

Mental health issues for older veterans and war widows:

**A report to the
national ex-service
round table on aged care**

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Executive Summary

The Department of Veterans' Affairs, in its policy *Towards Better Mental Health for the Veteran Community: Mental Health Policy and Strategic Directions, 2001*, emphasised the importance of mental health in older veterans and war widows [1]. Dementia and depression were specifically highlighted, reflecting the prominence of these conditions in this age group [2]. Dementia prevalence increases with age. By 85 years, 30% of the population will have dementia [3]. Behavioural and psychological symptoms in dementia (BPSD) occur in two thirds of those with dementia [4] and are associated with increased care-giver stress and institutionalisation. Reported prevalence for depression in community-dwelling older residents varies, some authors finding rates comparable with younger cohorts and others reporting a reduction in older cohorts. However, increased prevalence rates for depression are consistently reported for those who are carers, have physical disabilities or reside in aged care facilities [5].

There is growing evidence that lifestyle factors influence the risk of developing dementia. Controlling vascular risk factors, such as blood pressure, weight, cholesterol and diabetes mellitus may prevent or delay the onset of Alzheimer's disease, as well as Vascular dementia [6; 7; 8]. High homocysteine levels in the blood are a risk factor for cardiovascular disease and have been associated with increased risk of dementia. Current research is evaluating the role of vitamin B12 and folate, and the role of vitamin B6, which modify homocysteine by different pathways [9]. Antioxidants, omega-3-fatty acids and exercise may reduce the risk of dementia [10; 11; 12; 13]. Access Economics estimate the 2004 costs for dementia to be \$6.1 billion, including \$3.56 billion in direct health costs and \$1.96 billion in carer and family costs [14]. If, by universal or selective prevention, the onset of dementia could be delayed by even a few months, the economic savings would be significant [15].

In an Australian survey of challenging behaviours in residential aged care, 22% of nursing home residents had moderate challenging behaviour and 14% had severe challenging behaviour [16]. Non-cognitive symptoms in dementia include psychosis, depression, anxiety, agitation, vocally disruptive behaviour, disinhibition, apathy, aggression and wandering. They are complex behaviours pertaining to bio-psycho-social factors of the individual, his environment and his interactions with others. Good management involves reviewing medical conditions, including pain, medications and their side effects, psychological factors pertaining to past experiences and coping styles, as well as social interactions. There is evidence to support the effectiveness of environmental modification, behaviour therapy, carer education and activity programs in

reducing behavioural and psychological symptoms in dementia (BPSD) [17; 18; 19]. A systematic, empathic approach provides an antidote to demoralisation and powerlessness.

Community residents with dementia were six times more likely to be prescribed an antipsychotic medication than those without dementia [20]. Antipsychotic medications are the mainstay of pharmacological interventions for BPSD. There are a number of trials showing modest efficacy for treatment of BPSD, but these trials are often of short length and high levels of placebo responses are reported [21; 22; 23]. Whilst newer antipsychotic medications appear to be better tolerated there is growing evidence that conventional and newer antipsychotic drugs are associated with increased mortality and morbidity in those with dementia (unpublished data held by the author) [24; 25]. BPSD may be transitory as suggested by the high placebo response in some trials, and medication should be periodically reviewed with regard to a reduction or cessation [26; 27; 23]. The Pharmaceutical Benefits Scheme psychotropic drug costs for all age groups have increased by 570% in real terms from 1992-93 to 2001-2002.

Depression in old age is often under-recognised and under-treated [28]. It is associated with dementia, physical disability and physical illnesses, as well as social isolation. It is also associated with worse outcomes in physical rehabilitation [29], which has implications for general health spending. Depression prevalence in residential aged care facilities (RACF) varies from 12.6% to 51% [28; 5], highlighting the vulnerability of residents of aged care facilities. The Department of Health and Ageing has completed a major survey of depression in RACF [5] and developed an excellent manual on treating depression in residential care. Professor Liddell *et al.* from Monash and Deakin Universities, in collaboration with *beyondblue*, is assessing both depression screening tools and the training of general practitioners and RACF staff to combat this high level of burden.

The *National Action Plan for Depression, 2000* [30] and *beyondblue* have raised depression literacy in the general community. However, depression is sometimes seen as a natural part of ageing and not as a treatable condition. Increasing depression literacy in older cohorts should be a priority. Emerging literature on vascular depression raises the possibility of a preventative focus for depression in old age [31]. Prospective trials are underway, examining the role of vitamin B6 and folate in the prevention of depression in old age.

The National Mental Health Strategy, 1992, sought to reform the mental health services to make them more accountable, ensure clinical standards and reduce stigma. There was a reduction in the reliance on stand-alone psychiatric hospital beds and a move to co-locate them with general medical hospital services. The integration of inpatient and community care, to allow continuity of care, was also part of this plan. Subsequently, the National Mental Health Plans and the *National*

Action Plan for Depression, 2000 have broadened the focus from low prevalence disorders, such as schizophrenia and bipolar disorder, to include high prevalence disorders such as depression and anxiety disorders. Health promotion and disease prevention were articulated in *National Action Plan for Promotion, Prevention and Early Intervention for Mental Health, 2000* [32]. The Second National Mental Health Plan highlighted the importance of general practitioners in delivering mental health treatment. Commonwealth and State initiatives supported training and reimbursement for general practitioners.

States and Territories varied in their expression of these national strategies. Overall, the number of psychiatric beds fell by 26% during the period between 1992-93 and 2001-02. This reduction occurred mainly in non-acute beds. Failure to decommission stand-alone hospitals in some states resulted in smaller savings than expected from these bed closures. Total old age psychiatry beds per 100 000 in 2002 varied from 132.3 in Victoria to 44.2 in Queensland [33]. While provision of inpatient services is only a small part of the Older Persons Mental Health Services (OPMHS), the lack of beds has flow-on effects to other parts of the mental health service and general health services. By providing intensive support to those who in other circumstances would have been admitted, community teams are able to provide crisis care but only limited ongoing care. This reality is lamented by carers, consumers and health professionals [34].

Some states, such as Victoria, have included mental health aspects of dementia in their mental health service's planning. This has resulted in the development of Victorian psychogeriatric nursing home (PGNH) beds, parallel to mainstream residential care beds. The PGNH beds receive both State and Commonwealth funding. In Victoria, multidisciplinary psychogeriatric assessment teams (PGAT) have evolved to complement the Aged Care Assessment Teams. In some other states mental health aspects of dementia are not specifically included in population planning policies. Lack of development of PGNH leads to pressure on mainstream RACF and delayed discharge from hospital for those with BPSD.

The DVA treatment population has access to both public and private inpatient and outpatient care. Older people, both in the general community and the DVA treatment population, receive fewer per capita private psychiatry consultations than the younger population [35]. This reflects many factors, including physical frailty, medical co-morbidities and the limited number of domiciliary visits made by private psychiatrists. The ratio of private to public multi-stay psychiatric admissions was approximately 1 : 3 in NSW and ACT in 2002-2003 for male veterans over 75 years. This emphasises the importance of public psychiatry admissions in some age groups.

DVA purchases services from public and private providers to give its treatment population access to mental health interventions. It also forms research partner-

ships with universities and peak bodies. Through its databases DVA can monitor prescribing trends and some health outcomes. DVA is involved in aspects of carer and staff education as well as supporting ex-service organisations and other non-government organisations in providing social connectedness. DVA has been involved in health promotion through the Heart Health Program for younger veterans, and physical activity training for older veterans.

RECOMMENDATION 1

That NERTAC advocate for **dementia prevention programs** or that a dementia prevention component be developed to adjoin existing lifestyle programs. Making more information available with regard to nutritional protective factors and control of vascular risk factors would be appropriate. The younger veterans' "Heart Health Program" is a model prevention program. Consideration should be given to the development of a "Heart and Brain Program" for older veterans and war widows. Dementia prevention would result in cost savings [15].

RECOMMENDATION 2

That NERTAC advocate for **the development of a course for those with behavioural and psychological symptoms in dementia and their carers**, containing education, a problem-solving approach and behavioural therapy techniques aimed at reducing BPSD. It is recommended that this occur through consultation with Alzheimer's Australia and carers' groups. Evaluations of this course should include outcome measures for the individual and carer, but also measures of delay in institutionalisation or reduction in antipsychotic medication. The Alzheimer's Australia *Living with memory loss* program is only for those with mild memory loss and hence many veterans and war widows with BPSD would not be able to make use of this program.

RECOMMENDATION 3

That NERTAC advocate to improve **depression literacy** in the older veteran and war widow populations, together with their carers. *beyondblue* would be a useful partner in developing strategies and evaluation procedures. Existing ex-service organisations and volunteers may be one pathway to spread information and change attitudes.

RECOMMENDATION 4

That NERTAC retain **depression in residential aged care as a focus**. Current research funded by *beyondblue* and undertaken by Professor Liddell *et al.* through Monash and Deakin Universities is evaluating both screening instruments for depression in RACF, and educational programs for GPs and staff in the recognition and management of depression in RACF. It has been suggested that

depression was higher in those in veterans' residential care [5]. A specific research project may establish the prevalence of depression among veterans and war widows in RACF, and assess the efficacy of veteran-specific interventions. For example, the DVA treatment population in RACF might benefit from treatment from a psychologist, for which there is a DVA item number available.

RECOMMENDATION 5

That NERTAC **encourage the DVA in its current educative role** for workers in RACF and Veteran Home Care Packages. Each DVA State Office has its own educational packages on a range of mental health topics. It may be worthwhile developing a standard presentation on each topic, which staff can adjust to their local context. The Victorian State Office, in partnership with *beyondblue*, Monash university, TAFE and Mental Health Aptitude, is developing an interactive CD ROM for the carers and staff of those with mental health problems. If the evaluations are positive, it could be adopted by other states. A parallel interactive CD ROM, again developed in partnership with appropriate organisations, could be developed for carers and staff involved with those with BPSD.

RECOMMENDATION 6

That NERTAC advocate for the DVA to support States and Territories as they express the National Mental Health Strategy principles of developing and funding a responsive and integrated mental health service for all age groups.

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DISCLAIMER AND DECLARATION OF CONFLICT OF INTEREST

The terms of reference are very broad and aspects of the terms of reference are explored at various depths. The methodology, and some of its limitations, are discussed in the methodology section.

The advice contained in this report is general and should not be taken as clinical advice. Individual medical conditions and situations vary, so advice about dementia or depression should be sought from a suitably qualified medical practitioner.

Whilst every effort has been made to ensure accuracy at the time of writing, information may change. No responsibility is accepted by the author for any loss, including financial loss, damage, injury or death suffered by any person acting on or relying on information contained in this report.

Conflict of Interest

The unpublished DVA report concerning Mortality Rates Associated with Antipsychotic Medication in Older Veterans and War Widows was authored by Jean Hollis, Stephen Touyz, David Grayson and Loelle Forrester [36]. Graeme Killer, Henry Brodaty and the previous collaboration of authors will submit a second project, expanding on the first, to the Research Committee.

TERMS OF REFERENCE

The Contractor will perform the following tasks:

- make a stock-take of the activities and research being undertaken in Australia and, if appropriate, elsewhere, in relation to mental health and ageing, particularly taking account of the salience of depression and mental health aspects of dementia, with particular emphasis on prevention, treatment and service delivery;
- perform an analysis of gaps in current service delivery and development of the work force with regard to mental health needs of older veterans;
- Identify the current policy context, especially at the national and state levels;
- Provide a commentary on the range of actions in the area already taking place in the Department of Veterans' Affairs;
- Provide a written and verbal report to NERTAC on the stock-take, including making recommendations in four or five priority action areas which have strategic significance for the interface and would assist in furthering discussion or research by interested parties. Such a report should serve to set a course for future action by NERTAC in relation to mental health issues affecting older veterans and war widows.

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METHODOLOGY

A Medline search was performed using terms such as “depression”, “dementia”, “vascular dementia”, “elderly”, “services”, “review” and so on. Preference was given to review articles, articles in more prestigious journals and articles available electronically through the University of Sydney. Collected references on topics, such as the reference list on the Alzheimer’s Australia website were reviewed.

Websites of the Department of Health and Ageing, Department of Veterans’ Affairs and State Departments of Health were searched by area map and by the specific search facilities of the web sites. *beyondblue*, Alzheimer’s Australia and Carers Australia web sites were searched as were some related links.

Contacts suggested by the Steering Committee within DVA were emailed. Mental Health Related Activities submitted for the May, 2003 Mental Health and Ageing Workshop were reviewed. The person nominated as responsible for the activity was emailed. As further names were suggested, they in turn received email contact. In some cases telephone contact was made.

A number of experts were contacted in the making of this report. In particular, I would wish to thank Professor Henry Brodaty, Professor John Snowdon, A/Professor Brian Draper, Dr Helen Creasey, Dr Richard Bonwick and Dr Mike Bird.

1. Introduction

The Department of Veterans' Affairs (DVA), in its policy *Towards Better Mental Health for the Veteran Community: Mental Health Policy and Strategic Directions, 2001*, broadened the traditional mental health focus to include dementia and depression occurring in older veterans and war widows [1]. This review aims to capture some of the research done in Australia and overseas. Excellent longitudinal studies have been done in Northern Europe and Canada, highlighting the prevalence of mental disorders in older people together with associated risk factors. Research in Australia has examined psychotropic medication prescribing and depression in residential aged care facilities. *beyondblue*, a Commonwealth and State initiative, has provided an impetus for research, models of prevention and approaches to increasing depression literacy. Neurochemistry and neuropathology in dementia are exciting areas of research, as is the testing of therapies to alter dementia progression. More research is needed on pharmacological and non-pharmacological ways of managing challenging behaviours in dementia.

The National Mental Health Strategy has been praised as an exemplar of mental health policy. The principles of reducing stigma and raising clinical standards are still relevant today. The blueprint of reducing dependence on stand-alone hospitals, co-locating psychiatry beds in general medical hospitals and strengthening community care has been expressed in different ways, with varying success, by the jurisdictions. As health costs, particularly pharmaceutical costs, continue to rise, it is imperative to spend wisely and develop a service with the capacity to meet the needs of the DVA treatment population. The Second Mental Health Plan rightly highlights the pivotal role General Practitioners play in delivering mental health care. Changes to the Medicare Benefits Schedule have underpinned the Commonwealth's desire to support the delivery of services to vulnerable groups, such as those in residential aged care facilities and remote locations.

By the nature of the complex layers of responsibility for the delivery of mental health services, the Department of Veterans' Affairs is involved in partnerships with Commonwealth and State Departments, peak consumer bodies and professional organizations. The aim is that health services will provide health promotion, prevention, early intervention, treatment and rehabilitation opportunities for veterans and war widows.

2. Dementia

Dementia is the third leading cause of burden in women and the fifth leading cause in men [37]. In 2001, Australia with a population of 19 million had an estimated 165 000 residents with dementia. Current projections predict that by 2020 there will be 270 000 Australians with dementia [14]. Access Economics estimate the 2004 costs for dementia to be \$6.1 billion, including \$3.56 billion in direct health costs and \$1.96 billion in carer and family costs [15].

2.1 DEMENTIA PREVALENCE

Estimates of dementia prevalence vary from study to study, in part resulting from different methodologies. From a community based, longitudinal cohort study, Skoog *et al.* reported that the prevalence of dementia in the cohort at 70 years was 6.6% in men and 3.1% in women [3]. The prevalence of dementia at 85 years was 30% (men equal with women). At 85 years the prevalence of dementia in those with stroke was 57% and in those without stroke 24%. Again, in the 85 year group, white matter lesions were found in 69% of those with dementia and only 34% of those without dementia.

2.2 DEMENTIA SUB-TYPING

Dementia is a progressive neurodegenerative disorder affecting memory and at least one other cognitive domain, resulting in social and/or occupational impairment. The cognitive impairment should not occur exclusively during a delirium or be better attributed to another psychiatric condition, such as depression. The cognitive impairment should not be better accounted for by another medical condition or substance-induced conditions [38].

Alzheimer's Disease (AD) is the most common neurodegenerative dementia. The pathological hallmarks of this disease include amyloid plaques, neurofibrillary tangles and cell loss. Biochemical changes include a reduction in cholinergic activity and decreased nerve growth factor. These features are not, however, specific to AD and it is beyond the scope of this report to discuss pathological issues in detail. Variable emphasis has been given to plaques and neurofibrillary tangles in competing pathological classification systems, which resulted in variable sensitivity and specificity rates. The clinical expression of AD may be modified by coexisting vascular disease, such that those with mild pathological AD changes may have had a more severe clinical dementia if there were also signs of cerebro-vascular disease at autopsy [39].

Vascular dementia (VaD) includes multi-infarct dementia, strategic infarct dementia and subcortical white matter disease. The prevalence of VaD depends on the definition and methodology of detecting cases. Mixed AD and VaD may occur commonly [40]. VaD and AD coexist more often than would be expected by chance, suggesting common risk factors.

Dementia associated with Lewy Bodies (DLB) occurs in up to 20% of hospital autopsy series [41]. Debate has surrounded the classification of this dementia as the pathological hallmarks, cortical Lewy bodies and Lewy neurites, occur in combination with the features of AD pathology. The cholinergic deficits in DLB are more marked than in AD.

Fronto-temporal dementias (FTD) contribute 5% to the overall prevalence of dementia. However, FTD comprises 20% of early onset dementias (onset below 65 years).

Other neurodegenerative dementias include dementia associated with Parkinson's disease, progressive supranuclear palsy, corticobasal ganglionic degeneration, multi-system atrophy, Huntington's Disease and Prion diseases.

Alcohol related brain damage. Vitamin B1 deficiency occurring in long term alcohol abuse can cause the Wernicke-Korsakoff syndrome. If the deficiency is not treated in the acute stage, the progression is to a profound memory loss. Alcohol is a neurotoxin and can particularly damage the frontal lobes and cerebellum. Heavy alcohol use is a risk factor for dementia, while moderate wine drinking may be protective. The protective effect of wine drinking is probably not attributable to the alcohol content but may be linked to antioxidants in the wine. Given the recent focus by the Department of Veterans' Affairs on alcohol use and the broad nature of the terms of reference for this report, alcohol will not be a specific focus of this report.

2.3 DEMENTIA RISK FACTORS

Large epidemiological studies have recognised a number of risk factors for dementia. Some are modifiable lifestyle factors, which invites speculation about preventative interventions. Some protective factors may not be independent of each other, for example higher education levels, nutrition and socio-economic status. Evidence for risk factors needs to be gathered at three levels: epidemiological evidence of association between the risk factors and dementia, evidence that modifying the risk factor alters the incidence of dementia and evidence that modifying the risk factor in those already suffering cognitive impairment is beneficial. It is likely that there is a gene-environment interaction,

with some of the population being more at risk, for example, of low folate or vitamin B6 levels.

2.3.1 MODIFIABLE DEMENTIA RISK FACTORS

Hypertension

Those with hypertension at 70 had significantly higher incidence of dementia, both VaD and AD, at 79 and 85 years [3]. Blood pressure declined in the years before the dementia onset and would not have been detected if a cross-sectional design had been used. Use of antihypertensive medication at 70 correlated with reduced incidence of dementia after 79 years. Hypertension was correlated with cognitive decline in mid-life in a six-year prospective trial [6]. However, in this study well-controlled hypertension was not distinguished from poorly controlled hypertension, leaving questions about the benefits of treatment unanswered. Large trials have shown that treating hypertension produces a reduction in the risk of stroke.

Homocysteine

Levels of homocysteine in the blood increase with age, particularly after 70 years [9]. Those with elevated levels are at increased risk of vascular disease, heart attack and stroke. Cells produce homocysteine from the amino acid methionine. It is metabolised back to methionine using an enzyme that requires folic acid and vitamin B12, or converted into cysteine by an enzyme that requires vitamin B6. Remethylation of homocysteine to methionine requires the enzyme 5-10-methylenetetrahydrofolate reductase (MTHFR). A common MTHFR mutation results in decreased activity of the enzyme. Vitamin B12 deficiency can exist without evidence of haematological or neurological deficits. Evidence of the neurotoxic effects of homocysteine has come from animal studies. It has been demonstrated to be atherogenic and increases platelet aggregation.

Elevated homocysteine levels have been found to be an independent risk-factor for dementia. Other studies have shown that homocysteine levels are significantly higher in those with dementia. Another study reported elevated homocysteine levels in those with vascular dementia but not AD. While these factors have been explored as risk factors, there is no evidence that they will help those symptomatic with dementia. Clinical trials of folic acid in AD are underway.

