Part B

Project reports

1 Dementia Behaviour Assessment and Management Service

1.1 Project description

The Greater Southern Area Health Service in New South Wales is the approved provider for a 16-place Dementia Pilot project, known as Dementia Behaviour Assessment and Management Service (DBAMS).[1] Greater Southern Area Health Service is an instrumentality of the New South Wales Government (NSW Health), which provides a range of primary and secondary specialist services and home- and community-based services, including Aged Care Assessment. DBAMS services a vast regional area of southern New South Wales, stretching from Hillston and surrounding district in the north to Albury in the south, and east to west from Tumut to beyond Hay, approximately 113,850 square kilometres in all. The project operates from the Area Health Service centre in Wagga Wagga.

DBAMS was initially funded to provide 16 flexible care places over a period of 2 years, commencing 1 June 2003. Clients are expected to remain in the program for an 8 to 12 week support period.

Objectives and target group

DBAMS has trialled a model of outreach and intermediate care for people with dementia or dementia-related behavioural symptoms with the aim of increasing carer and care worker confidence and competence in managing behavioural issues.

Specifically, DBAMS was designed to assess the effectiveness of:

1. a regional outreach education and support program to enhance the management skills of staff in residential care facilities dealing with dementia
2. an intermediate care model within an 8 to 10 week timeframe providing a comprehensive assessment and management program for people with dementia or dementia-related behavioural symptoms
3. early intervention and community-based assessment for people with dementia and dementia-related behavioural symptoms
4. an interactive model of care that involves the client, the carer and/or residential care provider and general practitioner through each stage of assessment and management.

The target group is people with dementia, living in the catchment area, who have been assessed by ACAT as eligible for high level residential aged care and who would benefit from the provision of a specialised assessment and behaviour management plan. An eligible participant will exhibit behavioural symptoms that mean he or she cannot be managed at home or in a residential care setting.

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1 The original auspice for the project was the Greater Murray Area Health Service, which was merged with the Southern Area Health Service to form the Greater Southern Area Health Service as part of the 2004 restructuring of NSW Health services.

Care model

The DBAMS model comprises two main components:

- Intermediate care, including assessment, medication review and behaviour management, is provided in Yathong Lodge, a 16-bed aged care unit in Wagga Wagga with an adjoining Day Therapy Unit. Clients admitted to Yathong Lodge receive consultancy access to a psycho-geriatrician, specialist psycho-geriatric nurses, psychologist and allied health therapists. The assessment and management strategies are individually based with a focus on behavioural management supplemented by medical treatment where necessary.
- An outreach service provides dementia-specific services to the community including community-based assessments for people with acute dementia and related behavioural symptoms; a behaviour management program to support carers and staff in aged care facilities; referral pathways to relevant agencies; and education and support to health workers, carers and other agencies operating in the region. A telephone hotline is available to provide support 24 hours per day on 7 days a week for residential aged care services, smaller rural hospitals and carers and families in the community.

Case study 3 at the end of this section illustrates the delivery of complementary intermediate care and outreach support. Outreach is a critical component of the project because it provides almost immediate practical assistance and rapid access to specialist medical and psychogeriatric advice. Through the outreach arm, DBAMS enables aged care staff and carers at home to manage client behaviours, which in turn reduces demand on Yathong Lodge.

On receipt of a referral, an assessment of client needs is made in the home environment (aged care facility or private residence). At this point it is determined whether the client should be admitted immediately to Yathong Lodge for specialist assessment and management, or whether services can be delivered in place. Referrals that culminate in client admission to Yathong Lodge have come mostly from aged care facilities, with a smaller proportion from the community, the acute care hospital and smaller hospitals with nursing home-type beds. Medication review is a key component of assessment for clients in Yathong Lodge. The 'Sunshine Club', a program of small group activities for people with common interests and level of functioning, has been developed to encourage social interaction and participation for clients in Yathong. Under the supervision of a diversional therapist, clients are able to participate in music therapy, aromatherapy and similar activities. On discharge from Yathong Lodge, the DBAMS client returns to their usual place of residence or appropriate placement, as applicable. DBAMS assists with transitional arrangements and may provide on-site support for as long as required.

DBAMS facilitates access to psycho-geriatric assessment and behaviour management for people who remain at home, either in the community or in an aged care facility (the outreach arm). The DBAMS team conducts assessments in the home environment, coordinates any additional referrals, and develops a behaviour management plan that is implemented in situ, jointly with the carer and family together with aged care staff in the case of a client who resides in a facility. The 8 to 12 week intervention period allows time for observation of the client, medication review, establishment of a behaviour management plan and supported handover to workers in an aged care facility or family carers (or both in some instances).

