books (bibliotherapy) are available (52-54), and may be helpful to some persons with CBD. Debtors Anonymous, patterned after Alcoholics Anonymous, is a voluntary, lay-run group that provides an atmosphere of mutual support and encouragement for those with substantial debts. Simplicity circles are available in some US cities; these voluntary groups encourage people to adopt a simple lifestyle, and to abandon their CBD (55). Many subjects with CBD develop substantial financial problems, and may benefit from financial counseling (56). The author has seen cases in which a financial conservator has been appointed to control the patient's finances, and appears to have helped. While a conservator controls the person's spending, this approach does not reverse his or her preoccupation with shopping and spending. Marriage (or couples) counseling may be helpful, particularly when CBD in one member of the dyad has disrupted the relationship (57).

Psychopharmacologic treatment studies have yielded mixed results. An early case series suggested that antidepressants could curb CBD (58), and an early open-label trial using fluvoxamine showed benefit (34). Yet, two subsequent randomized controlled trials found that fluvoxamine did no better than placebo (35,36). In another open-label trial (28), citalopram produced substantial improvement. In this particular study, responders to open-label citalopram were then enrolled in a nine-week randomized placebo controlled trial (38). Compulsive shopping symptoms returned in five of eight subjects assigned to placebo compared with none of the seven who continued taking citalopram. By comparison, escitalopram showed little effect for CBD in an identically designed discontinuation trial by the same investigators (39). Grant (40) and Kim (41) have described cases in which persons with CBD improved with naltrexone, suggesting that opiate antagonists might play a role in the treatment of CBD. Interpretation of treatment studies is complicated by the high placebo response rate associated with CBD (ranging to 64%) (35).

The author has developed a set of recommendations (59). First, pharmacologic treatment trials provide little guidance, and patients should be informed that they cannot rely on medication. Further, patients should: a) admit that they have CBD; b) get rid of credit cards and checkbooks, because they are easy sources of funds that fuel the disorder; c) shop with a friend or relative; the presence of a person without CBD will help curb the tendency to overspend; and d) find meaningful ways to spend one's leisure time other than shopping.

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# Financial conflicts of interest in psychiatry

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*The issue of conflicts of interest has brought clinical medicine to an unprecedented crisis of credibility. The situation of psychiatry does not appear to be different from other areas of medicine. The problems caused by the increasing financial ties between the pharmaceutical industry and researchers and clinicians can be addressed only by a complex effort encompassing both the establishment of lines of support of independent researchers who are free of substantial conflicts of interest and better disclosure policies and conduct regulations as to financial ties. Such effort requires a bold shift from current, largely inadequate strategies. In the long run it may entail, however, substantial advantages to patients, clinicians, researchers, the health industry and the civil society at large. Psychiatry, in view of its humanistic and social roots, may lead this effort.*

**Key words:** Conflicts of interest, disclosure, psychotropic drugs, practice guidelines, psychiatry

(*World Psychiatry* 2007;6:19-24)

The proliferating connections between physicians and the pharmaceutical industry have brought the credibility of clinical medicine to an unprecedented crisis (1). The public seems to be increasingly skeptical of clinical medicine, since corporate actions that have placed profit over public health have become regular news in the media (2). Medical journals have been defined by a former editor as “an extension of the marketing arm of pharmaceutical companies” (3). The dangers of medicine’s complicity with big business have been disclosed to the lay public in several books (4-7). In one of these books, John Abramson admirably unveils how propaganda has substituted research evidence in the medical field (7).

More and more voices from academic medicine are questioning the relationship between the pharmaceutical industry and the physicians (8). Conflicts of interest have thus become a major issue of concern in medicine, including psychiatry, and are getting more and more important for medical journals (9). They undermine the credibility of papers which are submitted, their review process, and even the editorial decisions about acceptance or rejection.

The notion of conflict of interest is widely used but may entail different meanings. Margolis (10) distinguishes between conflicting interests and conflicts of interest. The former occur in any situation where competing considera-

tions are presumed to be legitimate. Conflicts of interest, on the other hand, are characterized by individual occupying dual roles which should not be performed simultaneously. Because of the potential for abuse, performing both roles at the same time is considered to be inappropriate. Which roles? For instance, being a researcher and holding a financial interest in an area related to the research one is involved in. Table 1 lists the main sources of conflicts of interest.

I will describe some of the insights that research on conflicts of interest has generated in medicine and psychiatry, and some strategies which may counteract this phenomenon.

## CONFLICTS OF INTEREST IN MEDICINE

In the past decade there has been a

**Table 1** Main sources of conflicts of interest in medicine

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Being a clinician/researcher and:
- an employee of a private firm
- a stockholder
- a member of a company board of directors
- a regular consultant of a private firm
- an occasional consultant of a private firm
- an official speaker of a private firm
- an occasional speaker of a private firm
- getting refunds from a private firm
- recipient of honoraria
- a clinical investigator in a sponsored trial
- recipient of research support from a private firm
- owing a patent

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considerable amount of research, mostly in the US, on the issue of conflicts of interest in medicine. This research has yielded important insights into the dimensions and importance of the phenomenon. Special attention will be given to the psychiatric field.

## Prevalence is very high

The first idea of the prevalence of situations of conflict of interest in scientific research came from a landmark study which appeared in the 1990s. Krimsky et al (11) analyzed 789 articles written by authors from Massachusetts universities publishing in leading scientific journals in 1992. In one out of three cases, at least one author had a vested interest in research. Krimsky et al (11) took a very conservative stand as to what constitutes a financial conflict of interest: owing a patent directly related to the published work; being a major stockholder or executive in a company with commercial interests tied to the research, or serving on the board of directors of such a company. The percentage of cases of conflict of interest would have greatly increased if consultancies and honoraria had been taken into account. The study clearly showed the extent of corporate presence in scientific publishing. These results, however, were systematically downplayed by the scientific community, as exemplified by the

response of *Nature* to them (11).

The same group of researchers addressed the issue of the financial ties with the pharmaceutical industry of the 170 DSM-IV panel members. Ninety-five (56%) had one or more associations with companies (12). The percentage reached 100% among members of the panels on mood disorders and schizophrenia and was above 80% among members of the panels on anxiety and eating disorders (12).

It has been reported (8) that one of ten US physicians is currently engaged in a formal consultancy with investment industry. We should expect this proportion to be much higher in clinical research, including psychiatry, even though there may be differences from one field to another.

### **Disclosure is seldom performed**

Disclosure has emerged as a first and essential step for dealing with conflict of interest contamination in science. But, despite journals' policies, it is seldom performed (in less than 1% of medical articles according to a study by Krinsky (13)). Such disclosure often takes place in the media, instead of coming from the authors or scientific community. For instance, Zalewski (14) illustrates an impressive list of examples where the problem of conflict of interest was associated with important scientific and clinical issues. At times, conflicts of interest may undermine the credibility of scientific data, such as in the scandal over a study on a heart attack medication (tissue plasminogen activator, TPA) published in the *JAMA*, when a reporter from *Newsday* revealed that at least 13 researchers were long-term stockholders of the company manufacturing the drug.

Such scandals have also involved psychiatric researchers (4). A very recent one about an article on vagus nerve stimulation has led to the resignation of the lead author from the editorship of an important journal (15). It is worth mentioning that this scandal was not triggered by an investigative reporter, but by a member of the society which was linked to the journal.

It must be noted that, while disclosure has become standard practice in North American meetings and journals, it has not achieved wide currency in Europe.

### **Scientific societies may be beholden to the drug industry**

Glassman et al (16) investigated whether revenues generated from pharmaceutical advertisements in medical journals create potential conflicts of interest for nonprofit physician organizations that own those journals. They found that financial conflicts of interest were substantial, and some prestigious medical organizations, such as those underlying the *JAMA* and the *New England Journal of Medicine*, could be viewed as beholden to the drug industry. In an accompanying editorial, Lexchin (17) reported on the growing concern about the relationship between the World Health Organization (WHO) and the pharmaceutical industry. The WHO issued a set of guidelines for the diagnosis and management of essential hypertension in conjunction with the International Society of Hypertension. A letter signed by close to 900 physicians and scientists pointed out that the guidelines ignored ground rules of clinical assessment and placed an excessive weight on trials funded by the pharmaceutical companies. This casts serious doubts on the WHO, which has been accepting temporary substitutes of personnel from the pharmaceutical industry. As has been pointed out concerning the diagnosis of depression and the use of antidepressant drugs, the game is clear: to get as close as possible to universal consumption of a drug, either by stretching its indications (e.g., to include demoralization) or by encouraging its preventive use (18). Scientific societies may control medical journals and affect editorial policies and the selection of papers. Further, financial ties may also affect the scientific meetings of those societies. This is something anyone walking in a major society meeting may easily perceive.

### **Authors of clinical practice guidelines are often linked to the pharmaceutical industry**

Choudhry et al (19) examined authors of clinical practice guidelines endorsed by North American and European societies on common adult diseases. Eighty-seven percent of authors had some form of interaction with the pharmaceutical industry (58% had received financial support to perform research and 38% had served as employees or consultants for a pharmaceutical company). In published versions of the 44 clinical practice guidelines, specific declarations regarding the personal financial interactions of individual authors with the pharmaceutical industry were made in only two cases (19).

### **Attending drug sponsored scientific events is associated with an increased prescription of the sponsor's medication**

A review (20) has outlined how attending sponsored continuing medical education (CME) events and accepting funding for travel or lodging for educational symposia were associated with an increased prescription rate of the sponsor's medication. Attending presentations given by pharmaceutical representative speakers was also associated with nonrational prescribing. Wilkes (21) commented on the consequences of the interactions: "Physicians take gifts from drug companies and then spend patients' money to help make the same pharmaceutical industry the most profitable in the world. They recruit 'research' subjects without advising them of the personal financial gain that accrues to them.... All these behaviors are directly opposed to what patients and society expect from us in return for the privileges that have been bestowed". And, as the subtitle of the editorial indicates, when trust goes, so does the healing power of physicians.



## Studies sponsored by pharmaceutical companies are more likely to have outcomes favorable to the sponsor

It has been repeatedly reported that studies sponsored by pharmaceutical companies are more likely to have outcomes favorable to the sponsor (22-25). Industry sponsorship also results in restrictions on publication and data sharing (23) and in selective reporting (26). Perlis et al (25) examined funding sources and authors' financial conflicts of interest in clinical trials published in four leading American journals concerned with psychiatry. Sixty percent were funded by a pharmaceutical industry, and conflict of interest was associated with a greater likelihood of reporting a drug to be superior to placebo. Further, Melander et al (26) analyzed controlled studies of selective serotonin reuptake inhibitors and found that sponsored studies with favorable results were more often published than negative studies. A very good example of this selective publication is given by the scandal following the finding that a major pharmaceutical company allegedly withheld from the medical community clinical trial findings which indicated that a widely used antidepressant had no beneficial effect in treating adolescents (27). This casts serious doubts on the representativeness of the drug trials which are included in meta-analyses (28). Further, even systematic reviews require careful critical appraisal (29,30). Conflicts of interest may affect this appraisal. Evidence-based medicine may thus be a deceptive instrument of propaganda.

Heres at al (31) analyzed the sources of bias which may limit the validity of head-to-head comparison studies of second-generation antipsychotics, such as equivalent dosages, study entry criteria, statistical analysis, reporting of results and wording of findings.

## Often researchers do not own their data

Mello et al (32) explored the legal agreements that exist between industry sponsors and academic investigators.

In 80% of institutions the sponsor may own the data and in 50% the sponsor may write up the results for publication. There have been many instances in the media about the struggles between clinical researchers and pharmaceutical companies as to the publication and analysis of data (14). In most of the instances investigators have been quite alone in their battles. In sponsored scientific presentations at meetings, it is a quite common practice that the slides of speakers are reviewed and approved by the sponsor.

## Independent investigators are a threat to special interest groups

There have been growing concerns about the independence of academic psychiatry (33). We are often led to believe that virtually all clinical investigators should have some ties with the pharmaceutical industry, even though this is not true (8). We are also led to believe that the advertising section of a major medical journal has nothing to do with the editorial section. There is evidence to call such view in question (34). Apparently, it is also possible to buy editorials (35).

When the percentage of investigators with conflicts of interest reaches 100% (as in DSM panels), this means that there is systematic exclusion of independent investigators. They may represent a threat to special interest groups, self-selecting academic oligarchies who are the gatekeepers of corporate interest in scientific information (36). Several examples are available to indicate the degree of retaliation that may be provided to outliers (36).

## WHAT CAN WE DO?

So far, the problem of conflicts of interest in medicine has been conceptualized in naïve terms. The scenario is pictured as the corporate industry (bad guys) exerting more and more pressure on physicians (helpless victims), with the medical journals (good guys) attempting to protect both the physicians

and their patients. The inadequacy of this scenario is reflected by the pathetic outcomes of the efforts to limit the phenomenon. For instance, the *JAMA* rules for reporting industry-sponsored studies require that at least one author, who should not be a firm employee, takes full responsibility for the integrity of the data and that an independent biostatistician should perform or confirm data analysis (37). Does an academic researcher loaded with conflict of interest provide more trust than a firm employee? I believe the contrary is true. Similarly, registration of trials and tougher standard for disclosure are certainly welcome (38), but comprehensive disclosure could not restore public trust as wished.

A crucial problem lies in the lack of a definition of substantial conflict of interest. Are eating a pizza at a drug-sponsored lunch and being a regular consultant to a firm the same thing? Table 2 outlines some tentative criteria which are based on Krinsky et al's work (11). The first two situations shown in the Table 2 involve the concept of continuity of a relationship with a private firm. Indeed, occasional consultancies, grants for performing an investigation, or receiving honoraria or refunds in specific occasions would not be a source of substantial conflict of interest. The latter two situations depicted in the Table 2 indicate major financial sources of bias.

Another issue is that the problem of conflicts of interest has been viewed so far mainly in negative terms: how to limit corporate influence in medical research. There has been little or no emphasis on the fact that the scientific community is draining itself of a reservoir of disinterested experts who can be called upon to advise government poli-

**Table 2** Criteria for the presence of substantial conflict of interest of a researcher

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The researcher meets at least one of the following:

- Being an employee of a private firm
- Being a regular consultant or in the board of directors of a firm
- Being a stockholder of a firm related to the field of research
- Owning a patent directly related to the published work

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cy makers and physicians on the safety and efficacy of treatments, on the hazard of chemicals and on the safety of technology (4). Do we believe that researchers who opted for not having any form of conflict of interest and, by doing this, gave up financial gains, are of special value? Or do we believe that their opinion is in no way different from that of researchers with substantial conflicts of interest and that they are simply a pathetic remnant of the past century? Is the pharmaceutical industry interested in researchers who may cooperate with marketing, as most of the academic physicians who are involved with them now do, or are they interested in independent and critical minds? Not surprisingly, innovative and groundbreaking development of new drugs by the pharmaceutical industry has been extremely disappointing in the past few years (5).

Yet, the experts who are free of conflicts of interest may find increasing difficulties in obtaining appropriate visibility at meetings and in journals and in getting support for their research. It is not that disinterested experts are extinct: it is that they are marginalized by the gatekeepers of corporate interest within public institutions, scientific societies and medical journals.

As a result, if we believe in the value of independent research and researchers and in the need of preserving and promoting this independence, we should endorse the steps which are outlined in Table 3. If a grant agency committee, or a medical journal, or a scientific meeting committee does not include experts with no substantial conflicts of interest, and particularly those who have none, it does not deserve credibility.

For certain positions (e.g., editor-in-chief of a medical journal), the situation should be evaluated on an individual basis. For instance, tie to a single firm, contrary to what is often assumed, allows an easy monitoring of an editor's job (he or she can be excluded from assessing papers dealing with products of that firm), whereas multiple forms of conflict of interest make this control impossible. At times advertising departments appear to influence editorial de-

isions in journals which advertise drugs or devices (39). Such influence may be particularly strong if the editor is vulnerable because of his/her conflict of interest.

Information overload is the key vehicle of pharmaceutical propaganda (40). A psychiatrist may be overwhelmed by scientific articles, often of redundant nature. He or she may become aware of certain articles because of firms pointing to those, or because they appear in very well-known and distributed journals. Yet this may be very misleading. Conflict-free articles (particularly review papers) and purely subscription-based journals should become the focus of attention of clinicians who have become educated to the issue of conflicts of interest (40).

Only in this context, interventions aimed to getting a better control of conflicts of interest may become successful (Table 4). While disclosure has become standard practice in North American meetings and journals, it is still poorly practiced in Europe. It should be emphasized that in psychiatry conflicts of interest may arise not only when there are ties with the pharmaceutical industry, but also when the researchers, for instance, are involved in private schools for training in psychotherapy. Disclosure is the minimal requirement for scientific credibility. It should have a specific time frame (e.g., 3 years). When an endless list of financial ties is provided,

it should be clear that it becomes virtually meaningless, unless the potential implications of such ties are described in a note.

Each scientific organization should have a conflict of interest advisory committee that represents different segments of the organization and that should be a referral point to individual members identifying possible conflicts of interest (41). Scientific organizations may also request disengagement from corporations that abuse public trust (e.g., false advertising, regulatory fines) and do not allow publication of scientific results (42). Individual members of a society can also decline participation in specific meetings or society events (43), or refuse to pay the dues of the society, or write to the journal which was involved in a specific case of conflict of interest (and the letter should be published, whereas this is seldom done with the excuse of lack of space or by not having a dangerous letter section). Members attending a meeting of their association should be able to rate the quality and the influence of the pharmaceutical industry with appropriate evaluation forms and to manifest their dissent (electronic mail is a powerful instrument for it).

The development of specific policies for integrity of agencies and pharmaceutical industries is also important. The American College of Cardiology Foundation and the American Heart Associ-

**Table 3** Lines of support to independent researchers who are free of substantial conflicts of interest

- 
- Priority for obtaining grants from public agencies supported by taxpayer money
  - Priority for scientific societies and medical journals editorship positions
  - Adequate visibility in scientific societies meetings programs
  - Inclusion only of researchers with no substantial conflict of interest in clinical practice guidelines groups
  - Conflict-free investigations and reviews should be emphasized in training and continuing medical education and should have priority in medical journals
- 

**Table 4** Steps to addressing financial conflicts of interest in medical research

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- Disclosure should become the rule in all scientific meetings and journals
  - Each scientific organization should have a conflict of interest advisory committee
  - Individual members of societies and readers of medical journals should express their dissent from presentations and articles biased by conflict of interest
  - Specific policies for integrity in science by professional societies, universities, granting agencies, pharmaceutical companies
  - Independent review bodies (within each field) for examining the issues concerning conflicts of interest
  - Educational plans for recognizing conflicts of interest
-

ation's report on professionalism and ethics (44) may inspire psychiatric associations to take similar steps.

The creation of independent review bodies (within each field) for examining the issues concerning conflicts of interest would be another important step. Such bodies might provide peer support to struggling authors or editors, well beyond the generic, if not ridiculous, encouragement to register unpublished research (45). Further, these bodies may become an important reference to consumers' associations, which so far have not fully realized the importance of addressing the issue of conflicts of interest. A notable exception is represented by the brave battle of a British consumers' association for the recognition of withdrawal reactions following use of benzodiazepines (46) and second-generation antidepressants (47). We should realize that public research money is often invested for the benefit of special interest groups instead of addressing key public health issues.

Finally, professional training programs (e.g., medical school, residency training, etc.) should teach individuals to recognize conflict of interest situations (41) and increase awareness of biased interpretations of research results (28).