Vitamin B6 is a homocysteine remethylation cofactor [42]. The Vitamin has an important role in the synthesis of several neurotransmitters including, serotonin, dopamine, noradrenaline, and gamma-aminobutyric acid. Low vitamin B6 levels have been noted to be low in up to 20% of older people. Deficiency has been linked to seizures, migraine and depression. The Cochrane reviewers concluded that there was no evidence that vitamin B6 improves cognition, prevents dementia or improves mood.

Mattson reviewed the gene–diet interface in the risk of developing dementia [12]. Dietary factors may influence the development of neurodegenerative disorders. High caloric, folate-deficient diets are associated with increased risks. Animal studies have shown that caloric restriction and dietary supplementation with folic acid can reduce neural damage. Folic acid fortification of grains began in the USA and Canada in 1998 as a preventative measure against neural tube defects in babies.

Folic acid given in the presence of Vitamin B12 deficiency can deplete Vitamin B12 levels and provoke sub-acute combined degeneration of the cord. Those considering folic acid supplementation should discuss the need for Vitamin B12 supplementation with their doctor.

Diabetes Mellitus, Statins and Increased Weight

The diagnosis of diabetes mellitus correlated with cognitive impairment in a six-year prospective trial in middle aged subjects [6]. There is some evidence from epidemiological data that statins are associated with a lower risk of AD. There is some laboratory evidence that statins reduce amyloid production. Women who developed dementia between the ages of 79 and 88 years were more likely to be overweight at 70 years [3]. A prospective 18-year trial reported that, in women, every 1.0 increase in BMI (BMI equals height in centimetres divided by weight in kilograms squared) brought a 36% increased risk of AD [8]. The average BMI of those who developed AD was 3.6 units higher than those who did not develop dementia. In this study BMI was not related to the risk of developing VaD. As dementia can be associated with weight loss, prospective rather than cross-sectional studies are needed. In animal models, caloric restriction protected the hippocampus (part of the brain involved in memory). It has been reported that 36.4% of women aged over 75 were overweight and 25.5% were obese [43]

Head Trauma

Head Trauma has been found to be a risk factor for AD.

2.3.2 UNMODIFIABLE DEMENTIA RISK FACTORS

Apolipoprotein E

Apolipoprotein is used in the transportation of lipoproteins and cholesterol. It is involved in neuronal membrane repair and remyelination. Apolipoprotein ε4 allele is a risk factor for AD and coronary heart disease. Apo ε4 allele increased the Odds Ratio of developing dementia (OR 1.9) [3].

Family History of dementia

There are a few specific mutations which account for a small percentage of dementia presentations (Chromosome 1, Chromosome 14 and Chromosome 21). A positive family history may increase risk through shared Apo e4 alleles or genes that determine vascular health.

Down's Syndrome

Amyloid precursor gene is found on chromosome 21, hence the young age at which people with Down's Syndrome develop AD.

2.4 PROTECTIVE FACTORS FOR DEMENTIA

Higher educational achievements and brain size

Higher educational achievements and brain size may be protective [7]. This may be due to greater reserve or possibly the higher socioeconomic status associated with education. In the Nun study, autobiographies that elderly nuns had written as novices were analysed for ideas and grammatical complexity. Greater complexity was correlated with a reduced risk of dementia [39].

Non-steroidal anti-inflammatory drugs (NSAIDs)

In a meta-analysis of trials Etminan *et al.* noted that long-term users of NSAIDs had a lower risk for dementia (Relative Risk 0.27) [44]. Length of use was associated with greater protective effect. Publication bias cannot be excluded in this type of meta-analysis. Other prospective trials supported the finding of NSAID's protective effect [7]. As a class, however, this medication has some significant side effects, for example gastric ulcers.

Moderate wine drinking

Moderate wine drinking has been associated with a reduction in risk of dementia [11]. This effect is thought to be related to flavanoids, which are antioxidants present in wine, and not related to the alcohol content. Other types of alcohol were not associated with a reduction in dementia. It is possible that the manner of drinking wine, more often associated with meals and less likely to be consumed during binge drinking, may be relevant. Excessive drinking was associated with an increased incidence of dementia, possibly from a direct neurotoxicity or indirect nutritional cause. Flavanoids are also found in fruit and vegetables.

Antioxidants

Oxidative stress is one theory explaining the metabolic cascade that leads to the pathological hallmarks of AD. Amyloid reduction and aggregation leads to an increase in reactive oxidative species that damage cell membrane transporters. Antioxidants scavenge free radicals and thereby protect cell membranes and structures. Neurones are particularly vulnerable to oxidative damage and hence

the hypothesis that antioxidants may protect against cognitive impairment. Combinations of vitamin C and vitamin E were found to lower the risk of dementia in a large, longitudinal trial [13]. Other large studies have shown an inverse correlation between dietary antioxidant intake (even after adjusting for vitamin supplements) and dementia.

Fish consumption

A seven-year French prospective study showed a reduced incidence of dementia for those consuming fish at least weekly [45]. This effect was partly explained by higher levels of education.

Physical exercise

Physical exercise was associated with a reduced incidence of dementia [7]. The Canadian Study of Health and Ageing is a large-scale prospective trial. Laurin *et al.* reported an Odds Ratio of 0.50 for the development of AD in those partaking in high levels of physical activity [10].

Leisure activities

Regular participation in leisure activities has been found to correlate with lower rates of cognitive impairment in older people. Many studies were cross-sectional and no causal relationship can be inferred. A three-year prospective study demonstrated a lower risk in those that travelled, gardened or engaged in knitting [46]. However, given the theoretical long prodrome of dementia, it may be that some subjects who eventually developed dementia had reduced activities at baseline on the basis of early or prodromal dementia.

Oestrogen

Oestrogen has been hypothesised to improve cognition. There has been support from some epidemiological studies but not others [7]. Clinical trials have so far been negative. Large cohort studies have not showed any beneficial effects of oestrogen [47].

2.4.1 RECOMMENDATIONS FROM ACCESS ECONOMICS REPORT, 2003

Recommendation 3

- Address cardiovascular risk factors- reducing hypertension, cholesterol, and homocysteine (folate) and anti-platelet treatments;
- Promote good diet, exercise, quitting smoking and drug and alcohol programs;
- Promote ongoing awareness to reduce other dementia risk-factors such as head trauma, occupational hazards and others revealed and confirmed by ongoing research.

2.5 MILD COGNITIVE IMPAIRMENT (MCI)

MCI is a conceptual transitional stage between ageing and dementia. Much of the focus of research has been predicting factors associated with progression from MCI to dementia, for example, smaller hippocampal volume. The diagnosis of MCI involves memory impairment with preservation of general cognitive and functional abilities, in the absence of the diagnosis of dementia. In a longitudinal study with a mean follow-up interval of 5.1 years, the progression to dementia from the MCI group was 20% compared with 6.8% for controls [48]. Rates of progression vary depending on definition of MCI and dementia. One study examined the predictive power in those 75 years and older of three subsets of MCI: MCI-amnestic, MCI-multiple domains slightly impaired and MCI-single non-memory [49]. Subjects progressed to dementia at the rate of 10-55% over 2.6 years depending on which criteria were used. The MCI-amnestic category achieved the highest positive predictive power. It is anticipated that identifying those at high risk of developing dementia would provide opportunities to test interventions.

2.6 MENTAL HEALTH ASPECTS OF DEMENTIA

2.6.1 BEHAVIOURAL AND PSYCHOLOGICAL SYMPTOMS IN DEMENTIA

Behavioural and psychological symptoms in dementia (BPSD) is a broad term for non-cognitive symptoms occurring in dementia. It includes psychosis, depression, anxiety, agitation, vocally disruptive behaviour, disinhibition, apathy, aggression and wandering. Lawlor states in his editorial that about two-thirds of people with dementia experience BPSD at some point in their illness [4]. BPSD will be clinically significant in one-third of community residents with dementia. Over 90% of residents with dementia in nursing homes have at least one behavioural or psychological symptom and 60% have psychotic symptoms [50]. Ten percent of nursing home residents were estimated to have severe BPSD, that is BPSD to the extent that management in mainstream residential aged care facilities (RACF) was difficult [51].

Challenging behaviours should be understood not only in the bio-psycho-social context of the individual, but also in the context of the individual's environment and carers. Indeed it may be the environment which causes a behaviour to be labelled as problematic. Wandering in a RACF is more problematic if there are unprotected stairs or lack of perimeter fencing. Carer perception of disinhibited comments is affected by whether the comments are attributed to the illness or the person's true judgement. Some delusions and hallucinations are not distressing

and are best managed by an empathic comment or distraction, rather than antipsychotic medication. Specific behaviours may occur on the basis of premorbid coping styles and personality. Behaviours may be a means of communicating distress, or loss of purpose.

BPSD is also a diagnosis of exclusion. Medical illnesses, including delirium, drug and alcohol withdrawal and intoxication, and side-effects of medication should be diagnosed and treated. Pain commonly occurs in nursing home residents with dementia. In one survey of Australian nursing homes, 27.8% of residents reported pain and 16% of those residents had no analgesia charted [52]. Pain detection may have been made more difficult by the cognitive and language losses resulting from dementia.

A number of pharmacological and non-pharmacological treatment trials with placebo arms reported placebo response rates of 30-35% for BPSD [23]. This suggests that these symptoms might fluctuate over the course of the illness. Thus an apparent clinical response to a medication or intervention may simply be variation within the illness. Therefore, periodic reduction in medication may reveal that underlying behaviours have settled and the drug is no longer needed. In addition, studies with intervention response rates of 30-40% and inadequate control methodology should be cautiously interpreted given the background placebo response. On the other hand, however, a longitudinal community study reported that 67% of those with clinically significant neuropsychiatric symptoms continued to display them at 18 months, although treatment was not examined [53].

Several associations with BPSD are important to note. BPSD is associated with increased carer stress and institutionalisation. Hence it is important to detect BPSD and provide support and treatment before the behaviours cause damage to support systems. Hospitalised patients with BPSD are more difficult to discharge. A community sample showed those with dementia used more psychotropic medications than those without dementia. Those with dementia were six times more likely to be using antipsychotic medication [20].

Brodsky *et al.* proposed a seven-tiered model of increasing BPSD severity with commensurately responsive service delivery [51]. Up to 1% of those with dementia were predicted to have very severe BPSD and be unable to be managed within a mainstream RACF. Thus for the 2001 population they estimated that 1 650 psychogeriatric beds would be required. They also postulated that extremely disturbed aggressive individuals under 70, usually male, with FTD or alcohol-related brain damage, would require placement in a high-security unit.

In an Australian survey of dementia and challenging behaviour in residential facilities, Rosewarne *et al.* reported that the prevalence of dementia in hostels was

28.4% and in nursing homes was 60.3% [16]. Estimated levels of cognitive impairment in nursing homes was 21.9% mild, 26.7% moderate and 41.1% severe, suggesting that dementia may have been under-diagnosed. In nursing homes 14% of residents were rated as having severe behavioural disturbance and a further 21.8% as having moderate challenging behaviours. In 1997, this translated to 10 462 and 16 290 residents respectively.

In those with moderate or severe dementia, the most commonly prescribed psychotropic medication was an antipsychotic (AP) medication [16]. Sixty percent of those with moderate dementia and 50% of those with severe dementia received at least one AP drug. While there is a rationale for treating psychotic symptoms with AP medication by analogy with psychotic syndromes in younger people, it should be noted that the delusional phenomenology may be different in dementia [54; 55], and the risk/benefit ratio is more heavily weighted towards risk [56; 24]. Furthermore, the evidence for treatment of non-psychotic non-cognitive symptoms with AP medication rests on short-term trials demonstrating a modest efficacy in some behaviours [57; 21; 58]. Residents with dementia and “functional” psychiatric diagnoses (depression and psychosis) had the highest levels of challenging behaviours compared with other diagnostic groups [16].

2.6.2 PSYCHOSIS IN DEMENTIA

Dementia is associated with an increased incidence of psychotic symptoms. In nursing home populations with dementia, 60% were reported to have psychotic symptoms [51]. The prevalence of psychotic symptoms also depends on the underlying cause for the dementia. The prevalence of delusions ranged from 16% in AD to 45% in DLB [59; 60]. Delusions commonly involve the belief that someone is stealing property. This is understandable in part with regards to memory impairment. Other delusions involved misidentification of spouse or home and subsequent persecutory interpretations. Complex delusional systems are more likely to occur when there is subcortical disease and relative sparing of the cortices [59].

Visual hallucinations were present in 13% and auditory hallucinations in 10% of those with AD [61]. Visual hallucinations are one of three core features used in diagnosing DLB and thus would be expected to occur commonly in DLB [62; 63]. Visual hallucinations occur commonly in DLB but may not be distressing. They are often complex and may occur in ambiguous lighting. Neuroleptic sensitivity occurs in up to 57% of those with DLB exposed to an AP drug and is associated with increased mortality [62]. Thus in cases of DLB, many advise avoiding AP drugs if possible or considering cholinesterase inhibitors as the first-line pharmacological management for psychotic symptoms.

Psychotic symptoms are predictors of institutionalisation, functional decline [64] and cognitive decline. AP medication in dementia was found independently to predict cognitive decline in one small prospective study [65].

2.6.3 DEPRESSION IN DEMENTIA

Symptoms of depression are common in AD. In DLB, 25% were diagnosed with depression and a further 24% had significant depressive symptoms [62]. Anxiety is understandable on the basis of poor short-term memory and continual disorientation. There are difficulties in diagnosing depression in dementia, namely, symptom overlap, poor concentration, sleep disturbance, apathy versus anhedonia, etc. Emotional lability, where tears change to laughter and back again, either disproportionately or inappropriately to an environmental stimulus, should be distinguished from depression where there is profound and persistent low mood. However, there is some evidence that emotional lability also may respond to treatment with antidepressants.

2.7 NON-PHARMACOLOGICAL INTERVENTIONS

A range of psychosocial interventions has been discussed in the literature. Behavioural therapy examines the antecedents, the nature and the consequences of a behaviour to determine if there is a trigger for the behaviour or if it is being reinforced by subsequent actions. Scheduling pleasant events may lift mood. A problem-solving approach examines triggers in the person and interactions with others and the environment. Carers then identify possible triggers, make a plan to modify them and then analyse the result. Other approaches seek to understand the individual, their likes and life experiences, to assess what the behaviour may be communicating, and ways to intervene. Proposed behavioural management plans in RACFs need to be feasible given the time restraints and pressures of the work place. Studies suggest that staff will generalise interventions given to one resident to others in the facility [58].

Environmental stimuli are often examined in an assessment of BPSD. Excess stimuli, ambiguous stimuli and a lack of stimuli may be possible triggers for BPSD. External cues to purposeful behaviour, clear simple signage, adequate areas for wandering and the participation in actions, such as folding towels and sweeping leaves, may assist in settling the disorientation which is the logical consequence of profound short-term memory impairment. Assessing receptive language function, including the ability to understand one-stage, two-stage or three-stage commands, and educating staff about effective communication, may lessen BPSD. Most psychogeriatric assessments would involve an eclectic approach considering the above as well as medical problems, including pain, the role of medication and medication side effects.

There is limited controlled evidence for non-pharmacological treatments. In part this is understandable: trials in this population are expensive and, in contrast to pharmacological interventions, there are no pharmaceutical companies supporting the research. It is also difficult to have adequate control groups, and psychosocial interventions are often made in conjunction with medication changes [66].

One well-funded randomised control trial (RCT) compared behaviour therapy (BT), trazadone (a sedating antidepressant), haloperidol (an antipsychotic medication) and a placebo group for agitation in dementia [27]. Contrary to expectations, there were no significant differences in outcome. However, there were differences in the reason for discontinuation in each group. The haloperidol group discontinued secondary to side effects and the BT group discontinued due to lack of efficacy. There was a high placebo response in this trial.

Carers are responsible for the bulk of the interactions and environmental manipulation for those with dementia. Teri *et al.* [18], in a small prospective trial in community subjects with dementia and DSM III-R major depression, showed that teaching carers behavioural techniques reduced depressive symptoms in the subjects with dementia and in carers. One strategy was to increase pleasant events and positive interactions. The second was to teach carers a problem solving approach. The study included follow-up at six months. Another similar trial, with a focus on aggression, was negative [67]. However, the sample size was small and the training consisted of only four sessions. Aggression has been linked to delusions, depression, noise and lack of open space as well as internal triggers such as pain.

Opie *et al.* reviewed psychosocial approaches to BPSD [19]. Forty-three studies met methodological inclusion criteria, of which five were RCT. Methodological flaws included small study numbers and high attrition rates. This review found evidence to support activity programs, music, behaviour therapy, light therapy, carer education and changes to physical environment. Environment changes found helpful included camouflaging the door handle or exit, and the strategic placement of mirrors. Visually enhanced halls, for example with murals of country scenes, increased time spent by wanderers in the hallways and reduced, though not significantly, trespass into other residents' rooms. Bathing time agitation was reduced in one study by providing bird song music, large pictures of nature and desserts and drinks. It was hypothesised that these stimuli would distract the resident from the experience of bathing.

In contrast, however, a later review by Forbes examining the evidence for light therapy in managing sleep, behaviour and mood in disturbances in dementia, found there was insufficient evidence to assess efficacy [68]. In a review of behavioural interventions by Allen-Burge *et al.*, modification of external stimuli did not show a significant reduction at group level, though some individuals

appeared to benefit [69]. Exercise reduced incidents of aggression in a number of studies. Music was more effective if specific song titles and performers were identified and for people for whom music was important. Preferred music during bath-time reduced aggression. Another study examined agitation in 15 residents who could understand a one stage command but not a three stage command (point to my face, raise your arms then clap your hands). They were videotaped listening to 60 three-stage commands and displayed high levels of agitation. This was markedly reduced when read a series of one-stage commands which they could understand.

Studies of verbally disruptive behaviour indicated that it occurred more often when the person was alone in their room, in the evening and night, and during activities of daily living (ADL). Residents also called out more when restrained. Cohen-Mansfield and Werner demonstrated a reduction in shouting and repeated requests for attention by the use of audiotapes of patients' preferred music, videotapes made by family members, conversation and sensory stimulation [70]. Benefits, however, were limited to the time of intervention. Twenty per cent of the sample died before the study data was collected, so verbally disruptive behaviour may have been a marker of medical illness. Their conclusion was that verbally disruptive behaviour was in part generated by social deprivation.

Cohen-Mansfield stated that so-called psychotic delusions in dementia can be understood on the basis of cognitive impairment and memory loss. She advocated for non-pharmacological interventions for psychosis in dementia, such as overcoming sensory impairment by correction of hearing impairment or refraction of glasses. An ambiguous environment may provoke misinterpretation of stimuli, hence the importance of good lighting and non-reflective windows. Some of these distinctions have been made by other authors [54; 59]; however, complex delusions do occur in dementia and are responsive to medication.

2.8 PHARMACOLOGICAL INTERVENTIONS

2.8.1 ANTIDEPRESSANT MEDICATION

There is little formal evidence for the use of antidepressants, but the newer antidepressants are usually well tolerated. Depression tends to be more pervasive over the course of the illness compared with other symptoms such as agitation. A Cochrane database review by Bains *et al.* found only three trials on pharmacological treatment of depression in dementia that met the rigorous methodological standards [71]. They commented on the difficulties in comparing studies because of the overlapping nature of some symptoms in depression and dementia. Thus studies varied in how they determined whether subjects had depression, so that subjects may not have been comparable across studies.

The older tricyclic antidepressants have side-effects of postural hypotension, sedation, confusion and falls, and can be dangerous in overdose. They also cause widening of an interval on the electrocardiogram adjusted for rate, the QTc interval [72]. Prolongation of the QTc interval is associated with the development of arrhythmias. Generally the newer antidepressants are preferred as they have a more benign profile. Nevertheless these newer drugs can cause side-effects leading to an increase in confusion, or akathisia (a feeling of restlessness or anxiety) contributing to restlessness. Some of the newer drugs have numerous interactions with other drugs and are best avoided in the elderly population.