Carers are supported by a social worker, psychologist, counsellor and dementia support worker. Carers generally receive assistance to coordinate other services and respite care.

Clients may be readmitted to the pilot if they are unable to be managed under a current behaviour management plan or if symptoms change necessitating additional assessment and support. This capability offers a 'safety net' for facilities and family carers.

Regular meetings of the DBAMS clinical team have proved critical to prioritising admissions and organising rapid, appropriate placement. Discharge case conferencing and behaviour management meetings also play a central role in the multidisciplinary coordination of access to intermediate care and outreach services.

DBAMS provides consultancy services for staff in residential facilities. Staff can access specialist geriatric and nursing expertise by telephone or organise outreach workers to visit the facility. Staff in facilities who have referred to DBAMS indicated to the evaluation team that the outreach service is highly valued and has helped them to manage challenging situations effectively, often avoiding the need to transfer a client to another facility such as hospital or Yathong Lodge.

DBAMS also delivers dementia-specific education programs to professionals, carers and interested members of the public throughout the service region. Between October 2003 and December 2004, 1,058 people attended DBAMS dementia-specific training sessions in 19 locations across the project's catchment area. The project supplied to the evaluation a DBAMS education program report (Part B, section 1.6)

Feedback from participants indicates that staff in residential aged care facilities find the training sessions interesting and useful, as they improve general understanding of dementia and associated behaviours plus practical ideas to assist staff to manage their clients. Participants also value the opportunity to access training in the workplace (or at least in their home towns), as this means more staff members can participate at a reduced cost. Generally travel time and costs make accessing training for people living and working in rural and remote locations difficult and expensive.

Staffing

The DBAMS care model is founded on a multidisciplinary team structure as follows:

- geriatrician
- two visiting psycho-geriatricians
- psycho-geriatric nursing team: psycho-geriatric clinical nurse consultant and two psycho-geriatric nurses
- social worker (2 days per week)
- occupational therapy, physiotherapy, psychology and podiatry services are subcontracted from Wagga Wagga base hospital or the Forrest Centre Aged Care Assessment Service on an as-needed basis
- diversional therapist.

Project coordination is the responsibility of the psycho-geriatric CNC, who also develops and delivers the professional education program. Social work is a key factor in the project's success. The social worker provides carer support, manages paperwork associated with guardianship and power of attorney, coordinates services and provides client and carer advocacy. In cases where a placement decision has been taken, the social worker assists carers and family members to locate suitable aged care accommodation and complete the admission procedures.

Brokered allied health professionals work with clients admitted to Yathong Lodge only. The project tried unsuccessfully to employ an occupational therapist and physiotherapist for Yathong Lodge. Brokerage has proved successful, but direct employment is viewed as offering more flexibility. Likewise, a diversional therapist works with clients in Yathong Lodge on 2 days per week (the project would employ a therapist for more hours if one was available). In-home allied health assessments and services are accessed via normal channels.

A cohesive, multidisciplinary team is thought to be a major factor in achieving outcomes for DBAMS. Highly selective recruitment was undertaken to fill positions in the outreach team.

Attracting qualified staff, especially psycho-geriatric nurses and allied health professionals is a significant and ongoing challenge in the region. Prior to DBAMS, one psycho-geriatric nurse covered both the northern and southern regions of the then Greater Murray Area Health Service. The cost of travel, both personal and financial, is exceptionally high.

Successes, challenges and lessons

DBAMS has functioned as a point of referral for rapid access to psycho-geriatric expertise for people in southern New South Wales who are caring for a person with behavioural and psychological symptoms of dementia. The outreach service ensures almost immediate access to specialist medical and nursing advice and practical assistance. Admissions to Yathong Lodge slowed as a result of increased awareness and use of the DBAMS community outreach service. This outcome illustrates the success of an outreach model in providing effective in-place support to clients with behaviour management needs. At the inception of the pilot, all 16 beds at Yathong Lodge were occupied and a waiting list had grown to 6–7 potential admissions; during 2005 occupancy averaged 12 inpatients with a maximum of one name on the waiting list at any one time. Very few calls are made to the telephone hotline, a further indication that the project has been able to reach people in need of specialist intervention and put in place appropriate management strategies.

An effective outreach service is observed to reduce the number of beds needed for intermediate care and it is thought that 12 beds plus an outreach component could meet demand in the area over the medium term. With dementia prevalence projected to double over the next 20 years, the need for beds to support this type of service will inevitably rise.

Outcomes for this project are difficult to quantify in a numeric sense because DBAMS is fundamentally about system capacity building and quality care for people with BPSD. Client behaviours may or may not alter, but the people who provide care in the home environment gain insight into behaviours and learn effective management and coping strategies. Outcomes closely relate to quality of life for clients, their families and carers, and work satisfaction and sense of competence for staff in facilities.