## CONCLUSIONS

The problem of conflicts of interest in psychiatry does not appear to be different from other fields of clinical medicine. It can be addressed only by a complex effort on different levels, which cannot be postponed any longer. In fact, either clinical researchers become salespeople (and the main aim of many scientific meetings today is apparently to sell the participant to the sponsor) or they must set out boldly to protect the community from unnecessary risks (36). By choosing the latter course, they should be aware that they will also be defending their own intellectual freedom (48). Psychiatry, in view of its humanistic and social roots, may lead this effort.

## Disclosure

The author has received grant support for his studies from the Italian Ministry of Education, University and Research, the Italian National Research Council, the Italian National Institute of Health and the Carisbo Foundation. He is editor-in-chief of *Psychotherapy and Psychosomatics* (Karger, Basel).

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# Conflicting interests and doing right

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Although Giovanni Fava's title is "Financial conflicts of interest in psychiatry", the definition he gives is a more general one, which I like: "conflicts of interest... are characterized by individual occupying dual roles which should not be performed simultaneously". And he asks which roles these are. In answer, he focuses exclusively upon all those that academics may play for pharmaceutical companies. He could have added roles with a voluntary organization, a charity, a law firm, a department of government, an investment company or any other formally constituted body with interests in the field of psychiatry. But it is part of the current Zeitgeist that pharmaceutical companies are particularly demonized (1).

Is there a current problem? Unfortunately, I must accept that there is. Do some individuals in academia abuse their position in exchange for fees from companies, for example, by putting their names on articles they have scarcely read, let alone written? I am sure some do and it is wrong. Is the influence of industry on medical prescribing excessive? Yes. At present we have far more spent on continuing medical education by companies than by anyone else. But that also represents a failure of healthcare systems funded by governments. Are some roles incompatible one with another? Obviously so: one cannot personally buy and sell shares in a specific company and claim not to have an interest in its success; advising regulatory bodies is an activity that largely precludes working with industry. But the majority of research academics do not, or certainly need not occupy roles that are incompatible with involvement with industry, and many that are most

critical of such contact may have problems of an analogous kind, that they do not have to declare.

To understand why I say this, let us explore a more general definition of conflict of interest – in other words the positions, allegiances or interests that shape the people we are and the decisions that we reach. Some of the most compromising allegiances may be less quantifiable than the fees received from a pharmaceutical company.

Such issues provide part of the reason this debate seems to have become so vitriolic in psychiatry. I believe it taps into a more profound disagreement about the status of drug treatment per se, for what we still call in English "mental disorder". I do not know Giovanni Fava personally, but, from reading his published papers, I would not be surprised if he believes, as I know many social psychiatrists do, that drugs ultimately do not work, or anyway do not work very well, and that psychotherapy or social interventions are superior, or anyway preferable. This is often associated in my experience with a high-minded view that social factors cause or exacerbate mental illness and that ultimate solutions lie in a better society, rather than better medicines. My own position is more or less the opposite of this: I see medicines as holding a primary role for significantly improving the chances that an individual patient may recover from severe psychiatric disorder. I accept the value of pragmatic psychotherapies, but, while drug-placebo differences seem to be magnified by illness severity, psychotherapies tend to look less effective as illness severity increases. Finally, I am pessimistic about social solutions to personal problems. If I have asthma, I want an inhaler: I can complain about the air quality later.

There is a more explicitly political argument, which is also close to the surface in the current controversy. Is the making of money on the back of drug development and sales somehow immoral? It is part of a more general political critique of capitalism, whereof Winston Churchill once remarked: "The inherent vice of capitalism is the unequal

sharing of blessings; the inherent virtue of socialism is the equal sharing of miseries". Those of us who want to see an improvement in the efficacy, tolerability and use of medicines are bound to accept the capitalism of pharmaceutical companies. Innovation may start in academia, but it can only be delivered by companies. Along with that come marketing, consultancy, and hype, and the countervailing forces of government regulation, attention seeking whistle blowers, newspaper-puffed scandals, etc. It is untidy, but it is how a free society works. In my opinion, my patients have benefited directly and significantly from the new medicines licensed in the last 20 years. And there is no doubt, either, that the first generation drugs were a major breakthrough at the beginning of the psychopharmacological era. They were also no doubt a major source of profit to the companies that made them. However, drug companies are for the most part public companies. In other words, we may all benefit through the employment they create, the taxes they pay and the pension funds that invest in them. Further, they spend much more on medical research than any other sector of the economy.

Can we improve the current state of affairs? I agree with Giovanni Fava that the USA is ahead of Europe in relation to policies of disclosure, and that transparency is a minimum essential safeguard. Journal editors need to be vigilant, and learned societies need to decide what the ethos of their meetings is to be and get the balance right: the atmosphere in some is embarrassingly commercial. But to seek to sterilize academic activity from the pharmaceutical industry is to deny a key link between academic innovation and actual delivery of a product to the consumer. There has to be a relationship if we want any more new compounds. And it is a real further concern that, if we protest too much, psychiatry may come to seem not worth the bother.

Finally, while I applaud Giovanni Fava's focus on individual responsibility, I am not convinced that a narrow obsession with what he refers to as un-



necessary risks offers clinical research any kind of intellectual freedom at all. Intellectual freedom comes from a training that instils independence of mind, a sceptical approach to evidence and a taste for the truth. These are classical virtues. I see nothing that should prevent their display in one's relationship with pharmaceutical companies.

## One flew over the conflict of interest nest

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Giovanni Fava has given us an excellent analysis of the development of crisis about commercial conflicts of interest in psychiatry. But there are some grounds to think the entire subject is something of a red herring, or that Fava's position is itself industry-friendly.

If we view the issues from the frame of the past 400 years, and consider where science has come from, then it is clear that a key triumph of the new branch of knowledge lay not just in any of the so often celebrated breakthroughs in physics, chemistry or biology, but rather in the fact that society had found a means to move knowledge forward that overcame the issue of conflicting interests. If they adhered to the scientific method, then the fact that scientists might be Catholic, Protestant, Hindu, Muslim, Jew or atheist was irrelevant.

Aside from these powerful social prejudices, several studies of the scientific process suggest that individual scientists are all but insane. Many of our most famous scientists can be seen to have pursued their goals obsessively and with a conviction that must have appeared to many contemporaries as close to delusional.

But the scientific method, which involved a new emphasis on observable and replicable data, has provided us

### Disclosure

The author currently holds grants from P1Vital, Sanofi-Aventis, Servier, Baily Thomas Charitable Fund, Economic and Social Research Council and Medical Research Council, and in the last year has acted as advisor to Bristol-Myers Squibb, P1Vital, Roche, Sanofi-Aventis, Servier and Wyeth, and accepted honora-

ria for chairing or speaking from AstraZeneca, Bristol-Myers Squibb, Lilly, Eisai, Lundbeck, Sanofi-Aventis and Servier.

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1. Goodwin GM. Conflict of interest is not just about advising pharmaceutical companies. *J Psychopharmacol* 2004;18:447-8.

with a way to overcome both social prejudice and individual idiosyncrasy (1). The success of science lies in the fact of its being a communal and empirical process rather than a process whose success depends on the motives of individual practitioners. It is against this background that *Nature* and other journals cited by Giovanni Fava have been slow to respond to the new proposals for statements of conflicts of interest. Why would scientists in general expect relatively small amounts of money given to a few individuals to undo a system that has tamed far more powerful inner demons than this?

Reframed in this way, the fact that there is an undoubted crisis at present suggests that focussing on conflicting interests as the origin of this crisis may be mistaken. Another option is that the apparent studies and related reviews that are at the centre of this crisis are in fact not scientific – they are a cuckoo's egg in the nest of science. And indeed a key feature of the clinical trial reports and review articles that Fava makes reference to is that they do not conform to the central tenet of science which is to engage with issues that are replicable and/or to make the data publicly available.

The current problem for any aspect of medical science involving therapeutics with agents that are on patent is that a significant proportion of trials now remain unpublished and those that are published are often ghostwritten and bear an ambiguous relationship with

the underlying data (2). Company postings of trials on the internet do little to mitigate this problem. The difficulties are best symbolised by the case of the pediatric trials of selective serotonin reuptake inhibitors, where we have the greatest known divide in medicine between the raw data on an issue on the one side and the published accounts purporting to represent those data on the other. The data can now be seen to indicate that the drugs do not convincingly work and are hazardous, but prior to the release of the data the scientific literature universally portrayed these agents as safe and effective (3). This divide, it is important to note, only came to light as a result of the efforts of journalists and lawyers. It came to light not because they chased the question of conflicting interests but because it seemed obvious to lay people that the data did not add up. To our shame, no clinician or scientist had a hand in questioning the validity of the "science". What lessons can be drawn from this situation?

If companies want to market their product under the banner of science, they can be required to conform to the norms of science. This will require journal editors and academic meeting organizers to refuse publication to articles or presentations on data not freely accessible. Taking a stand like this will challenge the conflicts of journal editors and meeting organizers, but this rather than conflict of interest declarations from individual academic authors or speakers is much more likely to have teeth.

Ghost writers are in fact much more likely to insert conflict of interest declarations into articles or lecture slides

in a manner that conforms to journal or meeting protocols than are academics. If I were employed in a company marketing department I would much prefer to have the field think that all that is wrong is that a few corrupt academics fail to declare competing interests than to have the field think that company practices that restrict access to data while still claiming the moral high ground of science are the real source of the problem.

### Disclosure

The author has been a consultant,

principal investigator, clinical trialist, chairman or speaker at international symposia for, or received support to attend meetings from: AstraZeneca, Boots/Knoll Pharmaceuticals, Eli Lilly, Janssen-Cilag, Lorex-Synthelabo, Lundbeck, Organon, Pharmacia & Upjohn, Pierre-Fabre, Pfizer, Rhone-Poulenc, Roche, Sanofi, GlaxoSmith-Kline, and Solvay. He has been an expert witness for the plaintiff in 15 legal actions involving SSRIs and has been consulted on a number of attempted suicide, suicide and suicide-homicide cases following antidepressant medication, in most of which he has offered the view that the treatment

was not involved. He has also been an expert witness in a number of patent cases.

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## Psychiatry: from interest in conflicts to conflicts of interest

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There was a time when psychiatry was largely influenced by the view that most mental conditions were the result of unsolved inner conflicts. That was a time when the availability of effective drugs for psychiatric disorders was extremely limited, and access to mental health care was also restricted to the very wealthy or to very sick patients, who would be confined in institutions for the mentally ill for long periods of time, and kept apart from society. The emergence of psychopharmacology rapidly changed this panorama, but it has carried novel challenges, not only for clinical practice, education and research, but also for doctor-patient relationships. These changes go in parallel with those of modern societies, increasing the distance between developed and struggling countries, and raise further ethical concerns. This is why I believe that the debate on conflicts of interest, particularly for the financial ones, is difficult to separate from ideology/politics, and this is why

I think that we should take a global approach to it. Hence, as Giovanni Fava rightly points out, clinical medicine and psychiatry are suffering from an unprecedented crisis of credibility, and this has more to do, in my opinion, with increased awareness about this issue rather than with decreased ethical standards or malpractice. Our society is increasingly aware of potential conflicts of interest and this is good for transparency, although one of my arguments will be that some conflicts are more visible than others and, to be fair, our responsibility as clinicians, educators or researchers is to disclose all of them, regardless of their nature. At the end of the day, having a potential conflict of interest is not the same as being necessarily biased or corrupt. Psychiatry has taught that avoiding conflicts is not generally the right way to solve them.

The increasing skepticism about drug development, clinical trials, and publications goes in parallel with the popular view on pharmaceutical industry, which is far from unbiased. It has been reported that people see pharmaceutical companies as business corporations with low ethical

standards such as the arms industry. The paradox is that never in history there were as many regulations, constraints and supervision of drug development, approval, and marketing strategies as nowadays. Hence, this climate comes up from mistakes made by several agents in this drama: the pharmaceutical industry, of course, but also opinion leaders, medical journals, regulatory bodies, politicians, and even clinicians. The raise of evidence-based medicine may also be partly responsible, because evidence is only available for questions receiving funding, and most of the funding comes from companies expecting refunds from their investments. Some of us believe that this would be fair as far as strict regulations and public funding are able to counteract against the risk of relying almost exclusively on company-sponsored evidence-based medicine. Otherwise, evidence-base may become evidence-bias.

Bias may come from two main sources: biases in trial design, and biases in results dissemination. Trial design biases are easier to counteract: for instance, regulatory bodies as the Food and Drug Administration (FDA) in the United States or the European Agency for the Evaluation of Medicinal Products (EMA) in Europe have set their own trial design guidelines for marketing approval (1,2). This strategy

has been successful to avoid marketing of potentially ineffective or unsafe drugs via sophisticated designs or statistical analyses. However, those trials have characteristically high internal validity but poor external validity (3), providing little information about the use and effectiveness of a given drug in clinical practice. Non-regulatory trials, on the other hand, may be more generalizable, but are commonly biased in favour of the novel (expensive) drug. Examples of trial design biases include false non-inferiority designs, enriched designs, underpowered comparator samples, unfair comparator doses, inclusion of patients who are non-responsive to the comparator, unfair rescue medication rules, and “creative” outcome measures favouring the drug of choice. Biases in results dissemination are more difficult to ascertain. The most well-known one is publication bias: positive trials are published while the negative ones remain forever as “data on file”, or at most they are presented at a small meeting as a poster or shown at a website in a very concise format. Conversely, positive trials are re-analysed, subanalysed, and repeatedly published and presented at scientific meetings. Publishing negative trials and making that information available to society is not only the responsibility of pharmaceutical companies, but also of researchers and opinion leaders, particularly those who sit on companies’ advisory boards and have access to privileged information. Confidentiality rules apply to matters that may have to do with competitive research, but if the companies do not put their negative data in the public domain within a reasonable time period, the rights of the patients who voluntarily participated in those trials are being broken. Other sources of bias not as evident as selective publication include unbalanced presentations, which are especially common at but not exclusive of standalone meetings or satellite symposia: exclusion of the comparator arm in placebo-controlled trials, emphasis on certain (favourable) secondary measures, minimization of adverse

events, and many more; again, not only the industry but also academics and speakers should avoid this kind of pseudoscience, and ideally clinicians should be able to identify and criticize those who promote it. Unfortunately, in most countries the only source of continuing medical education (CME) is the pharmaceutical industry, so, even when there are no biases as those mentioned so far, the focus of the meetings is rarely free of indirect or direct financial interest. Here, national governments and scientific societies also have their responsibility. In Europe, CME credits are not well implemented and this carries higher risk of unbalanced meeting programmes and poor attendance to scientific sessions. Finally, the issue of treatment guidelines deserves further discussion: while recusal of experts with potential conflicts of interest would leave them practically orphan of any expertise, the fact is that the evidence-bias discussed above, which has more to do with the dearth of independently sponsored trials than with the potential interests of the advisors, makes them often more supportive to newly marketed drugs than to cheap, old compounds (4,5), such as lithium, which has been decreasingly prescribed in many countries despite the evidence that it is effective and may have unique antisuicidal properties (6,7). Boyd and Bero (8) have recently reviewed the management of conflicts of interest in guidelines development and they recommend a standard policy requiring all financial ties to be made public in advance.

Everything that we discussed so far suggests that something should be done to increase the integrity and credibility of pharmaceutical companies, journals, meetings, authors, and presenters. Fava is right when he says that disclosure is simply the minimal requirement for scientific credibility. Systematic feedback is another advisable practice: I think that every scientific meeting should provide feedback forms including a specific score for scientific balance for every presentation. Scientific societies and editorial boards should have a conflicts of in-

terest advisory committee to discuss the feedback provided by meeting attendees and readers (9). I do not think, though, that we should make the mistake of considering potential conflicts of interest as something necessarily bad. Having a potential conflict of interest does not mean at all that whatever that person says or writes is biased; excluding highly respected academics from editorial boards or meetings just because they have a potential conflict of interest would lead to the total fall of clinical research, with enormous impact on the number and quality of new drugs becoming available for the treatment of most conditions, including mental disorders. Consistently, most research subjects and patients understand and accept conflicts of interest (10) and some of them actually encourage them as far as they may carry benefit for the people (11). The best experts in certain conditions have generally multiple potential conflicts of interest, but at the end of the day what makes them attractive for patients, clinicians, trainees, governments and pharmaceutical companies is their credibility, and credibility is hard to achieve and easy to lose. At the end of the day, conflicts of interest are not always a bad thing: they correlate with interaction between public and private health care providers, and some of us believe that the best health care system is neither purely public nor purely private, but every effort should be made to ensure that the interest of a few does not go over the interest of society, the integrity of clinical research, and the progress of medicine.

Some potential sources of conflicts of interest do not seem to be as popular or scandalous as the ones that come up from the marketing of pharmaceutical companies, even though they may be an important source of bias in education and clinical practice. First of all, not all conflicts of interest are of financial nature; in fact, a very oppositional attitude towards the pharmaceutical business may carry political or professional benefits; others have actually made a lot of money with books reporting “drug compa-

nies malpractice". Finally, some financial conflicts of interest that are rarely disclosed are the ones belonging to the public health care sponsors: the government, the local authorities, and the hospital managers, whose interest is generally to avoid spending money on the most expensive drugs. In several countries, physicians get supplementary income if they are able to save money from the pharmaceutical expense; in certain hospitals, expensive drugs are not provided even though they have an approved indication; and in the editorial arena, some government-sponsored publications show a bias against new expensive drugs which is only comparable to the bias of company advertisements in favour of their drug.

In conclusion, I would agree with Fava that medicine and psychiatry's credibility is in crisis. But, at the end of the day, I do not think that there is such thing as somebody free of conflicts of interest. Conflicts are dimensional, not dichotomous, and they may have ideologic, financial, social, or academic nature, but they always carry the risk of biasing the information. Moreover, readers and clinicians are not just clueless, passive receptors of information, and there is plenty of examples of highly promoted drugs that were not successful at all once prescribers noticed that they would not solve their patients' problems. But we need to hear their voice in this regard. To increase the credibility of psy-

chiatry, I would improve the tools to get actual and honest feedback from meeting attendees and journal readers, I would implement a true and effective CME credits policy, I would encourage governments and scientific societies to promote independent clinical trials, and I would request all journals in Medline and scientific meetings to include a full disclosure of financial and non-financial potential conflicts of interest at the beginning of every presentation or article. Credibility, as mental health, is not a matter of absence of conflicts, but a matter of overcoming them.

#### Acknowledgements

Supported by the Spanish Ministry of Health, Instituto de Salud Carlos III, Red de Enfermedades Mentales (REM-TAP Network).

#### Disclosure

The author has acted as a consultant, received grants, or been hired as a speaker by the following companies: Almirall, AstraZeneca, Bial, Bristol-Myers-Squibb, Eli Lilly, GlaxoSmithKline, Janssen-Cilag, Lundbeck, Merck Sharp & Dohme, Novartis, Organon, Otsuka, Pfizer, Sanofi Aventis, Servier, UCB. He has acted as consultant and has received grants from the Spanish Ministry of Health and from

the Stanley Medical Research Institute.

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## On the propriety of collaborations between academicians and the pharmaceutical industry: an alternate viewpoint

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Giovanni Fava convincingly summarizes the many reasons why the relationships between the for-profit indus-

tries and academicians – as well as physicians more generally – are very serious matters and may adversely affect both society's confidence in the medical profession and the integrity of the evidence base that helps to guide selection of treatments. As my own experi-

ences are those of an academician who does several different kinds of work with the pharmaceutical industry, I will generally limit my comments to this area.