2.8.2 ANTIPSYCHOTIC (AP) MEDICATION

Despite widespread use, evidence for the safety of these medications in this vulnerable group with medical co-morbidities is limited. Elderly people are under-represented in clinical trials because of medical exclusion criteria and the difficulties of obtaining consent in dementia. Thus post-marketing surveillance of adverse events and analysis of databases are important sources of information.

Antipsychotic medication (AP) has been shown in double-blind RCT to have a modest effect in reducing agitation in dementia [73; 21]. Newer AP medication may be better tolerated than conventional AP medication [74; 75], particularly with regard to extra-pyramidal side-effects (EPSE) and tardive dyskinesia (TD). AP drug trials in dementia have tended to be of short duration [22]. Some trials have shown significant placebo responses, suggesting that in some cases the challenging behaviour may be transitory. A small study, with some loss of subjects, suggested that withdrawal of antipsychotic medication or benzodiazepines used for the treatment of agitation did not necessarily result in worsening of behaviour (the mean length of time medication had been taken was over 9 months) [26].

McShane *et al.* reported that the cognitive decline in community dementia subjects who took AP (n=16) was twice that of those who did not take AP [65]. This finding was independent of the degree of dementia. The point at which the AP was prescribed was the point of rapid cognitive decline. Persecutory ideas and AP were independently associated with cognitive decline. The APs in this study were conventional APs rather than the newer AP drugs. A weakness in this study was the failure to compare haloperidol against the other AP drugs, as the former has more limited anticholinergic side-effects [76]. Lopez *et al.* demonstrated that AP medication was independently associated with functional decline (in this study AP medication was prescribed for agitation, insomnia etc. as well as psychosis) [64].

There is emerging evidence from double-blind RCT that newer AP drugs are associated with increased mortality and cerebrovascular adverse events (CVAE) in

those with dementia [24; 77]. One to three-month trial data for risperidone (n=1230) in subjects with dementia demonstrated an increased risk of CVAE (4% in the risperidone group vs 2% for the placebo control group). Thus risperidone, the only AP drug with the indication for treatment of BPSD in dementia in Australia, has issued a clinical warning with regard to increased mortality and CVAE in the elderly with dementia.

Lilly conducted five placebo-controlled studies with olanzapine, a newer AP, in dementia (n=1662). There was an increased incidence of mortality in the olanzapine treated group compared with the placebo group in these short-term trials (3.5% vs 1.5%). There was also an increased incidence of CVAE (1.3% vs 0.4% respectively). The integrated olanzapine clinical database for patients with dementia (n=1852) showed an annual incidence of 41.6 CVAE per 1000 patient years. Age (older than 80 years), vascular risk factors and vascular dementia increased the risk of CVAE. A baseline Mini Mental State Examination score under 14 was a significant risk factor for CVAE in an open-labelled olanzapine trial. Some subjects developed postural hypotension during the trial. Increased mortality was not related to dose or length of exposure to olanzapine. Risk factors for increased mortality included age (older than 80 years), sedation, concomitant use of benzodiazepines and the presence of pulmonary conditions, for example pneumonia. In the olanzapine meta-analysis falls, urinary incontinence and pneumonia were significantly more common in the olanzapine-treated group.

However, evidence that newer AP drugs may increase morbidity and mortality, does not imply that conventional AP medication is safer. A Canadian retrospective cohort study in subjects 66 years and older did not find an increased incidence of stroke in olanzapine and risperidone cohorts compared with those that received a typical antipsychotic medication [78].

Nasrallah *et al.* [25], in a retrospective review of veteran data bases, reported an increased two-year death rate in the elderly prescribed haloperidol (21.4%) compared with atypical APs (4.75%). However, no attempt was made to link temporally the date of last prescription and date of death. It is unlikely that AP medication would influence death rates a year after cessation. In an unpublished study, funded by DVA, associated mortality rates for older veterans and war widows receiving AP medication in 2001 were established. In this approach the timing between the dispensing date and mortality was examined as was multiple psychotropic medications. Explanation of the methodology and statistics is beyond the scope of this paper. However, an increased Odds Ratio of death was found for those receiving haloperidol (OR 8.6), pericyazine (OR 2.53), thioridazine (OR 1.95) and chlorpromazine (OR 3.02), as well as the newer AP medication, olanzapine (OR 1.77) and risperidone (OR 2.59). Haloperidol is used in the treatment of terminal agitation and delirium, conditions that would increase

mortality rates in their own right. Thus the OR was established for those receiving haloperidol for 31-120 days but not receiving it 1-30 days before their study date or date of death. The OR for haloperidol, 31-120 days, was 5.9. It is anticipated that the manuscript will be submitted for publication in a peer-reviewed journal [36].

2.8.3 SODIUM VALPROATE AND CARBAMAZEPINE

Sodium valproate and carbamazepine are anti-epileptic drugs used in Bipolar Disorder as mood stabilisers. They are widely used in treating BPSD despite a limited number of RCT supporting their use [79; 80]. RCTs examining the use of valproate and carbamazepine in BPSD suffer from some of the limitations of AP trials, including a short trial period. Long-term safety has not been established in dementia.

2.8.4 CHOLINESTERASE INHIBITORS

There is a reduction in cholinergic transmission in AD and DLB. The cholinesterase inhibitors (ChEI) donepezil, galantamine and rivastigmine, which prevent the degradation of acetylcholine in the synaptic cleft, have shown modest benefit in cognitive outcomes in some people with AD [47]. These drugs are available on the Pharmaceutical Benefits Scheme and Repatriation Pharmaceutical Benefits Scheme for those with mild to moderate AD. They have not received the indication for use in BPSD. Memantine, an N-methyl-D-aspartate receptor antagonist, has the indication, although not the authority on the Pharmaceutical Benefits Scheme for use in dementia.

The cognitive effect size of ChEI is modest, perhaps translating to a delay of progression of 6 to 9 months. Evidence for continued benefit past 12 months comes from open-label extensions of trials. One study of rivastigmine suggested that the placebo group, who later started rivastigmine, did not obtain as much benefit as those originally started on rivastigmine. This was not however a blinded stage of the trial. Although most trials were done with AD subjects, there is evidence of efficacy in DLB and VaD.

There is some evidence that ChEI can influence BPSD. ChEI have been shown to reduce apathy, hallucinations, anxiety, depression, delusion and agitation. In a double-blind placebo controlled trial, AD subjects treated with galantamine did not, unlike placebo groups, show any emergence of neuropsychiatric symptoms [81]. Symptomatic patients at baseline showed a reduction in agitation, aberrant motor activity and anxiety. This correlated with reduced care-giver stress. A community survey found that patients receiving donepezil were less likely to be receiving an AP medication than patients not on donepezil. However, this may be accounted for by stage of dementia. A double blind RCT of donepezil in moderate

to severe AD showed reduction in scores for anxiety, apathy/indifference, and irritability/lability [82].

In DLB cholinergic deficits are even more marked than in AD, and have been found to correlate with visual hallucinations [83]. In a RCT in subjects with DLB, McKeith *et al.* found that rivastigmine resulted in 63% of treated subjects making a 30% improvement compared with only 30% of those taking placebo [84]. Subjects taking rivastigmine were significantly less apathetic and anxious and had fewer hallucinations and delusions than those on placebo. There is some evidence that CHEI may be safer than AP, especially in DLB. There are, however, no prospective trials known to the author comparing AP to cholinesterase inhibitors for the treatment of BPSD.

In a small open-label trial donepezil together with perphenazine produced greater resolution of psychotic symptoms in patients with AD not responding to the perphenazine [85]. Donepezil/perphenazine combinations were better tolerated than higher perphenazine doses.

There is less theoretical support for the hypothesis that CHEI would be helpful in VaD, as the cholinergic profiles of VaD and AD differ [86]. It is possible that the benefit seen in the donepezil VaD trial stem from those with mixed dementias (mixed dementias are a clinically significant group). Fisher and Bowler concluded that for symptomatic treatment an exact diagnosis between AD and VaD is probably not necessary [86].

2.9 PSYCHOGERIATRIC TEAM INTERVENTIONS

Trials of team interventions are difficult to perform. Draper reviewed the effectiveness of old age psychiatry services [87]. He concluded that the majority of studies had positive acute treatment outcomes. However, there was insufficient evidence to ascertain which aspects of the services are associated with better outcomes. In a RCT of activity programs, medication guidelines and advice from a psychiatrist, and education of facility staff, Rovner *et al.* reported a significant reduction in psychotropic medication and the use of restraints [17]. When the activity programs ceased some residents experienced increased agitation, suggesting that interventions needed to be ongoing. In a non-random controlled study by Bird, psychosocial and medication changes resulted in a 43% reduction in the identified challenging behaviour [66]. However, this study had some methodological flaws. The control RACFs and carers, from a different part of the AHS, had no incentives to implement the intensive behavioural monitoring that occurred in the intervention group, and so different behavioural measures were used for the control group. Brodaty *et al.*, in a RCT of interventions for those with dementia and depression or psychosis in a nursing home, allocated subjects to

review by a psychogeriatric team, psychogeriatric consultation with the GP or usual care [58]. All three groups improved, for which they hypothesised that, as they had randomly allocated subjects but not nursing homes, some improvements in management generalised to the control group. It is also possible that BPSD may be time limited and improve despite specific intervention.

2.10 PTSD AND DEMENTIA

Post-traumatic stress disorder (PTSD) is associated with neuroendocrine changes. The hippocampus, involved in episodic memory, is sensitive to effects of age and stress. Previous studies have reported correlations between high cortisol levels and small hippocampal volumes in combat veterans with PTSD. The behavioural or neurochemical effects of long-standing PTSD in an individual undergoing a dementing process are largely unknown. Studies reviewing the effects of PTSD on dementia prevalence and presentation are limited to case control studies.

A small retrospective case control study compared those with dementia and PTSD to aged-matched people with dementia [88]. Subjects with PTSD did not differ in presentation, hospital course or condition at discharge compared to those without PTSD. The study numbers were small. The PTSD group was more likely to be prescribed antidepressants. Those who had been Prisoners of War had higher paranoia scores. Johnston described three cases of comorbid PTSD and dementia [89]. Her cases illustrate the prominence of persecutory themes and possibly the role of disorientation in awakening PTSD-like symptoms, for example hypervigilance.

Mittal *et al.* report three cases with worsening of PTSD symptoms in the context of cognitive decline [90]. Traumatic memories may be processed via the amygdala (rather than the hippocampus which is responsible for episodic memory) and dementia may be associated with loss of inhibition of these memories. The hippocampus, as well as other structures, inhibits the amygdala, and Mittal postulated that hippocampal atrophy from chronic stress in PTSD may lead to a hyper-responsiveness of the amygdala and a preferential recall of traumatic memories. Holocaust survivors with PTSD did more poorly on tests of memory than Holocaust survivors without PTSD [91].

Further research is needed to assess whether combat exposure or PTSD leads to a different clinical presentation or course in dementia. As a consequence to that research, rational changes to resourcing veteran dementia care needs may be made.

2.11 CARERS

Significant mental and physical stress occurs in carers of people with dementia. Predictors of carer burden have been examined and include depression in those for whom they care, as well as delusions, hallucinations, aggression and wandering. Carers suffer physical, emotional and financial stress. Carers provide a significant cost saving to the government and support of carers makes economic as well as compassionate sense.

Unfortunately most of the literature examining carer interventions has methodological short-comings. Evaluation of *Living with memory loss*, a 6-8 week Commonwealth-funded program by Alzheimer's Australia for those with early memory loss and their carers, is currently with the Department of Health and Ageing. Similarly, the evaluation of the National Dementia Behaviour Advisory Service's 24-hour help line is with the Department of Health and Ageing. Both of these evaluations should be reviewed when available.

2.12 INSTITUTIONALISATION AND DEMENTIA

At 85 years, the rate of institutionalisation for those without dementia was 2% and for those with AD was 38% [3]. An extensive review of the pharmaco-economic aspects of ChEI medication is beyond the scope of this review. Byrne, in his review article, reported three review papers [47]. Two, supported by drug company funding, showed that donepezil used in mild dementia is associated with overall cost savings, largely from delayed institutionalisation. The third demonstrated that donepezil use is likely to be cost neutral. All reviews commented that their findings were sensitive to changes in underlying assumptions. Once institutionalisation is inevitable, cost savings are unlikely, hence these studies do not focus on severe dementia.

2.13 POSSIBLE FUTURE TREATMENT DIRECTIONS

Secretases

Beta amyloid is a fragment of amyloid precursor protein. It is postulated that an increase in beta or gamma secretases or reduced activity of alpha secretase may result in excess amyloid, leading to plaque formation. Secretase inhibitors are in development.

Immunisation

When immunised with amyloid, transgenic mice with an amyloid precursor protein mutation fail to develop neuropathological features of dementia, unlike their unimmunised brethren. However, Phase II trials in humans were discontinued when some subjects developed allergic encephalitis.

Zinc and copper chelation

Zinc and copper are associated with amyloid deposition, and Phase II trials are under way with a chelating agent.

Neurotrophic Growth Factors and Stem Cell Research

It was thought that there was no development of new cells in the adult brain. This has been found to be false. Research is under way using stem cells and growth factor to repair damage.

3. Depression

Depression is the third most common cause of illness among women and the tenth most common cause among men across the life span. Mental illness accounts for 27% of years lived with a disability. The World Health Organisation and World Bank predicted that by 2020 depression will be the second largest cause of disease burden in the developed world [30].

Whilst treatment of depression in the elderly has been shown to be effective, the elderly are at risk of under-treatment. In his literature review on depression treatment in the elderly, Anderson reported that undiagnosed and under-treated depression is frequent [92]. The perception of the community, and sometimes of health professionals, is that depression is understandable in old age and hence treatment may not be actively pursued. Depression is more common in those in residential aged care facilities (RACF). It was estimated that by 2007, 28 777 of the DVA treatment population would be in residential care [93].

3.1 EPIDEMIOLOGY

Epidemiological studies estimating the prevalence of depression in old age have produced variable results. Some like the nine-centre EURODEP study produced an overall prevalence of 12.3% (8.8% in Iceland and 23.6% in Munich). Others such as the Epidemiological Catchment Area (ECA) and the Australian Health and Well Being Survey found a decrease in the prevalence of depression with age. These substantially different prevalence figures were examined by Snowdon, 2001 [94]. Some studies had broader definitions of depression and different instruments for rating depression were used. Some scales were better able to discern depression in the presence of physical illness. Exclusion of those in residential care, where the prevalence of depression is high, and a refusal bias in the elderly may also have contributed to the disparity. The ECA study reported that elderly subjects had a lower lifetime prevalence of depressive disorders than the middle aged cohort. This may be explained by impaired recall, lower psychological mindedness, selective mortality of the depressed subgroup, or possibly the existence of a cohort effect, with older age groups being less vulnerable to depression.

Skoog, in a longitudinal Swedish Community study commenced in 1971, found the incidence of depression increased with age [3]. He raised the interesting point that dementia was an exclusion criterion for depression in some studies. At ages when the prevalence of dementia is low this may not affect the prevalence of depression, but by 85 years 30% of the community cohort had dementia. If those with dementia are not removed from the denominator, the incidence and

prevalence of depression will be under-estimated. In previous studies by this group, total psychiatric morbidity was 22% at 70 years, 24% at 75 years and 31% at 79 years. The study at 85 years used DSMIII-R criteria and reported that psychotic disorders were present in 5%, depressive disorders in 13%, anxiety disorders in 11% and dementia in 30% [3]. In 2004, Chew-Graham, Baldwin and Burns wrote:

The three major mental health problems affecting older people are dementia, delirium and depression. Depressive disorders are the most common, affecting one in seven, a prevalence rate that is consistent across countries and cultures. [2]

Despite some differences in reported prevalence rates, there is accord that depression is increased for those in residential care, those who are carers and those who have physical disability.

3.2 RISK AND PROTECTIVE FACTORS

Baldwin reports that across all age groups, women have a higher prevalence of depression. Higher prevalence rates have been reported in those widowed or divorced, those living alone and those without a confidant. Higher rates of depression are also found in carers. Depression has been associated with ill health and physical disability. Some diseases have obvious possible causal links to depression, for example changes to neurochemistry seen in Dementia with Lewy Bodies, Parkinson's disease and some cerebral infarcts. Cancer patients may have physical and psychological reasons for the increase in depression prevalence found in these groups. Some drugs are associated with depression, for example beta blockers and nifedipine [95].

Longitudinal studies have shown that depression may lead to increased disability or negative outcome in the rehabilitation after stroke, myocardial infarction, chronic obstructive pulmonary disease or hip fracture [29]. Depressed patients after a myocardial infarct have a higher cardiac mortality than non-depressed patients with comparable cardiovascular disease. After acute myocardial infarction (AMI), the presence of depression increased mortality with an Odds Ratio of 3.6. The presence of depression was equivalent to the other strongest predictor, heart failure after AMI. Depression and cardiovascular disease are a major focus of current research.

The literature on loss and life events is not straightforward. Not all depressions are preceded by significant negative life events and many elderly people resiliently pass through suffering without developing depression. Indeed, old age is marked by an increased incidence of loss: of spouse, friends, work, and physical and cognitive functioning. Eric Erickson's developmental account of the lifespan, "Eight Ages of Man", has as the penultimate stage "generativity versus

stagnation”, and as the last stage “ego integrity versus despair”. Generativity concerns the generous, altruistic giving to others (family, institutions, next generation), a transfer of self-centred interests to others. The last stage, “ego integrity versus despair” is described by the author in various ways:

It is a post-narcissistic love of the human ego—not of the self—as an experience which conveys some world order and spiritual sense, no matter how dearly paid for. It is the acceptance of one’s one and only life cycle as something that had to be and that by necessity, permitted of no substitutions. [96]

Ego integrity and the meaning ascribed to loss may be important factors in the power of an event to provoke a depressive disorder. In a classic paper, Valliant, 1985, stated that it is not loss that is damaging but impaired capacity for attachment [97]. Indeed, the lack of social cohesion or attachment has been linked to some types of suicide.

A cross-sectional study of depression and life-style factors in community dwelling women found low mood to be associated with physical inactivity and higher consumption of cigarettes [43]. The cross-sectional nature of this study precludes any inferences about causality. The literature examining physical exercise as an intervention in depression is mixed, partly due to varying definitions of depression and the degree of physical activity included in the research design. Benefits from physical activity may occur via a reduction in risk for physical diseases, a reduction in the stress response, changes to neurochemicals on exercising, or the sense of mastery and the experience of pleasure that exercise brings. High homocysteine levels have been associated with depression and there are prospective trials of the preventive roles of vitamin B6 and folate currently taking place.

There is discussion in the literature whether depression in old age is a homogenous group, or composed of two groups with different aetiologies, namely those with early onset depression and those with late onset depression. Studies do not have a uniform age after which the first episode of depression is considered late onset. Many studies use 50 years as the cut-off, while others use 65 years. Family history of depression, and presumably a genetic predisposition, are more common in those with early onset depression. Vascular disease is more common with late onset depression.

Neuroimaging changes are seen in a proportion of the depressed elderly. These changes include ventricular enlargement. Ventricular enlargement is often associated with cognitive dysfunction, poor response to antidepressant medication and increased mortality rates. Several reports have noted increased rates of periventricular hyperintense areas, subcortical white matter lesions and

subcortical grey matter lesions. Functional imaging changes have been reported including a reduction in cerebral blood flow to the frontal cortex.

The following factors have been linked to resilience in many reports, for example the *Queensland Government Suicide Prevention Strategy* [98]: good interpersonal relationships, family cohesion, social connectedness, academic/sporting achievements, easy-going temperament, optimistic thought patterns and effective coping skills

3.3 DEPRESSION AND RESIDENTIAL CARE

Depression prevalence in nursing homes had been reported as between 34-51% in the UK and 6-25% in the USA [28; 5]. This was not unexpected given the association between physical disability and medical illness and depression on one hand, and the losses associated with entering a RACF on the other. The Department of Health and Ageing commissioned a report [5] regarding depression in residential care. 1758 residents in 168 RACF were surveyed. The results revealed 51% of high-care residents were depressed and 30% of low-care residents were ascertained to be depressed according to the Geriatric Depression Scale (GDS) [99].

The following factors were associated with depression:

1. Grief over loss of opportunities and abilities to take part in valued activities;
2. Described by a relative as being depressed prior to admission;
3. Not involved in helping others;
4. Attending but not taking part in activities;
5. Having problems settling in, particularly with establishing good relationships;
6. Experiencing chronic pain;
7. Having a stroke;
8. Not having a weekly visit.