The project coordinator remarked that the alternative for many clients accepted into DBAMS would have been sedation in hospital or an aged care facility. Among clients coming in to Yathong Lodge, the DBAMS team has noted high use of chemical restraint for behaviour management. DBAMS intervention has not reduced the number of psychotropic medications in use by Pilot clients but benzodiazepines have in most cases been replaced by newer, safer medications administered in smaller doses.

Specialist medical assessment and behaviour management aims to identify the root causes of behavioural disturbance such as pharmacological or environmental factors, and seek a reduction in behavioural symptoms by addressing the underlying causes. Family carers and staff in facilities do not usually have the resources to tap into education programs to develop

the necessary skills. DBAMS has imparted knowledge through the interaction of psycho-geriatric professionals with carers and care workers. Enhanced knowledge has been observed to greatly increase the confidence of people providing care at home.

Clinical involvement of Area Health Service specialists and visiting psycho-geriatricians has been critical to successful outcomes for clients. Their role is illustrated in case study reports included at the end of this section. Medical specialists have lent valuable expertise to the development and delivery of DBAMS education in the southern region.

Through the project, regional access to psycho-geriatric specialists has increased. DBAMS has attracted additional personnel with specialist skills to the area. Prior to the project, just one psycho-geriatric nurse was available to respond to calls from all general practitioners in the region. Multidisciplinary support for the psycho-geriatric nurses has increased considerably as a result of DBAMS.

Referral rates (to DBAMS) dropped following the first phase of the professional education program and it was suggested that this was in relation to increased behaviour management capacity in aged care facilities. The DBAMS team has observed a reduction in the use of chemical and physical restraints as means of coping with behavioural symptoms in facilities and hospitals.

It is expected that the DBAMS model would work well alongside EACH packages, the first allocation of which was made to the region in mid-2004. Project staff would like to see this type of intervention before carers reach crisis point and people with dementia are admitted to facilities.

Major challenges with providing effective care to members in the target group centre on workforce issues. There are limited numbers of registered nurses in aged care facilities and even fewer with psycho-geriatric training. This limits the capacity of facilities to provide effective management of clients with complex care needs. In this environment, staff need back-up from a specialist team. DBAMS has, itself, encountered recruitment difficulties. There is a widespread shortage of psycho-geriatric nurses. Finding appropriately qualified staff who fit in well with the team has been a challenge; turnover of staff once engaged is less of an issue. Staffing of Yathong Lodge has been less than straightforward, as the project carried over a staff from what was originally a NSW Health Confused and Demented Elderly unit. Changing the culture of an existing staff to be amenable to a philosophy of client-focused care has required some effort.

Travel is an additional complicating factor. DBAMS services a large geographic area and travel to cover the entire region is time consuming and demanding on staff. DBAMS staff has had access to an existing fleet of three cars that have not had to be funded from the project budget.

A lack of dementia-specific beds in the region has proved a major barrier to timely, appropriate placement of DBAMS clients.

Although not one of the most populous areas of New South Wales, it is estimated that the southern region along with the central west has relatively high concentrations of older people with very high care needs compared to other parts of the State (Brown et al. 2005). This pilot has successfully demonstrated an effective and efficient service model for people with dementia-related high care needs and their care providers. Demand for dementia-specific services is expected to grow while the nursing and aged care workforces are expected to contract over the next few decades. DBAMS has demonstrated that community outreach combined with intermediate care for older people with BPSD has the potential to increase efficiencies within aged care and health systems through improved client outcomes

and increased skill and sense of competency in nursing staff, care assistants and family carers.

ACAT perspective

ACAT reported that DBAMS provides a new referral option and that ACAT has confidence in the knowledge that it is referring clients to a service that offers highly effective assessment and care. Prior to DBAMS, ACAT had a great deal of repeat contact with clients and their carers and facility staff. 'ACAT was the only place people know to go for help.' However, in many situations, ACAT had very limited options for providing assistance to members of the target group. This difficulty was far worse for outreach ACAT staff working with small communities, where ACAT is usually a one-person team.

ACAT indicated that DBAMS has facilitated resolution for a number of clients considered to be 'difficult placements', assisting the placement process by putting an effective care plan in place and providing an important source of ongoing support to clients and staff. ACAT also suspects that there has been a reduction in hospital admissions from aged care facilities as a result of the DBAMS pilot.

Aged care service perspective

The director of nursing at a 60-bed aged care facility provided further insight to the DBAMS service.

