



New Zealand's psychiatry of old age services. Revisiting 'the view from the bottom of the cliff'—have we made any progress since 1998?

Pamela Melding

Abstract

Aim In 1998, the New Zealand Branch of the Faculty of Psychiatry of Old Age (FPOA) surveyed psychiatry of old age (POA) services in New Zealand for their resource levels. At that time, they were low by international and Mental Health Commission 'Blueprint' levels. In 2003, POA services in New Zealand were resurveyed to determine how much progress had been made in the ensuing 5 years.

Method All POA services in New Zealand who had Faculty members were surveyed for information on their service's administrative structure; access to acute, long stay and day hospital places; staffing levels of the different disciplines; the range of services they provided, and what they considered were strengths, gaps and potential improvements.

Results Thirteen services responded, providing services for 387,000 elderly people. Since 1998, acute bed numbers and day hospital places had proportionately decreased nationwide, with disparity of access across the country. Inpatient nursing staff had decreased by 34%, with community nurse numbers barely increasing. There were modest increases in the number of psychiatrists, junior doctors, clinical psychologists, and social workers.

Conclusions There has been little progress towards achieving 'Mental Health Commission Blueprint' benchmark levels of service of 1998, and nationally there has been a decrease in access to acute beds, without a concomitant increase in staff to support older people in community settings.

In 1998, there was much confusion about the status of old age psychiatry services in New Zealand. A major difficulty for administrators was a lack of knowledge about resource levels and the range of patient problems treated by psychiatry of old age (POA) services. Provider contracts were based on incorrect assumptions, such as the notion that POA services did not treat patients with dementia.

In 1998, the Mental Health Commission published the *Blueprint for Mental Health Services in New Zealand; how things need to be*¹ and *The funding needed for Mental Health Services In New Zealand*.² However, the Commission had inadequate data on which to base its recommendations.³ The authors of the Blueprint erroneously assumed that old age psychiatry services did not treat organic or age-related disorders and excluded services given to this group from their assessment of benchmark levels for service provision.

The Commission suggested a national guideline of 4 acute specialised inpatient beds per 100,000 total population¹ (p101), plus 1.3 beds per 100,000 in general psychiatry

units (p100) as an appropriate service level for assessment and treatment of *functional* mental disorders in older people.

However, as many old-age psychiatrists were treating patients with dementia in their inpatient and community services, they felt that provider contracts and benchmark levels that excluded age-related disorders were incongruous with their case-mix of patients. The Commission's estimates for day ward places and community staff were more pertinent.

To assist administrators gaining a clearer picture of the work of the specialty, the New Zealand Branch of the Faculty of Psychiatry of Old Age (FPOA) of the Royal Australian and New Zealand College of Psychiatrists (RANZCP) surveyed its New Zealand members.

During a 1-month period in September 1998, respondents were asked to record diagnoses, acuity, and medical comorbidity for every patient seen (inpatient, outpatient and community). Managers were asked to provide bed numbers, day places, and personnel resources available for their catchment's case-mix.³ Thirteen services responded, who provided service delivery for 70% of New Zealand's older population.

The survey demonstrated that all services dealt with a wide variety of psychiatric problems. Twenty-six percent of all patients seen in the survey month had an age-related organic brain disorder, such as dementia, as the main diagnosis. Inpatient units had a greater predominance of patients with age-related brain disorders (mean 36.07%; median 33.3%; range 18–87.5%).

Up to half of all patients had some degree of cognitive impairment *in addition* to other psychiatric diagnoses. Considerable comorbidity between psychiatric illness and other medical conditions was present in many patients.³ The survey indicated that, by disregarding organic brain disorders, the 'Blueprint' had underestimated the required acute bed resource for the case mix by at least one-third. Even so, the survey indicated that overall resources in New Zealand were low by 'Blueprint' benchmarking. However, since 1998, there have been significant developments for healthcare of older people.