A significant difference was found between the average GDS scores of residents of veterans' homes and other types of homes, suggesting higher levels of depression in veterans. The sample size of 70 was small and no firm conclusions can be formed. However, this finding should be sufficient to prompt further evaluation. No correlations were found between the size of the home or the length of time since admission. Staff, both personal care workers and RNs, had reduced their misclassification of residents as not being depressed by the end of the survey period.

As a result of the research a manual was developed, written by a range of experts. The Manual – *Challenge depression: A manual to help staff identify and reduce depression in aged care facilities* – contains twelve approaches to reducing depression in RACF.

Manual Sections:

1. Identifying and reducing depression prior to admission
2. Developing depression sensitive policies and procedures
3. Creating a happy, helpful environment
4. Improving the social network
5. Being sensitive to cultural issues
6. Helping people to be themselves
7. Providing appropriate leisure and recreation activities
8. Listening
9. Using reminiscence
10. The self help group
11. Minimising pain
12. Medical management

The authors of this report recommend developing a training module, similar to the Unit of Competency developed under the National Action Plan for Dementia, called "Provide support and care for older people with depression". The authors also suggested that RACF demonstrate a systematic approach to the identification of depression.

In a cross-sectional study, Eisses *et al.* examined factors associated with depression in residential care [100]. Loneliness, higher education, higher neuroticism and functional impairment correlated with depression. Interestingly, loss and adverse life events did not correlate. The authors raised the possibility that in old age some of these events are expected.

3.4 DEPRESSION AND DEMENTIA

Those with dementia have an increased prevalence of depression. In addition, those with depression may have a greater chance of developing dementia. Brodaty *et al.*, in somewhat contradictory findings of a 25 year follow-up study, did not find a significant difference in neuropsychological scores for those who had depression versus the surgical controls, but did find a greater prevalence of dementia than expected [101]. There was a trend towards greater psychomotor slowing in the depressed group. VaD was more prevalent in the depressed group than was predicted. The authors postulated two hypotheses: Was the initial presentation of depression one of vascular aetiology? Did depression lead to greater vascular risk, for example from inattention to hypertension or greater smoking? The length of follow-up in this study excluded the possibility that depression was a prodromal expression of dementia. The risk of developing dementia was not associated with depression treatment.

Hickie *et al.*, in a small longitudinal study of subjects with severe depression, demonstrated that 27% of those with depression developed dementia, mostly vascular in type [31]. Dementia was associated with white matter hyper-intensities (WMH) on brain imaging, older age and late-onset of depression. White matter hyper-intensities correlated with lack of remission in patients older than 60 years with depression. Furthermore, increased volume of WMH correlated with lack of remission [102]. Increase in WMH is related to hypertension and progression may be reduced by antihypertensive medication. Vascular changes may partly explain poor response in some older depressed patients.

3.5 VASCULAR DEPRESSION

Late onset depression is associated with vascular risk factors and changes on neuroimaging suggestive of cerebral vascular disease [103]. Some authors use the term “Vascular depression” to describe this subset of older depressive subjects. Delineation of this group is important to examine specific treatment responses or prognosis in the vascular depression. The possible aetiological cause of some cases of depression raises issues of prevention. The correlation between cardiovascular disease and late onset depression may be an expression of the same pathological process. Diseases affecting the subcortical structures are associated with increased rates of depression, and it is hypothesised that vascular damage to these structures might be responsible for vascular depression. Damage to this area may disrupt neurotransmitters responsible for mood regulation. Some authors have reported more psychomotor retardation and cognitive impairment in those with vascular depression compared with early onset depression.

3.6 CLINICAL PRESENTATION OF DEPRESSION IN THE ELDERLY

Some studies have reported more guilt, withdrawal, apathy and suicidal ideation in older people with depression. However, other studies have not replicated these findings. Brodaty *et al.* found that psychosis and psychomotor changes increased with age [104]. They did not find any phenomenological differences between older patients with early onset compared with those of late onset depression.

Mood disturbance in the elderly can be accompanied by cognitive changes, including changes in attention memory and psychomotor speed [105]. Greater cognitive impairment is seen in melancholic versus non-melancholic depression [105]. Melancholic depression may be associated with impairment of frontal tasks such as shifting sets [105]. However, some studies have reported that cognitive changes may persist even after resolution of depression. This appears to be so for psychomotor speed which may reflect permanent changes rather than trait changes associated with depression.

Lishman invented the term “psuedodementia” to describe conditions which present as an organic dementia but where “physical disease proves to be little if at all responsible”. This term is largely unhelpful. Depression may coexist with dementia or depression may be marked by cognitive impairment; however, the relevant clinical approach is to treat the depression and assess cognitive function after remission of the depressive symptoms.

3.7 SUICIDE RATES

Suicide rates vary across countries, being higher for older people in eastern and central Europe and lower in southern Europe. Suicide is likely to be underreported and differences in collection of data make comparisons between countries difficult. Marriage is a protective factor and rates are higher in the divorced and single. Men usually adopt more violent means of suicide which in part explains their higher suicide rate. In Australia, the ratio of suicides to undetermined deaths changed from 1968-1970 and 1983-1985 from 7:1 to 25:1, which may account for up to a 5-10% increase in suicide rate over this time.

During 1991-2001, male suicides outnumbered female suicides by a factor of four (Australian Bureau of Statistics Suicide paper) [106]. The highest suicide rates occurred in 1997. In this period the 25-34 year age group had the highest rate, 20.6 per 100 000, accounting for 30% of all male deaths in this age group. In the 65-74 year age group the suicide rate was 12.1 per 100 000 persons. In the 75 years plus age group suicide rate was 13.0 per 100 000. However, examining the age-specific death rates by gender reveals the male rate for 15-24 years was 25.3 per 100 000, for 25-34 years was 33.2 per 100 000 and for 75 plus was 30.6 per 100 000. Thus the relatively low female rate in those 75 years and older concealed a higher rate in the males. When examining years of life lost and proportion of deaths attributable to suicide, the effect of younger suicides is pronounced. During this period suicide involving shooting and medications had fallen but suicide by hanging, suffocating and strangulation had risen.

Snowdon and Hunt examined suicide rates from 1919-1999 [107]. There were peaks in the 1930s and 1960s, with lows during WWII. During the 1970s, elderly males' suicide rates decreased but that of young men reached a new higher level, twice the rate that occurred during the depression. The male birth cohort of 1977-1981 was the first cohort to fall in the 15-19 age group (the study examined data to the end of 1999). The highest rates for young, middle aged and elderly female suicides occurred during the 1960s [107].

Several studies have shown an increase in suicide rates for successive cohorts. These effects are difficult to dissect because period effects (for example, the

occurrence of war, availability of sedatives etc.) influence overall rates. In Australia, there is variation in the suicide rate state by state with Queensland's suicide rate higher than the national average for 11 years and Victoria's rate lower than the national average for 11 years. In Queensland, elderly male suicide rates 75 years and older were higher in rural than urban centres.

3.8 SUICIDE RISK FACTORS AND PROTECTIVE FACTORS

Suicide risk factors and protective factors interact to determine outcome. Population prevention interventions have been effective in the past, for example, the change from coal gas to natural gas, firearms restrictions and the change in prescribing habits in the 1960s. There is some evidence that media coverage of suicide can increase subsequent suicide rates in cohorts that identify with the protagonist. It would be counterproductive to portray suicide as a normative response to stress. Acts of suicide in older people are less impulsive and use more violent means, thus there are few opportunities for rescue [98]. In one study, 41% of those who suicided had been discharged from a psychiatric admission in the last 12 months.

In a community study examining suicidal ideation in the elderly, 5.4% wished to die and 1% had suicidal thoughts [108]. Suicidal ideation was correlated with age. Of those with suicidal thoughts and a wish to be dead, only 11% were not diagnosed with a psychiatric diagnosis. Between 44-87% of those who committed suicide were suffering from depression. In Britain, alcohol misuse was a factor in 10% and schizophrenia accounted for less than 10% [109]. About 15% of suicides in people over 60 years were associated with a personality disorder. In 84% of suicides, medical illness, particularly pain, was considered a stressor at the time [109]. In the UK areas of social deprivation had higher suicide rates. Death of a spouse and social isolation increased the risk of suicide.

Up to 50% of people contact their GP in the month before suicide. In one study in the UK, GPs had identified psychiatric symptoms in most of the attendees but only offered treatment to half. About 25% of people committing suicide have been in contact with specialist mental health services in the year preceding their death. Clergy are an under-recognised source of support for older people, and some have advocated training for ministers in suicide risk assessment. However, the predictive power of risk factors, given the low frequency of suicide, remains poor.

Reducing Suicide: The Queensland Government Suicide Prevention Strategy 2003-2008 was developed in conjunction with Professors De Leo and Martin. The strategy stresses the need for population prevention approaches in conjunction with targeted prevention for at-risk groups, with a broad view to the social determinants of health, such as living and working environments, education,

physical environment, ethnicity, age, gender and personal health behaviour. In its own words:

Promoting social and emotional wellbeing involves the development of personal and family resilience, supportive communities, connectedness within schools, development of recreational opportunities at the local level, promotion of physical activity and social networks. [98]

Protective factors for 60 years and older in the Queensland Suicide Prevention Strategy included:

1. Participation within the community, and connection to family friends and social networks;
2. Good physical and mental health;
3. Income security;
4. Early intervention for depression and anxiety.

Risk factors were:

1. Loss of former functioning or wellness;
2. Unaddressed bereavement;
3. Lack of financial support;
4. Loss of relationships;
5. Lack of information to support services and information.

Some of the Queensland Report's conclusions may be useful to consider for the DVA treatment population.

1. Priority and support should be given to males over 75 and recently discharged from an admission for mental disorder.
2. There is a need for general education of the community to improve its ability to respond to early warning signs, as not everyone seeks help from the health sector.
3. Family and friends of those who suicide need support, since they themselves are at greater risk.

"As the causes of suicide are multifaceted, any prevention program should be multimodal and multistrategic. Intervention to prevent suicide should include strategies targeting the individual, family and community in a multidisciplinary approach." [98]

3.8.1 SELECTIVE SUICIDE PREVENTION STRATEGIES

Some of the following strategies, emerging from a suicide prevention conference held in Sydney in 2003, could be applied to the veteran and war widow populations [110]. Increased depression literacy amongst the DVA treatment population, volunteers, Veteran Home Care workers and Auxiliaries in Nursing in

RACF may be a focus for intervention. The prevalence of depression in residential high care settings is so high that screening for depression would be feasible, with good positive predictive values. Draper [110] suggested the following suicide prevention strategies:

1. Promote community programs to contact and support isolated older people;
2. Focus on reducing disability;
3. Support and counselling to elderly care givers;
4. Educate those in remission about early signs of relapse;
5. Train gate-keepers in recognising symptoms;
6. Expand opportunities for bereavement counselling for males;
7. Screening in GP, RACF and hospitals;
8. Encourage prophylactic use of antidepressant medication.

3.9 TREATMENT

Unlike dementia treatments, there have not been extensive trials for antidepressant medications in elderly people. Tricyclic antidepressants have side effects including postural hypotension, anticholinergic effects and cardiac toxicity [72]. Historically, concern about side effects and toxicity resulted in subtherapeutic doses and poor treatment response. Tricyclic antidepressants are still used in treatment-resistant depression [111]. Newer antidepressant drugs generally do not have the same problems with toxicity or side effects, so therapeutic doses are more easily achieved. Newer drugs can be associated with serious side effects, however, such as hyponatraemia, serotonin syndrome and drug interactions. One role of the specialist mental health services is to assist GPs in treating those whose depression has not responded or only responded poorly to first-line treatments. Other treatment options include augmentation strategies or electro-convulsive therapy (ECT).

Most antidepressant drug trials have not been done on geriatric populations. Roose *et al.* outlined, in addition to their own study, the three methodologically sound antidepressant placebo control trials in the elderly [112]. Two showed a significant treatment effect. In one study there was no difference for treatment overall but those with more severe depression had a better response rate to the antidepressant [112]. There were five active trials which compared antidepressants. None showed a significantly different response rate between treatments. In the trial reported by Roose *et al.* there was no difference in response to antidepressants in the early onset and late onset groups [112]. Commonly reported clinical impressions include that the elderly with depression may be slower to respond to pharmacological treatment.

ECT is safe and effective and does not lose its efficacy with increasing age. Older Americans make up over half the number of Americans treated with ECT. ECT is

often selected because of its rapid response, different side-effect profile compared with antidepressants and usefulness for depression with psychotic features or psychomotor disturbance. Tew *et al.*, in a prospective trial, compared efficacy and safety of ECT among those under 59 years, 60-74 years and those 75 plus [113]. The younger group had a response rate of 54%, the “young-old” 73% and the “old-old” 67%. They were all given supra-threshold right-sided ECT on commencement of the ECT course. The “old-old” were no more likely to require bilateral ECT than the younger groups.

Randomised control trials have shown support for cognitive behavioural therapy and interpersonal therapy in the treatment of depression in adults [114]. Fewer studies have explored the issues of psychological therapies the elderly. One meta-analysis of brief psychological interventions for preventing depression in old age, found five out of ten trials had positive outcomes [115]. There were methodological problems in many studies but the positive findings point to this area as one for further research.

3.10 PROGNOSIS

Depression in the elderly often follows a chronic or relapsing course related to medical co-morbidities, social deprivation and cognitive changes. The immediate prognosis following a depressive episode is good, with 60-80% achieving remission. In the longer term, 60% will have a relapsing course, up to one third will improve but have some residual symptoms and 10% will be treatment resistant. Only 25% will be completely well in the long term [95]. Many older subjects with depression should be on maintenance pharmacotherapy because of the risk of relapse and the favourable benefit/risk ratio of treatment [116].

3.11 DEPRESSION LITERACY

Prior to *beyondblue* there had been two depression literacy campaigns in the UK. The Defeat Depression Campaign 1992-96 and the Changing Minds project, 1998, aimed at reducing stigma. In the USA, the Depression Awareness, Recognition and Treatment (DART) program, 1988, and the National Depression Screening Day, 1990, were established. Only the DART program was evaluated and it produced a change of 5-10%. Health promotion aims to modify factors that predispose, reinforce and enable desired health behaviours, rather than focusing on the health behaviours in themselves. Literacy aims to increase knowledge of depressive symptoms, knowledge of treatment and so on. Reinforcing factors include societal attitudes to depression and help-seeking. Enabling factors include availability of information and effective treatment options. People vary in their readiness to change and messages need to be spread across this spectrum. Information is more likely to change an attitude or behaviour if the person is made

to think carefully about a topic. Messages should appeal to a variety of belief models, for example medical, psychological and social paradigms [117]. Many people mistakenly believe that depression is an inevitable part of old age and as such do not seek treatment for themselves or their family.

4. Policy

Mental Health Policy has historically concentrated on low-prevalence psychotic disorders, but in recent years the focus has expanded to include higher prevalence disorders, such as depression and anxiety. The points of intervention have also widened to encompass health promotion, prevention, early intervention, treatment and rehabilitation. In part this change has resulted from a greater understanding of the prevalence and burden that results from mental disorders. The National Survey of Mental Health and Wellbeing reported that almost one in five Australians experienced a mental disorder some time in the previous 12 months [118]. Only 38% of these individuals used mental health services.

Concerns for the protection of the rights of those with mental illness were expressed by consumers, carers and health professionals in the 1980s and 1990s. The *1993 Report of the National Inquiry into the Human Rights of People with Mental Illness* (The Burdekin Report) raised concerns about structure and accountability within the mental health services [119]. The trend towards protection of the individual and the right to treatment in the least restrictive environment have been expressed in state-based mental health legislation, for example the NSW Mental Health Act, 1990.

4.1 THE NATIONAL MENTAL HEALTH STRATEGY, 1992

In 1992, all Australian Health Ministers agreed to the **National Mental Health Strategy (NMHS)**. The Strategy is outlined in four documents:

4.1.1. NATIONAL MENTAL HEALTH POLICY

This policy [120] outlined 12 priority areas:

1. Consumer rights;
2. The relationship between the mental health services and the general health sector;
3. Linking mental health services with other sectors;
4. Service mix;
5. Promotion and prevention;
6. Primary care services;
7. Carers and NGOs;
8. Mental health work-force;
9. Legislation;
10. Research and evaluation;
11. Standards;

12. Monitoring and accountability.

4.1.2. THE MENTAL HEALTH STATEMENT OF RIGHTS AND RESPONSIBILITIES

This policy [120] supports the principles of the United Nations Resolution 98B (Resolution on the Protection of Rights of People with Mental Illness).

4.1.3. THE NATIONAL MENTAL HEALTH PLAN

This plan [120] set the priorities for the five years spanning 1992-92 to 1997-98. A second (1998-2003) and third (2003-2008) plan have since been developed.

4.1.4. THE MEDICARE AGREEMENTS (1992/93 TO 1997/98) AND SUBSEQUENT AUSTRALIAN HEALTH CARE AGREEMENTS

The NMHS focused on reducing stigma associated with mental illness, in part through the mainstreaming of mental health services with general medical services. The co-location of mental health services was anticipated to increase accountability and ensure better standards of care. Continuity of care was advocated, with integrated inpatient, community and residential care allowing treatment in the least restrictive environment and the reduction of dependence on stand-alone psychiatric hospitals. A focus on carers and consumers was encouraged at the Commonwealth and State level as well as at service level. Changes in health professional training emphasised the perspective of consumers and carers. This was the first attempt to coordinate mental health reform nationally.

Funding from the First Plan commissioned the *National Survey of Mental Health and Well Being, 1997*, which comprised three surveys: one for adults above the age of 18 not living in institutions, the second for children and adolescents and the third to survey low-prevalence diseases such as schizophrenia and bipolar disorder. Almost one in five Australians had a mental health disorder and only 38% of these used a health service [118]. GPs were the main service providers, seeing 29% of those with a mental health disorder.

The National Mental Health Policy and Plan endorsed the development of national outcome standards for mental health services, and systems for assessing whether services were meeting the standards [120; 121]. The *National Standards for Mental Health, 1997* has three sections:

Standards 1-7 are related to “human rights, dignity, uniqueness and community acceptance”;

Standards 8-10 address mental health organizational structure and links between other parts of the mental health sector;

Standard 11 describes available treatments and support.

Standard 11.1 demanded equality of access to the mental health service irrespective of age or disability. Standard 11.3 outlined the need for assessment and three-monthly review for all consumers. Each Mental Health Service must have “a comprehensive range of services”, although the specific services were not articulated. Specific tools for assessing outcomes were not specified.

4.2 THE SECOND NATIONAL MENTAL HEALTH PLAN, 1998-2003

The **Second National Mental Health Plan** (1998-2003) consolidated the first plan. Together with the National Mental Health Policy and the Mental Health Statement of Rights and Responsibilities, it formed the National Mental Health Strategy. The second Plan added emphasis to

1. Promotion and prevention;
2. Partnerships in service reform and delivery; and
3. Quality and effectiveness.

The interface between the public psychiatry sector, private psychiatry, primary care and non-government organisations (NGOs) was articulated. The results of the Australian Bureau of Statistics survey highlighted the pivotal role of GPs in service delivery. Whilst the First Plan dealt primarily with low-frequency severe disorders (for example schizophrenia and bipolar disorder), the Second Plan expanded the emphasis to include higher prevalence disorders such as depression and anxiety disorders.

Reduction in the reliance of stand-alone psychiatric hospitals was inconsistent across the states, with Victoria decommissioning more hospitals. Other states reduced beds without closing the institutions and hence achieved higher bed costs due to fixed expenditure (see examples of expenditure and savings in Section 5.2.1 below).

Initiatives under the Second Plan included

1. *beyondblue*, the national depression initiative (\$175 million from the Commonwealth);
2. Incentives for States to implement reform;
3. MindMatters, school-based health promotion and prevention.

The *National Action Plan for Promotion, Prevention and Early Intervention for Mental Health, 2000* was a pivotal report outlining research in each of these areas across the lifespan [32]. Aims expressed by this report included the encouragement of a community appreciation of positive ageing, as well as improved mental health literacy among older adults. Overarching aims were to reduce risk factors for

mental health problems and suicide, and provide early intervention for depression, anxiety and dementia. One suggestion was “to pilot and evaluate projects that address high risk populations, such as those with chronic physical disability, living in residential care, who are recently bereaved and carers of all ages”.