Access to support from specialists in the field of psycho-geriatrics has greatly enhanced the working experience of staff in the facility. Aged care nurses are able to visit Yathong Lodge to learn about a client's management plan before the client is discharged back to the facility. DBAMS educates facility staff on how to respond to client behaviour on their return home from Yathong. Guaranteed return to a facility after a period in Yathong Lodge allows facilities to make a referral without fear or worry that a client will lose a place. Transfers have been well handled to minimise distress.

A pre-DBAMS scenario was recounted for comparison with the DBAMS experience. Before the project was established, a facility requiring assistance for a client with behaviour management issues would refer to the one Area Health Service psycho-geriatric nurse and wait 10 to 14 days for a response. If consultation with a psycho-geriatrician was recommended, up to 2 months might elapse (a specialist from Sydney visits Wagga once a month). Following contact with the client's general practitioner to change the medication regime, there might be another lengthy delay for review by the visiting psycho-geriatrician. In total, 3 to 4 months might elapse simply for medication review and management. Under the DBAMS model, response and intervention is immediate.

Nursing staff in aged care facilities are drifting back to community nursing because of high levels of occupational stress. The DBAMS pilot has made inroads to reducing staff burnout by providing staff with strategies for the effective management of clients and by offering an immediate solution in situations where a client needs specialist diagnosis and management. In conclusion, DBAMS is seen as building capacity in the aged care system for effectively addressing the complex needs of a growing number of people with dementia.

Case studies

DBAMS provided three case study reports.

Case study 1

'One client admitted to DBAMS was aged in the late 30s at time of admission. This case study outlines client history and reason for admission to the project. The case highlights the lack of suitable facilities for younger people with dementia requiring care, the financial and emotional stress for carers in this situation and the need for advanced care directives.

Social background

The client was employed prior to initial diagnosis, separated from spouse but maintaining some contact with young children. The client's mother has a history of erratic behaviour but no diagnosis of psychiatric disorder. Client's father, stepmother and brother were the primary caregivers.

Medical history and events leading to admission and discharge from project

The participant was diagnosed in January 2004 with degenerative disorder of the white matter, described as sub-acute demyelinating syndrome of unknown origin. However, symptoms emerged in September 2002 and at that time the client displayed manic and psychotic behaviour. Client was admitted to a psychiatric unit for assessment and diagnosed with bipolar disorder. Client re-presented three weeks after discharge after several suicide attempts and was readmitted and treated for severe depression. In November 2003 the client had a focal seizure which led to a series of investigations in a hospital, 2 hours from home. Client was then transferred to a different hospital in the capital city (further from home) in January 2004 where the diagnosis of degenerative disorder was made. A brain biopsy in February 2004 'essentially showed multi-focal necrotising lesions in the white matter with some activation of endothelial cells and a mild chronic inflammatory reaction'. Electron microscopy did not confirm any particular diagnosis. Client was admitted to intensive care on three occasions in status epilepticus. After discharge from hospital in March 2004 the client was treated with chemotherapy at the original hospital which is over two hours from the home of carers. Client returned to the home town, where family took it in turns to provide care. They were concerned that the impulsive intrusive and slightly uninhibited behaviours were having a negative effect on a younger family member. Unable to access respite services, the family chose to hire a motel room in which to care for the client. This continued for several weeks.

When an ACAT assessor became aware of the client she tried to access services and eventually found respite with a dementia respite service in a group home situation that offered 4 days per month. The client absconded from this facility after 2 days. ACAT discussed the case with DBAMS but the client did not meet the DBAMS eligibility criteria and was not at that stage considered a candidate for the project. However DBAMS staff assessed the client and the case was discussed at the weekly intake meeting, mainly to get some input as to how DBAMS could assist ACAT.

After the respite had finished the client returned to the care of family for a few days. They were unable to cope with the client's increasingly demanding and erratic behaviour. The client was taken to the emergency department at the local hospital, and from there was transferred to the base hospital where a psychiatrist deemed the client's condition as due to

an illness causing dementia. After consultation the client was admitted to Yathong Lodge in July 2004.

During the assessment period the client was reviewed by the visiting psycho-geriatrician, and returned to the hospital in the capital city for planned follow-up assessment by a neurologist, returning to the hospital 2 hours from home for further chemotherapy.

Outcome

After effective behavioural and pharmacological interventions were implemented, accommodation options were sought. The social worker with DBAMS tried many avenues all of which were unable to accept the client for permanent placement.

The client went into status epilepticus in January 2005 and was transferred to an intensive care unit, then returned to Yathong after a few days. The client's condition had markedly deteriorated; the client was no longer able to walk without the assistance of two people, could not communicate, and seizure activity was frequent. A family conference was held to determine the level of medical intervention. The client's condition was rapidly deteriorating necessitating transfer to the local hospital nearest to the client's family for palliative care. The client passed away shortly after.'