Firstly, the 4 Regional Health Authorities (RHAs) were replaced by 21 District Health Boards (DHBs), who have responsibility for providing for the health needs of people of all ages within their catchments. Currently, elderly people make up 12% of the New Zealand population.

Secondly, population projections suggest that the number of people in the over-65 age-group will increase by 158% (from 12% to 26% of the total population by 2051), with the greatest expected proportional increase of 485% being for the over-85 age-group.⁴ In contrast, the New Zealand population as a whole is expected to increase by only 20%. Already, some DHB areas have disproportionately higher percentages of older people.⁴

Thirdly, there is worldwide recognition that health services must plan for the future health needs of ageing populations. In New Zealand, more attention has focused on older people with the Ministry of Health forming a Health of Older People Team and producing several key documents such as *Health and Well-being of Older People and Kaumatū*,⁵ *Health of Older People Strategy*,⁶ *Assessment Processes for Older People*

*Best Practice Guideline*⁷ and *Guideline For Specialist Health Services For Older People*⁸.

Fourthly, older people's health and mental health are priority areas for the Health Research Council. In view of the higher profile of older people's mental health since 1998, it was expected that resources would have improved in the five years since the last survey.

Method

Old age psychiatry services throughout New Zealand were surveyed in mid-2003 asking for the following information:

- Total catchment;
- Number of elderly people in the catchment;
- Collocation with geriatrics or mental health;
- Services provided;
- Bed access numbers;
- Staffing levels;
- Perceived strengths;
- Challenges; and
- Areas for improvement.

Results

Responding services were Auckland; Bay of Plenty; Waitemata; Capital and Coast; Christchurch; Counties Manukau; Hawke's Bay; Hutt; Mid Central; Otago; Taranaki; Waikato; Waitemata; and Whanganui.

Bay of Plenty, Hawke's Bay, and Whanganui, were not included in 1998, but responded to the 2003 survey. The responding units provided services for population areas of over 3,300,000 (83% total population), of whom 389,000 were adults over 65 years. This was an increase from the 1998 survey (total catchment areas of all responders covered a population of 2,800,000). Non-responders were Lakes, Nelson and Marlborough, Northland, South Canterbury, Southland, Tairāwhiti, Wairarapa, and West Coast.

The population of non-responding DHBs totalled 651,347—thus excluding 87,599 elders from this survey. A stocktake by the Ministry of Health in 2003⁹ indicated limited or no provision of specialised POA services in these areas and that older people's mental health was generally subsumed under adult mental health or generic Assessment, Treatment, and Rehabilitation (AT&R) services. Data on what proportion of AT&R services went to mental health patients was unavailable.

Catchment areas

The population catchments for each service had changed since 1998 due to the replacement of the 4 RHAs with 21 DHBs. The catchments of three Auckland DHBS (i.e. Waitemata, Auckland, and Counties Manukau) all increased substantially. Christchurch and Capital and Coast also had significant growth but to a lesser extent and there were small decreases in population catchments elsewhere.

As in 1998, only three services (Auckland Central, Hutt Valley, and Capital and Coast) in 2003 confined their activities to urban areas. Most services in New Zealand continue to serve large rural areas. Many areas in New Zealand, including the cities of Rotorua and Gisborne, still lacked any publicly funded dedicated specialist POA services.

Management of services

Fifty-four percent of services were fully integrated with Geriatric Services, a rise of 9% since 1998. Thus, Bay of Plenty, Capital and Coast, Christchurch, Hawke's Bay, Mid Central and Otago all received their funding from Disability Support Services (DSS). Counties Manukau had joint management with Geriatric Services, but their funding came from Mental Health. The remaining services continued to be separate and were funded and administered by Mental Health. Data reporting depended upon the funding stream and was different for each group, with the integrated services reporting output and case-mix information to DSS and the other group to the Mental Health Information National Collection (MHINC). The two datasets are not equivalent.

National bed resources

Acute beds—Figures given in Table 1 are given for 100,000 total population to allow comparison with the recommendation of the Mental Health 'Blueprint' (which was 5.3/100,000 exclusive of age-related conditions). As the proportion of older people varies considerably in individual DHB areas the bed ratios are also given per 10,000 older people for each catchment.