The *National Health Priority Areas Report: Mental Health 1998* highlighted the burden associated with depression, and stressed that the condition was preventable and treatable [122]. Co-morbid anxiety was found in 80% of those with depression, and 43% of depressed individuals reported a physical condition. Treatment of depression may result in a reduction in other health spending. The *National Health Priority Areas Report: Mental Health 1998* suggested the development of a National Action Plan for Depression. The *National Action Plan for Depression, 2000*, which occurred under the Second National Health Plan, aimed to reduce the prevalence and burden of depression in the community [30]. The report found the prevalence of depression to be 6%. It estimated that in 1993-94, \$521 million was spent in health care costs for depression. The report exhorted change at the community, primary care and specialist mental health service level.

At the community level, the plan sought to increase depression awareness, reduce stigma and change the way individuals sought help for depression. It aimed to develop educational material and deliver it in novel ways that would improve access of consumers to good quality material. Schools, churches and community groups were targeted for health promotion and prevention activities.

The pivotal role of GPs in assessing and treating depression was noted. The report also focused on the training of medical students and doctors to recognise and treat depression. Recommendations encouraged the development of Clinical Practice Guidelines. Currently, a range of guidelines are available, including the RANZCP Clinical Practice guidelines for the treatment of depression [123]. The limitations of the GP fee structure and the need to provide incentives to treat mental illness at the primary care level were highlighted.

The report also supported the funding of clinical psychologists through the Medical Benefits Schedule (MBS). Different forms of support for primary healthcare workers were recommended for trial and assessment. Other recommendations included a fee structure for private psychiatrists that allowed consultations to primary healthcare workers. This was anticipated to make better use of their expertise than one-to-one consultations alone. The report reviewed the literature and attempted to advocate practical steps that would encourage meaningful change. Recommendations from this report were subsequently supported by changes to MBS item numbers.

Despite the excellent work achieved by the *National Action Plan for Depression, 2000*, there was little focus on the elderly and no attempt was made to prevent depression in older people.

LIFE: a framework for prevention of suicide and self harm, 2000 aimed to coordinate the various suicide prevention strategies and broaden the focus from youth suicide to include other high-risk groups such as young adult males, rural and remote individuals, the elderly, those with mental illness, prisoners, those with substance abuse problems and indigenous Australians [124].

4.3 THE INTERNATIONAL MID-TERM REVIEW OF SECOND NATIONAL MENTAL HEALTH PLAN

The Mid-Term Review of Second National Mental Health Plan, by two international consultants, praised the National Mental Health Strategy and Second National Mental Health Plan as exemplars of mental health policy [125]. The review included focus groups of consumers, carers and health care professionals.

The reviewers advocated:

1. An enlarged role for carers and increased availability of respite care for carers;
2. Nationally-based universal and selected prevention programs, to obtain economy of scale;
3. The adoption of *beyondblue* and MindMatters in all areas;
4. Incentives for specialists to consult with GPs, that is, new item numbers;
5. Psychologists focusing on providing psychological therapies to consumers, noting that clinical psychology numbers in the public sector were low by international standards;
6. Building the nursing workforce;
7. Funding some non-medical mental health workers through Medicare;
8. Eliminating barriers between drug and alcohol services and mental health services;
9. Encouraging the routine use of outcome measures.

They observed that

1. Older persons mental health services (OPMHS) appeared fragmented;
2. Acute beds are often occupied by people needing longer-term supported beds in the community.

4.4 TOWARDS BETTER MENTAL HEALTH FOR THE VETERAN COMMUNITY: MENTAL HEALTH POLICY AND STRATEGIC DIRECTIONS, 2001

Mental health of veterans had long been a focus for DVA. In the DVA general treatment population, 22% received some form of mental health treatment per year. As is the case in the non-DVA population, general practitioners provided most of this treatment. Psychotropic medication was taken by 20% of the DVA treatment population.

Towards Better Mental Health for the Veteran Community: Mental Health Policy and Strategic Directions, 2001 outlined the directions of the Department as a purchaser of services [1]. The first strategy, “enabling a comprehensive approach to mental health care,” included a strategic initiative (\$1.1.5) regarding mental health prevention. The focus, however, was on younger veterans, and no reference was made to the prevention of dementia or depression in older people. Some current and published research on these topics have been discussed in the research section of this report.

The second strategic direction advocated broadening the focus of veteran mental health needs to include mental health disorders of the aged. The areas specifically targeted were depression and suicide, and the management of psychosocial and behavioural problems related to dementia. From epidemiological studies and case control studies, these appear to be the most prevalent disorders, and are associated with high disease burden. Recognition of carers, the importance of respite care and the necessity of partnerships with other government departments and NGOs were raised as strategic initiatives. Education of carers, GPs, residential care staff, ACATs and other primary care staff was also included.

4.5 THE THIRD NATIONAL MENTAL HEALTH PLAN 2003-2008

The current plan [126] consolidates the focus of the first two plans. There are four “priority themes”:

1. Promoting mental health and preventing mental health problems and mental illness;
2. Increasing service responsiveness;
3. Strengthening quality;
4. Fostering research, innovation and sustainability.

The emphasis on a population health framework was strengthened, with the implication that epidemiological data should determine funding priorities. Interventions and strategies across the life-span were articulated, reflecting the broad focus of the *National Action Plan for Promotion, Prevention and Early Intervention for Mental Health, 2000* [32]. It was acknowledged that risk factors and

protective factors are often influenced by areas outside the health framework, for example, housing and education. Therefore government policies need to be co-ordinated across portfolios. Again, issues of continuity of hospital and community care and the appropriate mix of these resources were discussed. A comprehensive mix of services should cover health promotion, prevention, early intervention, treatment and rehabilitation. Measures of accountability should include waiting times and consumer and carer satisfaction surveys.

Many objectives and key directions were described, including:

1. Increasing mental health literacy in the community by involving promotion of accurate portrayal of mental health problems and mental illness in the media;
2. The promotion of self-help manuals;
3. Recognition that prevention policies involve protective and risk factors that are external to health services, so that partnerships need to be developed to promote interventions in wider social policy;
4. Improved access to early intervention services, with a particular stress on providing training for consumers, carers and families;
5. The need to address the maldistribution of GP services, especially in rural areas;
6. The need to develop psychiatrist workforce initiatives to retain specialists in the public sector, together with incentives for private psychiatrists to collaborate with the public sector and in rural areas;
7. The need to develop a nationally agreed set of performance indicators that focuses on outputs and outcomes rather than “crude” inputs.

4.6 NATIONAL MENTAL HEALTH REPORTS (NMHR)

Biannual health reports from each State and Territory allow the Commonwealth to assess mental health reform and adherence to the NMHS. These reports disclose total government spending on specialised mental health services. Expenditure analysis cannot guarantee the quality of the services bought and does not include spending on housing, income support, or general medical funding. The analysis does not include out-of-pocket expenses or activities of NGOs that were not government funded. Capital expenditure is also excluded so as not to obscure real trends in recurrent spending. However, assessment of inputs does allow some comparisons across jurisdictions and an indication of service mix. One role of the NMHR was to ensure that money generated by selling stand-alone psychiatric hospitals would be directed to community services. The NMHR for 2002 and 2004 are discussed later in this report.

4.7 CRITIQUE OF THE THIRD NATIONAL MENTAL HEALTH PLAN

Australia devotes less than 7% of health spending to mental health, compared to levels of 10-12% in the United Kingdom, Canada and New Zealand [127]. Groom, Hickie and Davenport in *Out of Hospital, Out of Mind* called upon the government to increase mental health spending to 12% of total health spending [34].

Hickie and Groom critiqued the Third National Mental Health Plan [128]. Despite one of four priority areas being “research, innovation and sustainability”, none of the 34 proposed desirable outcomes deals with research, innovation or sustainability. They further stated:

Unfortunately, the current plan does not commit governments to any priorities. While all strategies are again possible, no government is required to deliver on any specific items in the plan within any given time frame.

They criticised current methods of accountability, with “delayed reporting of inputs rather than the more critical notions of quality of care or clinical outcomes”. A difficulty with focusing on clinical outcomes is the inadequacy of outcome measures and the lack of financial support for data collection. A review of outcome measures is beyond the scope of this report; however, many clinicians have a sceptical view of outcome measures, such as the Health of the Nation Outcome Scale for Older People (HoNOS 65+) [129]. Are they valid instruments, designed to be used in the way in which they are employed? If the rater is the clinician, usually the case manager, will there be bias? Given the under-funding of mental health, does a focus on collecting data leave clinical work undone or lay further stress on the conscientious worker? Even collecting simple data, such as referral rates, can be influenced by the service’s procedures, such as the service discharge policy. Until valid outcome measures are available, reporting of inputs at least allows the first question to be asked: is a service sufficiently funded and does it have the right mix of services? The second question about the quality of the service is more difficult to answer.

In *Out of Hospital, Out of Mind* [34], Groom, Hickie and Davenport report on a survey of consumers, carers, health care professionals, managers and government officials. The preferred option of 67% of respondents was to increase government accountability by the development of an independent national commission. The recommendations included establishing a national innovation system with a \$100 million initial investment followed by support at a level of five percent of recurrent mental health expenditure annually.

4.8 MEDICAL BENEFITS SCHEDULE (MBS) CHANGES REFLECTING THE DEVELOPMENT OF GOVERNMENT POLICY

In support of these initiatives and reflecting developments in aged care policy, the Commonwealth government has changed MBS items.

1. **Home Medicines Review (HMR)**, also known as Domiciliary Medication Management Review (DMMR). From 2001, Medicare provides a rebate for a GP's involvement in a Home Medicines Review (HMR) in which the GP:
 - assesses a patient's medication management needs and, following that assessment, refers the patient to a community pharmacy for a HMR, and provides relevant clinical information required for the review, with the patient's consent; and
 - discusses with the reviewing pharmacist the results of that review including suggested medication management strategies; and
 - develops a written medication management plan following discussion with the patient.
2. **Residential Medication Management Review**. From 2004 a new Medicare item is available for comprehensive medication assessments for permanent residents of aged care homes.
3. **The Enhanced Primary Care Package** provides for Medicare Benefit Schedule (MBS) items for the following:
 - Annual health assessments for elderly Australians aged 75 years and older and Aboriginal and Torres Strait Islanders aged 55 years and older;
 - Care planning for those with complex care needs;
 - Case conferencing between general practitioners (GPs) and other health and support workers about the care and progress of patients requiring care from these multiple providers.
4. **GP training**. In 2001 \$120.4 million was given to train GPs in mental health diagnosis, care planning and treatment. MBS item numbers were established for suitably trained GPs to give short-term non-medication-based therapies for mental disorders.
5. **Comprehensive Medical Assessments** are available from 2004 for residents of age care homes. New item numbers provide an incentive for GPs thoroughly to review this population.
6. From 2004, **allied health professionals** will be funded under Medicare for patients with chronic, terminal or complex needs. GPs are able to claim new item numbers for a maximum of five allied health services each year for each patient managed under an Enhanced Primary Care plan. "Allied health workers" includes psychologists and "mental health workers".
7. The divisions of General Practice were funded to set up **Aged Care GP panels** to increase the involvement of GPs in RACF.

8. **Telepsychiatry** MBS item numbers were developed in consultation with the Commonwealth government, Royal Australian and New Zealand College of Psychiatrists and the Australian Medical Association in 2002. Guidelines for the use of telepsychiatry were generated.

4.9 MEDICATION REVIEW IN RACF

Concern about multiple medications and the use of psychotropics in RACF has been long-standing (NSW Ministerial taskforce). The Australian Pharmaceutical Advisory Council Working Party on Quality Use of Medicines in Nursing Homes and Hostels recommended that medication advisory committees (MAC) be established in each RACF. The MAC should have at least one doctor, one pharmacist, one nurse and a resident or carer. The development of the Residential Medication Management Review Item number under the MBS also addresses this area of need.

4.10 ELECTRONIC MENTAL HEALTH REPORT

With the development of the internet, novel models of education and health care delivery became possible. Advantages of this new medium included cost effectiveness, scope for innovation, ability to overcome some access inequalities, and possibilities of increased mental health literacy. Issues to overcome in the development of this technology as a health tool included lack of established funding mechanisms to update information, legal ambiguities, ethical and legal obligations to respond to requests for help, issues of information misconstrued or inappropriately applied, widespread poor-quality information and a lack of evidence of effectiveness.

Suggestions from this report [130] included the establishment of a national reference group to advise on policy, a comprehensive review of available e-mental health services, the identification of barriers to access, the development of useful health websites with appropriate evaluation processes and the development of guidelines for online mental health therapies.

Twenty-one percent of the DVA treatment population accessed the internet [131], although this result was not stratified by age. Various Departments of Health and Area Health Services have supported the development of web-based health sites for consumers, carers and health professionals. They will be reviewed in the services section. *beyondblue* serves as an example of such a web-based intervention.

4.11 OLDER PERSONS MENTAL HEALTH SERVICES (OPMHS) AND POLICY IMPLICATIONS

The delivery of mental health services to older people is complex, partly because of the mix of federal and state responsibility, but also because of the presence of co-morbid physical conditions, isolation, dependence on carers and the complex social support systems that are often used in community care. Unlike adult mental health services (AMHS), there are a range of different entry points to the older persons mental health service (OPMHS). OPMHS relate to both AMHS and aged care services (ACS). A lack of coordination between the services may result in unmet needs and difficulty for consumers in transferring across services.

The principles of the NMHS promote good clinical care for older people. Continuity of care, with integrated inpatient and outpatient services and a strong community team, is necessary because of physical disability and complex community services packages. The presence of co-morbid physical disease makes the co-location of inpatient beds in general hospitals desirable and strengthens the need for home visits. For electro-convulsive therapy (ECT) and maintenance ECT to be used in the elderly, access to anaesthetists and geriatricians is needed. GPs are recognised by OPMHS as coordinating outpatient care, and the prevalence of medical problems in this age group requires mutual communication.

As would be expected by the prevalence of dementia and disability in RACF, residents of RACF have a high prevalence of depression, psychosis and behavioural and psychological disorders [50]. These residents, however, have difficulty accessing services. Some OPMHS with Home and Community Care funded case workers will not review RACF residents; few specialists visit RACF; and GPs are increasingly reluctant to provide services. The increased MBS rebate for GPs may alter the latter situation but there has been no parallel increase in specialist fees.

Rosewarne reported that 14% of residents in nursing homes had severe levels of challenging behaviour and that another 22% had moderate levels of challenging behaviour [16]. For the 1997 population, this was estimated to be 10 462 and 16 290 individuals respectively. Mainstream nursing homes managed 92% of individuals with dementia who resided in a nursing home, that is, 8% were in dementia-specific accommodation. Ninety per cent of all nursing home residents with severe challenging behaviour (n=24 327) were in mainstream nursing homes and not specialist psychogeriatric nursing homes. The support these nursing homes receive varies from region to region and from state to state.

In Victoria this problem has been overcome by comprehensive funding of Psychogeriatric Assessment Teams (PGAT), whose work complements the Aged Care Assessment Teams (ACAT) [132]. Furthermore, the establishment of

Psychogeriatric Nursing Homes (PGNH) and Hostels allows the movement of residents from standard RACF to PGNH where they receive specialist nursing and medical care. This relieves pressure from both the acute inpatient service and the standard RACF. In 2001, the State government top-up funding for PGNH was \$63.00 per day per resident. The residents also receive a subsidy from the Commonwealth as aged care facility residents.

States interpret their responsibilities differently and vary in per capita spending and in the composition of their spending (NMHR 2002) [133]. Victoria, for example, has traditionally included some aspects of dementia in their mental health funding. Whilst there have been discussions that NSW planning formulations would include some aspects of dementia, NSW has not currently expanded its understanding of its mental health responsibilities (*Mental Health Clinical Care and Prevention Model: a population mental health model, 2001*).

4.12 EXAMPLES OF STATE AND TERRITORY EXPRESSION OF THE NATIONAL MENTAL HEALTH STRATEGY

The *Victorian Mental Health Service: A Framework for Service Delivery – Aged Persons Services, 1996* articulated a model which included some aspects of dementia under the care of the mental health services [132]. They defined their treatment populations as:

1. Those with long-standing mental illnesses who have reached the age of 65 years (or for whom issues of ageing complicate the treatment of their mental illness);
2. Those with late-onset so-called “functional” psychiatric disorders such as depression, other affective disorders, anxiety disorders or psychosis;
3. Those with cognitive impairment who display psychotic symptoms; syndromes of depression, agitation or anxiety; or those with behavioural disturbances – for example, aggression, disinhibition or vocalisation.

The principles of the service stressed the rights of those with mental illness, the desire to treat people in the least restrictive manner and the involvement of consumers and carers. Acute inpatient beds were located in the general hospitals. The service provided integrated acute inpatient care, community care and residential care. Respite and day programs were provided for those in the community or in hostels. Pivotal to the service were the Psychogeriatric Assessment Teams, multidisciplinary teams of community case managers. They helped the consumer to access appropriate aged care, NGO and mental health services, and developed a flexible responsive package for their clients. They worked with the Aged Care Assessment Teams, and while able to share resources, they had operational integrity. Crisis work was done by the Adult Mental Health Service.

PGATs were the gatekeepers to the Psychogeriatric Nursing home and Hostel beds. Clients in PGNH remained on average 12 months and then returned to a general RACF when the challenging behaviour settled or the progression of their dementia made management in a general facility possible.

Victoria purchased some of its services from NGOs and had the highest percentage of NGO spending of any jurisdiction. The Department of Health and Community Services took the unusual step of articulating a guideline for bed numbers, suggesting 4 acute beds and 11 PGNH beds per 10 000 people over 65 years. They also suggested the multidisciplinary nature and staffing ratios of the PGAT. Despite dating from 1996, this remains a watershed policy: academic, comprehensive and informative.

New Directions for Victoria's Mental Health Services, 2002 outlined six key directions for the next 5 years [134]:

1. Expand service capacity;
2. Create new service options;
3. Extend prevention and early intervention programs;
4. Build a strong and skilled workforce;
5. Improve consumer participation; and
6. Improve carer participation and support.

In New South Wales, the Centre for Mental Health determines policy and planning for the Mental Health Services. The *Mental Health Clinical Care and Prevention Model: a population mental health model, 2001* is an epidemiological model for the distribution of services. In the current model, dementia and the mental health aspects of dementia are excluded. Mental health aspects of dementia may be included in subsequent models. Currently NSW OPMHS receive referrals concerning those with dementia but are not specifically funded by this model, which places dementia within Aged Care Services. Area Mental Health Services have recently been amalgamated, in part to achieve economies of scale in management, and in part to link well-resourced areas with weaker areas. NSW Suicide Prevention Strategy comments on the development of guidelines for treating depression and training clinicians in risk assessment.

Queensland uses a population model, the *Queensland Ten Year Mental Health Strategy*. Their benchmarks are Acute Inpatient Services at 45 beds per 100 000 population (65 years and over) and Extended Inpatient Services (similar to Victoria's 24-hour residential beds) at 3 beds per 100 000. This State promotes the use of telepsychiatry for rural and remote support

The development of *Queensland suicide prevention strategy 2003-2008* was overseen by Professors De Leo and Martin [98]. It outlined current literature with regard to the biological, psychological and social determinants of suicide as well as protective and risk factors. Queensland had a higher than average suicide rate.

In *Tasmania Dementia Care Plan: A Discussion Paper on Service Directions, 2001*, reference is made to the need for specialist services to intervene as the dementia progresses and to provide advice on behaviour management and support for carers [135]. This model provides specialist secure inpatient beds as well as dementia-specific residential beds, which support the mainstream RACF. The dementia-specific residential beds were conceived of as a special unit attached to a mainstream RACF. However, there is one stand-alone dementia-specific unit which has been recently evaluated.

5. Services

An ageing population provides challenges for any health system. In 1997, 12% of the population was over 65 years. By 2031 it is estimated that the percentage will rise to 22% [136]. Two thirds of those with dementia will experience BPSD over the course of their illness [4], and 90% of those in nursing homes will display at least one feature of BPSD [58]. Prevalence data for depression in the elderly are debated (see section 3.1 above). However, given the large number of the DVA treatment population who are carers, reside in an aged care facility or have a physical disability, it is imperative that depression, its diagnosis and treatment are foci for the Department of Veterans' Affairs.