Case study 2

'Male client admitted to DBAMS in December 2003. This case study outlines the client's history and reason for admission to the project and the successful outcome in keeping a client at home with services when the local hospital and his GP were pushing for permanent placement in a residential aged care facility.

Social background

The client was an 85-year-old male who, until his admission to hospital, had been living with his wife of 60 years in a house he built on their farm. The farm had been sold some years ago, but the couple retained permanent tenancy of the home. They had only ever spent minimal time apart in their married life and this hospitalisation was the longest time they had been separated. The house is located close to a small town. They have two children, a son who lives in a major centre 1.5 hours drive away, and a daughter who lives in Canberra and a number of grandchildren but none living nearby.

Medical history and events leading to admission and discharge from project

The client had seen a neurologist in May 2003 and been diagnosed with dementia and commenced on Aricept which he did not continue to take because of side effects. He was admitted to hospital 3 months prior to admission to the project with pneumonia, from which he recovered. Then, following one day at home, the client had a mild cerebral vascular accident and was immediately readmitted to hospital. During the ensuing month he developed a urinary tract infection and for most of both admissions had a delirium which led to behaviours such as exit seeking, inappropriate urinating, intruding into other patients' rooms.

His MMSE on assessment was 15/30, he was disorientated in time but not place; short-term recall scored 0/3 but client was able to follow a three-stage command. He had problems with tasks requiring visual acuity as well. On the Cornell Scale for depression he scored 14/38,

indicating probable major depression. Brief Cognitive Rating Scale 14/35 and Modified Barthels 51/115.

He was receiving treatment for depression which had developed after the sale of the farm. His wife also reported an increasing unfounded insecurity about finances, not allowing her to write cheques and becoming angry about phone bills.

He was admitted from the local hospital to Yathong when a bed became available a week after the initial assessment. In Yathong he settled well at first, then he began exit seeking, trying to climb the fence and refusing to accept that the car he saw in the car park was not his and wanting to ring the police to report his car stolen and becoming agitated and verbally aggressive towards staff.

Following an assessment by the psycho-geriatrician, who changed his anti-depressant medication, and a family meeting, it was decided to organise a home visit for a day to see whether his wife could manage him at home. During the home visit a number of possible problems were identified and these were addressed with education for his wife in behaviour management strategies and some environmental modifications. The family agreed the main risk would be if he drove the tractor but decided to accept the risk in the interest of his improved quality of life as he hated being in Yathong Lodge and even a year later referred to his stay there as being in prison.

Outcome

He was discharged home for 2 weeks trial 14 days after admission to Yathong—the trial was successful. Regular respite 4 hours a week was organised with the local dementia-specific respite service, Home Care came weekly to assist his wife with housework, and attendance at the local day care was organised for 2 days weekly. He was followed up in the community 1 month later and discharged from the project 4 months after that, the longer length of time in the project being caused by an inability to contact them at home as they had re-established their life in the local community and were often out of the house during the day.

On discharge from the project all assessment scores had improved: his MMSE was 16/30, his short-term memory had improved, Brief Cognitive Rating Scale 1/35 and Cornel Depression Scale 1/38 (no depression), Modified Barthels 100/115.

The client was again referred to the project in April 2005 when he had become physically aggressive towards his wife when she wouldn't let him drive the car. An offer was made to readmit him to Yathong Lodge which his wife rejected so a third day of respite in the local daycare was organised, and further education on strategies to enable her to prevent confrontations over the car and use of diversionary tactics were implemented.

As of July 2005 the client's name has been placed on the waiting lists for local dementia-specific hostels and the family is beginning to make arrangements for them to move to the larger centre where a son lives.'

Case study 3

'Female client aged 84 years, living in a high level aged care facility 350 km from the DBAMS office. She had moved into a low care facility in 2001 and moved to the current facility two months before referral to DBAMS. She was referred to DBAMS by the director of nursing due to agitation, aggression and delusional behaviours in December 2003.

Social history

Married for 63 years, her husband described the marriage as difficult. They have four children all living interstate, 11 grandchildren and 10 great-grandchildren. Client was the middle child in a family of seven siblings who are all still alive. She grew up on a farm and married a dairy farmer. They moved into town after 30 years on the farm. She was socially active with a good network of friends, played bowls, worked tirelessly for the Royal Blind Society and enjoyed singing in local church choir.

Medical history

In the past the client had breast cancer treated surgically. She is prone to chronic urinary tract infection. She received treatment for anxiety and depression in 1988; her earlier history is uncertain. In 2000 the mental health service diagnosed dementia with delusional ideation and hallucinations, then in August 2003 she developed increased confusion, agitation, hostile thoughts, and persecutory delusions as a result of an infected mouth. MMSE 11/30 at that time. Alprazolam and Serepax prn were ordered to treat the behaviours.