Table 1. Psychiatry of old-age acute-assessment bed ratios for each DHB per 100,000 total population, and per 10,000 over-65 population

DHB (in order of elderly population size)	1998 beds/100,000 total population	2003 beds/100,000 total population	2003 Number people aged 65+	2003 Acute beds/10,000 over 65
Canterbury	12	8.90	59,395	6.73
Waitemata	4	3.62	49,830	3.41
Waikato	3	3.30	39,485	2.79
Auckland	4	2.94	39,450	3.04
Counties Manukau	4	3.66	35,525	3.80
Bay of Plenty	0	2.63	28,380	1.76
Capital Coast	5	4.58	26,465	4.53
Otago	16	17.37	25,255	12.27
Mid Central	10	9.27	21,620	6.94
Hawke's Bay	0	1.35	19,830	1.01
Taranaki	5	3.79	15,165	2.64
Hutt	4	2.92	14,780	2.71
Whanganui	No data	1.53	9,470	1.1

In 1998, the mean number of acute beds was 6.8/100,000 of total population surveyed (6.18/10,000 over 65). In 2003, for the slightly larger population surveyed, the mean dropped to 5.9/100,000 (4.91/10,000 over 65). However, high bed numbers in Otago,

Christchurch, and Mid Central bias the ratio. Nationally, there is wide disparity ranging from over 12/10,000 to 1/10,000 older people.

As the non-responding services to this survey also did not indicate they had any specialist POA services to the MOH 2003 stocktake,⁹ presumably they are absent or minimal in these areas. Thus, an estimate of the national dedicated psychiatry of old age acute assessment and treatment bed resource is 4.25/100,000 total population (3.8/10,000 elderly population).

Only Mid Central (with 10 beds) retained any access to long stay geriatric beds in public hospitals. However Counties Manukau and Waitemata DHBs each have a shared care arrangement for regional access to a total of 47 long-stay beds in two private hospitals.

Day hospital places—The ‘Blueprint’ recommended 4 ‘packages of care’/100,000. A total of 60 places for 2,800,000 population was reported in 1998. In 2003, this figure reduced to 52 places for 3,300,000 or 1.57/100,000; 1.31 places/10,000 older people for the population surveyed. Four units (Bay of Plenty, Christchurch, Otago, and Waikato) had day hospitals, down from five units in 1998. Auckland had lost all its day places.

Service delivery

There was no change in the range of services supplied. All responding DHB services provided community assessment. Larger DHB services (Waitemata, Auckland, Counties Manukau, Canterbury, Capital and Coast, Waikato) provided a good range of inpatient services; community assessment and management; geriatric psychiatry liaison; and daytime crisis management. Smaller DHB services (Bay of Plenty, Hawke’s Bay, Hutt, Taranaki, Whanganui) provided community assessment, crisis management, some liaison, and limited inpatient services—usually dedicated psychiatry of old age beds in either geriatric or mental health units.

Special components of service had increased since 1998. Five years previously, 4 DHB services had memory, anxiety, or depression special clinics—and 3 had rural outreach clinics. In 2003, 5 services had memory clinics, 3 had anxiety clinics, 3 had developed a special delirium service, and 5 had rural outreach.

Clinical work

All teams saw a full range of psychiatric disorders, both functional and organic. Most teams considered that their workload had increased—but were unable to substantiate this by accurate figures as they lacked information systems to collect the data. Caseloads for key workers in the teams were still 30–50—i.e. no change from 1998.

Human resources

Psychiatry of Old Age Services are delivered by multidisciplinary teams but their composition varied throughout the country. Larger services had several disciplines represented, more than 1 (range 2–5) psychiatrist of old age, and 2 or more teams.

Smaller DHBs usually had only one team composed of a psychiatrist, nurse and, sometimes, a social worker. Excepting nursing and medical staff specifically employed for inpatient units, the majority of multidisciplinary personnel divided their time between inpatients and community assessment and treatment.