After decades of denial and minimization, there are now sufficient data



on the impact of unmanaged conflicts of interest to justify the conclusion that speaking for, advising/consulting, and doing research with pharmaceutical industry can influence opinion leaders' evaluations of the industry's products. Most often the nature of this effect is a positive bias, which can result in overvaluation of a treatment's strengths and underappreciation of that therapy's limitations. The net result of such bias could be overly favorable presentations at scientific meetings and/or insufficiently critical interpretation of results or conclusions in manuscripts, which ultimately could result in greater use of that treatment and higher profits for the manufacturer.

Fava has correctly pointed to a number of notorious cases involving purportedly unreported conflicts of interest that have been an embarrassment to the broader academic community, with several recent cases specifically involving psychiatry. Although the initial public presentations of these "scandals" often did not fairly reflect the facts of the cases, there is the growing public perception that all collaborations between academicians and the pharmaceutical industry are unseemly and, at best, suspect. For these reasons and more, academicians must examine their relations with the pharmaceutical industry with much greater scrutiny than ever before, and think much more carefully about the potential for conflicts of interest and strategies to manage such conflicts.

Before turning to our more specific areas of agreement and disagreement, it is important to clarify that the pharmaceutical industry is a heavily regulated business, which does produce medications that can save lives and reduce human suffering; few of our currently used psychiatric medications have been developed by alternate (i.e., governmental, academic, or not-for-profit) agencies. When practicing within accepted ethical guidelines, it is not inherently a conflict of interest for an academician to earn income from working with a drug company. Such financial relationships do have the *potential* to cause conflicts of interest, however, and as such they must either be avoided (as

suggested by Fava) or properly managed (the approach that I recommend)

One factor that complicates debates such as this is that "accepted ethical guidelines" for managing potential conflicts of interest are continually changing. Thus, when the standards of today are applied to work completed a decade ago, it should be no surprise that a large proportion of academicians appear to fall short of the standard. And, no doubt, the same will be true when the standards of 2017 are applied to work performed today.

I fully agree with Fava that effective management of the potential for conflicts of interest represents one of the major challenges facing academic medicine in the 21st century. Moreover, I feel strongly that we must come to terms with these issues in order for collaborations between academicians and industry to continue, which I believe offers the best opportunities for development of improved therapeutics. As I have written about previously (1,2), however, the pharmaceutical industry is not a monolithic evil and, despite being in business to earn profits for stockholders, all of the companies and the vast majority of people who work in the pharmaceutical business want to develop – and sell – new and improved products that really do help humanity. And, although it is true that new (patent-protected) medications are too expensive for many people and a large proportion of publicly funded health care agencies, it is also true that – without first introducing these new drugs "on patent" – there would be no newer generation generic medications after patents expire.

As is often the case in polemical papers, Fava focuses on the negative side of this issue and does not give proper credit to the legitimate contributions of the pharmaceutical industry to improved public health and the potential benefits that can result from academic-industry collaborations (e.g., improved research designs, research on pharmacogenomics, development of biomarkers, etc.), if the potential for conflicts of interest is properly managed. Although I share Fava's disdain for the practice of selective publication (i.e., suppression

of "negative" studies), I do not think that it is fair to describe as pathetic the industry's efforts to create study registries and to make all data from all relevant trials available for meta-analysis. Nor do I view the potential benefits of longer-term antidepressants for patients with highly recurrent forms of depression to be "propaganda".

Giovanni Fava also largely fails to deal with the potentially deleterious effects that noncontractual or uncompensated conflicting interests can have on "scientific" matters, such as those related to different schools of thought, sociopolitical positions, interpersonal rivalries, or even spiritual, religious, or quasi-religious beliefs, which are virtually never acknowledged and also have shown to have potential negative effects on both professional relations and the design, interpretation, presentation, and publication of research results. As one example, it should be recognized that academicians who strongly believe that the pharmaceutical industry conducts shoddy research often provide negatively biased evaluations of industry-sponsored studies.

With respect to management of potential conflicts of interest, who in 2007 can argue against full disclosure and transparency? To take such an untenable position would reflect both ignorance of the data and insensitivity to the issues involving public trust. In fact, in order to avoid even the appearance of trying to conceal ties with industry, I (along with most colleagues that I know who do work with the pharmaceutical industry) have begun to report all financial relationships in all manuscripts, regardless of relevance of the paper to the pharmaceutical industry.

I also agree with Fava that expert consensus panels should include individuals (clinicians, researchers, and patients and their family members) with no industry ties, although I disagree with the notion that individuals with such ties should be systematically excluded. Parenthetically, the fact that 100% of the DSM-IV panelists for mood disorders and schizophrenia had some industry relationships reflects the ubiquity of these relationships in the

1990s, not the systematic exclusion of those without such ties.

As one of the so-called gatekeepers at the industry sponsored symposia at the American Psychiatric Association's annual meetings, I can report that there is no pressure whatsoever to pick faculty from a select "oligarchy" of colleagues who work with industry (we are, in fact, strongly encouraged to recruit a very diverse faculty for these presentations). Our other continuing medical education (CME) talks are independently reviewed to ensure a lack of commercial bias and, unless the talk is explicitly promotional (i.e., clearly labeled as such), the rules are clear: industry representatives must keep their hands off the material. Although I am not immune to commercial bias, I am fairly certain that I have a greater risk of unrecognized bias when presenting work that I have performed and findings that are consistent with my clinical beliefs. Consistent with this view, although it is true that industry sponsorship does have an effect on study outcome (e.g., 3,4), it is also true that – in work not sponsored by the pharmaceutical industry – much larger effects have been associated with an investigator's allegiance to particular models of psychotherapy (5).

With respect to advising and consulting, I cannot see how the public health could be benefited by mandates that prevent the pharmaceutical industry from utilizing the input of experts. At one point, Fava wonders out loud:

wouldn't the pharmaceutical industry want to hear the opinion of someone – like himself – with an unbiased opinion? I am sure that they would and often do. But, given Fava's stated position, wouldn't he have to decline the invitation or, if he accepted it, wouldn't he no longer qualify as an unbiased advisor?

I likewise disagree with the merits of prioritizing governmental research funding for investigators with no industry ties. Could a system that arbitrarily excludes some of the best and brightest scientists actually result in better science? In this case, the remedy may be much worse than the malady.

I admire the stand taken by Fava, as well as his disciplined adherence to a personal code of conduct that eschews industry support. There are legitimate differences of opinion here and I would not be surprised if our disagreements herein might be mirrored by similar differences in sociopolitical world views. I am glad that there is such a diversity of opinion on this matter and remain optimistic that the dialogue between those who are and are not interested in working with industry will lead to better ways of managing the very real potential for conflicts of interest and ultimately will result in better treatments for our patients.

#### Disclosure

The author has been advisor or

consultant for AstraZeneca, Bristol-Myers Squibb, Cephalon, Cyberonics, Eli Lilly, GlaxoSmithKline, Janssen-Cilag, MedAvante, Neuronetics, Novartis, Organon, Sepracor, Shire US and Wyeth. He has accepted honoraria for chairing or speaking from AstraZeneca, Bristol-Myers Squibb, Cyberonics, Eli Lilly, GlaxoSmithKline, Organon, Sanofi-Aventis and Wyeth. He has an equity holding in MedAvante. He has received royalties from American Psychiatric Publishing, Guilford Publications and Herald House.

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## Staying true to mission

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I am probably not the only reader who responded with defensiveness and irritation to the strident tone of Giovanni Fava's commentary. Nevertheless, when my higher cortical functions returned, I found myself in substantial agreement with his concerns.

We face a wave of public mistrust that has not yet crested. In truth, ethical breeches have occurred. The integrity of psychiatry and all of medicine requires that we take bold, earnest, prompt steps to remedy this.

I approach this issue as a physician and psychiatrist, a university professor and department head, an editor, and a teacher. As my declaration of interest statement will reveal, I have also con-

sulted to many pharmaceutical manufacturers. I chair the work group revising the American Psychiatric Association's guidelines for the treatment of major depressive disorder. Thus, all aspects of this multifaceted issue come alive within my own consciousness.

To make informed decisions, one must be able to gather sufficient data to inform those decisions. This applies to clinical choices made by patients and clinicians. If an author, scientist, speaker, or guideline writer has an agenda other than to inform and educate, as

Giovanni Fava notes, a serious ethical breach is likely.

In a world of infinite resources, it would be comparatively easy to heal this lesion. All scientists and scholars could have access to neutral resources, i.e., funding without “strings”. When asked to render opinions on matters of public health importance, this untainted brain trust could opine from a position of objective altruism.

In today’s real world, however, with constrained resources and imperfect systems of oversight, we need iterative steps to earn the public’s trust. Immediate solutions are transparency and proportionality. Journals, including the one I edit, are broadening the definitions for interests that must be declared by authors and reviewers. Journals are entertaining consequences for failures to disclose. Universities may be informed of ethical breaches, and journals will be reluctant to accept future submissions from offenders. At the very least, this growing transparency will allow consumers (including medical and

lay readers) to make more informed decisions based on the source of information and potential biases.

Proportionality is another important component. Because the pool of expertise is limited in most areas of medicine, including psychiatry, the government, professional organizations, and private industry turn to the same pool of experts to serve as consultants. Many of us function in this manner and provide input in multiple settings. In screening members to serve on its work groups on practice guidelines, the American Psychiatric Association establishes *de minimis* standards in which the proportion of a scholar’s income is examined to assess magnitude of possible influence. Thus, a small proportion of a professor’s income that comes from consulting to multiple sources is less likely to have a major hold on that scholar’s opinion than if 50% of one’s income comes from a single source. To pick up one of Giovanni Fava’s examples, a pizza is less likely to influence opinion than a mansion on the Riviera.

The same issue of proportionality holds true of organizations. The American College of Neuropsychopharmacology has recently elected to “tighten its belt” by spending less on its annual meetings, thereby reducing its dependence on industry funding. This is a conscious and value-based decision to diminish both the perception and the actuality of industry influence.

As physicians and scientists, our esteem in society is based on the public’s trust. That trust is eroding, and we must take immediate and serious steps to earn it back.

### Disclosure

The author has been a consultant for Eli Lilly, Pfizer, Best Practice, Astra Zeneca, Wyeth, Cyberonics, Novartis and Forest. He owns stock options in Vela Pharmaceuticals. He is editor of the *Journal of Clinical Psychiatry*.

## Conflicting views on conflicts of interest in medicine

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I would like to divide my commentary on Giovanni Fava’s paper into two parts. Firstly, I will discuss style and tone and secondly content.

As scientists – and Fava, I am sure, fits this category – we should be guided by the principle *sine ira et studio*. At least the former is not adhered to in Fava’s remarks. I understand that he has a strong opinion regarding the issue of conflicts of interest, but I feel that a more balanced and less affectively charged manuscript would have helped his cause more. Merely repeating accusations and unfounded insinuations, which have

been unfairly generalized to the whole field in the past, will only jeopardize a rational discussion of the problem. Consequently, those of us, and I trust we are many, who believe that the field needs to actively tackle the issue, will be taken aback and disengage from discussing the matter. As I firmly believe that we need this discussion, from both the perspectives of scientific ethics and integrity and of the distorted public view of it, I find the style and tone of Fava’s comments regrettable.

The 1850 edition of the Webster Dictionary defines conflict of interest as “a conflict between private interests and official responsibilities of a person in a position of trust” (I believe this was cited by Ira Glick at the 2006 Meeting of the American College of Neuropsychopharmacology).

This nicely outlines the point that I would like to make in the following, namely that the issue goes way beyond financial interests, although most of the public discussion, especially in the lay media, has focused on these. All of us face conflicts of interest regularly in our professional lives. For instance, we may see a manuscript sent to us for review in a more favourable light if it approvingly cites our own work. When writing up scientific papers, we may be more eager to report data which support our hypotheses than those who do not. As journal editors, we could be more willing to accept a manuscript which is likely to drive up the impact factor of the journal. As conference organisers, we may put more emphasis on topics which suit our own interests. As librarians, given the choice to spend the rest of the library budget on a book on the same topic written by a friend or by a stranger, we may favour our friend’s

book. As clinicians, deciding among drugs of similar efficacy and safety profile, we may recommend the one that the company representative has just left a package of, and so on.

These few examples dealing with various aspects of a clinician/scientist's job represent an incomplete list of everyday challenges to our work ethics. Many of them are much more subtle than financial conflicts of interest, but yet of at least comparable relevance. In addition, monitoring these types of conflicts is considerably more difficult than the tracking of financial relationships, which may be one of the reasons why the latter have become much more the focus of the debate.

The field is charged with a challenge that, I believe, must be targeted from within the scientific community. While declarations of financial conflicts of interests on publications, during scientific meeting, etc. help to enhance transparency, all the other potential conflicts call for additional measures. I am convinced that the concept of peer review, if taken really seriously, can be the strongest force in this struggle. Peer re-

view can function as a continuous self-monitoring instrument. We have to revive the skill of reading between the lines of manuscripts we are reviewing and point out potential conflicts of interests to editors, who need to make such remarks part of their decision process. Journal editors should explicitly ask their reviewers to look at manuscripts under this aspect, just as they require to judge the ethical standards of studies under review. (As a bynote, open access publishing and open peer review will not make the task easier). Similar rules should apply to the grant review process and to program committees of scientific meetings. Conflicts of interest have to be identified in such settings and individuals affected by them must be excused from the decision process.

Some international societies have already established committees to provide guidance regarding these matters. Again, the scope must go beyond the relationships between scientists and the pharmaceutical industry. Clearly, such rules should not be buried in the minutes of the relevant committees, but

actively communicated to the field and the public. Societies should not only set up rules but also suggest means to oversee compliance with these standards. Let us not leave this important business to self-appointed watchdogs, but assume a leading role ourselves, as a strong responsibility of and for our field.

At the 2006 meeting of the American College of Neuropsychopharmacology, David Braff stated that "conflict of interest is the entry of wrongdoing not wrongdoing in itself", and I would submit that we all need to be sitting near the entryway to make sure that nobody harms the field by crossing the line.

## Disclosure

The author currently receives research support from AstraZeneca, Janssen-Cilag, Pfizer, Sanofi-Aventis and Servier. He has received consultancy/speaking honoraria in the past year from AstraZeneca, Bristol-Myers Squibb/Otsuka, Janssen-Cilag, Pfizer, Servier and Wyeth.

# Conflicts of interest and the credibility of psychiatric research

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The credibility of psychiatric research has been seriously compromised of late, undermined by both real and perceived – and some would argue all-too-pervasive – financial conflicts of interest (COI). Giovanni Fava underscores the seriousness of the problem, which he fully acknowledges is not unique to psychiatry but extends to virtually all fields of medicine. In fact, we believe the problem of financial (and other) COI could well erode the credibility of the entire enterprise of academic medicine, if not properly and promptly ad-

ressed. Financial COI are also not limited to pharmaceutical research and can occur wherever (and whenever) profit-seeking companies interact with either the academic-research or clinical care communities. We would also submit that financial COI are not the only COI that threaten the credibility of academic medicine. Indeed, most of the recently publicized and egregious cases of scientific misconduct and outright fraud have for the most part involved other (non-financial) forms of COI among academic investigators (1). Given the complexity and pervasiveness of the problem of COI in medicine, it seems unlikely that they can be completely eliminated, nor is a simple solu-

tion likely to be found. With respect to COI in psychiatric research, we offer the following brief commentary.

First, like Fava, we believe that full transparency, including full disclosure of any potential COI, is absolutely essential. We also concur that the problem with "full disclosure" is often defining (and then disclosing) what exactly constitutes a "substantial COI". Our experience suggests that for industry scientists such transparency is relatively straightforward but it is often much more obscure for those working in academia or government. For example, simply listing the existence of consulting relationships with industry for a given academic investigator (e.g., on scientific publications), as is now customary, is insufficient in our opinion to establish whether or not a substantial "financial" COI exists. The criteria listed by Fava for establishing a substantial COI



are a good start, but in our experience “the devil – i.e., the extent of such relationships – is always in the details”. As suggested by Freedman et al (2), academia and the pharmaceutical industry need to set their ethical boundaries and standards. We propose that, in order to be embraced by industry and academic scientists worldwide, codes of conduct regarding research collaborations need to be further developed jointly and embraced at national levels by institutions such as the American College of Neuropsychopharmacology and globally by associations such as the WPA.

However, we emphasize that, beyond enhancing efforts to fully disclose and minimize potential COI, attempts to eliminate investigator bias, regardless of the source of funding, and to independently verify results of important studies become paramount. Rothman (3) has proposed that the value of the results should not be tainted by the affiliation or source of funding (nor by any other obvious non-financial COI), but rather assessed on the basis of the methodology employed. We do not argue that industry-funded research, nor publicly-funded research for that matter, is (or will ever be) completely free of bias, but that the solution is not to focus solely on the funding source or potential COI. More importantly, efforts should be directed at assuring that the research methodology employed is sufficiently robust to avoid such bias in the first place. In our extensive experience in conducting research in both industry and academia, we are impressed with

the methodology and rigor employed to minimize investigator bias in most industry-sponsored clinical trials. We maintain that, contrary to the views of some, industry actually has a vested financial interest in generating valid, reliable and reproducible data on compounds either in development or on the market. Results from industry studies are thoroughly scrutinized by regulatory agencies around the world. Poor methodology will lead to non-approval of new products or indications with the obvious financial consequences.

We also believe that efforts to allow for independent verification of research results, from academia, industry or government studies, should be enhanced. For industry-sponsored clinical trials, regulatory agencies, such as the Food and Drug Administration (FDA) and the European Agency for the Evaluation of Medicinal Products (EMA), receive all relevant data on given compounds, and such data is often independently analyzed by these regulatory agencies prior to review and approval. More recently, companies such as ours ([www.lillytrials.com](http://www.lillytrials.com)) have created comprehensive clinical trial registries and websites where clinical trial data on all marketed products are routinely posted ([www.clinicalstudyresults.org/home](http://www.clinicalstudyresults.org/home)) and are readily accessible by the public. We also support, in principle, efforts to verify data prior to publication in peer-reviewed journals, but again would argue that such verification should occur irrespective of the funding source or potential COI.

So, like Fava, we too are concerned that the problem of financial (and other) COI, if not adequately addressed, may completely erode the credibility of psychiatric research and thus undermine the essential trust that patients have in their physicians and in the treatments they prescribe. We believe, however, that productive and meaningful collaborations between industry and academia (as well as with the clinical care/practice community) are not only possible but are absolutely essential for the development of new therapeutics in psychiatry. Better definitions of the nature of such collaborations, including their boundaries, are therefore desperately needed.

#### Disclaimer

The authors are solely responsible for the content of this commentary, which should not be considered as an official position of Eli Lilly and Company.

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## A counter proposal to manage financial conflicts of interest in academic psychiatry

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As stated by Giovanni Fava, the issue of financial conflicts of interest in medicine, and in psychiatry in partic-

ular, has strained the credibility of academic researchers in the eyes of the public as well as fellow physicians. Fava documents legitimate criticisms leveled against the pharmaceutical industry. He suggests that part of the solution is to establish a system to support a group of experts who are free of

financial conflicts of interest and who can act as arbiters of truth and can evaluate available evidence with a dispassionate and objective eye. These groups can then produce conflict-free reviews and advise other groups (governments, hospitals, other physicians) who make financial and policy deci-

sions about risks and benefits of psychiatric treatments.