In October 2003 formal diagnosis of probable Lewy Body Dementia was made by a visiting psychiatrist.

Over the years she had been trialled on various medications: in 2003 Zyprexa and Aricept were ceased and Exelon commenced.

On admission to the project, assessment MMSE was unable to be tested due to non-responsiveness and level of confusion. Brief Non Cognitive Rating Scale 22/35; Cornell Depression Scale 22/38.

Current medications: Exelon 1.5 mg BD
Zyprexa 2.5 mg daily 3.00 pm
Panamax i-ii QID prn (not being given regularly)
Largactil 25 mg TDS 8.00 am 12.00 midday 5.00 pm
Avanza 30 mg ½ nocte
Durolax 5 mg 5:00pm

with PRN orders of Largactil 25 mg oral one daily, Largactil 25 mg IMI, and Durolax suppositories.

Observed behaviours: client was unresponsive when spoken to, talking to herself as if telling a story (delusional), became agitated when trying to engage her in conversation and began wandering around muttering. Client had been physically aggressive towards staff and there was increased agitation surrounding the husband's visits.

Medication changes instigated: increased Exelon and ceased Avanza for next 4 weeks—condition much improved but 1 month later client again became delusional, verbally agitated and uncooperative. Largactil increased by GP and restraints applied, assessed for infections and constipation—not detected. Largactil was ceased and a small dose of Serenace 0.5 mg prn was introduced in August 2004. Behaviours then settled. Client was still delusional at times but this was not causing her distress, staff had stopped informing her before her husband was to visit and she was much less agitated when he visited.

Training was also given to the staff in validating client emotions and distress and communication strategies. She seemed more depressed but not as aggressive or agitated and was going to be discharged from DBAMS but in October her behaviours escalated. Medications were reviewed and suggested Epilim increase to 200 mg BD and Serenace

increase up to 2 mg TDS PRN, increase Exelon to 6 mg BD and introduce antidepressant. These changes were made one at a time to review the incremental effects. As a result of the review, the antidepressant was not introduced. When Exelon was increased to 6 mg there were 2 weeks of no behavioural problems and client did not require any PRN doses of Serenace. Antidepressant Zoloft 50 mg was commenced in November. By January 2005 her behaviours had escalated again. Exelon was ceased in January 2005 to see if it was having a paradoxical effect and Morphine 5 mg PRN was commenced in February. Client was much more settled in March and Serenace was ceased and Fentanyl patches 2.5 mg 3rd daily were commenced. Fentanyl patches were subsequently increased to 7.5 mg 3rd daily with Morpine 10 mg TDS PRN if required.

Outcome

In July 2005 the client was discharged from the project. Her agitation and verbal disruptions had ceased; when approached she responded appropriately, was friendly, smiling and she initiated appropriate conversation. She was still unable to complete most of the MMSE, scoring 2/30 and able to repeat 2 of the 3 words, the Cornell Depression Scale had improved to 10/38 and Brief Non Cognitive Rating Scale also improved 17/35.

Medications on discharge:
Fentanyl patches 7.5 mg 3rd daily
Zoloft 50 mg daily
Zyprexa 5 mg daily
Morphine mixture 10 mg tds PRN
Durolax 5 mg daily
Microlax enema PRN

During the 18 months, DBAMS nurses visited the facility on 12 occasions and had phone contact a further six times. Consultation from the geriatrician took place in person once and with the DBAMS team, five times. Also, the majority of staff at the facility attended 12 hours of training from a DBAMS clinical nurse consultant on dementia, communication and behavioural management.

This case study reflects the advantages of having visiting specialist consultations, both nursing and medical expertise, to provide support, strategies and education to staff in isolated areas to assist them in obtaining a satisfactory outcome for their clients with difficult behaviours.'

1.2 Client profiles

DBAMS supplied evaluation data on 39 clients, including 21 males and 18 females.

DBAMS is unique among Innovative Pool Dementia Pilot projects in that it has targeted clients in aged care facilities and in the community. Twenty clients who participated in evaluation activities received services only in their usual place of residence—either an aged care facility or private residence—through the DBAMS outreach service. Nineteen clients spent time in the DBAMS inpatient unit, Yathong Lodge, 15 of whom also received DBAMS support services while at home (Table B1.1).

Table B1.1: Dementia Behaviour Assessment and Management Service, number of clients by service delivery setting.