Medical staff

In 1998, medical staff employed in psychiatry of old age services were 19 full-time equivalent (FTE) specialist psychiatrists, 2.8 Medical Officers of Special Scale (MOSS), 11 psychiatry trainees (registrars), and 8.5 house surgeons.

In 2003, the specialist psychiatrist workforce for the slightly larger population surveyed was 20.8 psychiatrists, and 5 medical officers (MOSS). Pre-fellowship psychiatry trainees increased to 12.8 FTE plus an additional 5 FTE senior trainees undergoing vocational advanced training. Six of the 13 DHBs (Bay of Plenty, Hawke's Bay (0.5, increased in 2004 to 1), Hutt, Mid Central, Otago, and Whanganui (0.2) had one specialist psychiatrist or less.

Nursing staff

In 1998, the majority of nurses (193.9 FTEs) were employed in the inpatient units. A third were enrolled nurses or care assistants. Community team nurses totalled 35.5 FTEs (1.25/100,000 total population; 1.15/10,000 older people) and day ward nurses, 6.7 (0.24/100,000; 0.21 / 10,000 older people) for the populations surveyed.

In 2003, the inpatient nursing workforce had decreased to 144.5, with a similar proportion to 1998 being enrolled staff. The community team nursing personnel had increased to 46.1 FTEs—but for the higher population surveyed, this represented only marginal improvement of 1.16/10,000 older people. Similarly, the number of FTE day ward nurses had remained static but served a larger population. Since the 1998 survey, 3 services offered a new delirium service for which there was 2.5 FTE nursing staff.

Other personnel

In 1998, other disciplines employed were clinical psychologists (7.6 FTEs), social workers (16.3 FTEs), occupational therapists and aides (17.3 FTEs), and physiotherapists (2.25 FTEs). In 2003, for the larger population surveyed, the clinical psychologists were 13.3 inclusive of 1.4 FTE specialist neuropsychologists.

The physiotherapists increased to 4 FTEs whilst occupational therapists remained the same at 17.5 FTEs. Social workers increased to 20.6 FTEs and Christchurch reported an additional 5.8 FTE Needs Assessment Service Co-ordinators (NASC) attached to their mental health of older people teams.

Additional staff were the introduction of 3 FTE diversion therapists and 22.2 FTE administration and support staff. Thus, there were very modest gains overall in clinical psychology, physiotherapy, social work, psychiatry, and advanced trainees. Larger units fared better than the smaller services.

Academic positions

In 1998, Christchurch had 0.3 FTE and Auckland 0.3 FTE senior lecturers in psychiatry of old age. In 2003, the situation had marginally improved with Auckland recruiting a 0.5 FTE Associate Professor from overseas. Unfortunately, this position was vacated, and in 2005 there are still only 0.6 FTE academic positions in POA nationally.

Table 2. Blueprint recommendations (1998) versus actual resources allocated for psychiatry of old age services (1998 and 2003)

Variable	Acute beds per 100,000 total population	Day hospital places per 100,000 total population	Community clinical FTEs (all disciplines) per 100,000 total population
1998 Blueprint benchmark	5.3 (excludes age-related disorders)	4	8.5
1998 FPOANZ Survey³	5 (includes age-related disorders)	2.14	2.8 (estimated FTEs dedicated to community teams)
2003 FPOANZ survey	4.25 (includes age-related disorders)	1.58	3 (estimated FTEs dedicated to community teams)

FPOANZ=Faculty of Psychiatry of Old Age (New Zealand). FTEs=full-time equivalents.

Strengths

Ten of the 13 services surveyed in 2003 cited their strengths as ‘the multidisciplinary team’, ‘good clinical skill mix’, and ‘stability’ of their teams. Another strength frequently cited was either integration with geriatrics or collaboration with geriatrics.