Fava's proposals have substantial merit. It would be ideal to have some system to support objective physician researchers who could provide the services outlined. And his call for training in recognizing the effects of conflicts of interest and potential bias is reasonable. But, ultimately, the solution outlined may not serve the public as well as he suggests. In some ways, the problem of conflicts of interest brings up the business of medicine and the pharmaceutical industry. Is the capitalistic system that focuses on profit good or bad for patients? Is the pharmaceutical industry focus on marketing – and the explicit or implicit cooperation of experts in marketing – the actual culprit as opposed to academicians' financial conflicts of interest? If experts are to have relationships with industry, what type of relationship between expert clinical researchers and pharmaceutical companies would serve patients best? Can drug development be improved with the input of experts or would drug development be better served by excluding those experts in order to manage financial conflicts of interest? I will make the case that a mutually beneficial relationship between experts and industry, with clear ethical rules, can help patients, and that excluding experts from this process may impede drug development. I will also argue that non-financial conflicts of interest are just as important as financial ones and these, too, need to be understood and managed.

I write this commentary as one who has evolved from rejecting any industry influence on practice (I rejected the offer of a free stethoscope from Eli Lilly during medical school) to someone who has collaborated with the pharmaceutical industry whenever I felt that it would eventually benefit patients. I believe that my relationships with industry are mutually beneficial and I value my relationships with the companies that produce the medications that help my patients. I also believe that, without the capitalistic for-profit motive of the pharmaceutical

industry, we would not have any innovative treatments. Few, if any, treatments have arisen from government alone or from non-industry sources.

At their best, pharmaceutical companies want to make a profit by helping patients and want to help patients while making a profit so that they can afford to make new treatments and repeat the cycle. At their worst, pharmaceutical companies market medication through direct and physician advertising and continuing medical education (CME) symposia that act as hidden (or not so hidden) marketing. I worry that we have abrogated our responsibility for our ongoing post-graduate education and, instead, we have deferred to industry to fund it. This type of pseudo-education is justly criticized by Fava. I fear that there is a dearth of independently funded CME or at least CME that, if funded by industry, includes a firewall that separates it from marketing. One such CME with a firewall has been launched by the Massachusetts General Hospital Psychiatry Academy ([www.mghcme.org](http://www.mghcme.org)). Within the site, interested readers can find the integrity policy and statement, view some of the content, and make a decision about the effectiveness of the firewall. Several pharmaceutical companies fund the Academy, but none have any input into content or speakers. But, relevant to this commentary, is it a conflict of interest for me to include the Academy website? While I teach for the Academy, I get no additional revenue from writing about it here. Nor will I get invited to give more talks for the Academy because it is listed here. The results of any study or any review that I publish have no bearing on my invitation to teach.

Would drug development be helped by excluding some experts from participating in industry-academic relationships and, in effect, serve as industry watchdogs? I think not. Industry needs the perspective of those physicians who best know the disorders of interest. Which relationships constitute an acceptable conflict of interest and which are unacceptable? Giovanni Fava outlines a reasonable set of

criteria to define sources of financial conflict of interest, but it is less clear which of these will lead academics to be unacceptably biased such that they will minimize risks and magnify benefits of drugs. A more challenging question is "What would constitute an ethically acceptable, mutually beneficial relationship between academics and industry?". I propose that such a relationship be guided by ethical behavior that ultimately helps patients and avoids any harm.

I am not so sure that developing panels of independent researchers/academics that are completely free of relationships with industry will solve the problems so well outlined by Giovanni Fava. His solution may veer to the other side by assembling a group that has a negative bias against industry and innovation – without any way to disclose, manage, or check this. His proposal to have professional training programs and the recognition of conflicts of interest can, however, be practical and should be implemented. Such training in critical thinking about any evidence and the detection of any bias, no matter its source, should be an integral part of any training program.

Finally, non-financial conflicts of interest can also contaminate research and produce unacceptable biases. These non-financial conflicts of interest include advancing one's career, academic promotion, achieving success, attracting non-industry funding, pride, status, power, fame, prestige, recognition, and a desire to avoid impeding the progress of research (through membership in institutional review boards) (1-3). Foster warns us that "we are expected to have a dominant commitment to serving others, rather than to personal gain" (2). Yet, he also outlines the varieties of activities that can lead physicians astray, since their most human of motivations will still respond to reward and he acknowledges that the "tension between altruism and self-interest is unavoidable". Korn further warns: "Those who propose new remedies to deal with financial conflicts of interest in aca-

demic biomedical research should take care that in their zeal to recreate an idealized state of virtue in which financial conflicts of interest no longer exist, they do not interdict a developmental pathway of immense social benefit" (3).

That a group of experts free of financial conflicts of interest would be free of non-financial conflicts of interest is probably unrealistic. That academic researchers can strive to achieve the highest levels of ethical behavior in their dealings with industry and attempt to minimize bias may be equally unrealistic, but should be the goal. Perhaps the solution to the problem of

conflicts of interest is somewhere in the middle between Fava's stance and the one I have outlined here: partial support of experts from impartial financial sources and peer oversight of activities which have even the appearance of bias due to conflict of interest.

#### Disclosure

The author has provided scientific consultation for Eli Lilly, Genaisance, GlaxoSmithKline, Innapharma, Sepracor, Shire, Novartis, Cephalon, Abbott, Pfizer and Brain Cells, Inc. He has received research support from Bristol-

Myers Squibb, Cederroth, Cyberonics, Forest Pharmaceuticals, Janssen Pharmaceutica, Lichtwer Pharma, and Pfizer, and research support and honoraria from Eli Lilly, GlaxoSmithKline, and Wyeth-Ayerst Laboratories.

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## What is the impact of financial conflicts of interest on the development of psychiatry?

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In recent years the relationship between drug companies and psychiatry has received an increasing attention from physicians, scientists and the media. Some authors support the notion that this relationship is having a negative influence on clinical practice and medical education, threatening the objective and independent development of mental sciences. According to this position, psychiatrists should avoid or minimize the interaction with pharmaceutical companies (1,2). On the other hand, some professional leaders have suggested that a substantive relationship between doctors and the drug industry is necessary and beneficial, and that any commercial influence mediated via this relationship does not harm significantly the future of psychiatry (3,4).

In the last couple of years, serious doubts have been raised about the reliability of drug trials. In a study by

Perlis et al (5) on 162 randomized, double-blind, placebo-controlled trials, those involving potential conflicts of interest were 4.9 times more likely to report positive results; this association was significant only in the subset of pharmaceutical industry-funded studies. Concerns have been also expressed about the promotional tactics used by the industry to display the results of these studies. The medical research community has tried to address the problem by proposing measures like the introduction of a clinical trial registry. However, several studies have shown that these measures are insufficient and a more radical reform of the clinical trials regulation is needed.

Conflicts of interest have also been reported in the elaboration of clinical guidelines and the definition of diagnostic entities and classifications. It has been reported that a substantial percentage of the DSM-IV panel members had a financial tie with the pharmaceutical industry (6). With regard to clinical guidelines, a recent comparison of meta-analyses concluded that

"industry supported reviews of drugs should be read with caution as they were less transparent, had few reservations about methodological limitations of the included trials, and had more favorable conclusions than the corresponding Cochrane reviews" (7). An important scientific journal has recently introduced the concept of "corporate-sponsored disease", suggesting that pharmaceutical companies, with the collaboration of physicians, are increasing the number of prescriptions of certain psychotropic agents by mongering diseases (8).

According to some sources, at least 10% of the physicians in Europe and the US have close relationships to pharmaceutical companies (9). In Latin America this percentage may be even higher. In the last decade, international pharmaceutical companies have created close links to local private research managing organizations in order to run multicenter drug trials with local investigators. In most of the cases the institutions sponsoring these trials are the owners of the data.

In Chile, the main medical scientific societies have proposed formal guidelines for a better control of conflicts of interest (10). However, the limited awareness of the problem and the marketing strategies designed by the industry do not help in this attempt,

and the practice of disclosure has not achieved wide currency. A worldwide collaboration between international organizations like the WPA and the World Health Organization with their national or local counterparts is strongly recommended in this area.

As Helmchen pointed out (11), one of the premises of a psychiatric intervention is the trust of the patient in his therapist, in his knowledge and scientific background. Our patients cannot lose this confidence. Otherwise, the role of psychiatry, as we know it, is going to disappear. An international effort of the psychiatric community to redefine its relationship with the pharmaceutical industry is urgently needed.

Drug companies can be of considerable benefit for the development of our profession, but only if we learn to

manage this collaboration without commitments and dependencies, considering our ethical foundations and respecting the interest of our patients over any other form of interest.

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# Premorbid IQ varies across different definitions of schizophrenia

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*The nature of the association between IQ and schizophrenia is still unclear. So far no study addressed this issue in relation to the breadth or scope of the very concept of schizophrenia. We examined the premorbid IQ in a polydiagnostic study with four classifications of schizophrenia: ICD-8/9, ICD-10, St. Louis and Flexible System-Wide. Only the ICD-10 schizophrenia patients exhibited a significantly lower premorbid IQ. There were suggestive differences between the four examined systems as well as between the ICD-10 paranoid and non-paranoid subtypes. Exploration of crucial diagnostic features of schizophrenia in relation to IQ revealed associations between low premorbid IQ and hallucinations as well as negative symptoms. It is concluded that premorbid IQ varies across different definitions of schizophrenia.*

**Key words:** Schizophrenia, premorbid IQ, polydiagnostic study, hallucinations, negative symptoms

(*World Psychiatry 2007;6:38-41*)

A vibrant interest in the intellectual abilities of psychotic patients was present in psychiatry and psychology already at the birth of these disciplines in the 19th century. Kraepelin, E. Bleuler, Jung and other psychiatrists conducted neuropsychological studies in patients with schizophrenia (memory, reaction time, visual stimulation), without, however, any consistent findings (1,2).

Today, there is an agreement that cognitive deficits are detectable in many, but not all, patients with schizophrenia (3,4). The IQ measurements are at the forefront of this “cognitive drive” (5). The term IQ (“intelligence quotient”) does not refer to any specific modal mental function but to a general cognitive ability predictive of educational achievement and social functioning (6). Large epidemiological studies (7,8) demonstrated that a low premorbid IQ is a consistent, albeit weak, risk factor for schizophrenia. The nature of this association is not clear and is considered as a parcel of a more general, overarching issue of the relationship between psychiatric symptoms and cognition.

The link between symptoms and cognition in schizophrenia is inconsistent across the studies. Negative and disorganization symptoms correlate weakly with cognitive dysfunctions ( $R=0.2-0.3$ ) in some, but not all studies (9-12). An unaddressed issue concerns the potential relation between the diagnostic boundaries of schizophrenia and IQ. We have therefore used the data obtained in a polydiagnostic study (13) to examine premorbid IQ in schizophrenia diagnosed according to four different definitions and to explore the correlations between IQ and the diagnostic criteria.

## METHODS

The sample consisted of 155 subjects with age <40 years, consecutively first-admitted to the Department of Psychiatry at Hvidovre Hospital, whose catchment area corresponds to

the city of Copenhagen, between September 1, 1998 and September 1, 2000. Exclusion criteria comprised bipolar disorder, melancholic depression, organic disorders, and severe substance abuse. All patients received a 3-5 hour interview by a senior psychiatrist (PH), including the administration of the Operational Criteria Checklist (OPCRIT); the Bonn Scale for the Assessment of Basic Symptoms (BSABS); the Positive and Negative Syndrome Scale (PANSS); the Global Assessment of Functioning (GAF) and the Global Assessment Scale (GAS). Three senior clinicians (PH, LJ, JP) completed a checklist including items required by several sets of diagnostic criteria for schizophrenia. Computerized algorithms, written for each system according to its operational criteria, generated schizophrenia diagnoses. The methodological details of the study are reported elsewhere (13).

A clinical psychologist (JN) tested the premorbid intelligence with the DART (Danish Adult Reading Test). The test consists in reading loud a list of 50 single and short words with irregular pronunciation. To pronounce them correctly requires semantic-lexical resources. This test is well-validated, also in schizophrenia research (14-16).

Twenty-four patients, distributed across all diagnostic groups, were not included in the analyses because of their foreign language background, reducing the sample to 131 individuals.

Of the originally examined nine polydiagnostic systems (13), we selected for the current purpose four schizophrenia definitions, which we considered as being representative of a broad range of perspectives: the St. Louis criteria (17) (conservative, often considered as a “gold standard”), the Flexible System-Wide (18) (a rather inclusive system and the only truly polythetic approach), the ICD-8/9 (partly reflective of Bleuler’s conception of schizophrenia and used in Europe prior to the introduction of the ICD-10), and the ICD-10 (chosen as a contemporary operational definition, highly concordant with the DSM-IV in this particular sample; kappa 0.82) (13).

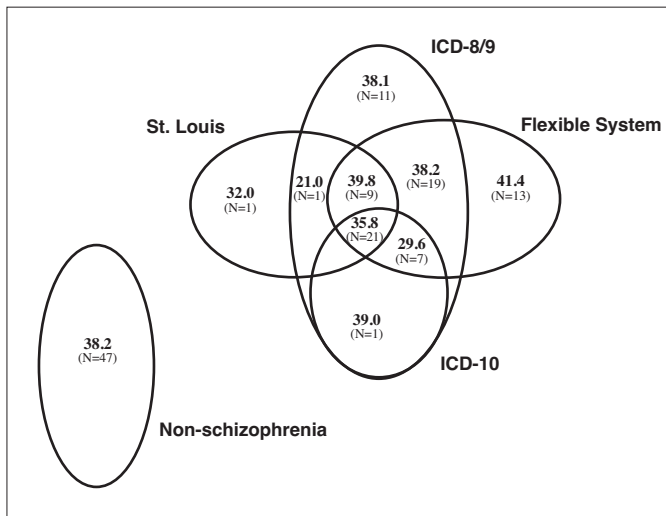
## RESULTS

In our sample of 131 subjects, 84 were diagnosed with schizophrenia by at least one of the four selected diagnostic systems. For three of the systems, with the Flexible System-Wide as an exception, schizophrenia patients scored lower on the DART than the rest of the sample. For the ICD-10, this difference was statistically significant (Figure 1 and Table 1).

The ICD-10 paranoid subtype scored higher on the DART (mean=38.83) than the non-paranoid subtype (mean=34.36), but the difference was not significant.

It is clear from Figure 1 that the cells of the diagnostic subcategories are too small for statistical purposes. Nonetheless, it is interesting to note that the 21 subjects with a diagnosis of schizophrenia according to all four diagnostic systems nearly had the lowest mean DART score.

We explored the Pearson correlation coefficients in the entire sample between the DART scores and the main individual criteria from all four diagnostic definitions. If the correlation reached statistical significance, we re-tested the difference in DART between all patients who had scored positively for that particular item and those who had not, with a p value from a non-parametric Wilcoxon test. The significant differences involved the items “hallucinations” and



**Figure 1** Mean scores on the Danish Adult Reading Test in patients fulfilling the various definitions of schizophrenia and in those without a diagnosis of schizophrenia

“absence of organicity”, which are present in the ICD-8/9, ICD-10, and St. Louis criteria: “non-organic” and non-hallucinating patients exhibited higher premorbid IQ than the remainder of the sample (Table 2). It is noteworthy that the Flexible System-Wide, which does not include hallucinations as a criterion, resulted in the highest DART mean score, and patients with a schizophrenia diagnosis made only by the Flexible classification (13 subjects) showed the highest DART mean score (Figure 1).

The ICD-10 criteria “negative symptoms” and “inability to meet ordinary demands of life” were close to statistical significance. The St. Louis system’s item “tangentiality” was the only other item significantly associated with a low IQ.

Low scores on DART correlated significantly with low educational level ( $p < 0.001$ ) and pre-school childhood learning and/or behavioural problems (35.5 vs. 38.9 for the remainder of the sample;  $p = 0.017$ ), an item scored on historical information from a variety of sources, while the correlation with poor premorbid work adjustment approached statistical significance ( $p = 0.062$ ), and there was no association between sex and IQ. After Bonferroni’s correction, only the correlation with educational level remained significant.

The DART scores were lower among the patients rated for early learning and behaviour disturbances (such as delayed milestones and significant behavioural or developmental problems) with and without adjustment for diagnosis. The effect of this interaction was significant for the ICD-10 category of non-paranoid schizophrenia ( $p = 0.02$ ), whereas there was no effect for paranoid schizophrenia ( $p = 0.49$ ).

There were no significant associations between the DART and family history of schizophrenia, age at first contact with a treatment facility, duration of symptoms and the duration of untreated psychosis.

## DISCUSSION

It is appropriate first to point to the methodological aspects of this study, the trade-off between the size and psychopathological detail. It is clear that the limited sample size might have been conducive to Type II error, potentially obscuring true existing associations. On the other hand, the sample was extremely well-examined from the psychopathological perspective, with a very thorough interview and reliable rating of the single diagnostic criteria.

**Table 1** Mean scores on the Danish Adult Reading Test in patients with or without schizophrenia diagnosed according to four different systems

Diagnosis	Schizophrenia			Non-schizophrenia			Two-tailed p*
	N	Mean	SD	N	Mean	SD	
ICD 8/9	70	36.37	7.92	61	38.75	6.37	0.060
Flexible System-Wide	69	37.39	7.64	62	37.58	6.98	0.882
St. Louis criteria	33	35.97	8.04	98	37.99	7.01	0.166
ICD-10	30	34.07	9.45	101	38.50	6.25	0.003

\* p value from a parametric analysis of equal means in the two groups, confirmed by a non-parametric Mann-Whitney test

**Table 2** Mean scores on the Danish Adult Reading Test in patients scoring negatively or positively on the individual items of the various definitions of schizophrenia

Items	Not present			Present			p
	N	Mean	SD	N	Mean	SD	
Formal thought disorder (ICD-8/9, ICD-10, St. Louis)	104	37.8	6.6	27	36.3	9.7	0.835
Fundamental disturbance of personality (ICD-8/9)	73	38.2	5.8	58	36.6	8.8	0.610
Tangentiality (St. Louis)	107	38.2	6.7	24	34.9	9.1	0.051
Flat or blunted affect (ICD-8/9, ICD-10, Flexible)	78	37.8	7.0	53	36.9	7.8	0.568
Autism (ICD-8/9)	77	38.1	6.1	54	36.5	8.8	0.483
Disturbed perception (ICD-8/9)	22	41.0	5.6	109	36.8	7.4	0.007
Hallucinations (ICD-8/9)	69	39.2	5.9	62	35.6	8.2	0.012
Hallucinations without significant perplexity or disorientation associated with them (St. Louis)	70	39.2	5.9	61	35.5	8.3	0.008
Persistent hallucinations in any modality occurring every day for weeks or months on end (ICD-10)	110	38.2	6.6	21	33.8	9.6	0.045
Bizarre delusions (ICD-8/9, ICD-10, Flexible)	113	37.7	6.9	18	36.1	9.6	0.794
Delusions of control, influence, or passivity (ICD-8/9)	121	37.8	6.9	10	33.8	11.0	0.270
Thought broadcasting (ICD-10, Flexible)	120	37.7	6.9	11	34.7	10.7	0.544
Catatonia (ICD-8/9, ICD-10)	125	37.5	7.2	6	36.8	10.2	0.783
Negative symptoms (ICD-10)	25	39.3	7.0	106	37.1	7.3	0.094
Inability to meet ordinary demands of life (ICD-8/9, ICD-10)	37	39.4	5.8	94	36.7	7.7	0.089
Social withdrawal (ICD-10)	50	38.2	6.8	81	37.0	7.6	0.420
The disorder is not attributable to organic brain disease or to alcohol or drug abuse (ICD-8/9, ICD-10)	10	31.2	9.5	121	38.0	6.9	0.023

This study demonstrates that only certain diagnostic definitions of schizophrenia are associated with lower IQ. There is a higher premorbid IQ in the patients diagnosed by broad definitions, which pick up a higher number of persons with schizophrenia (ICD-8/9 and Flexible System-Wide). As a function of its lowest number of detected schizophrenia patients, the ICD-10 may be considered as the most restrictive system, favouring selection of more chronic patients with lower IQ.