Service delivery setting	Number of clients
Inpatient service only	4
Outreach services only	20
Combination of inpatient and outreach services	15
Total	**39**

Socio-demographic and ADL profiles presented below include clients across DBAMS service delivery settings. Profiles describe the client group during the 2004 evaluation period. Functional assessment results are presented separately according to usual accommodation setting: community (includes private residence and independent or supported living in a retirement village); low level residential aged care; and high level residential aged care.

Age and sex

The mean age of evaluation clients was 78.8 years (age ranges from 38 years to 98 years). Thirteen clients were aged 85 years or over (Table B1.2).

Table B1.2: Dementia Behaviour Assessment and Management Service, number of clients by age group and sex

Age (years)	Males	Females	Persons
		(number)	
Less than 65	2	—	2
65–74	6	3	9
75–84	8	7	15
85+	5	8	13
Total	**21**	**18**	**39**
		(per cent)	
Less than 65	5.1	—	5.1
65–74	15.4	7.7	23.1
75–84	20.5	17.9	38.5
85+	12.8	20.5	33.3
Total	**53.8**	**46.2**	**100.0**

— Nil.

Language and communication

Seven clients had little or no effective means of communication. Two national languages were represented in this client group (Table B1.3). Nine clients could not communicate effectively in English.

Table B1.3: Dementia Behaviour Assessment and Management Service, number of clients by language spoken at home and English proficiency

	How well does client communicate in English?			
Language spoken at home	Very well or well	Not well	Not at all	Total
English	30	7	1	38
Czech	—	—	1	1
Total	**30**	**7**	**2**	**39**

— Nil.

Accommodation and living arrangement

Private residences, retirement villages, and aged care facilities are represented in the mix of usual accommodation settings (Table B1.4). Three clients were in hospital at the time of referral to DBAMS.

Table B1.4: Dementia Behaviour Assessment and Management Service, number of clients by usual accommodation, living arrangement and accommodation setting at referral

	Usual living arrangement			
Accommodation setting	Alone	With family	With others	Total
Private residence	5	8	1	14
Retirement village—independent living	1	—	—	1
Retirement village—assisted living	1	—	—	1
Residential aged care—low care	—	—	11	11
Residential aged care—high care	—	—	12	12
Hospital	—	—	—	—
Total	**7**	**8**	**24**	**39**

— Nil.

Years at usual place of residence ranged from less than one to 50 years. Four clients had been living in the same home for 20 or more years. Eighteen of the 21 clients who had changed place of residence in the 2 years prior to entering DBAMS were residing in an aged care facility.

Carer availability

Twenty-nine clients had a family carer during the reporting period (Table B1.5). Seven carers elected not to participate in assessments for the evaluation. Ten carers were living with the care recipient.

Carers' ages ranged from 40 to 89 years, averaging 64.7 years. Eight carers were aged 75 years or over (Table B1.6). Most carers were female.

Table B1.5: Dementia Behaviour Assessment and Management Service, number of clients by carer availability, carer relationship to client and co-residency status

Relationship of carer to client	Carer lives with client	Carer does not live with client	Total
Spouse or partner	6	6	12
Parent	1	–-	1
Son or daughter	3	7	10
Son- or daughter-in-law	–-	1	1
Other relative	–-	3	3
Friend/neighbour	–-	1	1
Not stated	–-	1	1
Total clients with a carer	*10*	*19*	*29*
Clients without a carer	. .	. .	10
Total clients			**39**
Per cent of clients with a carer			74.4

— Nil.

. . Not applicable.

Table B1.6: Dementia Behaviour Assessment and Management Service, number of carers by age group and sex

Age (years)	Males	Females	Persons
25–44	—	2	2
45–54	2	6	8
55–64	1	3	4
65–74	3	4	7
75–84	1	5	6
85+	—	2	2
Total	**7**	**22**	**29**

— Nil

Income and concession status

Government pensions were the primary source of cash income for 34 of the 39 clients (Table B1.7). Eighteen clients held a health care concession card. DBAMS does not charge fees for community-based clients. Clients admitted to Yathong Lodge for medical supervision and management contribute $37 per day towards accommodation costs.

Table B1.7: Dementia Behaviour Assessment and Management Service, number of clients by principal source of cash income, health care card status and project concession status

	Number of clients	Per cent
Principal source of cash income		
Age pension	27	69.2
Disability pension	2	5.1
DVA pension	5	12.8
Superannuation or annuities	4	10.3
Other cash income	1	2.3
Total	**39**	**100.0**
Health care concession card holder	18	46.1
Project concession status	1	1

Previous use of government community care programs

Twenty-three clients were admitted to DBAMS from a residential aged care facility.