Gaps and challenges

There was a long list of perceived gaps and challenges. The most frequent were lack of acute beds, waiting lists for acute beds, and high caseloads. Smaller services highlighted under-resourcing in all service areas. Some services targeted their resources into specialised clinics. Other problem areas included service delivery to rural areas (due to few staff and large travelling distances).

Services mentioned poor provision for dementia care, intellectually handicapped older people, younger demented patients, patients with drug and alcohol problems, and patients with long-standing psychiatric disorders who had grown old and frail. Lack of community resources and support for caregivers were other deficient areas highlighted. Whilst most services saw integration with other geriatric services a strength, others considered the interface with general psychiatry to be a challenge. A particular concern, for DHB services with only one psychiatrist or less, was lack of cover for holidays or sickness.

Potential improvements

The ‘wish list’ included development of community and specialised services such as memory, anxiety, or depression clinics. The concept of the ‘one stop shop’ (single referral and triage point from which a patient can access health and disability support for physical, mental health, social, cultural, or spiritual needs) also evoked favourable comment from several survey respondents.

Discussion

The results of this survey were disappointing and show little improvement in POA Services during the 5 years from 1998 to 2003. Indeed, in some respects, services

appeared to have lost ground. Only 13 DHBs provided specialist services. For over 87,000 older New Zealanders, there are minimal, if any, specialist mental health services.

Access to acute beds decreased in some areas through actual loss or relatively, due to increasing populations in some catchments without proportional increases in bed resources. Expansion in community team staff was minimal, barely keeping up with population growth and had not decreased caseloads. Only a few services in the larger DHBs had the full range of disciplines. Despite older people and mental health being priority areas for the Health Research Council, academic positions remain minimal.

The *1998 Mental Health Commission Blueprint* was an important document, as it has been the only attempt to quantify mental health resource needs for New Zealand. However, for older people's services, it had to do so with woefully inadequate data. Unsurprisingly, some of its assumptions were incorrect.

The Blueprint recommendations for 5.3 older person's beds in 1998 did not include beds for people with age-related conditions (dementia or behavioural and psychological symptoms of dementia [BPSD]). Yet, the 1998 survey indicated age-related brain disorders comprised 25–30% of the work of POA services, with patients with dementia being over-represented in inpatient units (mean 36.07%, median 33.3% range 18.18-87.5%). Thus, if the 'Blueprint' benchmark resource is 5.3, a further 1.5 BPSD/Dementia assessment beds needs to be added to give 6.8 (as a minimum acute bed resource) per 100,000 total population (5.66/10,000 older people).

This, whilst being a more reasonable resource level, is still below the benchmark of 8/100,000 total population (6.66/10,000 older people) recommended by Australian and UK experts.^{10,11} The Royal College of Psychiatrists in the UK recommends even more beds (15 beds/10,000 older people¹²).

Evidence points to greater effectiveness of specialised POA inpatient services over older people being managed in general psychiatry units.^{13–15} However, access to such specialised services varies widely throughout the country. Specifically, many of the smaller DHBs, have to rely on general psychiatry or geriatric beds for their mentally frail older people that are currently well below minimum acceptable levels. South Island services are comparatively better off than their northern counterparts. However, even taking their riches into account, a national average of 3.8 acute beds/10,000 older people falls well short of desirable.

Whilst acute beds are needed for patients who require specialised treatment, are suicidal, or whose disorder leads to challenging behaviours, some older people (even with acute psychiatric conditions) might be manageable in the community, if given sufficient resources. The *Blueprint* recommended 4 places/100,000 total population day hospital places (p101). However, in 2003, instead of day places increasing, they had reduced to 1.6 places/100,000 (1.3/10,000 elderly people) for the population surveyed.

A lack of acute beds or day places means community teams have to manage patients with acute conditions in their place of residence, and the burden of care often falls on families who need extra support. The *Blueprint* recommended a national resource of 321 FTEs (8.5/100,000 total population [p.101]; 7.08/10,000 elders) for older people's community teams. While there have been some increases in medical, clinical

psychology, and social work personnel, these are disciplines that enhance assessment and diagnosis. The day-to-day management of patients in the community and provision of support is mostly done by community nursing staff and the paltry increase in their numbers in the 5 years (1998–2003) from 1.15 to 1.16 /10,000 elders for the population surveyed is insufficient to keep up with the increased catchments, never mind managing acute patients outside a specialised unit.