Only few psychopathological variables in this study are related to premorbid intelligence. First, we found that hallucinations correlated with low IQ. Consistent with this association, the Flexible System-Wide, which does not include hallucinations as criteria, defines a patient sub-sample with the highest mean premorbid IQ. These findings were unexpected, but they are consistent with the results

from a well-conducted study by Johnson and Miller (19). Among 101 patients with schizophrenia, those reporting auditory hallucinations scored significantly lower on a battery of intelligence tests taken at a military draft session. This association was not explainable by social background factors, subtype of schizophrenia or the length of time elapsed between draft session and hospitalization. Johnson and Miller (19) concluded that low IQ may reflect a cognitive predisposition to auditory hallucinations in schizophrenia.

Second, we found a nearly significant association between low premorbid IQ and negative symptoms, which is consistent with certain (but not all) empirical findings (20,21). A common link to "organicity" implicated in the low IQ and the negative symptoms is frequently invoked (22). We can interpret in a similar way the observed correlation of the DART scores with educational level and early

learning and behavioural problems (most pronounced in non-paranoid schizophrenia): these variables may point to a common “neurodevelopmental aberration”, a term probably signifying several epigenetic processes. The IQ and educational level function here as extensive indices of developmental aberrations in the organism and environment. It is clear that the idea of a neurodevelopmental pathogenesis of schizophrenia makes the usual conceptual distinctions between the pre-morbid and post-onset illness features much more complex, fuzzy and ambiguous (23).

A frequent statement in the current literature is that cognitive dysfunctions are the “core features of schizophrenia” (24,25). However, this statement is difficult to understand, because there are no unique and stable cognitive findings in schizophrenia, but only varying patterns of group differences with quite modest correlations between cognitive measures and symptomatology. As demonstrated here, the relationship between IQ and schizophrenia is not independent of the diagnostic criteria. As emphasized by several authors (26,27), persons with schizophrenia perform in all ranges of the IQ spectrum, and “premorbid cognitive impairment is not a necessary condition for the development of schizophrenia” (28).

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# Cost-effectiveness of an essential mental health intervention package in Nigeria

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*The study aimed to describe the cost-effectiveness of a selected list of interventions for common neuropsychiatric disorders in a developing country. Using depression, schizophrenia, epilepsy, and hazardous alcohol use, a sectoral approach to cost-effectiveness analysis developed by the World Health Organization was contextualized to Nigeria. The outcome variable was the disability adjusted life years (DALYs). We found that the most cost-effective intervention for schizophrenia is a community-based treatment with older antipsychotic drugs plus psychosocial support or case management. The most cost-effective interventions for depression, epilepsy, and alcohol use disorders are older antidepressants, with or without proactive case management in primary care, older anticonvulsants in primary care, and random breath testing for motor vehicle drivers, respectively. Combined into a package, these selected interventions produce one extra year of healthy life at a cost of less than US \$320, which is the average per capita income in Nigeria.*

**Key words:** Neuropsychiatric disorders, cost-effectiveness, interventions, Nigeria

(*World Psychiatry* 2007;6:42-48)

Mental disorders have a large impact on individuals, families and communities. Recent epidemiological research has shown the considerable (and previously underestimated) burden of these disorders throughout the world (1). They affect about 25% of all people in their lifetime, with about equal prevalence in men and women (2,3). Though usually non-fatal, mental and neurological disorders are highly disabling. Apart from affecting multiple domains of functioning, these disorders start early in life and often go untreated. When treatment is given, it often is inadequate (4). Neuropsychiatric disorders combined contribute no less than 12.3% of the entire global burden of disease, as measured by disability adjusted life years or DALYs. The share of the total burden due to mental illness varies between developed countries; in African countries, primarily due to the disproportionate burden due to communicable, maternal, perinatal and nutritional conditions (70-75% compared with 5% in developed countries) (5), the burden of neuropsychiatric problems is proportionally reduced.

In Nigeria, evidence from general health care settings shows that about 10% of adult attendees meet ICD-10 criteria for definite psychiatric disorders (commonly, major depression, anxiety disorders, somatoform disorders, dysthymia and alcohol abuse) (4). The proportion with significant psychological distress not meeting the criteria for specific psychiatric disorders may be even higher, with one study finding a rate of 25% (6). A recent large scale community study suggests that about 45 of every 1000 persons in the community have experienced at least one depressive episode in their lifetime, while about 12 have done so in the previous 12 months (7). Also, 65 out of every 1000 men reported a substance use disorder in their lifetime.

Despite the existence of a national mental health strategy in Nigeria (8) and the well-documented prevalence of neuropsychiatric disorders in the country (4,6,9,10), resources

currently allocated to meet the needs of persons with these disorders are extremely meager (considerably less than 1% of the total health budget, itself no more than 3% of gross domestic product). For example, recent estimates show that there are only 4 psychiatric beds, 4 psychiatric nurses and 0.1 psychiatrists per 100,000 population (11). The Institute of Medicine estimates that, while about 50% affected persons are reached by mental health services in developed countries, only about 15% are reached in developing countries. This three-fold treatment gap (12) is exemplified by the results of a recent survey in Nigeria, which showed that fewer than 1 of 10 persons with DSM-IV disorders in the previous 12 months had received any form of treatment (13). While political will by the government is one of the factors explaining this grossly inadequate mental health service coverage, a further important constraint relates to the perceived high cost of effective treatment. Given the extreme scarcity of resources, evidence is needed to demonstrate to policy makers both the effectiveness of available interventions and the overall return on an increased investment in the provision of a package of key interventions for neuropsychiatric disorders. Accordingly, the aim of the current study was to generate an evidence-based case for priority-setting, investment and service development in mental health in Nigeria.

## METHODS

We used a sectoral approach to cost-effectiveness analysis, developed by the World Health Organization (WHO). WHO's CHOosing Interventions that are Cost Effective (CHOICE) project has developed standardized methods and assembled sub-regional databases on the cost-effectiveness of an extensive range of interventions for leading causes of disease burden (14). In this approach, and in or-

der to facilitate comparisons between different regions of the world, costs have been initially expressed in international dollars (an international dollar has the same purchasing power as one US dollar has in the USA); effectiveness has been measured in terms of DALYs averted (relative to the situation of no intervention for the disease in question); and cost-effectiveness has been described in terms of cost per DALY averted.

Data on avertable burden at a WHO sub-regional level have now become available for a wide range of diseases, including schizophrenia, depression, alcohol abuse and epilepsy (15-18). However, the existence of these cost-outcome data is no guarantee that findings and recommendations will actually change health policy or practice in countries. There remains a legitimate concern that global or regional cost-effectiveness results may have limited relevance for local settings and policy processes. In order to stimulate change where it may be necessary, there is a consequent need to contextualize existing regional estimates of cost, effectiveness and cost-effectiveness to the setting in which the information will be used, since many factors may alter the actual cost-effectiveness of a given intervention across settings (18). In order to contextualize WHO-CHOICE sub-regional findings down to the level of national or sub-national populations, a range of data are required: a) data on local demography, including mortality rates; b) local epidemiological rates for specified disorders; c) intervention definition, efficacy and adherence; d) treatment coverage and setting; e) resource utilization rates and costs of care for specified disorders.

Based on local clinical experience and health facility admissions/service utilization data, as well as epidemiological data on the prevalence and associated disability of different

neuropsychiatric disorders in Nigeria (6,7), the following four priority conditions were identified: depression, schizophrenia, alcohol abuse and epilepsy. A set of key interventions for these disorders was prepared (Table 1). For each of these priority conditions and interventions, a process of contextualization was carried out as described below.

**Demography.** Regional age- and sex-specific population and mortality data were substituted with national data for Nigeria (total population, 115 million).

**Epidemiology.** Current disease burden figures for schizophrenia, depressive episode, epilepsy and heavy alcohol use, based on WHO's Global Burden of Disease and Comparative Risk Assessment studies for the African sub-region (3), were reviewed and, where supported by good-quality local data, revised. Since no recent population-wide survey was available for schizophrenia, and given the relatively stable estimates found for this particular condition from other African studies, no revision was made to default regional values. For depression and heavy alcohol use, up-to-date prevalence data available from representative sample surveys in the Nigerian population (7) were used to revise epidemiological model parameters. For epilepsy, local data were also used, albeit derived from relatively small community surveys (9).

**Effectiveness.** International data sources used to estimate intervention efficacy or effectiveness at the level of WHO African sub-regions (15-17) were reviewed and altered to better reflect local evidence or expectations. For example, parameters underlying the anticipated impact of increased taxes on alcoholic beverages were tailored to the Nigerian context. The estimated population-level effect of each intervention – expressed as a percentage reduction in disability, case-fatality remission or incidence – is summarized in Table 1.

**Table 1** Interventions considered for reducing the burden of neuropsychiatric disorders in Nigeria

Disorder	Intervention	Primary effects	% improvement*
<i>Schizophrenia</i> (treatment setting: hospital outpatient; treatment coverage, target: 70%)	- Older antipsychotic	Disability	2.8
	- Newer antipsychotic	Disability	3.5
	- Older antipsychotic plus psychosocial treatment	Disability	5.6
	- Newer antipsychotic plus psychosocial treatment	Disability	6.3
<i>Depression</i> (treatment setting: primary health care; treatment coverage, target: 40%)	<i>Episodic treatment</i>		
	- Older antidepressant	Remission/Disability	6.9/7.7
	- Newer antidepressant	Remission/Disability	7.7/8.6
	- Psychosocial treatment	Remission/Disability	5.6/8.8
	- Older antidepressant plus psychosocial treatment	Remission/Disability	7.4/8.3
	- Newer antidepressant plus psychosocial treatment	Remission/Disability	7.8/8.8
	<i>Maintenance treatment</i>		
- Older antidepressant plus psychosocial treatment	Incidence/Remission	7.9/9.0	
- Newer antidepressant plus psychosocial treatment	Incidence/Remission	8.4/9.6	
<i>Epilepsy</i> (treatment setting: primary health care; treatment coverage, target: 80%)	- Older antiepileptic	Remission/Disability	30/21
	- Newer antiepileptic	Remission/Disability	30/21
<i>High-risk alcohol use</i> (as risk factor for disease and injury)	- Increased taxation on alcoholic beverages (50%)	Incidence	5
	- Drink-driving laws and enforcement via breath-testing	Fatal injuries	0.05-0.5
	- Brief counselling in primary care (coverage: 50%)	Remission	3.7

\*Estimated population-level intervention effect

*Coverage and treatment setting.* A primary health care model for mental health care delivery has been proposed and implemented by a number of developing countries. Lack of reliable data, however, makes it difficult to determine the number of persons with psychiatric disorders currently receiving treatment in this setting. Estimates of current coverage, therefore, were mainly based on expert opinion, supplemented where possible by local survey data (7).

*Resource use and costs.* For each disorder included in the analysis, country-specific values were entered into the model concerning the frequency and intensity of health care use. Estimates were based on local expert opinion, including a Delphi consensus panel survey of 24 mental health professionals working in different parts of the country (19). Predicted unit costs in local currency units for primary and secondary care services (20) were validated against locally available hospital data, while other default resource inputs such as salaries of health professionals, psychotropic drugs and laboratory tests were substituted with their corresponding local values.

## RESULTS

Results are presented to show: the estimated or projected coverage of each intervention; the effectiveness of the intervention as indicated by an estimation of the DALYs averted per year by the intervention; the total cost of delivering the intervention per year, as well as a breakdown of its component patient, programme, and training costs; the cost of delivering the intervention to one case of the indicated disorder per year; and the average cost of averting one DALY by the intervention. These indices are provided for the extant situation, represented by the predominant form of intervention for each disorder and the proportion of cases that cur-

rently receive the intervention, as well as for the proposed intervention at a scaled-up level of coverage.

Table 2 provides summary results for different interventions for schizophrenia. At the current coverage of 20%, the DALYs saved per year is 2,615 and the cost per DALY averted is 209,430 Naira (N), corresponding to US\$ 2,013 at the mean official exchange rate for 2000. When coverage is increased to 70% (the maximum level considered feasible in the foreseeable future), the two interventions for schizophrenia that can be considered most cost-effective are community-based interventions which combine older antipsychotic drugs with psychosocial treatment or case management. These two interventions avert more DALYs and at lower costs per DALY (N 66,790 or US\$ 642; N 70,806 or US\$ 680 respectively). On the other hand, when the two forms of interventions are implemented with newer, atypical antipsychotics, the relatively small extra gains in DALYs averted are associated with very considerably higher costs per DALY (N 1,637,168 or US\$ 15,742; N 1,778,509 or US\$ 17,101 respectively).

Table 3 presents the results for different interventions for depression. At the current low coverage of 10%, the DALYs averted is low (11,211) and so is the cost per DALY averted (N 20,181 or US\$ 194). When coverage is increased to 40%, the intervention which combines older antidepressants with psychotherapy and proactive management is most cost-effective because it saves more DALYs (120,357) and at a lower cost than any of the other interventions with the same coverage. With the same type of intervention using the newer antidepressants, though the DALY averted is marginally higher (127,543), the intervention cannot be considered cost-effective, because the cost per DALY averted is almost three times higher.

Table 4 presents the results of the intervention analysis for epilepsy. Two different interventions are compared at

**Table 2** Cost-effectiveness of selected interventions for schizophrenia

Intervention	Coverage	Effectiveness (DALYs averted per year)	Total cost per year (Naira, millions)				Cost per treated case per year	Cost per DALY averted
			Patient	Programme	Training	Total		
Older antipsychotic	20%	2,615	510	37	0	548	9,793	209,430
Community-based service model: older antipsychotic	70%	14,081	1,625	141	31	1,798	9,185	127,676
Community-based service model: newer antipsychotic	70%	16,863	48,427	141	31	48,599	248,293	2,882,052
Community-based service model: older antipsychotic + psychosocial treatment	70%	26,980	1,598	141	62	1,802	9,204	66,790
Community-based service model: newer antipsychotic+ psychosocial treatment	70%	29,774	48,541	141	62	48,744	249,037	1,637,168
Community-based service model: case management with older drug	70%	29,378	17,470	240	93	2,080	10,627	70,806
Community-based service model: case management with newer drug	70%	27,564	48,690	240	93	49,023	250,460	1,778,509

N 104 = US\$ 1 (at the mean official exchange rate for 2000)

**Table 3** Cost-effectiveness of selected interventions for depression

Intervention	Coverage	Effectiveness (DALYs averted per year)	Total cost per year (Naira, millions)				Cost per treated case per year	Cost per DALY averted
			Patient	Programme	Training	Total		
Older antidepressant in primary care	10%	11,211	226	0	0	226	765	20,181
Older antidepressant in primary care	40%	69,608	5,255	70	42	5,367	4,680	77,105
Newer antidepressant in primary care	40%	77,244	23,039	70	42	23,151	20,274	299,714
Brief psychotherapy in primary care	40%	69,101	8,044	70	78	8,192	7,096	118,548
Older antidepressant + psychotherapy	40%	74,269	8,745	70	93	8,908	7,788	119,938
Newer antidepressant + psychotherapy	40%	78,891	25,575	70	93	25,738	22,560	326,246
Older antidepressant + psychotherapy + proactive case management	40%	120,357	9,004	126	102	9,233	5,517	76,710
Newer antidepressant + psychotherapy + proactive case management	40%	127,543	33,435	126	102	33,663	20,242	263,933

N 104 = US\$ 1 (at the mean official exchange rate for 2000)

**Table 4** Cost-effectiveness of selected interventions for epilepsy

Intervention	Coverage	Effectiveness (DALYs averted per year)	Total cost per year (Naira, millions)				Cost per treated case per year	Cost per DALY averted
			Patient	Programme	Training	Total		
Older antiepileptic in primary care	20%	30,928	413	0	0	413	2,637	13,339
Older antiepileptic in primary care	50%	105,946	985	88	40	1,113	2,868	10,507
Older antiepileptic in primary care	80%	169,514	1,676	142	85	1,903	3,065	11,228
Newer antiepileptic in primary care	50%	105,946	3,492	88	40	3,620	9,327	34,169
Newer antiepileptic in primary care	80%	109,514	5,705	142	85	5,932	9,552	34,993

N 104 = US\$ 1 (at the mean official exchange rate for 2000)

two coverage levels. At 50% coverage, both older and newer antiepileptics implemented at primary care settings averted the same number of DALYs per year (105,946). However, the cost per DALY for the newer drugs is as much as three times higher than that of the older drugs (N 34,993 or US\$ 336 compared with N 10,507 or US\$ 101). The results suggest that older antiepileptic drugs in primary care implemented at 80% coverage offer the best value for money: more DALYs are averted but at a minimal increase in cost per DALY saved.

Table 5 shows that, though a 25% increase in the rate of taxation on alcohol will avert more DALYs, the decrease in cost per DALY cannot be considered significant (from N 20,134 or US\$ 193 to N 18,201 or US\$ 175). An increase in

taxation by 50% will achieve little more than 25% taxation increase, improving DALYs saved but with no substantial decrease in cost per DALY (from the initial N 18,201 or US\$ 175 to N 17,125 or US\$ 165). This is because it is anticipated that tax increases would be accompanied by rises in the amount of illicit and therefore untaxed consumption of alcohol (increased production of home-brewed beverages, plus rises in smuggled alcohol). On the other hand, implementation of random roadside breath-testing for alcohol is expected to save considerably more DALYs than the other interventions and will do so at a considerably lower cost per DALY of N 8,873 or US\$ 85.

Using the above data, it is possible to construct a profile of the costs and effects associated with a package of neu-

**Table 5** Cost-effectiveness of selected interventions for heavy alcohol use

Intervention	Coverage	Effectiveness (DALYs averted per year)	Total cost per year (Naira, millions)				Cost per DALY averted
			Patient	Programme	Training	Total	
Current scenario (tax at current rates)	95%	24,988	0	503	0	503	20,134
Increased taxation (current + 25%)	95%	27,641	0	503	0	503	18,201
Increased taxation (current + 50%)	95%	29,378	0	503	0	503	17,125
Brief advice/counseling in primary care	50%	12,866	698	100	30	828	64,400
Roadside breath-testing (including non-fatal injuries)	80%	109,490	0	972	0	972	8,873

N 104 = US\$ 1 (at the mean official exchange rate for 2000)



**Table 6** Costs and effects of an efficient intervention package for neuropsychiatric conditions in Nigeria

Condition	Intervention	Coverage	Effectiveness (DALYs averted per year)	Total cost per year (Naira, millions)				Cost per treated case per year	Cost per DALY averted
				Patient	Programme	Training	Total		
Schizophrenia	Older antipsychotic+ psychosocial treatment (community-based model)	70%	26,980	1,598	141	62	1,802	9,204	66,790
Depression	Older antidepressant in primary care	40%	69,608	5,255	70	42	5,367	4,680	77,109
Epilepsy	Older antiepileptic in primary care	50%	105,946	985	88	40	1,113	2,868	10,507
Hazardous alcohol use	Roadside breath-testing of motor vehicle drivers	80%	109,490	0	972	0	972	-	8,873
Total package			312,024	7,839	1,270	144	9,254	80	29,658

N 104= US\$ 1 (at the mean official exchange rate for 2000)

ropsychiatric care, characterized by the following criteria: a) selection of one intervention for each of the studied neuropsychiatric conditions; b) implementation of a community-based outpatient service model for schizophrenia and primary care treatment for other conditions (depression, epilepsy, heavy alcohol use); c) adoption of combined pharmacological-psychosocial treatments where such approaches are more cost-effective than drug treatment alone; d) reliance on older psychotropic drugs (neuroleptics such as haloperidol for schizophrenia, tricyclic antidepressants such as imipramine for depression, and phenobarbital or phenytoin for epilepsy).