5.1 TYPES OF MENTAL HEALTH SERVICES TO WHICH WAR WIDOWS OR VETERANS MAY GAIN ACCESS

5.1.1 INPATIENT BEDS

Veterans and war widows accessing state based OPMHS may use acute inpatient beds, non-acute inpatient beds and respite beds. These beds may be co-located with general medical hospital beds and may or may not be part of the adult psychiatry inpatient unit. Some units have a specific veteran focus, but this is not common. Austin and Repatriation Medical Centre, Victoria, has a 25-bed gazetted psychiatry ward. This ward caters for peacekeepers through to WWII veterans. There are 5-7 beds set aside for this latter group. One public hospital model which works well is a secure ward for behaviourally disturbed elderly people, with input from both geriatricians and old age psychiatrists. This combination, in addition to skilled nursing care, allows assessment without excessive sedation and provides a safe environment within which to withdraw elderly people from their psychotropic drugs. As has been discussed, some states have psychogeriatric nursing home beds (also classified as 24-hour staffed residential beds under the National Mental Health Reports).

In addition, DVA clients are admitted to private psychiatry wards. Data regarding this appears in the following section. While veterans do utilise the private sector in this way, many private hospitals are not appropriate for frail elderly patients, whether because of their physical layout or their insufficient general medical cover. St John of God, Richmond, has a ward for older people and a visiting Old Age Psychiatrist. The ward, however, is not secure and would not be suitable for confused elderly patients.

Whilst OPMHS do much more than simply provide inpatient services, a lack of appropriate beds causes deficits in other parts of the service. If community teams

are supporting those who would otherwise have been admitted, the community focus becomes crisis-driven and unable to offer continuity of care. This point is made by carers and consumers in *Out of Hospital, Out of Mind, 2003* [34]. Similarly, if there are no residential beds for those with dementia and challenging behaviour, mainstream RACF will refer residents to Accident and Emergency and hospital patients with BPSD will be difficult to place. OPMHS also provide a liaison service to the medical and surgical wards of general hospitals.

5.1.2 COMMUNITY MANAGEMENT

Community teams are multidisciplinary and often supported by Old Age Psychiatrists. Most OPMHS have close relationships with the Aged Care Services (ACS) and Adult Mental Health Services. GPs manage the majority of older people with mental health problems and the OPMHS provide consultations to those involved in primary care. A shared care model between the GP and OPMHS may be appropriate for consumers with persistent, disabling conditions.

An OPMHS case manager brokers veteran-specific and non-veteran-specific services from the OPMHS and ACS. It is beyond the scope of this report to discuss in detail the ACS or veteran-specific ACS. However, many of these services fulfil psychological needs of connectedness and support and as such are an important part of the management of mental disorders. In areas without OPMHS, the ACS need to take on the tasks that, in a better resourced service, would belong to the OPMHS. Residential respite, day programs and in-home respite are important parts of the care package.

Some OPMHS include day programs. These offer support for individuals unable to use ACS or NGO day programs because of challenging behaviour, as well as offering respite for the carers. They may also be integrated with the community teams and provide an alternative to inpatient admission together with opportunity for further assessment. These day program places are usually time limited with a view to discharging consumers back to general programs. This model is available in the UK and Victoria. Some services' day programs have "functional" components (relating to depression, anxiety and psychosis) and "organic" components (relating to dementia).

The ACPMH accredited PTSD programs for older veterans in four centres. The total throughput of older veterans for Wesley Private Hospital, NSW, was 25 veterans; for Daw Park, SA, 68 veterans; for Austin and Repatriation Medical Centre, VIC, 135 veterans; and for Hollywood, WA, 6 veterans. The PTSD severity was in the mild range and the average effect size was 0.3, a small but significant treatment effect. The treatment effect sizes for programs varied from 0.1 to 1.1.

Younger veterans have higher rates of same-day private psychiatric separations (admissions) than older DVA groups. For example, in NSW older veterans only account for 13.6% of private day-only male same-day admissions. These private day-only admissions may include PTSD, alcohol and anger management programs.

5.2 NATIONAL MENTAL HEALTH REPORT 2002 (NMHR 2002) AND NATIONAL MENTAL HEALTH REPORT 2004 (NMHR 2004)

The National Mental Health reports are biannual reports of health spending by all levels of government. The reports also record State and Territory Mental Health Service reforms and compliance with the national Mental Health Strategy (NMHS). Information was presented differently in these two reports, therefore data have been used from both. The NMHR 2002 covered data from 1992-93 until 1999-2000. The NMHR 2004 added data from 2000-01 until 2001-02. For brevity's sake, 1992-93 will be designated 1993, and so on. The NMHR 2002, in particular, invited comparisons by state.

Expenditure analysis cannot guarantee the quality of the services bought nor does it include spending on housing, income support, or general medical funding. The expenditure analysis includes neither out-of-pocket expenses nor NGO activities that were not government-funded. Capital expenditure is excluded so as not to obscure real trends in recurrent spending. Based on other studies, for every mental health dollar spent directly on those with mental health disorders, \$1.60 is spent indirectly on their other health costs and community and income supports. One role of the NMHR was to ensure that money generated by selling stand-alone psychiatric hospitals would be directed to community services.

5.2.1 NATIONAL MENTAL HEALTH REPORT 2002 (NMHR 2002)

Total spending on mental health in 1999-2000 was \$2.6 billion, approximately 6.6% of total health spending. The Commonwealth provided 34.5% of mental health funding, States and Territories 60.8% and private health funds 4.7%. Expenditure on psychotropic drugs had increased by 402% from 1992-93. Total government spending on mental health had increased in real terms by 46% since 1992-93.

The total number of inpatient psychiatric public beds fell from 45.5 per 100 000 in 1993 to 31.5 per 100 000 in 2000, which represented a 24.9% reduction in beds. Bed numbers had already reduced by 30% in the decade before the NMHS. The overall number of acute beds remained constant at 20 per 100 000. However, 24-hour staffed community beds grew by only 558, one quarter of the number of long-stay beds removed from psychiatric institutions. Overall, 44% of the growth in community funding has been supplied from reductions in psychiatric hospitals.

TABLE 1: EXPENDITURE BETWEEN 1992-93 AND 1999-2000 (\$MILLIONS)

	NSW	VIC	QLD	WA	SA	TAS
Spending growth on community and general hospital services	132.4	211.7	108.3	79.3	28.5	9.2
Reduction in spending on stand-alone psychiatric hospitals	43.2	167.5	4.0	12.8	2.5	3.8

No jurisdiction apart from Victoria developed a significant number of community staffed residential beds, despite an assumption that rehabilitation and long-stay beds in stand-alone psychiatric institutions would be replaced by residential beds. Aged care beds made up 18.8% of psychiatric public beds and accounted for 60% of new residential beds. All Victoria's psychogeriatric nursing home beds were approved under the Commonwealth *Aged Care Act, 1997* enabling them to receive \$10 million in funding.

Over the period of the strategy, real bed costs increased by 33% for stand-alone psychiatric hospitals and by 9% for general hospitals. Whilst bed numbers were reduced by 25%, staffing costs were reduced by 14% and expenditure by only 7%.

TABLE 2: COMPARISON BETWEEN STATES OF INPATIENT EXPENDITURE, BEDS AND FTE, 1993-2000

	Inpatient expenditure	Inpatient beds	Inpatient clinical FTE
NSW	-1.5%	-23.4%	-3.2%
VIC	-41.5%	-42.4%	-40.2%
QLD	16.7%	-18.4%	6.4%
WA	19.5%	-9.2%	-1.5%
SA	12.5%	-15.9%	-19.2%
TAS	-7.4%	-29.4%	-19.8%
ACT	-12.7%	-5.8%	-13.1%
NT	13.5%	-22.0%	0.6%
NAT. AVERAGE	-7.0%	-24.9%	-14.0%

Workforce shortages were reported in all jurisdictions, especially for nurses. The number of psychiatrists in the public sector remained stationary over the life of the NMHS. There were two barriers to accountability: underdevelopment of information systems and lack of agreement on outcome measures.

NSW

Despite an 18 % per capita increase in funding from 1992-93, per capita spending was 5.9% lower than the national average. NSW ranked 6th overall in state spending but was the leading jurisdiction in the use of outcome measures. NSW had a low level of NGO funding. While non-acute beds were reduced, 24-hour

staffed residential community beds were not developed. The Mental Health Outcomes and Assessment Tool (MHOAT) was implemented.

Victoria

The remaining stand-alone hospitals were closed. Victoria's high spending on 24-hour staffed residential community beds and NGOs distinguish it from other jurisdictions. Only in Victoria was the percentage in bed reduction matched by the percentage of expenditure saved.

Queensland

Queensland opened a 24-hour staffed community unit, although they classified it as extended inpatient services. Old age services were provided at 50% of the national average. In 2000, parliament passed new mental health legislation.

Western Australia

Per capita spending was 17.3 % above the national average. Combined acute beds and 24-hour staffed residential beds were 6% below the national average. Mental Health Direct, a 24-hour mental health call line that gives information about mental health conditions and services, was commenced. Suicide prevention included enlarging the workforce and targeting at-risk groups. Telepsychiatry was established at 35 locations to provide clinical assessment and continuing rural education and supervision. A Joint Services Division Unit was established to pilot models for service provision for those with co-morbid mental health and substance abuse problems. There was increased partnership with NGOs to support people living at home. These situations were not clinically staffed and not reflected in bed numbers.

South Australia

There was a reduction in institutionalised beds by 42% but a reduction in costs of only 4%. Limited progress was achieved with structural reforms and reliance on stand-alone psychiatric hospital beds remained. There was a relatively high level of aged care beds, but they were mostly in stand-alone psychiatric hospitals. Information systems were significantly behind other jurisdictions.

Tasmania

A State Discussion Paper was published on depression and included a catalogue of interventions. Tasmania Dementia Care Plan was developed to coordinate care for those with mental health aspects of dementia.

5.2.2 NATIONAL MENTAL HEALTH REPORT 2004 (NMHR 2004)

According to this report [137], total spending in 2002 was \$3.1 billion, a 62% increase in real terms since 1993. National spending on specialised mental health

care was 6.4% of total health spending. There was a significant disparity in spending between the jurisdictions, suggestive of differences in service provision. Overall spending on community services increased by 145% between 1993 and 2002 and, in 2002, represented 51% of total mental health spending. NGO funding increased to 5.5% of total spending. Victoria and Queensland had the highest level of NGO funding.

The number of beds in stand-alone psychiatric hospitals was decreased by 60% and accounted for 39% of total inpatient bed capacity. The overall number of acute beds was relatively unchanged since 1993, which coupled with population growth, implied that the number per capita had fallen. The number of non-acute beds had fallen dramatically and there had not been compensating growth in 24-hour staffed residential beds.

Government Spending, 2001-2002:

1. Commonwealth \$1146 million, 37.1%
2. States/Territories \$1798 million, 58.2%
3. Private Health funds \$145 million, 4.7%

Commonwealth Mental Health Spending, 2001-2002:

1. PBS \$498 million, 43.4%
2. Private Health Rebates \$38 million, 3.3%
3. DVA \$134 million, 11.7%
4. NMHS \$94 million, 8.2%
5. MBS GPs \$167 million, 14.6%
6. MBS psychiatrists \$197 million, 17.2%

Spending on psychotropic drugs in 2002 increased by 570% since 1992-93.

TABLE 3: PER CAPITA SPENDING ON SPECIALIST MENTAL HEALTH SERVICES 2002 IN DOLLARS (NMHR 2004)

WA	VIC	SA	TAS	NT	NSW	ACT	QLD	AVERAGE
110.82	98.81	96.19	93.86	85.56	85.13	84.86	84.83	92.03

TABLE 4: FULL-TIME CLINICAL EQUIVALENT STAFF EMPLOYED IN AMBULATORY CARE PER 100 000 (NMHR 2004)

WA	ACT	NT	SA	VIC	NSW	TAS	QLD	AVERAGE
42.9	42.6	40.3	39.0	37.3	35.2	31.9	29.8	35.9

TABLE 5: CLINICAL SERVICE DELIVERY STAFF FTE PER 100 000 (NMHR 2004)

TAS	SA	WA	VIC	QLD	ACT	NSW	NT	AVERAGE
104.0	102.2	101.5	93.7	89.7	82.6	81.2	78.1	90.0

There was an overall bed reduction of 26% since 1992-93. Tasmania closed its only stand-alone psychiatric hospital in 2001. By June 2002, 13 of the 39 original stand-alone psychiatric hospitals had been closed. South Australia was most dependent on its stand-alone psychiatric hospitals. Over the 2000-2002 period, non-acute beds were reduced by 5%. Whilst total bed numbers in stand-alone psychiatric and general hospitals decreased by 26%, clinical staffing costs and expenditure only decreased by 11% and 2% respectively. Unlike previous reports, the NMHR 2004 contains information about residential beds staffed for fewer than 24 hours (NSW and Victoria).

TABLE 6: AGED CARE INPATIENT AND 24-HOUR RESIDENTIAL BEDS PER 100 000, 2002 (NMHR 2004)

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AVERAGE
Acute inpatient	16.9	34.9	11.2	55.8	41.1	-	-	-	25.2
Non-acute inpatient	19.9	2.3	32.9	11.7	65.8	52.6	-	-	21.7
24-hour residential	14.4	95.2	-	-	-	62.6	-	-	31.3
Total	51.1	132.3	44.2	67.5	107.0	115.2	-	-	78.2

NSW and QLD had the lowest number of mental health aged care beds. The NSW CADE unit beds would have been included under the 24-hour staffed residential beds but, unlike the Victorian beds, they are not part of an integrated service. Adult Mental Health Services and Aged Care Services perceived that the Older Persons Mental Health Services in NSW were under-resourced and lacked beds [138].

Despite the generally positive reporting, there were some comments that indicated concern from consumers, carers and the community about the capacity and responsiveness of the services to crises:

Of most concern is the frequent feedback emerging from consultations with consumer and carer representatives that the strategy's vision of accessible, responsive integrated mental health service has little resemblance to the current reality in many areas of Australia. [33]

By 2002 the private sector provided 23% of total psychiatric beds. Private beds have increased by 38% over the life of the Strategy. Forty-six private hospitals provided specialist psychiatric services. Twenty-three of these were stand-alone psychiatric hospitals. If the original move away from stand-alone psychiatric hospitals was made to reduce stigma, the growth in private stand-alone psychiatric hospitals does not seem consistent with this aim.

MBS spending on psychiatrists decreased by 2.3% from 2000 to 2002. 1.4% of the population had at least one consultation with a psychiatrist. South Australia and

Victoria had the highest level of MBS spending on psychiatrists, at 30% and 33% above the national average respectively.

5.2.3 OVERALL CONCLUSIONS FROM THE NMHR 2004

Whilst there has been significant growth in government spending, particularly in pharmaceutical costs, spending on services varied throughout the jurisdictions. Fifty-seven percent of all veterans and war widows lived in NSW/ACT and Queensland in 2003. NSW and Queensland have the lowest per capita number of aged care mental health beds of any state, with Queensland also having the lowest per capita FTE clinical staff numbers employed in ambulatory care. SA was dependent on stand-alone psychiatric hospitals for its inpatient old age psychiatry beds, which does not reflect the principles of the NMHS. WA reported a number of innovations in NMHR 2002 and had the highest per capita spending (combined across all age-groups). Tasmania appeared to be developing its capacity to manage the mental health needs of older people with an integrated approach to mental health problems in dementia. Victoria, in addition to its commendable 1996 policy, had the highest number of aged care mental health beds and a well-established community service. The period of reporting does not cover 2002-2003 or 2003-2004, and changes may have occurred in these years. For example, NSW opened 15 old age psychiatry inpatient beds in the Central Coast Area Health Service in 2004.

In a 2002 survey, psychiatrists were asked about difficulties admitting and discharging public patients [139]. The responses were similar across the states, except in SA where 57% (n=44) described weekly difficulties, compared with 37% (n=247) in the rest of Australia. Fifty-seven percent of private psychiatrists could give an urgent appointment in one week, while 16% said they were not taking any new patients. Nineteen percent of psychiatrists believed that public psychiatry care had become much worse over the last five years. Psychiatrists from NSW and SA were more likely to report that the situation had worsened. The public mental health service had deteriorated in the opinion of 67% of private practitioners, 39% of practitioners who practised public psychiatry exclusively, 27% of academics, but only 18% of administrators.

5.2.4 COMPARISONS BETWEEN THE PBS AND RPBS IN PSYCHOTROPIC DRUG COSTS

The growth in psychotropic drug costs quoted in the NMHR 2004 was 570% from 1992-93 to 2001-2002. Department of Veterans Affairs mental health spending was classified separately and presumably includes the Repatriation Pharmaceutical Benefits Scheme (RPBS) costs. Psychotropic drug costs, not adjusted for inflation, were available from DVA from 1997-1998 to 2002-2003.

TABLE 7: SELECTED RPBS DRUG COSTS 1997-1998 TO 2002-2003

	1997-1998	2002-2003	% increase from 97-98
Antipsychotics	\$ 942,986.00	\$ 6,239,821.00	562%
Antidepressants	\$ 8,274,941.00	\$ 16,242,308.00	96%
Sedatives/Hypnotics	\$ 1,633,402.00	\$ 2,103,724.00	29%
Anxiolytics	\$ 1,103,502.00	\$ 1,312,377.00	19%
Antidementia	nil recorded	\$ 4,795,122.00	

Antidementia drugs were introduced over this reporting period and it is likely that they are not considered “psychotropic drugs” for the purposes of the NMHR 2004. During this period, new antipsychotic medications were introduced. Despite only one of the newer drugs having the indication for treatment of behavioural disorders in dementia, they are widely prescribed in the elderly and contribute to the increasing PBS and RPBS costs. The figures quoted above refer to pharmaceutical costs for the entire DVA treatment population. It would be interesting to know the psychotropic drug costs, particularly antipsychotic costs, in the older population.

5.3 CURRENT AND PLANNED COMMONWEALTH DEMENTIA SPENDING

The NMHR outlines spending on mental health services. To complement these figures, the funding figures for dementia released by the Commonwealth have been included.

Estimates of Commonwealth dementia funding (from the Coalition Government Statement 2004)

1. \$2.3 billion for RACF funding;
2. \$158 million for Home and Community Care Services for people affected by dementia;
3. \$56.7 million for Community Aged Care Packages for people affected by dementia;
4. \$43 million for targeted dementia services;
5. \$34 million for PBS anti-dementia drugs;
6. \$11 million for dementia research.

Coalition Government promises before the 2004 election

The Coalition Government promised \$200 million over four years in extra dementia funding [140]. Dementia was to become a National Health Priority and \$52.2 million dollars over four years would be spent on:

1. New methods of treating and caring for people with dementia;
2. Programs to increase education for GPs, carers and people with dementia;

3. Research funding for early intervention programs;
4. An extra 2000 Extended Aged Care at Home (EACH) places and an increase in the number of hours of support available to the recipients of these places (for which the Coalition pledged \$127.7 million over four years);
5. An expansion of the Carer Education and Workforce Training project (for which \$20.1 million was pledged).

5.4 PSYCHIATRY CONSULTATIONS FOR OLDER PEOPLE

Draper and Koschera examined the private psychiatry consultation rate and expenditure per capita for Australians, stratified by age [35]. Only 6.4% of private psychiatry consultations (5765.6 per 100 000) were for patients older than 64 years. Patients 15-64 years received 2.7 times the number of consultations compared with those 65 years and older and 3.6 times that of those 75 years and older. Medicare expenditure for those younger than 65 years was 4.1 times higher than for those 65 years and older. This Medicare analysis excluded veterans and war widows.

In Victoria there were more domiciliary visits by private psychiatrists, 10 times the per capita home visit rate of Queensland. Victoria has a well-integrated Old Age Psychiatry Service and the authors speculated that the higher rate of private psychiatry home visits may reflect the experience of psychiatrists as trainees. They also examined the number of consultations for older veterans and war widows. Over the same time period, 84% of entitled DVA beneficiaries were 65 years and older, but they used only 21.4% of the total private psychiatry consultations [35].