Overall, the community personnel resource is still a long way off the *Blueprint* recommendation of 8.5/100,000 total population (p101) (7.08/10,000 elders). Caseloads of 30–50 had remained the same in the 5 years, and are too high to manage acute psychiatric conditions adequately in the community.

The Ministry of Health supports ‘Aging in place’ in New Zealand¹⁶ whereby older people are managed with support in the community rather than institutions—but to realise this policy’s full potential, adequate resources must be available, including sufficient acute care beds (when required) and enough community personnel to support older people in the home environment. At the present time there is neither.

On a more positive note, one of the most gratifying aspects of the 2003 survey was the increased number of senior trainees electing advanced training in POA, showing there is growing professional interest in the field. In addition, the number of clinical psychologists had doubled and they have formed their own national interest group. Caution expressed in 1998 about amalgamation of POA with other older people’s services in some areas was dispelled in 2003, with services naming integration as a strength. As the national policy trend moves from funding programmes to funding populations this, at least, seems to auger well for the future.

The older population of New Zealand has increased in accordance with predictions over the past 5 years. As increasing age is the major risk factor for dementia, the unprecedented expected increase in the over-80 year cohorts will mean larger numbers of people with dementia will require services. Approximately 25–30% of these patients need psychiatric assessment for the behavioural and psychological symptoms of dementia.¹⁷

Whilst ‘younger old’ (65–80 years of age) have about the same prevalence of mental disorders as other adults, the ‘oldest old’ have the greatest disability, comorbidity, and high social loss,¹⁸ which increase the risk for depression and poor psychological adjustment.¹⁹ As the population continues to age, demand for mental health services will increase, and future planning must take the projected demographic changes into account. The lack of progress in the past 5 years should be a clarion call to planners of mental health services for older people to become more proactive.

Conclusion

In 1998, the Mental Health Commission’s *Blueprint for Mental Health Services* set some benchmark levels of resources for older people’s mental health services. For day hospital and community team resources, the resource levels seemed realistic but the levels of acute assessment beds were underestimated for need. Unfortunately, there has been little progress towards achieving *Blueprint* minimal levels of service, even in DHBs who have specialist services for POA.

Currently, many DHBs lack any services or have minimal provision. Nationally, there has been a net decrease in access to acute beds without a concomitant increase in staff

to support older people in community settings. This latest survey highlights that there is still considerable work to do to achieve minimum levels of service for older people with mental health problems and that inequities of access persist throughout the country. New Zealand's ageing population is increasing and this will impact on all health services, including mental health, within the next two decades. Planning for future mental health needs to begin by paying attention to current deficiencies.

Author information: Pamela S Melding, Clinical Senior Lecturer in Psychiatry of Old Age, Department of Psychological Medicine, Faculty of Medical and Health Sciences, University of Auckland (and Consultant in Psychiatry of Old Age, Waitemata DHB), Auckland

Acknowledgements: I thank the following doctors for their cooperation during the collection of the survey data: C Duncan, N Fernando, M Fisher, I Hosford, J Kirwan, B McIvor, A-L Seifert, B Simons, J Strachan, S Swartz, R Worrall, and G Young.

I also thank Pam Fletcher from the Ministry of Health for supplying helpful information, and an anonymous reviewer for their very helpful comments.