Table 6 provides summary results for such an intervention package. Each of these interventions represents an efficient choice out of all those considered for the particular condition. Schizophrenia has the highest cost per treated case (N 9,204 or US\$ 88 per year), but depression absorbs the highest proportion of total costs (more than half), owing to its considerably greater prevalence in the population (over N 5,000 million per year, equivalent to US\$ 41.2 million). Highest returns in terms of health outcome and cost per unit of outcome are for epilepsy treatment and roadside breath-testing (over 100,000 DALYs averted per year, each at a cost of N 9,000-11,000, corresponding to US\$ 100 or less). The total annual cost of the package amounts to more than 9 billion Naira (US\$ 88 million), equivalent to 80 Naira (US\$ 0.77) per capita across the Nigerian population of 115 million inhabitants.

## DISCUSSION

Unquestionably, there is a wide gap between the burden of neuropsychiatric disorders and available resources to address this burden in Nigeria, just as is the case in many other developing countries. In the context of such a limited resource envelope, there is an even greater need for decisions about what money is to be spent on to be guided by evi-

dence. Cost-effectiveness analysis enhances allocative efficiency and is used to evaluate the cost and health effects of specific interventions. By indicating the interventions that produce best value for money, it could guide policy makers in decision making.

In this study, the relatively greater efficiency of some interventions over others has been demonstrated. It is clear that a modest investment of resources into a range of cost-effective interventions has the potential to markedly reduce the existing burden of neuropsychiatric disorders in Nigeria. In the package herein described, the key inputs consist of patient-level costs (composed mainly of direct costs of medication and health facility visits), programme costs (composed essentially of capital and recurrent infrastructural expenditures) and training costs. Except for preventive interventions aimed at curbing high-risk drinking in the population, much of the total cost is made of patient cost, and the other components constitute a relatively small proportion. At current practice, much of the patient cost comes directly from consumers as out-of-pocket payments, since there is no national health insurance and no social welfare programs. In order to expand coverage from the currently low rates to the target coverage levels employed in this study, at least some of the financial burden on consumers from having to make out-of-pocket payments for service needs to be relieved. Thus, other than the programme and training costs that come from government sources, there is a need for some additional provision for more patient costs to be borne by the government. Even with this proviso, the total financial outlay of government is still likely to be relatively small (less than one US dollar per capita). Without a doubt, an increase in government spending has the potential to produce a more cost-effective set of interventions and save more DALYs than is the current situation. For example and as shown in Table 4, an increase in coverage from the current 20% to 80% in the treatment of epilepsy would increase total spending from 413 million to 1,903 million Naira. At the current situation of 20% cover-

age, what the government spends is relatively negligible, being mainly as part of direct patient cost. If coverage is increased to 80%, spending by government would increase slightly more than 12% of the total cost (being largely money spent on programmes and training). However, there will be a gain in efficiency, as reflected in a decrease in cost per DALY saved from the current N 13,339 to N 11,228.

It is noteworthy, however, that the structure needed to implement the intervention package is a crucial element in the projections and such structure is not currently available in the country. The health system necessary to implement these interventions will require better coordination of the various elements of service delivery, with particular emphasis on the ability of the primary care component to fulfill the projected role. A well-organized primary health care service which can deliver the envisaged interventions is presently not on the ground. The reorganization of the primary care service would involve re-training of the workers at this level of the health care system, provision of essential drugs for specified disorders, and better integration into the other tiers of the system. With this in place, a well-coordinated referral system would be available to serve as support for the primary care program.

We recognize several caveats concerning the use of results from this analysis in formulating policy for the delivery of service to persons with mental and neurological disorders. As good as cost-effective analysis may be in enhancing allocative efficiency, a number of criticisms have been leveled against the methodology. One such criticism is that the process is complicated, expensive and requires a lot of data which are not readily available in many developing countries, including Nigeria. In addition, some estimates (for example, relating to expected resource utilization patterns) are based on the opinion of a group of mental health experts, in which case the opinions of other health care providers, interest groups or beneficiaries may not necessarily be fully reflected.

Also, although cost-effective evidence relating to interventions is informative in itself, it is not the end of the analytic process. Rather, it represents a key input into the broader task of priority setting. Other inputs affect decision making: the needs for equitable distribution of available resources, to attend to the health requirements of special or vulnerable populations, and to attend to emergencies, for example those resulting from an unforeseen disaster, are additional inputs that have to be considered. Also important is a consideration of public expectations. For the task of analysis, therefore, the purpose is to go beyond efficiency concerns only and establish combinations of cost-effective interventions that best address stated goals of the health system, including improved quality of care and reduced inequalities. Other allocative criteria against which cost-effectiveness arguments need to be considered include the relative severity and the extent of spillover effects among different diseases, the potential for reducing catastrophic household spending on health, and protection of human rights. Thus, priority set-

ting implies a degree of trading-off between different health system goals, such that the most equitable allocation of resources is not necessarily the most efficient one.

It is also worthy of note that we have built our estimates on current prices of newer medications. Many of such medications are still on patents and therefore carry high purchase costs. However, should generic forms of the medications become available, the picture could change dramatically in regard to their cost-effectiveness, especially given the low side effect burden and the higher prospect of treatment adherence that some of the newer medications may offer. Therefore, it is essential that our results should not be taken as implying that patients from low-resource countries should be permanently excluded from the benefit that newer medications can offer.

The current level of funding for health (3%) in Nigeria is widely considered to be quite inadequate to meet the identified health needs of the population. Inevitably, what comes to mental health services, which is at the moment not clearly defined, cannot meet the needs of the improved service implied in the intervention package described here. Overall improvement in funding is necessary and a clearer line of funding for mental health service should be available. At the moment, it is difficult to identify any relative neglect of mental health service funding with a view to drawing attention to it. In other words, out of sight, out of mind.

Currently, the organization of the health system in Nigeria is loose and uncoordinated. In particular, the primary care system, an essential tool for the delivery of the interventions described in this report, is incapable of meeting the many challenges implied by a more adequate level of health care delivery. Better training of the staff is required and so is better integration of its service with those provided at the other tiers. A structured link with the secondary tier is required, so that primary care staff can get the supervision and support they need and have a better defined referral system. Of course, provision of essential medication on a regular basis is necessary. In short, a more efficient service that can benefit from the results of cost-effectiveness analysis such as the one presented herein can only come through a process of major reorganization of the health system in Nigeria. What we have described here is practicable and affordable, but only within the context of those changes and reorganization.

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# Australian and New Zealand contribution to international mental health research publications: a survey of high-impact journals

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*Most mental health research published in high-impact journals originates from developed countries in North America and Western Europe and from Australia and New Zealand (ANZ), where only a minority of the world's population exists. We examined the contribution of the ANZ research community to the literature on international mental health in regard to countries outside this dominant group. A literature search was conducted with two phases: a PubMed search of mental health articles by ANZ authors in twelve high-impact local and international journals over three years (2001-2003); and a hand search of the Australian and New Zealand Journal of Psychiatry (ANZJP) over ten years (1994-2003). Four percent of mental health articles published by ANZ authors in selected high-impact journals related to international mental health in countries outside ANZ, North America and Western Europe. Six percent of the articles published in the ANZJP represented countries outside this dominant group, and ANZ authors contributed to 30% of those articles. Hong Kong and Singapore were the most frequently represented countries. Sixty-five of 78 selected articles were original research. Descriptive epidemiological studies and case reports were the commonest study designs. Psychotic illness was the most frequently studied mental disorder. Most studies were conducted in specialist mental health services. Thus, relatively little of the work published by the ANZ mental health research community in local and other high-impact journals related to international mental health in countries outside ANZ, North America and Western Europe. Countries with the lowest incomes and highest populations were particularly under-represented, and there was relatively less research in community settings or on mental health problems known to account for the highest global burden of disease.*

**Key words:** Research, international mental health, Australia, New Zealand, collaboration

(*World Psychiatry* 2007;6:49-53)

Traditionally, health research, including mental health research, has arisen mostly from highly developed countries of North America and Western Europe and from Australia and New Zealand (ANZ), where resources and expertise are readily available. Countries outside these regions have been poorly represented in research, a situation recognized in 1990 by the Commission on Health Research for Development (1) as the "10/90 gap": of US\$ 73 billion invested annually in global health research, less than 10% is devoted to problems that account for 90% of the global burden of disease (measured in disability adjusted life years, DALYs) (2). Thus, research activity is greatest in highly developed Western countries, not in the low and middle-income countries where more than 85% of the world's population lives and the global disease burden is greatest (3).

The Global Forum for Health Research (4) aims to correct the "10/90 gap" and focus research efforts on the diseases and risk factors that account for the highest disease burden worldwide. Mental and neurological health has been declared one of eleven priority conditions by the Global Forum, based on its high contribution to the global burden of disease, and a projected future increase in burden. For example, by 2020 depression is expected to become the leading cause of disability worldwide, and the second leading cause of overall disease burden (2,3). One important reason for this projection is the demographic transition expected in many populous low and middle-income coun-

tries (3,5), which will lead to many more people in these countries entering the age of risk for mental disorders.

Mental illness reduces individual capacity to acquire education, participate in economic activities and break the cycle of poverty, while also increasing health care and social costs (3,6,7). These issues are critical to development in low and middle-income countries, as are a range of other problems that are closely related to mental health, including gender inequity, HIV/AIDS, child and adolescent development, natural disasters, crime and violence. It is important, therefore, that international mental health research includes countries that are culturally diverse and at various stages of development. Research in population and primary health settings, particularly in low and middle-income countries, is necessary to provide a local, rational basis to set priorities, to determine the efficacy and quality of interventions and to ensure efficient allocation of resources (3). The Global Forum also advocates the need for health authorities, clinicians and planners in developing countries to have greater access to research of this nature (4).

High-impact journals are an important medium for dissemination of high quality research. High-impact journals contain the most widely read and cited research, and are often the most accessible, available in many countries in either paper or electronic format. However, much published mental health research is of limited value to a truly international audience. Only six percent of literature in several



high-impact psychiatric journals surveyed recently was published from regions of the world outside North America, Europe and ANZ (8). Reasons put forward for this inequity include low clinical and research capacity in poorer countries, language barriers, resource constraints, high clinical loads, low priority of mental health, and low international representation on editorial boards of journals (9-12).

This paper examines the contribution by ANZ mental health research resources to close the “10/90 gap” in regard to international mental health. The term international mental health research is used in this study to emphasize those countries outside ANZ, North America and Western Europe that have traditionally been under-represented in high-impact psychiatric literature. Most of these countries are low or middle-income according to human development indices (13), but high-income countries such as Singapore are also of interest, being culturally distinct from the dominant group of high-income Western countries.

We aimed first to determine the publication record of ANZ researchers. Australia currently ranks fifth in the world for total psychiatry/psychology publications and citations (14), an indicator of high national capacity for quality research. We sought to estimate the contribution by ANZ authors to international mental health articles, and their participation in collaborations with international colleagues. Our second aim was to examine the representation of international mental health in the *Australian and New Zealand Journal of Psychiatry* (ANZJP), and compare this with the results of a similar survey of high-impact international psychiatric journals (8). We focused on the ANZJP as the mental health journal with the highest impact factor published in the Asia-Pacific region, and arguably an important means of disseminating international mental health research to the region. Our third aim was to characterize the publications identified in our search, including countries represented, sources of funding and nature of research.

## METHODS

### Journal search

A PubMed search was performed over the period 2001-2003 for mental health articles published by ANZ authors in six high-impact international mental health journals: *Archives of General Psychiatry*, *American Journal of Psychiatry*, *British Journal of Psychiatry*, *Psychological Medicine*, *Acta Psychiatrica Scandinavica*, and *Addiction*. Articles by ANZ authors were identified by the search term “Australia OR New Zealand”. Four international general medical journals were also searched through PubMed from 2001 to 2003 (*New England Journal of Medicine*, *Lancet*, *British Medical Journal*, *Journal of the American Medical Association*); and two local general medical journals (*Medical Journal of Australia* and *Australia New Zealand Journal of Public Health*). The search strategy used was

“mental OR substance abuse OR suicide OR self-inflicted injury”. These twelve local and international, mental health and general medical journals were chosen because they are high-impact journals in which ANZ authors often publish mental health research. All issues of the ANZJP from 1994 to 2003 were hand searched and each article examined individually to identify eligible international mental health articles. A longer ten-year search period was chosen because the ANZJP was published bi-monthly, whereas most of the others were published weekly or monthly.

### Selection of eligible articles

Articles were eligible for inclusion in the study if they were about mental health in a country outside ANZ, North America or Western Europe; thus, high-income countries in the Asia-Pacific region, such as Singapore, were also included in this category. Articles about immigrants from eligible countries living in ANZ, North America or Western Europe were not eligible. We used a broad definition of mental ill-health, including publications about mental disorders, substance abuse, suicide and self-inflicted injury. Articles were only eligible if they were original research papers, reviews or editorials/commentaries. Correspondence, news articles and book reviews were not eligible. An irregular series of additional commentaries on research articles in the ANZJP were also excluded.

### Content analysis

All eligible articles were analysed to identify several features, including the country or countries of interest in the article. The address of each author was examined to determine whether ANZ and/or international authors contributed to the article, and whether or not there was international collaboration. Collaboration was deemed to have occurred when researchers from both ANZ and the country of interest in the article were listed as authors. Declarations of funding for all eligible articles were also recorded. Original research articles were then identified and analysed to determine: the study design, mental disorders studied, and participant settings. Articles were deemed original research papers if they involved data collection or novel analysis of existing data (15).

## RESULTS

### Contribution of ANZ authors

Over the search period, ANZ authors contributed to thirty-two international mental health articles about countries outside ANZ, North America and Western Europe. Twelve eligible articles were published in the twelve high-impact local and international journals (2001-2003), representing 4% of the 316 mental health articles published by ANZ

**Table 1** Origin of authors for eligible international mental health (IMH) articles

Origin of author(s)	Total IMH articles by ANZ authors in selected journals (2001-2003)	Total IMH articles in ANZJP (1994-2003)
International only	-	44
ANZ only	4	8
ANZ and international	4	11
ANZ, international and Euro-American	4	1
International and Euro-American	-	2

ANZ - Australia and New Zealand; ANZJP - Australia and New Zealand Journal of Psychiatry

**Table 2** Total publications and funding support for 78 eligible international mental health articles by country, showing country population and human development index (HDI)

Subject country	Population (million)	Total publications	Publications funded
<i>High HDI countries</i>			
Hong Kong	6.9	16	1
Singapore	4.1	15	4
Japan	127.3	1	0
South Korea	47.1	1	1
<i>Medium HDI countries</i>			
China / Taiwan	1285.2	7	5
India	1033.4	5	2
South Africa	44.4	5	0
Malaysia	23.5	5	1
Vietnam	79.2	3	0
Israel	6.2	3	0
Fiji	0.8	3	0
Thailand	61.6	2	0
Iran	67.2	1	0
Croatia	10.3	1	0
<i>Low HDI countries</i>			
Nigeria	117.8	2	1
East Timor	not known	1	0
<i>Multiple countries or country not specified</i>	not known	7	2

authors in those journals. No articles were found among 136 mental health articles in the two local journals, the *Medical Journal of Australia* and the *Australia and New Zealand Journal of Public Health*. Twenty eligible articles appeared in the ANZJP (1994-2003), representing 30% of

66 eligible international mental health articles in the journal. ANZ authors collaborated with international authors from the countries of interest in the articles on twenty occasions: twelve articles in the ANZJP and eight in the twelve other high-impact journals. Table 1 shows the origin of authors who contributed to eligible international mental health articles in the selected journals.

### Representation of international mental health in the ANZJP

Our search of the ANZJP showed that, of 1052 articles published in the period 1994-2003, 66 articles (6%) were about international mental health in countries outside ANZ, North America and Western Europe. Fifty (of 66) articles were contributed by first authors from the country of interest in the article, fourteen by ANZ first authors, and two by first authors from North America/Western Europe.

### Representation of countries

Of 78 eligible articles (66 from the ANZJP, 12 from other journals), the majority (77%) were about Asian-Pacific countries: Hong Kong (16), Singapore (15), India (5), Malaysia (5), Taiwan (4), China (3), Vietnam (3), Fiji (3), Thailand (2), Japan (1), East Timor (1), South Korea (1) and not specified (1). Other countries represented were South Africa (5), Israel (3), Nigeria (2), Iran (1) and Croatia (1). Three articles were set in multiple countries, and three articles did not specify countries. Table 2 shows that, among eligible articles identified in the search, countries with lower populations and higher development status (according to human development index, HDI) (13) were represented most frequently.

### Types of publications

Of 78 eligible articles, 65 (83%) were original research papers, eleven (14%) were reviews and two (3%) were editorials/commentaries. Table 3 shows that descriptive epidemiological studies (27 of 65) and case reports (19 of 65)

**Table 3** Study design, mental disorder studied and participant setting for 65 eligible international mental health research articles

Study design	Mental disorder	Participant setting
Epidemiological	27	Psychotic illness 20 Specialist mental health 41
Case report	19	Affective/anxiety disorder 14 Community 17
Intervention trial	5	Psychiatric symptoms 7 Primary care or general hospital 9
Methodological	5	Child/adolescent 7
Health service	5	Suicide/self-harm 5
Biological	3	Multiple mental disorders 5
Other	1	Substance abuse 3 Dementia 3 Personality disorder 1

were the commonest study designs; psychotic illness (20 of 65) was the most frequently studied mental disorder, and the commonest study setting was in specialist mental health services (41 of 65).

## Funding

Of 78 eligible international mental health articles, 17 (22%) declared funding support. Twenty-six grants were declared, from 24 funding agencies. Fourteen grants were obtained from agencies in the country of interest, seven from North America or Western Europe and five from ANZ sources. Articles with international collaborations were funded (9 of 22) more frequently than those published by authors from ANZ or the country of interest alone (8 of 56).

## DISCUSSION

While ANZ researchers contribute significantly to mental health research, only 32 articles about international mental health were contributed to our selected journals over the search period. A low proportion (4%, or 12 out of 316) of research articles published in the 12 high-impact local and international journals over the 3-year search period related to international mental health. Only 20 eligible articles were contributed to the ANZJP by ANZ authors over the 10-year search period. ANZ authors collaborated with international colleagues in a small proportion of eligible international mental health articles: a total of 20 articles (12 in ANZJP, 8 in other high-impact journals).

Our literature search also shows that there is a low representation (6%) of international mental health research in the ANZJP, the mental health journal with the highest impact factor published in the Asia-Pacific region. This level of representation is similar to that reported in a literature search of six high-impact European and North American mental health journals (8). Similar levels of representation from low and middle-income countries have been reported in tropical medicine (16), cardiovascular (17) and HIV/AIDS literature (18). Our results are therefore consistent with the Global Forum's assertion regarding the existence of the "10/90 gap".