In NSW and ACT in 2001, 84.5% of the total veteran population was over 65 years of age. Younger veterans were 8.6 times more likely to see a psychiatrist and 13.3 times more likely to consult a psychologist. With regard to private psychiatry hospital admissions in NSW, younger veterans had 4 times more admissions than expected on a pro rata basis and occupied 6.7 times more bed days than expected (unpublished data from NSW State Office, previously presented to the DVA Medical Advisers' Conference, 2003). Only 7% of referrals to the Vietnam Veterans' Counselling Service concerned veterans 65 years and older (Margaret Simpson, private communication).

5.5 DVA TREATMENT POPULATION 65 YEARS AND OVER, HOSPITAL ADMISSIONS DATA 2002-2003

Bed utilisation data cannot be used to infer the community prevalence of a disorder. Low bed utilisation may reflect not only low disease prevalence, but lack of available beds or good community services. There is no international or Australian normative data on bed utilisation for psychiatric conditions (B. Draper, private communication). The DVA treatment population effectively has private

health insurance and hence can access private as well as public psychiatric beds. It is anticipated that chronic psychiatry bed shortages in some states would lead to the DVA treatment population being diverted to private hospital beds. This may not present a barrier to those 65-74 years and physically well, but the older group and those with medical co-morbidities may not be managed in private psychiatric beds.

In 2002-2003, the most frequent multi-day psychiatry admissions were for major affective disorders. As older males are noted to have higher suicide rates, it may be worthwhile monitoring the trends in older males' admissions for X62A, "poisoning/toxic effects of drugs and other substances" in older veterans. *Reducing Suicide: The Queensland Government Suicide Prevention Strategy, 2003-2008* highlighted the increased risk of suicide for older males 12 months after hospital admission for a mental health disorder. It may be a quality assurance process to trace the treatment history of those who presented with "poisoning/toxic effects of drugs and other substances" and examine the extent of their medical and community support.

Using the multi-day separations (admissions) for psychiatric diagnoses in NSW/ACT from 2002-2003, male DVA clients over 65 years accounted for 87.4% of public and 32.4% of private DVA separations. Given the age distribution of the DVA treatment population, younger DVA clients had a disproportionate number of private admissions. Women accounted for 26.4% of all DVA public and private multi-day psychiatry separations for those 65 years and older, and 6.5% of all DVA public and private same-day separations for the same group.

From the table below, female public and private admissions in the 75-84 year group and the 85 plus group were parallel. Male private admissions for both the 75-84 year group and the 85 year plus group were well below the public rates. However, this would reflect the bias of younger veterans' preference for private hospital admissions. Perhaps a better measure is the ratio of private to public admissions in each gender by age group. This ratio suggests that, for whatever reason, males 75 years and over are less likely than corresponding females to access private multi-day psychiatric admissions.

TABLE 8: MULTI-DAY PSYCHIATRIC ADMISSIONS

	Public	Private
Male multi-day psychiatric admissions for 75-84 years as a percentage of total male multi-day psychiatric admissions	57% (n=247)	22% (n=95)
Male multi-day psychiatric admissions for 85 plus year as a percentage of total male multi-day psychiatric admissions	26% (n=112)	8% (n=37)
Female multi-day psychiatric admissions for 75-84 years as a percentage of total male multi-day psychiatric admissions	56.7% (n=131)	60% (n=222)
Female multi-day psychiatric admissions for 85 plus year as	30% (n=70)	27.5% (n=102)

a percentage of total male multi-day psychiatric admissions

TABLE 9: MULTI-DAY PSYCHIATRIC ADMISSIONS, PRIVATE VERSUS PUBLIC

Ratio of private : public male multi-day psychiatric admission 75-84 years	0.385
Ratio of private : public male multi-day psychiatric admission 85 plus years	0.33
Ratio of private : public female multi-day psychiatric admission 75-84 years	1.69
Ratio of private : public male multi-day psychiatric admission 85 plus years	1.46

Male DVA private multi-day psychiatry separations averaged 21.1 bed days for those under 65 years and 22.8 for those 65 years and older. The male DVA public multi-day psychiatry separations averaged 9.2 bed days for those under 65 years and 18.3 for those 65 years and older. Female DVA private psychiatry multi-day separations averaged 19.2 days for those 65 years and older. Female DVA public multi-day psychiatry separations averaged 15.8 bed days for those 65 years and older.

5.6 OTHER GOVERNMENT SERVICES AVAILABLE

Cognitive, Dementia and Memory Services (CDAMS), State Funded

These are multidisciplinary memory clinics that are available throughout Victoria. There are memory clinics in NSW, for example Concord Repatriation General Hospital, The Prince of Wales Hospital and Royal North Shore Hospital. With the exception of Concord Hospital, other memory clinics only service residents from their AHS. Concord Hospital Memory Clinic is partly funded by DVA directly.

Care Units (PGU), Commonwealth funded

In 1994-95, a pilot program was developed to meet the needs of those with challenging behaviour in dementia in RACF and those unable to access mainstream RACF because this behaviour [141]. The program's objectives were:

1. Accurate assessment and diagnosis of older people in the target group;
2. Advice to ACAT;
3. Support for staff of RACF;
4. Advice on environmental modification, and behavioural modification plans;
5. Funds to assist in the provision of continued residential care for the target group.

As of 2003 there were 13 Psychogeriatric Care Units nationally, with only one each in QLD, NSW, TAS, SA, WA and NT. Victoria had seven units. The review raised issues of access and the question of providing tiered intervention. Within the resources of this program, should the focus be on those with severe BPSD? The review commented on the high turnover of staff in PGUs and the need for advice to be evidence-based.

Telepsychiatry

Telepsychiatry is defined as the electronic transmission of psychiatric consultations, advice or services in digital form using a data communication link. Psychiatrists providing this service must have completed the online training module developed by the College. After four telepsychiatry consultations the consultant must see the patient face-to-face. There is a formal review mechanism for telepsychiatry consultations.

5.7 STATE DIFFERENCES IN THE DELIVERY OF MENTAL HEALTH SERVICES

5.7.1 NSW

The Centre for Mental Health determines policy and planning for the Mental Health Services. The *Mental Health Clinical Care and Prevention Model: a population mental health model, 2001* is an epidemiological model for the distribution of services. In the current model, dementia and the mental health aspects of dementia are excluded. Currently OPMHS receive referrals concerning those with dementia but are not specifically funded by this model, which places dementia within Aged Care Services. There has been discussion of including dementia in future documents. Area Mental Health Services have recently been amalgamated, in part to achieve economies of scale in management, and in part to link well-resourced areas with weaker areas.

OPMHS vary in structure and focus. Some services have a single point of entry with geriatric services, for example, Concord Repatriation General Hospital and Royal North Shore Hospital, but most are aligned with the Adult Mental Health Services. After-hours emergency cover is generally done by adult services, providing an economy of scale. Rural OPMHS are often under-developed and may be supported by psychiatrists employed as Visiting Medical Officers or by telepsychiatry.

NSW health funds CADE (confused and disturbed elderly) units. These units are funded from mental health sources but primarily deal with behaviours arising from dementia. In 1999, 87% of residents had a diagnosis of dementia. They are not part of an integrated community and hospital service, and function as long-stay beds. Geographical placement means that the only two units in Sydney are close to each other. There are plans to close some CADE Unit beds. The Commonwealth supports the PGU in one area health service. The Working Group on the Care of Older People in NSW Healthcare System prompted the development of Aged Service Emergency Teams (ASET) to review older people presenting to Accident and Emergency (A&E) Services. The ASET organise community services from A&E for those not requiring medical admission.

The NSW Department of Health and Central Sydney Area Health Service have opened a 41-bed PGNH. As residents in NSW RACFs require security of tenure, only 13 of the 41 beds will work as per the Victorian model: accepting referrals from standard RACF with the community OPMHS acting as the gate-keeper and relocating residents back into standard RACFs once the behaviour has settled.

The NSW Suicide Prevention Strategy commented on the development of guidelines for treating depression and “depression programs for older people”, referring to training clinicians in risk assessment. Each AHS was to establish a 24-hour help number to provide assistance to people with mental health problems. An extra \$2 million per year was allocated and the Early Intervention Officer program was to be funded directly from this money. They were to focus on all age-groups and work with emergency services, accident and emergency, GPs, schools, rural groups and other groups. There was no specific mention of veteran groups. District Suicide Prevention Action Plans were to apply the overall plan to specific geographical areas.

In NSW, the Concord Repatriation General Hospital Psychiatry Day Program is an open-ended, supportive day program for those veterans and war widows with depression and anxiety disorders. Individuals see their treating doctor outside this program. The program is accessed mainly by older veterans.

The DVA treatment population can access private hospital admissions or PTSD programs. St John of God, Richmond, NSW provides a socialisation program for older people with depression and anxiety. It has some educational content in addition to the socialisation and outings.

Review of OPMHS in NSW

Draper *et al.*, in a project funded by the Centre for Mental Health, surveyed OPMHS, AMHS and ACS about the structure and work of the OPMHS [138]. Only 59% of AMHS and ACS considered that the local OPMHS provided an adequate service. In NSW in 1999 (the year of the survey), only 10% (n=2) of OPMHS were rural. By contrast, 52% of ACS and 55% of AMHS were rural. However most rural “teams” were small, perhaps one or two workers. Seventy-five percent of community OPMHS had an old age psychiatrist working with the team. Problems highlighted by the OPMHS were difficulties of retaining workforce and budgetary restraints. Twenty-six percent of AMHS and 44% of ACS reported difficulty accessing OPMHS or an old age psychiatrist. ACS reported problems with limited OPMHS beds. ACS and OPMHS were co-located in 57% of cases, while AMHS and OPMHS were co-located in 37%. Few referrals were made by OPMHS or ACS to private psychiatrists.

5.7.2 VICTORIA

Expenditure on OPMHS was 13.6% of the mental health budget in 2002-03. The Psychogeriatric Assessment Teams Budget for 2002-03 was \$19.3 million. Inpatient units were allocated \$28.5 million in 2002-03, with 209 beds in 2001-02. The State budget for residential beds was \$12.1 million in 2002-03 for 585 part-funding beds (these beds also receive the Commonwealth subsidy). Victoria has the highest number of old age psychiatry beds per capita, largely due to the development of their 24-hour staffed residential beds. Cognitive, Dementia and Memory Services were widely available.

The Austin and Repatriation Medical Centre (ARMC) day program operates one day per week for those with dementia, one day for those with PTSD and two days for anxiety and depression. There is an Older Veterans psychiatry program and rehabilitation work group. The PTSD program is a 12- or 13-week program with a trauma focus. Assessment and outcome scores are evaluated by ACPMH. From Dr R. Bonwick's clinical experience, the veterans in the program do well although the program may proceed more slowly than comparable programs for younger patients. Cognitive impairment is an exclusion criterion. The ARMC run the largest number of PTSD cohorts.

5.7.3 QUEENSLAND

Queensland uses a population model, *Queensland Ten Year Mental Health Strategy*. Their benchmarks for OPMHS are:

1. Acute Inpatient Services 45 beds per 100 000 population;
2. Community Services 10 beds per 100 000 population;
3. Extended Inpatient Services (like Victoria's 24-hour residential beds) 3 beds/100 000.

Given the geographical issues facing the Queensland State Government, they have assessed and developed the use of telepsychiatry for rural and remote support. Queensland's suicide rate has been higher than the national average. Thus the Queensland Suicide Prevention Strategy has been a focus of activity.

5.7.4 SOUTH AUSTRALIA

A high proportion of the mental health funds are directed to stand-alone psychiatric hospitals. Like other states, their Aged Care psychiatry beds tend to be funded from mental health budgets, rather than receiving part-payment under the Commonwealth *Aged Care Act 1997*. There are difficulties in discharging residents to general aged care beds, so that many patients are transferred to extended Aged Care Psychiatry beds. Daw Park offers a PTSD program.

5.7.5 WESTERN AUSTRALIA

The University of Western Australia has produced a desktop reference guide for GPs in identifying and managing suicidal risk in older people. They are now developing a national training program with funding from the Commonwealth Department of Health and Ageing under the National Suicide Prevention Strategy. The total number of Western Australia's old age psychiatry beds falls below the national average. However, other beds staffed by NGOs are not included in that number. WA has the highest per capita spending on mental health. Hollywood Hospital had a small number of veterans completing a PTSD program.

5.7.6 TASMANIA

In *Tasmania Dementia Care Plan: A Discussion Paper on Service Directions, 2001*, future development of dementia services is planned to include mental health aspects of dementia [135]. Whilst Tasmania had no acute psychiatry aged care beds, they had 115.2 non-acute and 24-hour staffed residential beds per 100 000 population, placing them above the national average of 78.2 beds. Their approach appeared to be integrated. The stand-alone dementia specific unit has an excellent reputation. An independent evaluation has been performed but has not yet been released.

5.7.7 ACT

ACT has 26 000 people over 65 years old. Until 1999 there was no specialist OPMHS. The OPMHS now has a multidisciplinary team including a psychiatrist and a full-time GP. In partnership with geriatrics and they developed cross-funded beds for older people with a mental health problem within the geriatric ward. There is one RACF with 10 beds which receives clinical input from the OPMHS [142].

5.8 OLD AGE PSYCHIATRY SERVICES IN THE UNITED KINGDOM

Old age psychiatry was pioneered in the United Kingdom. *The National Service Framework for Older People, 2001* outlined the principles of service delivery in the UK [143].

Most UK old age psychiatry services make the first assessment after referral in the individual's home. After assessment, only 6% of clients receive an inpatient admission but 30% receive further assessment at a psychogeriatric day hospital. The first assessment is usually done by a registrar or consultant and much of the subsequent management is performed by the multidisciplinary team and GP. In rural settings there is more emphasis on Community Psychiatric Nurses.

In the UK, the relationship of health and social services is different from Australian structures. Some GPs are fund holding and primary care trusts generally service 100 000 people. All individuals are registered with only one GP practice. Recognition of BPSD in dementia has led to the development of Elderly Mentally Infirm nursing homes, which have staff trained in management of behavioural disorders and higher staffing ratios compared with ordinary nursing homes. Liaison with general medicine has become increasingly important with up to one third of referrals received from hospitals. Memory clinics are a new growth area, although they tend to be academic centres. There are examples of joint old age psychiatry and geriatric departments (for example, the Queen's Medical Centre, Nottingham) but they are not the norm.

The National Institute for Clinical Excellence (NICE) is in the process of producing guidelines for the treatment of dementia (due in 2006). No UK guidelines for acute, non-acute or residential bed numbers per 10 000 are known to the author.

5.9 RESOURCES

5.9.1 OTHER GOVERNMENT RESOURCES

1. With funding from the NSW Department of Health, a consortium from Prince of Wales Hospital has developed a web-based page with information about delirium, dementia and depression for health care providers. It is anticipated that the NSW Department of Health will attach this to their website. The NSW Guidelines for Treating Depression in Older People are available through the NSW Health web page.
2. NSW Health's *Care of Patients with Dementia in General Practice: Guidelines, 2003* is also available on the Department's website. These guidelines are very thorough and also contain an excellent summary.
3. A CD ROM entitled "Legal Issues for Older Patients" was developed by Central Coast AHS, Central Coast Division of General Practice and NSW Department of Ageing, Disability and Home Care. The target audience is GPs, and the use of the CD ROM is accredited with the Royal Australian College for General Practitioners for the GP continuing education program. DVA NSW State Training Committee funds were used in the evaluation project of this CD ROM.
4. NSW Health has developed a training module for GPs and mental health services on depression in older people under the "Teams of Two" joint GP-Mental Health Training initiative. The Alliance of Divisions of General Practice is coordinating implementation.

5. NSW Health has developed a training manual on early intervention, assessment and referral options for staff working with older people who may be at risk of suicide.

5.9.2 BEYONDBLUE

To quote from the website (beyondblue.org.au),

beyondblue is a national, independent, not-for-profit organisation working to address issues associated with depression, anxiety and related substance misuse disorders in Australia. *beyondblue* is a bipartisan initiative of the Australian, state and territory governments with a key goal of raising community awareness about depression and reducing stigma associated with the illness.

beyondblue works in partnership with health services, schools, workplaces, universities, media and community organisations, as well as people living with depression.

beyondblue's five priorities are as follows:

1. Increasing community awareness of depression, anxiety and related substance misuse disorders and addressing associated stigma;
2. Providing people living with depression and their carers with information on the illness and effective treatment options and promoting their needs and experiences with policy makers and healthcare service providers;
3. Developing depression prevention and early intervention programs;
4. Improving training and support for GPs and other healthcare professionals on depression;
5. Initiating and supporting depression-related research.

The website is easy to navigate and search functions work well. There is well-written information for consumers, carers and health professionals. The section for health professionals balances the literature and is evidence-based. Related links are exhaustive, and samples are included in Appendix B below.

The *beyondblue* Victorian Centre of Excellence in Depression and Related Disorders is funded with approximately \$1.3 million per annum of the Victorian Government's contribution of \$3.5 million per annum to *beyondblue*. Research often focuses on younger people; however, there are some exceptions. The following projects were available on the *beyondblue* website:

- **Recognising and screening for depression among older people living in residential care.**

“This proposal has been developed in response to a request from the Victorian Centre of Excellence in Depression and Related Disorders to establish a research consortium to investigate depression in aged care facilities. The consortium consists of researchers from Monash University, Deakin University, Eastern Health, Kingston Centre and Peter James Centre.

“The specific aims are:

1. To determine the prevalence of depression among older people living in nursing homes and hostels in the Eastern and South Eastern suburbs of Melbourne.
2. To examine the use of mental health services by aged care residents diagnosed with depression.
3. To identify the links between primary health, general medical, and specialist mental health services for depressed aged care residents.
4. To implement and evaluate an educational intervention for GPs and nursing home staff on the recognition and management of depression among residents.
5. To assess the concordance level between five brief depression measures and assessments from a clinical interview based on the DSM IV. [38]
6. To assess the feasibility of five brief depression measures in terms of acceptability by GPs and nursing home staff.”

As of May 2004, thirty-six participants were diagnosed with major depression (20.6%) and twenty-three with minor depression (13.1%) through administration of the SCID-I. Only sixteen participants with major depression (44.4%) were receiving current treatment, with participants reporting a lack of opportunity to discuss symptoms with their GP. Of the five depression scales investigated, the GDS-15 [99] was found to have the highest concordance with a diagnosis of major depression. Training facility nursing staff in the use of this instrument may improve current detection rates of depression among residents.

- **Caring for the depressed elderly in the emergency department:** establishing linkages between sub-acute, primary and community care. Dr Joubert, University of Melbourne.
- **A training program for professional carers in recognising late-life depression:** Impact on the delivery of health care services for depression among older people. Professor McCabe, Deakin University.

- **The emotional and lifestyle impact of type 2 diabetes: exploring the association between diabetes and depression.** A/Prof Kyrios, National Heart Foundation.
- **Depression as a predictor of long-term mortality and morbidity after heart attack.** Dr Alan Goble, RMH Heart Research Centre.
- **Prevention and management of depression in patients after an acute cardiac event:** randomised controlled trial of a cognitive-behavioural intervention. Dr Marian Worcester, RMH Heart Research Centre.
- **Depression Awareness Research Project.** The aim was to develop, implement and evaluate a community-based model designed to increase knowledge about major depression in the wider community. Volunteers were educated about depression and sent to tell their organisations. An experienced educator prepared the volunteers and a psychiatrist and psychologist answered any questions. An initial telephone survey assessed the level of depression literacy. Initial feedback suggests that the way the project was implemented in each region affected program outcomes.
- **Lifeline Depression Awareness Program.** This is a partnership between *beyondblue* and Lifeline aimed at improving the level of understanding, support and practical help offered by Lifeline staff to people with depression, their families and friends. The Lifeline Depression Awareness Project is a train-the-trainer program, developed by *beyondblue* and implemented with Lifeline staff in each state and territory throughout Australia.
- **A prospective trial examining depression, vitamin B6 and folate,** coordinated through the Australian National University by Professor Jorm. This trial is apparently still recruiting and it is anticipated that it will produce significant results.

Depression Literacy

One of the aims of *beyondblue*, is to promote community awareness and understanding of depression, also known as “depression literacy”. Their model proposes that effective health promotion strategies should focus not on health actions alone, but on the knowledge and attitudes that provide or reduce motivation to change.

The following components were assessed as part of an effective depression literacy campaign:

- Knowledge of depression symptoms;
- Knowledge of modifiable risk factors;

- Belief in help-seeking;
- Knowledge and attitudes towards health professionals;
- Knowledge and attitudes of effective treatments and self-help;
- Societal attitudes to depression; and
- Knowledge and attitudes of family and friends to help-seeking, treatments and self-help.