Correspondence: Dr Pamela Melding, Mental Health Services for Older People, North Shore Hospital, Waitemata DHB. Auckland 1309. Email: p.melding@auckland.ac.nz or Pamela.Melding@WaitemataDHB.govt.nz

References:

1. Mental Health Commission. Blueprint for Mental Health Services in New Zealand. How things need to be. Wellington: Mental Health Commission of New Zealand; 1998. Available online. URL: <http://www.mhc.govt.nz/publications/1998/Blueprint1998.pdf> Accessed April 2005.
2. Mental Health Commission. The funding needed for Mental Health Services in New Zealand. Wellington: Mental Health Commission 1998. Available online. URL: http://www.mhc.govt.nz/publications/1998/Funding_Needed.PDF Accessed April 2005.
3. Melding P, Osman-Aly N. "The view from the bottom of the cliff." Old age psychiatry services in New Zealand: the patients and the resources. N Z Med J. 2000;27;113:439-42.
4. Health of older people in New Zealand. A statistical reference. Wellington: Ministry of Health; 2002.
5. Public Health Group. The health and well-being of older people and kaumatua: public health issues. Wellington: Ministry of Health. 1997. Available online. URL: <http://www.moh.govt.nz/moh.nsf/0/19a4e4ef4637b959cc256a4600186e65?OpenDocument> Accessed April 2005.
6. Minister for Disability Issues. Health of older people strategy. health sector action to 2010 to support positive ageing. Wellington: Ministry of Health; 2001. Available online. URL: <http://www.moh.govt.nz/moh.nsf/0/13CF7B014CE29D44CC256AD30076D0BB/> Accessed April 2005.
7. New Zealand Guidelines Group. Assessment processes for older people (best practice evidence-based guideline). Wellington: New Zealand Guidelines Group; 2003. Available online. URL: http://www.nzgg.org.nz/guidelines/0030/Assess_Processes_GL.pdf Accessed April 2005.
8. Ministry of Health. Guideline for Specialist Health Services for Older People. Wellington: Ministry of Health; 2004. Available online. URL : <http://www.moh.govt.nz/moh.nsf/238fd5fb4fd051844c256669006aed57/7583849f0b7de0aac256f26007890fb?OpenDocument> Accessed April 2005.
9. Ministry of Health (report in publication). A snapshot of specialist health services for older people in New Zealand Wellington: Ministry of Health; 2003. Available online. URL:

<http://www.moh.govt.nz/moh.nsf/0/a5e159a99f531babcc256f5b007231d6?OpenDocument>
Accessed April 2005.

10. Snowdon J. How many bed-days for an area's psychogeriatric patients? *Aust N Z J Psychiatry*. 1993;27:42–8.
11. Snowdon J, Ames D, Chiu E, Wattis J. A survey of psychiatric services for elderly people in Australia. *Aust N Z J Psychiatry*. 1995;29:207–14.
12. Royal College of Physicians and Royal College of Psychiatrists, Care of Elderly People with Mental Illness. London: Royal College of Physicians; 1989.
13. Draper B. The effectiveness of old age psychiatry services. *Int J Geriatr Psychiatry*. 2000;15:687–703.
14. Norquist G, Wells KB, Rogers WH, et al. Quality of care for depressed elderly patients hospitalized in the specialty psychiatric units or general medical wards. *Arch Gen Psychiatry*. 1995;52:695–701.
15. Zubenko GS, Mulsant BH, Rifai AH, et al. Impact of acute psychiatric inpatient treatment on major depression in late life and prediction of response. *Am J Psychiatry*. 1994;151:987–94.
16. Howden-Chapman P, Signal L, Crane J. Housing and health in older people: ageing in place. *Social Policy Journal of New Zealand*. 1999;13:14–30.
17. Brodaty H, Draper BM, Low LF. Behavioural and psychological symptoms of dementia: a seven-tiered model of service delivery. *Med J Aust*. 2003 3;178:231–4.
18. Manton KG, Stallard E, Corder L. Changes in morbidity and chronic disability in the U.S. elderly population: evidence from the 1982, 1984, and 1989 National Long Term Care Surveys. *J Gerontol B Psychol Sci Soc Sci*. 1995;50:S194–204.
19. Smith J, Baltes PB. Profiles of psychological functioning in the old and oldest old. *Psychol Aging*. 1997;12:458–72.