We acknowledge a number of limitations in our research. We are confident of our results from the ANZJP as the literature search was performed by hand. However, our search strategy of the six international mental health journals may have missed eligible articles if the ANZ author was not the first author. Our search strategy for the six general medical journals may also have missed eligible articles if they did not contain the search terms "mental", "substance abuse", "suicide" or "self-inflicted injury". We believe, however, that only a small number of articles may have been missed. Our classification included all countries outside ANZ, North America and Western Europe, rather than aligning with international indicators of development. Thus, articles about high-income

countries such as Singapore were assigned to the same group as low and middle-income countries such as East Timor and India. This classification was chosen because our primary intention was to describe research from countries outside the dominant Euro-American strand of biomedical research, rather than by level of development. Nevertheless, the majority of eligible countries were low or middle-income, and this classification also enabled comparison with a previous international study of psychiatric literature (8). We acknowledge that ANZ researchers may have contributed articles about eligible countries of interest to journals in those countries rather than the high-impact journals we selected. We selected high-impact journals because research published in these journals has a greater potential benefit to these countries – for example, by virtue of being indexed on databases, and more easily accessed and disseminated in developing countries (4). Furthermore, most journals from developing countries are not indexed and we did not have the resources to search local literature from all the world's developing countries.

Most of the eligible international mental health articles were from or about countries with a small population and high HDI, such as Hong Kong and Singapore. Mega-countries with medium HDI, such as China and India, were represented to a lesser degree. Only two countries with low HDI were represented: Nigeria and East Timor.

Only some of the sixty-five eligible mental health articles have strong public health interest. Most studies (41 articles) were conducted in specialist mental health settings, rather than in the general population or primary care settings. Nineteen studies were clinical case reports. Furthermore, the commonest disorder studied was psychotic illness (20 articles), with fewer on depression (14 articles), the leading mental health cause of the global disease burden (2).

Five priority areas of international mental health research have been identified for low-income countries (5). These priority areas for research include the generation of culturally informed epidemiological databases, intervention evaluations, prevention approaches, women's mental health and violence (5). We found little research of this nature. Twenty-seven epidemiological studies were found, but only five intervention studies and one study about violence. There were no studies specifically about women's mental health or prevention.

Thus, despite the strength of mental health research resources, ANZ contribution to international mental health research, as evidenced by publications in high-impact journals, is relatively limited. We can only speculate on the reasons for this low representation. One reason may well be that journals representing national psychiatric societies, such as the ANZJP, are more likely to favour research which has a bearing on their primary readership. While a group of 25 editors representing high-impact mental health journals recently undertook to facilitate the publication of research that addresses the large unmet mental health needs in low and middle-income countries (9), the collaborative efforts of researchers, governments and funding bodies are needed.

Low research capacity in developing countries is an important reason for the current situation, and capacity building is a central focus of the Global Forum for Health Research's efforts to close the "10/90 gap". The ANZ research community, along with counterparts in North America and Western Europe, could participate in the process of setting priorities in mental health and in building research capacity of individuals and institutions internationally, particularly in low and middle-income countries. Through collaborative work, they could jointly plan or assist the design and conduct of research, the analysis of results, the application of research findings, the training of researchers, and the development of local journals and information networks. Great mutual benefit could be derived from actively promoting collaborative research with international colleagues.

According to the World Health Organization (WHO) Commission on Macroeconomics and Health (19), in developing countries, investments in health (including research) have higher rates of return than in any other sector of the economy: on average US\$ 3 per US\$ 1 invested, often more. The Commission recommended a seven-fold increase in donor assistance for health, with at least 5% devoted to research, and also advised governments of developing countries to expand their health and research budgets. Research funding is obviously crucial to the development of international mental health research in the Asia-Pacific region. All but seventeen eligible articles in our search were based on work undertaken without (declared) research grant support. Only five grants were obtained from ANZ sources. It would appear that ANZ research bodies and development agencies have made a relatively modest contribution to international mental health. By contrast, the UK Department for International Development (DFID) (20) and the US National Institute of Mental Health (NIMH) (6) have both recently incorporated international mental health into their programs.

What contribution to international mental health research should ANZ mental health researchers make? How much coverage should be devoted to international mental health research in high-profile journals such as the ANZJP? These questions cannot be addressed purely from a scientific perspective: a global, ethical perspective that acknowledges historic socio-economic inequities must be incorporated. Many factors restrict the opportunities for international mental health research. Nonetheless, we believe that ANZ, together with the other wealthier countries, have the necessary resources, financial and technical, to play a much greater role in promoting the mental health of populations in less well resourced countries in the world through research and publications.

## Acknowledgements

The George Institute for International Health, University for Sydney supported this work during the establishment

of its Mental Health Division, with the active involvement of the Institute's Principal Director Robyn Norton and Associate Director Kylie Monro.

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# European psychiatry: moving towards integration and harmony

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*This paper summarizes political and social changes in Europe that directly affect the training of psychiatrists and the provision of mental health services. In Western Europe the demands of service users have led to a closer integration of social and health services, and a closer working and training of health professionals. The European psychiatrist of the future will be an internationalist, familiar with the impact of culture on mental disorders and able to work in a multi-professional team.*

**Key words:** Europe, psychiatric training, mental health services, psychiatric associations

*(World Psychiatry 2007;6:54-56)*

There is evidence that European psychiatry is becoming more integrated and harmonized. This process is being driven by the Treaty of Rome which created the Economic Union, the subsequent Treaty of Maastricht and more recently the integrationist "Constitution". This Constitution could facilitate more shared decisions in the enlarged Europe, and increased co-operation on foreign policy, finance as well as welfare programmes.

It is hoped that these political processes will lead also to increased harmonization of medical training and training standards. As doctors are more likely to migrate across national boundaries, establishing the equivalence of undergraduate and postgraduate training, including continuing professional development, becomes a crucial priority at the present time.

It is within this new socio-political context that any consideration of community mental health services in Europe, and understanding of the effects of migration, disasters and terrorism which trigger mental disorder, should take place.

Interestingly, the European Union (EU) and the WPA were both founded after the Second World War, in part as a response to the need to bring countries closer together, to reduce the possibility of a third European conflagration and, for WPA, to share psychiatric expertise across the world.

Globalization, international terrorism and natural disasters have in more recent decades shown that events in Europe and elsewhere in the world affect us all. The terrorist attack of September 11 in the US did indeed "shake up the pieces in the global kaleidoscope" so that patterns yet to emerge are unknown.

On May 1, 2004, ten countries (the Baltic States, Slovakia, Slovenia, Poland, Hungary, Czech Republic, Malta and Cyprus) joined the EU, followed on January 1, 2007 by Romania and Bulgaria. Turkey and Croatia remain as applicant countries, but likely to join when the economic and political criteria are met.

Europe is a yet wider region, however, and includes not only Switzerland and Norway, but also Russia, Albania and Ukraine. There are substantial economic differences

between European countries, as well as language and cultural differences which could affect the cohesion of Europe and the hoped for ability to balance the economic strength of the United States.

It is essential, therefore, to understand these political processes if user friendly comprehensive mental health services are to be established and training programmes pertinent to local needs in Europe are to be developed.

## EUROPEAN PSYCHIATRIC ORGANIZATIONS

There are four major psychiatric organizations in Europe, which have recently worked together in a Task Force to review psychiatric training in Europe, coordinate continuing medical education (CME) credits, search for the identity of a "European psychiatrist" and summarize the characteristics of a modern community mental health service.

The WPA has 130 member societies and four Regions. In the European Region, there are five WPA Zonal Representatives in 52 countries with 59 psychiatric associations.

The World Health Organization has increased focus on mental health in Europe and recently, for example, published the useful book "*Depression: social and economic time bomb*" (1), as well as promoted the Helsinki Ministerial Conference on Mental Health, in which health ministers from 40 countries endorsed a declaration about priorities for mental health services, and committed governments to ensure more adequate funding and to train health professionals to deliver a mental health service to meet patients' needs.

The European Union of Medical Specialists (UEMS) is an EU structure which has Adult, and Child and Adolescent Psychiatry sub-sections with representatives from all member states. The UEMS has worked for many years to harmonize training programmes, and encourage the monitoring of training standards and rotational training of psychiatrists.

The Association of European Psychiatrists (AEP) is the premier scientific association in Europe and has a membership of individuals rather than organizations. The AEP has

developed successful itinerant post-graduate courses and could become an umbrella organization for leaders of psychiatric associations in Europe.

There are, however, considerable disparities between European countries with regard to the length and content of psychiatric training, as well as differences in wealth and political perspectives. For example, sub-speciality training is the norm in the UK; psychotherapy training is mandatory for all psychiatrists in France; revalidation of all doctors is mandatory in the UK; the scope of mental health legislation varies not only between England and Scotland but more starkly between Eastern and Western Europe. Furthermore, funding of health services is from general taxation in Sweden and the UK, and from personal health insurance in France and Germany.

The comparison of perinatal mental health services, the area of my special interest, is particularly complex. Health visitors are only found in the UK, and child, not adult, psychiatrists are responsible in France for Mother and Baby Inpatient Units. Yet, the prevalence of postnatal mental disorder is similar in most European countries (10-13%) and a poor relationship with the mother-in-law is a common psychosocial stressor (2).

Thus, in Europe there are many examples of the uniqueness of countries and peoples, and yet also their similarities. These themes have been explored in the WPA International Congress held in Istanbul, Turkey in July 2006.

The number of psychiatrists per head of the population in Western Europe is the highest in the world, a statistic which would suggest that a uniformly high standard of psychiatric care should be possible.

## **PSYCHIATRIC ASSOCIATIONS IN EUROPE: THE MOVE TOWARDS HARMONY AND INTEGRATION**

Professional associations of psychiatrists (member societies of WPA), because of their distinctive histories, vary considerably in their aims and membership. France, for example, has six professional organizations, in Russia there are two societies, whilst in many other countries, such as Germany and Norway, there is just one. The size of societies varies: the largest, with over 9000 members, is the Royal College of Psychiatrists of the UK and the smallest has less than 500 members. Member societies in Europe are co-ordinated by five Zonal Representatives elected by the WPA General Assembly, who hold office for a three year term (renewable for a further three years). They influence WPA policy through the Board, which meets annually and reviews the budget and the triennial plan.

At the Millennium Meeting in London (2001), the role of national psychiatric associations in promoting the identities of psychiatrists in Europe was considered. The dictum "All has changed and all is changing" was illustrated in my talk, which endeavoured to highlight those factors in society

which are driving the demand for new community mental health services. These include greater user/patient involvement, demand for increased patient autonomy, reduction in medical paternalism, mistrust of authority in institutions, improved training of mental health professionals and increased expectation that mental health services are equitable and available to ethnic minorities. The public demand for doctors to show their competency has resulted in annual appraisal, revalidation of doctors every five years, and a specific entry on the list of registered medical practitioners to indicate that the doctor has maintained a "licence to practise".

Psychiatric organizations help to create professional identity by shaping and collectively summarizing the aspirations and values of psychiatrists. Psychiatry is an integrative discipline which spans the evidence base from biological sciences to psychology and the social sciences. A psychiatrist in a modern community service is, therefore, required to be a brain/mind specialist, able to practise evidence based psychiatry attuned to an individual patient's needs. Integration within multi-professional teams is a watch word for psychiatry across the world and is not a threat for a well-trained psychiatrist who otherwise would fear loss of professional identity.

The boundaries between primary and secondary, neuroscience and social science, psychiatrist and psychologist, traditional healer, religious counsellor and psychotherapist, hospital and community all have to be traversed in both directions all the time. These migrations are being driven by at least two social forces. The first is the demand of the users for greater autonomy and more personalized healthcare. The second is the scientific advances of psychiatry, demonstrating, for example, the mechanism of the link between gene expression, early development and adult personality.

In much of Western Europe the role of the psychiatrist is changing fast. We are expensive professionals, yet our unique combination of skills (trained as doctors with knowledge in social, psychological and biological sciences) is crucial to a modern mental health service, and to the optimum care of complex patients. This process offers a paradigm not just for psychiatry as a medical specialty, but for medicine as a whole. Fulford et al (3) have rightly argued that these integrative insights from within psychiatry are likely to be the direction that medicine as a whole will travel. Psychiatry is at the centre, not at the fringe of medicine.

Changes in the post-graduate training of young doctors in the UK could encourage further this wider integration of basic experience. Four months attachments in psychiatry and general practice in the first two years of post-graduate training for all doctors, for example, are now possible in the UK. The recognition of the extent of comorbidity of mental disorders in obstetrics and cancer services is leading these specialists to increase their own expertise in mental health and ensure that this expertise is available in their teams.

Vociferous patients demand that doctors they consult understand their personal needs and fears, and identify and

treat co-existing mental disorder. The development of care plans and care programme approaches which emphasize multi-disciplinary skills and include the patient's family in the consultation process, though cumbersome, can encourage a truly integrative multi-faceted diagnostic assessment.

The WPA International Guidelines for Diagnostic Assessment (4) have valiantly summarized this broad approach to psychiatric care. What is now urgently required are field studies to determine how these guidelines can be used within acute clinical situations. There is a need also for recommendations as to how, when and by whom this multi-model assessment should be completed.

General practice as delivered in Geneva by Paul Tournier (5) is at its best a "medicine of the person". His novel inspiration was to emphasize not just the doctor/patient relationship with a broad spiritual element, but also that the person of the doctor was a crucial determinant of this two-way process.

These integrationist perspectives were considered again at the meeting in April 2004 of the European Task Force. There was agreement that, in contemporary mental health care, a greater emphasis should be laid on the provision of services that respond to the needs of service users. Services should be mobile and flexible; hospital services should be the backup for community services, and mental health services should be multi-disciplinary and multi-agency.

The training implications for these new mental health services are considerable. There is a need to specify, for example, the competencies of all mental health professionals, which in turn will lead to greater clarity about the specific and distinctive skills of a psychiatrist.

## CONCLUSIONS

In this paper I have summarized political and social changes in Europe that directly affect the training of psychiatrists and the provision of mental health services. Some of these developments are more specific to Western Europe, with vociferous user movements and a variety of mental health professionals in primary and secondary care. Yet, the accession of former communist countries into the EU and

the likelihood that a Muslim country (Turkey) will join the EU in the next decade provides a rich opportunity for Europe as a region to draw on its rich scientific and cultural heritage to develop services that are equitable, patient friendly, personal and evidence based.

If this can happen, then not only will the peoples of Europe benefit but the influence for the wider good will be tangible. Migration across national boundaries and the closer proximity of peoples who may not share a cultural heritage or language increase the need for training in transcultural psychiatry. Murphy's dictum "*Transcultural psychiatry begins at home*" will ring true.

The European psychiatrist of the future will be an internationalist, broadly trained in biological and social sciences, familiar with the impact of culture on mental disorder and able to work (and in most cases lead) a multi-professional team.

In Western Europe the demands of service users, with their cogent critique of paternalism, have led to the closer integration of social and health services, and the closer working and training of health professionals.

The European psychiatrist has, therefore, to be a broadly trained up-to-date scientist and clinician able to tailor therapy and mental health services to the individual needs of the patient in an increasingly diverse migrant population. Mental health services will then also be able to contribute to the urgent task of reducing the risk and the rumours of war, and of diminishing the threat and consequences of international terrorism.

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# Regional cooperation in South Asia in the field of mental health

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*The South Asian region accounts for around one fourth of the world population and one fifth of psychiatrically ill patients in the world. The region lacks mental health policies and infrastructure. Issues like community care, trained manpower, patient satisfaction and better legislation have been a focus of attention in recent years. As this region is fast developing, cooperation is needed in the field of mental health to keep pace with the other areas. Cooperation is needed to develop culturally acceptable forms of psychotherapy and new technologies for delivery of mental health services. Another area of potential cooperation is the development of a classification of mental disorders that is more informative in our setting. The development of a mental health programme and its inclusion at various levels of health care delivery has also gained precedence. As most of countries in the area have limited financial resources, the funds are to be used in the most cost-effective manner, and for this a greater collaboration amongst the countries is needed. New research needs to be undertaken in the area especially to meet the local requirements and to understand diseases in a regional perspective, but research cannot be fruitful if regional cooperation is lacking. To enhance the cooperation in mental health, world bodies like the WPA will need to come forward and bring all the countries at a common platform. The WPA has done commendable work in this regard and has always extended support to the regional bodies to uplift the mental health in this region.*

**Key words:** Regional cooperation, South Asia, mental health

*(World Psychiatry 2007;6:57-59)*

Asia has some of the largest conglomerations of human populations and also the fastest growing economies of the world. About 23% of the world's population lives in the South Asian region, and one fifth of psychiatrically ill patients in the world live in this part of the world. The South Asian Association for Regional Co-operation (SAARC) was formed in December 8, 1985 in Dhaka, Bangladesh. The seven member states are Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. Afghanistan has become a new member since 2005.

Despite vast cultural, religious, geographical and political diversities, the factors influencing mental health remain the same throughout this wide region, as highlighted at the recently concluded Asian summit, where the slogan "One vision, one identity, one community" was launched. Thus, the need to strengthen regional cooperation in the field of mental health has always been felt.

Cooperation is needed to prioritize the mental health needs and delineate the specific mental health problems of the region, to develop a cost-effective strategy in this regard and also to enhance the role of regional psychiatric societies to change the face of mental health in this area.

Cooperation is also needed to develop culturally acceptable forms of psychotherapy and new technologies for delivery of mental health services. Another area of potential cooperation is the development of a classificatory system that is more informative in our setting and the inclusion of a more detailed representation of cultural specific

illnesses in the future international classifications of mental disorders.

## THE MENTAL HEALTH SITUATION IN THE SOUTH ASIAN REGION

All the seven SAARC countries belong to the low-income group, with a gross national product per capita ranging from US\$ 220 (Nepal) to US\$ 1,160 (Maldives) per year (1999). The prevalence and problems of mental disorders in all these countries are similar. Estimating a prevalence of 10-12% of mental disorders, the total number of mentally ill people in the region turns out to be 150-200 million.

National mental health policies are present in only four of the countries: India, Pakistan, Nepal and Bhutan. With the exception of India (policy in 1982), all of them have been developed during the late 1990s. The policies still lack comprehensiveness, and countries like India do not have policies in the area of drug and substance control and prevention of abuse. Though mental health legislations are present in some countries, they are old and need amendments. Most countries have national mental health programmes. Some of them have integrated mental health with the general health delivery system, while some have separate mental health programmes. Some countries have a separate budget for mental health activities.



The mental health manpower is grossly inadequate. The number of psychiatrists for one million population ranges from 0.4 in India to 3 in Maldives, and the number of psychiatric nurses from 0.4 in India to 18 in Sri Lanka. The total psychiatric beds per 10,000 population range from 0.065 in Bangladesh to 1.8 in Sri Lanka.

The centralization of mental health delivery system has received a major setback in recent years and the focus has now shifted to community care rather than creating new mental asylums. Many reasons have been identified for the failure of mental asylums in the South Asian region, including ill-treatment of patients, geographical and professional isolation, poor reporting and accounting, bad management, poorly targeted financial resources, lack of staff training and inadequate quality assurance procedures. The concept of community care has brought the focus to individual based care and treatment, wider range of services, coordinated treatment programmes, services closer to home, ambulatory care, and partnership with caregivers.

The mental health issues can be tackled and delivery can be improved through better cooperation among the regional countries. Partnership is needed in areas like research, organizing community care, health education, public awareness through media, publication of data, training programmes, exchanges of faculty/postgraduate trainees, integration with general health care, training primary care physicians, national mental health programmes, teaching psychiatry to undergraduate medical students, general hospital psychiatry, and enlisting cooperation of private sector/non-governmental organizations (NGOs).