Blueprint was the first event held by *beyondblue* (28 February to 1 March 2001, Canberra), designed to engage media representatives across Australia in the reporting of mental health issues. Speakers from the health, mental health and media sectors met to discuss ways in which they could engage local communities in mental health issues through the media.

5.9.3 ALZHEIMER'S AUSTRALIA (AA)

Alzheimer's Australia (www.alzheimers.org.au) is an organisation advocating for those with dementia and their carers. With funding from the Commonwealth Government and donations, AA provides education and support.

AA produces a series of handouts for carers covering information about dementia, caring for someone with dementia, residential care, challenging behaviour and environmental issues. They can be accessed from the AA website, and treat the subjects with reasonable detail.

Reducing Behaviours of Concern: a hands on guide, 2003, by AA, uses a problem-solving approach to outline aspects of the person, the environment or the interaction which is predisposing, precipitating or perpetuating the problem behaviour. The problem would then be investigated, action taken and the results of the intervention reviewed. A helpful checklist of contributing factors is included, as are general strategies for intervention. Three work-sheets are included, showing different ways of documenting behaviour (antecedent/behaviour/consequence, 24-hour timesheet and an investigate/action/review timesheet).

This booklet would be appropriate to use with a carer after some education, but may be difficult for some carers to apply unaided. The checklist of predisposing factors and the list of interventions would suit carers who were interested in learning new strategies (for example, having a drawer full of odds and ends for "sorting"). This booklet would be suitable as a support for RACF. Cost \$15.00.

The National Dementia Behaviour Advisory Service, 1300 366 448, is a 24-hour service. There has been an evaluation of the effectiveness of this service by the Australian National University (ANU) but the results of this review were not yet available.

Living with memory loss is a 6- to 8-week program of two-hour weekly sessions. Two groups run simultaneously, one for those with early memory loss and one for the carers. The content includes information, support, planning for the future, practical strategies and problem solving. The courses are offered in rural and metropolitan centres in all states and territories. In NSW, 20 courses are offered per year involving 200 people with dementia and 200 carers or friends. There is no cost to the participants. There has been a formal evaluation through the ANU but it is not yet available outside the organisation.

A series of free educational seminars and courses was run for carers totalling 468 hours over 2003-2004 in NSW. More than 2512 attendances were counted. The Carer Education and Workforce Training (CEWT) course comprises of eight 3-hour sessions. The course is recognised as a Certificate III level dementia care competency course. Sessions include effective communication, understanding challenging behaviour and responses to challenging behaviour (one session each). To be eligible for subsidised training workers need to be involved in direct patient care in the community. Therefore personal care assistants in RACF are not eligible. Cost \$150.00. In 2003-2004 in NSW, 18 CEWT respite worker courses were delivered.

Fee-for-service training is also available for groups at \$200.00 per direct face to face hour. Topics include "Triggers for challenging behaviours" and "The P.R.E. problem Solving Approach to Challenging Behaviours". In 2003-2004 in NSW, 3789 individuals received training through this option.

5.9.4 OTHER NGOS

Carers' organisations exist in every state and provide support. The Carers' Resource Centre has a freecall number, 1800 242 636. It is beyond the scope of this report comprehensively to examine all NGO operations for older people. An example of the type of involvement is the "Do Care" program. Do Care is a HACC-funded program run by Wesley Mission, which supports volunteers to visit isolated elderly people. There is a long waiting list and a shortage of volunteers. Ex-service organisations arrange hospital visiting.

5.10 DVA SERVICES/ACTIVITIES

DVA purchases health services from the States and Territories and the private sector. It pays private providers, including GPs, psychiatrists and psychologists. These activities have been covered in previous sections. The following are extra activities, collected from State Office staff and from the May 2003 Workshop on Ageing and Mental Health. Not all the activities recorded for that workshop could be confirmed.

5.10.1 EDUCATION

Interactive CD ROM

In partnership with Monash University, *beyondblue*, Goulburn Ovens TAFE, TAFE Frontiers and Mental Health Aptitudes, the Victorian State Office is developing an interactive CD ROM for carers and staff looking after people with mental health problems. There will be two units on the CD ROM, "Orientation to Mental Health" and "Provide Support", which can be done at Certificate III and IV levels. Topics include stigma, diversity, depression, advanced depression, anxiety, health promotion, population health approaches, communication, and improving the local health service system for people with high-incidence mental health disorders. The State Training Committee input has ensured that the package will cover PTSD, substance abuse and dealing with an angry client. Two veteran case studies will be included, one Vietnam veteran and one older veteran, possibly with depression in RACF. The due date for this project is September, 2005.

Educational seminars

Educational seminars were delivered by State Office staff to practice managers, GP registrars, psychiatry registrars, ACAT, Veteran Liaison officers, Veteran Home Care Staff, RACF staff and Meals on Wheels staff. Another presentation involved physiotherapists and a community nurse. Seminars were also hosted by DVA with outside speakers from Alzheimer's Australia, ACAT and various universities. There were general comments that larger venues allow economy of scale. Various State Office staff have developed specific packages, such as Tasmanian SO focus on "Depression and Ageing", South Australian SO seminars for Veterans' Home Care workers and Victorian SO seminars for RACF staff. An unconfirmed program from Western Australia involved educational seminars concerning bereavement and planning ahead, delivered to the veteran community.

Drug interactions and problems with compliance are significant clinical problems, and contribute to mortality, morbidity and hospital costs. Mediwise seminars are semi-structured presentations given by pharmacists on the use of medicines given to elderly veterans and war widows. There is a video and material for the participants to take home. An evaluation of this program is available from DVA National Office. This appears to be a good example of a structured resource being delivered to the target population. Perhaps it would be possible to address the need for support in taking complex medication regimes, for example using a dosette box or Webster pack.

Other educational activities included "Men's Health Nights", some sponsored by Rotary, and Men's Peer Health, run by ESO volunteers and supported by DVA staff. A different form of education was the linking of veterans with schools to speak about the war and the impact it has had on their lives.

5.10.2 EDUCATIONAL RESOURCES

Respite Helps You Find the Balance is an unreviewed video produced by the Carer Respite Centre with a DVA grant. The *Loss and Grief* video was produced by the National Association for Loss and Grief with a DVA grant.

Other DVA resources include *Challenging Behaviours: Reference Tools, 2002*. This book, which is no longer available on the DVA website, gives general information about dementia, depression and suicide. It is perhaps most useful for DVA SO staff dealing with veterans and war widows. The section on dementia does not deal with BPSD and would not be specific enough for RACF staff. *Living with Dementia* is available in hard copy and online. It contains helpful information but some aspects need to be updated. There is a carers' booklet dealing with general issues of mental and physical support, but again lacking detailed treatment of BPSD. *Older, Smarter, Fitter* is an educational guide to physical activity. Some SO have produced PTSD educational sheets for GPs.

5.10.3 SOCIAL SUPPORT

Social support is an important part of reducing the prevalence of depression in older people. The networks are vast and interconnected and well beyond a review from a distance. Some examples of DVA's direct involvement are included. The Alice Elliott Day Centre in Tasmania is funded and staffed by DVA. It provides social connectedness and skills maintenance, as well as respite for carers. DVA has been involved in the development of the Men's Shed program, which was pioneered in Victoria by the Department of Health and Community Services, in partnership with local AHS and La Trobe University. Social and recreational activities were provided to increase social connectedness and reduce depression and suicide. Efforts were made to establish referral routes, and hence to reach the isolated at whom the program was aimed. Other unconfirmed resources included an Ex-military Rehabilitation Centre which again provided recreational and building activities in Queensland.

Day clubs are widely available and specific review is beyond the scope of this report. Meetings involve RSL Care, other NGOs and volunteers. DVA has a general role in supporting some of these programs. Some carers' support programs have received specific funding from DVA, such as the Carers, Victoria program.

One unconfirmed project of interest is the *Over 90 year old project*, in Western Australia. All gold card holders living at home were contacted and informed of available resources. According to *Your lives, your needs, 2003*, only 80% of carers knew about respite resources [131]. The approach whereby all of an age cohort is

contacted removes the bias towards servicing those already accessing resources and may contact the truly isolated.

5.10.4 PHYSICAL ACTIVITY PROGRAMS

*Living longer, living stronger*TM programs teach resistance training. DVA is a partner in this program. A recent evaluation has been submitted to the Council on Aging by the Centre for Ageing, Rehabilitation, Exercise and Sport, University of Victoria. This evaluation called for prospective research to examine questions of health cost savings. There was no control group in the evaluation.

Active veterans is a home-based exercise program with supportive telephone calls. This program has not been reviewed. DVA may have been a partner through grants to the Centre for Physical Activity in Ageing. A mall walking program was commenced with a veteran and community grant.

5.10.5 RESEARCH AND REVIEW

DVA has been involved in the following research and review projects:

Management of psychiatric co-morbidity in an acute aged care medical facility (Funded by Victorian Department of Health and Community Services with some DVA involvement). Caulfield General Medical Clinic, 1999-2001.

Results: The presence of psychiatric co-morbidity and problem behaviour in the elderly extended the Length of Stay by six days in a medical ward. Early identification and support by a Community Liaison Nurse (CLN) resulted in a reduction of staff sick leave by 30% and a reduction in unplanned admissions by 50 % compared with the two wards with no intervention. The CLN liaised with carers and case managers upon discharge. On average the number of services before admission was 0.8 and 2.8 new services were arranged post discharge. The CLN made an average of 3 visits and 2.8 telephone calls post-discharge. However, the numbers in this study were small, with only 26 patients being identified over the study period.

Mortality Rates Associated with Antipsychotic Dispensing in Older Veterans and War Widows in 2001 [36].

The Odds Ratios (OR) for dying were established for antipsychotic medications. Six antipsychotic medications were associated with significantly increased OR for dying. One antipsychotic, haloperidol, was associated with a significantly increased OR for dying when compared to the other five drugs. Haloperidol, however, is used in terminal agitation and delirium which may increase the associated mortality rate. A further study is planned on more recent data.

Prescriber Intervention and Feedback Program. Veterans' Medicines Advice and Therapeutics Education Services, with the Quality Use of Medicines and Pharmacy Research Centre, University of South Australia.

Sixty seven percent of DVA treatment population uses six or more medicines. This program has in the past reviewed tricyclic antidepressants and multiple medications in the DVA population. Eighteen modules have been developed over five years including six which were direct to veterans and war widows. The majority of feedback is to GPs.

Planned Research includes "Reducing isolation through internet access", a project from Deakin University which may receive a DVA grant. Unconfirmed research projects include a nutritional project with the University of South Australia and a study called "Dose Administration Aid Trial".

5.11 GAP ANALYSIS OF MENTAL HEALTH SERVICES

The Department of Veterans' Affairs purchases services from the hospital sector and private providers for the treatment of mental disorders in the treatment population. Older veterans' and war widows' mental health treatment is primarily delivered by general practitioners. As has been highlighted by National Mental Health Plans, maldistribution of GPs creates access problems for those in rural and remote locations. There has been a decline in GPs prepared to attend RACFs and the various MBS incentives to address this problem have already been outlined.

Those with more persistent mental health problems are managed by the specialist mental health services in conjunction with the primary care doctor. Total Mental Health spending was 6.4% of total health spending, a proportion that is lower than other countries. Overall psychiatry beds have declined by 26% since 1992-93, whilst savings from these bed closures have been variable across the states. Total aged care beds per 100 000 in 2002 ranged from 132.3 in Victoria to 51.2 in NSW and 44.2 in Queensland. FTE clinical staff in ambulatory care for all age groups per 100 000 ranged from Western Australia with 42.9 to Queensland with 29.8. Whilst acknowledging the limitations of expenditure analysis, it would appear that services vary across states and that the deficits in treatment options for DVA treatment populations vary accordingly.

The DVA treatment population has access to private psychiatry beds. Whilst this sector is the preferred one for younger veterans, this is not necessarily true of older groups. In NSW in 2002-2003 the ratio of private to public admissions for multi-day psychiatry separations for males 75-84 years was 0.39. For males 84 plus, the ratio was 0.33. This preference for public psychiatry admissions may result from medical co-morbidities in this cohort, but it may also reflect inadequate catering for physical frailty in private hospitals. The female ratio of private to

public multi-day psychiatric separations was 1.73 and 1.46 for those 75-84 years and 85 years and older, respectively.

Draper and Koschera found that 85% of entitled DVA beneficiaries were over 65 years old, but that they used only 21.4% of all private psychiatry consultations [35]. Domiciliary visits by a psychiatrist occurred ten times more frequently in Victoria than in Queensland. In the general population South Australia and Victoria had the highest per capita MBS spending on psychiatrists. Thus, for many reasons, the use of private psychiatrists by older entitled beneficiaries is less extensive than by younger beneficiaries and varies from state to state. Telepsychiatry may provide some answers to geographical access problems.

Some day programs are directly funded by DVA and generally have a catchment larger than a single Area Health Service (AHS). In Victoria the public hospital PTSD day program services veterans from diverse AHS. In contrast, most veterans and war widows in Victoria access local AHS dementia programs. Certainly for dementia, local supports are complicated and any day program delivery needs to be incorporated into the local network. The Alzheimer's Australia *Living with memory loss* is a useful program, but in NSW in 2004 it only serviced 200 individuals. This program is limited to those with early memory loss. There is scope to increase participation in the *Living with memory loss* program. The lack of a similar program for people with BPSD is a gap in service delivery.

Residents of aged care facilities are affected by depression and BPSD. Auxiliaries in Nursing provide social interaction but have limited training. Given the turnover of staff, continued training provided to RACF should be a priority. DVA is involved in education directly and indirectly. Various State Offices give seminars to staff in RACF and to Veterans Home Care workers. There is the opportunity to extend that role and share and develop resources for these talks. DVA, in partnership, is developing an interactive CD ROM for carers and staff of those with mental illness. If the evaluations of this project are positive this could be promoted by other State Offices. A similar project directed at the carers and staff of those with BPSD could be developed, in partnership with appropriate organisations, such as Alzheimer's Australia, Carers Australia and a University team.

6. Conclusion

Dementia as a disorder lies within both geriatric medicine and old age psychiatry, as cognitive symptoms are often accompanied by behavioural and psychological symptoms. These BPSD increase the burden of the illness and are associated with earlier institutionalisation and higher antipsychotic medication use. Individuals with BPSD need appropriate non-pharmacological and pharmacological management. Family carers, professional carers and general practitioners need to be supported in their vital roles. The management of BPSD is best done with integrated service delivery with Aged Care Services and the Older Persons Mental Health Service, with both teams having operational integrity. Fourteen per cent of those with dementia in nursing homes have severe BPSD. Mainstream RACF need support from psychogeriatric residential care beds and psychogeriatric community care teams.

Depression is a treatable disorder that causes suffering for many. Depression is often seen as a normal part of ageing and hence under-treated. Increasing depression literacy has been a focus in the general community and the focus should be widened to include all age groups. Residents of aged care facilities are particularly vulnerable to depression. Research concerning depression screening and training of primary care health workers and RACF staff is occurring. Insights concerning depression detection and management should be applied to the DVA treatment population.

There is good evidence that modifiable lifestyle factors influence the risk of developing dementia, and possibly depression. Universal and selective prevention measures can be applied to the older DVA treatment population to good effect.

APPENDIX A: ABBREVIATIONS

AA	Alzheimer's Australia
ACAT	Aged Care Assessment Teams
ACPMH	Aust Centre for Post Traumatic Health
ACS	Aged Care Services
AD	Alzheimer's Disease
AHS	Area Health Service
AP	Anti-psychotic (medication)
AMHS	Adult Mental Health Services
BT	Behaviour Therapy
BPSD	Behavioural and Psychological Symptoms in Dementia
CADE units	Confused and Disturbed Elderly units
ChEI	Cholinesterase Inhibitors
CVAE	Cerebrovascular Adverse Events
DLB	Dementia Associated with Lewy Bodies
ECT	Electro-Convulsive Therapy
EPSE	extra-pyramidal side-effects
FTD	Fronto-Temporal Dementias
FTE	Full-Time Equivalent
HoNOS	Health of the Nation Outcome Scale for Older People
MBS	Medical Benefits Schedule
NGO	Non-Governmental Organisation
NMHR	National Mental Health Reports
NMHS	National Mental Health Strategy
OPHMS	Older persons mental health services
OR	Odds Ratio
PBS	Pharmaceutical Benefits Scheme
PGAT	Psychogeriatric Assessment Teams
PGNH	Psychogeriatric Nursing Home(s)
PGU	Psychogeriatric Unit(s)
PTSD	Post-Traumatic Stress Disorder
RACF	Residential Aged Care Facilities
RCT	Randomised Control Trial
RPBS	Repatriation Pharmaceutical Benefits Scheme
VaD	Vascular Dementia

APPENDIX B: DSM IV DEMENTIA

DIAGNOSTIC CRITERIA FOR DEMENTIA OF THE ALZHEIMER'S TYPE (DSM-IV) [38]

- A. The development of multiple cognitive deficits manifested by both**
 - 1. Memory impairment (impaired ability to learn new information or to recall previously learned information).
 - 2. One (or more) of the following cognitive disturbances:
 - a. aphasia (language disturbance)
 - b. apraxia (impaired ability to carry out motor activities despite intact motor function)
 - c. agnosia (failure to recognise or identify objects despite intact sensory function)
 - d. disturbance in executive functioning (planning, organising, sequencing, abstracting).

- B. The cognitive deficits in criteria A1 and A2 each cause significant impairment in occupational and social functioning, and represent a decline from previous higher levels of functioning.**

- C. The course is characterised by gradual onset and continuing cognitive decline.**

- D. The cognitive deficits in criteria A1 and A2 are not due to any of the following:**
 - 1. Other CNS conditions that cause progressive deficits in memory.
 - 2. Systematic conditions known to cause dementia (e.g. hypothyroidism).
 - 3. Substance-induced conditions.

- E. The deficits do not occur exclusively during the course of a delirium.**

- F. The disturbance is not better accounted for by another disorder (e.g. major depression).**

APPENDIX C: A SAMPLE OF *BEYONDBLUE* LINKS

[‘SPHERE: A National Depression Project’](#)

The SPHERE Project is an Australia-wide educational program aimed at providing general practitioners with the knowledge and skills to more effectively identify, treat and manage psychological distress in their practice.

[InfraPsych](#)

InfraPsych is a complete psychiatric service providing patients, and those who care for them, with the tools required for quality care. InfraPsych is also a unique Internet service that integrates the delivery of psychiatric care for mental health professionals.

[BluePages](#)

BluePages™ provides information about depression for consumers. It is produced by the Centre for Mental Health Research (CMHR) at the Australian National University (ANU) & the Commonwealth Scientific and Industrial Research Organisation’s (CSIRO) Mathematical & Information Sciences (CMIS) with the assistance of an Advisory Board and feedback from consumers and health professionals.

[depressioNet](#)

depressioNet is an independent resource for information, help and support. They offer a 24-hour email service to answer any depression related questions and help locate resources available in your area. There is also the opportunity to communicate with others via the chat room and message board.

[The Black Dog Institute](#)

The Black Dog Institute is an educational, research and clinical facility offering specialist expertise in mood disorders – a range of disorders that include depression and Bipolar Disorder. The Institute is attached to the Prince of Wales Hospital, Sydney, and affiliated with the University of New South Wales.

[Lifeline](#)

Lifeline is a 24-hour telephone counselling service with associated services. So often the services have proven to be the real lifeline for families and individuals who have sought the support of this unique organisation.

[Suicide Prevention](#)

A voluntary and anonymous telephone suicide prevention service. Cost of a local call within Australia 1300 360 980, 24 hours a day. Free advice from a clinical psychiatrist on dealing with suicidal thoughts.

[Mental Health Research Institute](#)

The Mental Health Research Institute is a fully independent research organisation with a focus on neurosciences.

[Schizophrenia Fellowships Council of Australia](#)

The Schizophrenia Fellowships Council of Australia is the peak body for State and Territory Schizophrenia Fellowships throughout Australia. Their website presents information about policies, services and member organisations.

[Commonwealth Carer Resource Centre](#)

The Queensland Council of Carers Inc is the peak body for unpaid carers in Queensland. The Commonwealth Carer Resource Centre provides: referrals, information, counselling, community development, support services, advocacy, policy and research.

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