

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)

Ten overall recommendations	Scenario A: Low level of resources	Scenario B: Medium level of resources	Scenario C: High level of resources
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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