## **MENTAL HEALTH PRIORITIES IN THE SOUTH ASIAN REGION**

The government expenditure on mental health in the majority of the SAARC countries is less than 1% of the total national health budget. Most of the people needing treatment have to spend from their own pocket, and most are not covered by insurance schemes. Hence, the majority of poor people do not get adequate treatment, or they prefer alternative forms of treatment which are cheap and affordable, but not effective.

The United Nations Secretary General asked in 2001 all the governments to make mental health a priority, to allocate the resources, develop the policies and implement the reforms needed to address this urgent problem. Similarly, the Director General of the World Health Organization addressed all the member states on the same issue. However, we are yet to see significant changes in this area.

The following mental health priorities have been recommended for this region: including mental health as one of the priorities in the national health system; allocating a separate mental health budget; integrating mental health at all levels of health delivery system; developing district mental health programmes with targets; increasing the number of

psychiatrists and other mental health professionals; promoting mental health legislation; ensuring availability of psychotropic and antiepileptic drugs free of cost; supporting families and communities to take care of the mental patients and retain them within the communities for rehabilitation; arranging for social welfare and disability funds for chronically ill mental patients; performing a regular evaluation of the district mental health programmes.

The magnitude of mental health problems is huge, with limited financial and other resources, paucity of skilled mental health professionals and more emphasis on treating communicable diseases. Thus, a cost-effective strategy is necessary for better health care delivery.

This strategy may include the following elements: conceptualization, definition, demarcation and scope of "mental health" and "mental disorder"; proper positioning and marketing of "mental health" and "mental disorder"; exploitation of existing resources; establishment of workable partnerships and collaboration for shared care between various governmental departments, governmental organizations and NGOs, public and private sectors; integration of aspects of basic mental health care into all existing health, education and social welfare programmes of governments and NGOs; in-service training, support and supervision for different categories of personnel; enhancement of "mental health literacy" of general population; development of measurable "goals" and "indicators" for monitoring progress; promotion of innovative programmes of mental health service delivery, training and research.

## **COOPERATION IN RESEARCH IN MENTAL HEALTH IN SOUTH ASIA**

South Asia has been lacking in the field of mental health research mainly due to lack of adequate financial support and infrastructure, and poor collaboration among various health agencies in the region, due to political barriers amongst the countries.

The whole of South Asia faces the problem of "inequalities in health". The majority of people live in rural areas or urban slums with no access to care. New delivery systems are needed to target this large group. Pathways to care should be determined, and traditional sources (e.g., magico-religious healers) should be explored.

Some potential areas for research collaboration in South Asia have been identified: psychiatric rehabilitation; treatment of major depression; culturally acceptable psychotherapy; delivery of mental health services; epidemiological studies; burden of care; course and outcome of mental disorders; acute psychoses; classificatory systems; psychoeducation; transcultural psychopharmacology.

Individual countries like India have made some significant contributions in psychiatric research. The work of various agencies has been commendable, and the Indian Council of Medical Research, the World Health Organiza-

tion, the Department of Science and Technology of the Indian government, the Indian Council of Scientific and Industrial Research, and the United Nations Children's Fund have been noteworthy among them. Various psychiatric associations have been formed, such as the Asian Federation for Psychiatry and Mental Health (AFPMH) in 1981 (Indonesia, Malaysia, Philippines, Thailand, Singapore, now also Brunei, Laos, Cambodia, Myanmar, Vietnam), the South Asian Forum for Psychiatry and Mental Health (SAFPMH) in 2002 (India, Pakistan, Sri Lanka, Bangladesh, Nepal, Bhutan) and the SAARC Federation of Psychiatry (SFP) in 2004. The global pharmaceutical companies are also targeting India by involving several Indian institutions in various international multicentric studies. Also noteworthy is the contribution of the Indian Psychiatric Society (IPS), as it is the largest ensemble of trained psychiatrists in South Asia and has a major role in coordinating research in the region. The Society has promoted participation of the whole region in its annual conferences, in order to promote a better intra-regional cooperation in research.

#### **THE WPA AND THE DEVELOPMENT OF MENTAL HEALTH SERVICES IN THE SAARC REGION**

The WPA may be helpful in the development of mental health services in the SAARC region. One of the prerequisites of this program would be to identify the broad areas that need reorientation and further development. Such areas may vary from country to country in the region. They include: mental health policies, legislations and strategies; standard clinical guidelines; capacity building of mental health workers in certain areas; development of infrastructure and system arrangements; improvement of linkage with outside world; development of knowledge on mental health issues in the region; public awareness and stigma; funding and advocacy; violations of rights of patients.

The development of context specific and standard clinical guidelines that suit the region has been a felt need for a long time. Currently the SAARC countries follow the management models developed in resourceful centers. These models have to be adapted taking into consideration the cultural and socioeconomic characteristics of the region.

Severe shortage of mental health professionals in the region is a main limiting factor in developing mental

health services. Therefore, capacity building of mental health workers is one of the important steps in the development of mental health services. Capacity building in specific areas, like rehabilitation, and training in subspecialties like community psychiatry, forensic psychiatry, psychogeriatrics, child and adolescence psychiatry will help in providing quality care.

International conferences co-sponsored by the WPA in the regional countries can be a good measure in capacity building. Further, guidance in the form of educational materials, books and journals, awarding training fellowships and guidance in preparation of curricula for mental health professionals would be essential steps.

WPA advocacy would be quite beneficial in re-orienting the development of mental health services and in promoting continuous professional development. Many of our mental health professionals are isolated in their localities and follow only their own experience due to lack of linkage with the outside world. This of course is very unfair and violates the rights of mentally ill patients.

Most SAARC countries go by the Western statistics in the assessment of mental health disease burden. Regional support and guidance for research activities would help to identify the mental health priorities in the region, and to assess and monitor the trends of mental health disease burden. The establishment of a research fund for the region would be helpful in improving the research capacity of mental health professionals, in identifying research needs, and in organizing and disseminating already existing knowledge in the region.

Providing advocacy to governments to increase awareness about the burden of mental disorders and to combat stigma at every level would immensely help the improvement of mental health care in the region.

The WPA can help SAARC countries to establish strategies that protect the human rights of mentally ill. Poorly developed mental health services in any country violate the patients' right to receive the best available treatment, similarly to other branches of medicine.

The organization and coordination of the above-mentioned array of activities related to the development of mental health services need a focal point. Therefore, it is very much appropriate at this juncture to establish an institution which could be developed to be a centre of excellence on mental health in the SAARC region.

# Integrating mental health into primary health care: local initiatives from Uganda

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*Uganda has passed through political and bloody civil strife stretching over 40 years. Since 1987 the HIV/AIDS pandemic has compounded the problems of the country. The present paper describes some initiatives to develop mental health services in one district of the country. A bottom-up approach in the district resulted in the formation of a community-led mental health program with strong support from two self-help groups, district political leaders and district representatives in parliament. Primary health care providers at all levels of health care in the district were trained in order to make services accessible to the rural population. Further plans based on initial exploratory discussions aim to involve the education department, the welfare and probation office, prisons and police, the military, church and cultural leaders and traditional healers. These initiatives show that it is possible to empower communities to participate in the development of mental health programs in a low-income country.*

**Key words:** Integration, mental health, primary health care

*(World Psychiatry 2007;6:60-61)*

Uganda has passed through political and bloody civil strife stretching over 40 years. Since 1987 the HIV/AIDS pandemic has compounded the problems of the country. Under these circumstances, mental health indicators would be expected to be poor (1). However, over the last 15 years, important steps have been taken to improve mental health care provision in the country (2) and promote the role of psychiatry in medical education (3).

Uganda's health policy has decentralized the provision of health services to districts, and mental health is a component of the minimum health care package. The present paper describes some initiatives to develop local mental health services in Adjumani, a district of the country.

The Adjumani district is in the north-west of Uganda, bordering with Sudan, and has a population of 201,493 (4). The district has two medical officers, three psychiatric clinical officers (registered nurses with two-year advanced training in diagnosis and management) and five psychiatric nurses.

## THE INITIATIVES

Lobbying among local politicians and district health care providers convinced the Adjumani district about the need to be self-reliant and generate resources from within the district in order to respond to the psychosocial needs of the population. A local community voluntary organization ("Nyarima"), meaning "rush to my rescue", was initiated with technical support from the Mental Healthcare Organization of Uganda, a local non-governmental organization, to address the high level of suicide and alcohol use problems in the district. "Nyarima" held a two day sensitization seminar for local district health workers, police, prisons,

teachers and the district grade one magistrate. The seminar ended with ten resolutions, emphasizing the need to take urgent steps to formulate a local policy and legislation to support mental health care at the district level, and the need to lobby the national parliament to formulate a policy and take steps to combat the problems of suicide and alcohol abuse.

Subsequently, the district established a hotline telephone service, through which a senior psychiatrist responds to specific management problems that the mental health staff might have experienced within the preceding week. The data indicate that the mental health profile and severity of psychiatric disorders in the district are similar to those seen at the only national referral hospital in Kampala. The majority of those requiring mental health services were not recognized or simply lived with their condition untreated in their villages.

Thirty-four health care providers from lower level health care facilities in the district and 11 from the district hospital have been trained in the diagnosis and management of common mental disorders at district level. A referral system has been established at the district, supported in turn with the telephone hotline. Two consumer self-help support groups, Alcoholics Anonymous and Post-test Club for AIDS, have been established to help provide support to the district initiative. Further plans based on exploratory discussions aim to involve cultural leaders, the church, traditional healers, the education department, the welfare and probation department, police and prisons and the judiciary.

## DISCUSSION

The initiatives from Uganda have started as a local com-

munity response to high levels of alcohol abuse and suicide behavior. They have shown that local communities can be empowered to support themselves in accessing mental health services and thus help reduce the burden of disease attributable to mental and general psychosocial ill health. In addition, they have revealed that primary health care providers can be trained to treat persons with mental ill health at district level.

There are 21 psychiatrists in Uganda for a population of 26.8 million (4), a psychiatrist to population ratio of 1:1.3 million. Under these circumstances of dire manpower shortage, a special cadre of middle-level mental health personnel, so-called psychiatric clinical officers, with special skills in diagnosis and prescription, are being trained. There are some 50 officers in the country, giving a ratio of approximately 1:500,000 inhabitants. To improve the situation of mental health care in Uganda, the process of policy reform at the district level will need to be speeded up to make it easier for persons with mental health problems to access mental health services early within an integrated health service.

The main challenge is how to make psychiatric services acceptable, affordable and accessible to all on the basis of social justice, equity and fairness, through an integrated health service provision that involves the community and government departments. One more concern is whether and how the local experience in the Adjumani district can be sustained and replicated in the other districts, with 65 different languages and cultures, in the country.

We have to demonstrate to the public that mental health problems are treatable and that we can promote mental health in the community through specialist support supervision, adequate provision of drugs, continuing professional education for district health care providers, training and support for community volunteer counselors, and the involvement of patients and their families in the planning

and provision of psychiatric services. While the role of traditional healers in the treatment of mental illness has been reported in Uganda (5-7), this role is undermined by the lack of a functional system of collaboration and liaison between these healers and modern mental health care services in the country. Research into how best to collaborate with traditional healers is urgently needed.

### Acknowledgement

This initiative was supported financially by Tropical Health and Education Trust (THET) International, and scientifically by the Swedish National and Stockholm County Center for Suicide Research and Prevention of Mental Ill-Health at the National Institute for Psychosocial Medicine and the Department of Public Health Sciences, Karolinska Institute, Stockholm, Sweden.

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# Letter to the Editor

The Consensus Statement on Women's Mental Health, recently published in *World Psychiatry* (1), stresses the importance of increasing the recognition and reducing the stigma of mental illness in girls and women, suggesting that mentally ill women are more stigmatized than their male counterparts.

To highlight gender related problems in follow-up care, we carried out a study at the outpatient follow-up clinic of our Psychiatric University Hospital in April and May 2006. We consecutively interviewed 115 outpatients who had been hospitalized at least once and their accompanying persons, using an ad-hoc questionnaire.

Our first important finding was that women were less likely than men to seek mental health care. Less than 40% of patients were women, although our outpatient clinic is predominantly dealing with common mental disorders known to be twice as frequent in women. Almost 70% of women were usually accompanied when attending the outpatient unit, compared to only 44% of men. Among women, 60% said they would have not attended the unit had they not been accompanied. Because of their dependence on being accompanied, only 45% of women regularly attended appointments, compared to 64.5% of men.

Twenty-four percent of women had no knowledge of the drugs prescribed (appearance, color, dosage) compared to only 4.8% of men. Treatment was discontinued by a family member in 30.2% of women compared to only 6.5% of men. Some of the reasons given by family members for interrupting treatment were fear of future infertility, fear of dependence, and excessive sedation.

Gender was also seen as a factor in the way patients were treated by family members. For example, 41.5% of women reported being treated differently because of their illness compared to 16.1% of men. Female patients were more likely to feel stigmatized within society than male patients (37.7% vs. 24.4%).

Several factors can explain these findings. First of all, the cultural taboo of consulting in a psychiatric setting carries the risk of non-marriage or divorce, which seems to be more important in women because of their predominant role as mothers and wives in many traditional Arab societies. Furthermore, in Arab Islamic societies, women represent a fam-

ily's honour, and so they may be highly reluctant to divulge personal issues to anyone outside the family, for fear of hurting the family status or their own status within it (2). In addition, expectations concerning education, professional and income status are much lower for women than for men, the latter being regarded as future financial providers and heads of families. That is why parents are often more concerned about even minor signs of abnormal psychiatric behavior in men compared to women. Also, women constitute the vast majority of caretakers, for their children as well as for the elderly, ill or disabled family members. Their mental health is regarded as being of low priority compared to their care giving role. Finally, women are physically less aggressive and dangerous than men, thus allowing greater family tolerance for an acute psychiatric episode, as long as they continue to look after household and children.

Thus, there is considerable evidence that the extent of stigmatization of mentally ill girls and women is inextricably linked to their position in society. In societies giving women a lower social status, they seem to be doubly disadvantaged: because they are female *and* because they are mentally ill. Therefore, the striking gender inequalities existing in many traditional societies should be addressed first through adequate measures of women's empowerment. The predominant stigmatization of female psychiatric patients should be considered when developing public education and awareness campaigns in traditional societies. Increasing awareness of this dimension of stigmatization should give us the means to reduce it in the future.

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# The WPA Regional Meeting “Mental Health in Development” (Nairobi, March 21-23, 2007)

**FRANK G. NJENGA**

Congress Convenor

Africa has with a combination of pride and humility accepted the privilege of hosting the world psychiatric community in Nairobi, Kenya from 21 to 23 March 2007. The world community has in turn expressed its support for the continent in a practical way.

For example, the entire WPA Executive Committee, led by Juan Mezzich and including the President-Elect Mario Maj, will not only meet in Kenya but will also participate in the very rich scientific program organized by Oye Gureje and his team. Norman Sartorius, who is the Special Advisor to the conference, will deliver a keynote address on mental health and millennium development goals. Other distinguished speakers will include Peter Tyrer, who will discuss access to high impact journals by authors from low resourced countries. Post-natal depression, spiritualism and mental health will be discussed by John Cox among other distinguished speakers. Africa's giants including Oye Gureje from Nigeria and Atalay Alem from Ethiopia have confirmed presentations on various aspects of psychiatry, including initiatives and activities on the continent. Many young and upcoming psychiatrists who form the backbone of the future of psychiatry in Africa will be presenting papers. Kenyan psychiatrists will in particular describe their work on the current state of mental health in their country. Rachel Jenkins, who is a UK based mental health policy expert, will describe her ongoing work in the Eastern Africa region, funded by the Nuffield Foundation and the UK Government.

This work falls in neatly with the overall theme of the conference, “Mental Health in Development”, whose sub-themes include Provision of Mental Health Care in Low Resourced Countries: Challenges and Opportunities; Mental Health within General Health

Service: Peculiarities and Needs; Mental Health Economics and Policies; HIV, the Brain, and Development; Mental Health Workforce and Psychopathology, Disability, and Wellbeing.

The confirmed symposia are very diverse in content, including additional themes on HIV/AIDS and drugs. John Orley, former Senior Officer at the Division of Mental Health of the World Health Organization, will launch a new book on Alcohol in Context, while Paul Mullen from Australia will present in a symposium on mental health and terrorism. Special symposia on child and adolescent psychiatry, including attention-deficit/hyperactivity disorder, have been confirmed.

There is substantial support from industry, which will participate by way of exhibition and special symposia, but also by giving special travel and conference grants to young psychiatrists from Africa. A special three day workshop for African psychiatrists has been confirmed, and will follow the conference. Prior to the conference, a group of thirty child and adolescent psychiatrists led by Brian Robertson will continue with their regular meetings addressing the needs of

children and adolescents in Africa.

International support and attendance to the conference has been confirmed by the President of the American Psychiatric Association, Pedro Ruiz; the President of the UK Royal College of Psychiatrists, Sheila Hollins, as well as other participants from Canada, Japan, other parts of Europe and Asia.

Before and after the conference, delegates will be able to enjoy Kenyan hospitality. Visits to world famous game reserves and beaches will be on the menu for those who choose to go on safari. The Government of Kenya has partnered with the Local Organizing Committee to facilitate immigration, customs, security and protocol for the delegates.

The Local Organizing Committee has put in place a mentoring program where Kenyan and other East African young psychiatrists will be partnered for the duration of the meeting with senior colleagues from other countries, ensuring personal contacts between the two groups, in an attempt to make lasting and meaningful bonds between African and other delegates. Visit the website [www.wpa2007nairobi.com](http://www.wpa2007nairobi.com) for more information.

# The WPA Regional Meeting “Science and Humanism” (Seoul, April 18-21, 2007)

**YOUNG CHO CHUNG**

Chairman, Organizing Committee

Welcome to the WPA Regional Meeting to be held from 18 to 21 April, 2007 in Seoul, Korea, hosted by the Korean Neuropsychiatric Association.

A wide spectrum of psychiatric topics will be covered in the meeting under the theme of “Science and Humanism”. International experts will give lectures covering the latest developments and

there will be sessions focusing on the Asian regional situation, such as those on disaster psychiatry in East Asia, Asian epidemiology and transcultural issues. Meeting attendees will receive the most current information on basic and clinical research, as well as educational courses. A regional meeting of the World Association for Psychosocial Rehabilitation will accompany the WPA meeting.

J. Mezzich is the Meeting President,

Young Cho Chung is the Chair of the Organizing Committee and Jun Soo Kwon is the Chair of the Scientific Committee. Jong Hyuck Choi works as the Secretary General, and the presidents of WPA Member Societies of the region participate as members of the Advisory Committee.

Seoul is one of the most attractive cities in the world. You will find its unique charm of oriental traditions and inspiring modern architecture to be irresistible. We have arranged many interesting social activities and cultural experiences for participants to enjoy. Please do not miss the chance to have

enchanting memories in the Land of Morning Calm.

For detailed information concerning the scientific programme, registration, accommodation and tours, please visit the website [www.wpa2007seoul.org](http://www.wpa2007seoul.org).

We look forward to meeting you in Seoul, Korea in April 2007.

**Acknowledgement**

This publication has been supported by an unrestricted educational grant from Janssen-Cilag, which is hereby gratefully acknowledged.

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€ 17,67 per issue

Printed in Italy by Legoprint SpA, via Galilei, 11 - 38015 Lavis, TN