Half of the 16 clients living in the community were not receiving assistance from government community care programs before DBAMS (Table B1.8). Six carers reported that, despite having had a need for respite care in the 12 months prior to DBAMS, they had not used a respite care service. Four carers reported using residential or in-home respite care prior to DBAMS; six carers said they had not needed respite care.

Table B1.8: Dementia Behaviour Assessment and Management Service, number of clients by use of government support programs prior to entering DBAMS, community-based clients only

Previous use of government support programs	Number of clients	Per cent
No previous government program support	8	50.0
Government support program		
Home and Community Care	2	12.5
National Respite for Carers Program	2	12.5
Veterans' Home Care	1	6.3
Multiple programs (HACC and NRCP)	3	18.8
Total	**16**	**100.0**
Use of respite care in the 12 months prior to DBAMS		
Respite care not needed	6	37.5
Respite care used	4	25.0
Respite care needed but not used	6	37.5
Total	**16**	**100**

Nine of the 16 community-based clients were on a waiting list for residential aged care.

Assessment and referral

DBAMS receives referrals from a variety of sources, with most originating from an ACAT or an aged care facility (Table B1.9). Client care is managed by a registered nurse (15 clients) or a multidisciplinary team (24 clients).

Twenty clients had completed an ACAT assessment at or before entry to DBAMS (Table B1.10).

Table B1.9: Dementia Behaviour Assessment and Management Service, number of clients by source of referral

Referral source	Number of clients
Aged Care Assessment Team	14
Another community service or agency	14
Hospital	4
Other person	4
Greater Southern Area Health Service	2
General practitioner	1
Total	**39**

Table B1.10: Dementia Behaviour Assessment and Management Service, number of clients by days between completion of ACAT assessment and date of referral to project

Completion date of ACAT assessment	Number of clients
Before referral to project	
0–20 days	20
After referral to project	
Between 2 and 42 days post-referral	8
Not stated	11
Total	**39**

Health conditions and health status on entry

The number of health conditions recorded for DBAMS clients at entry to the project ranges from zero to eight. Twenty-five clients had three or more health conditions at entry. Table B1.11 shows the primary health conditions recorded on the Aged Care Client Records for DBAMS clients.

Table B1.11: Dementia Behaviour Assessment and Management Service, number of clients by primary health condition

Primary health condition	Number of clients
Dementia (includes Alzheimer's disease and other dementias)	34
Delirium	2
Other neurotic, stress-related and somatoform disorders not elsewhere classified	1
Cerebrovascular disease	1
Amnesia	1
Total	**39**

Twenty-three clients were assessed as being at risk of falls due to impaired gait or balance (Table B1.12). More than one-third of clients had diagnosed depression, and around half showed signs of disorientation or confusion—a relatively high prevalence of these conditions compared to other Innovative Pool Dementia Pilot client groups.

Table B1.12: Dementia Behaviour Assessment and Management Service, number of clients with selected sensory, mental and physical conditions

Health condition	Number of clients
Impaired gait or balance—at risk of falls	23
Disorientation/confusion	18
Diagnosis of depression	14
Hearing impairment	9
Vision impairment	3

DBAMS clients were taking between zero and 11 different types of medication at the time of reporting. Seventeen clients were taking six or more different medications. Medication review is a key component of inpatient assessment and intervention at Yathong Lodge. The project reported that many clients' medication regimes have been changed as a result of specialist assessment and diagnosis. Medication use (or non-use) has been found to be a main contributing factor to the behavioural and psychological symptoms for many clients.

At the time of entry to DBAMS, each client or carer was asked to report on client health status and change in health status over the past 12 months using a five-point Likert scale. Six clients self-reported, eight family carers rated their care recipient's health status, supported accommodation staff rated 18 clients, and other care workers gave a report on five clients. The health status of two clients was not recorded.

Five clients were reported to be in very good health. Other ratings were good (12 clients), fair (12 clients), and poor (one client). Around one-third of respondents reported that the client was in better or much the same state of health as one year earlier. Around half said that client health was somewhat worse (12 clients) or much worse (four clients) than one year earlier, which suggests that care needs may have increased in the 12 months prior to entry. Reports were not given for 12 clients.

Level of core activity limitation

Most DBAMS clients experienced mild to moderate self-care limitation and mild or no limitation in mobility and communication (Table B1.13). Thus, DBAMS clients are in most cases ambulatory, but have highly impaired capacity for self-care.

Twelve clients had a severe or profound level of activity limitation in at least one area of core activity.

Table B1.13: Dementia Behaviour Assessment and Management Service, number of clients by level of core activity limitation

	Level of activity limitation				
Core activity	No limitation	Mild	Moderate	Severe or profound	Total
Self-care	2	10	18	9	**39**
Mobility	17	15	3	4	**39**
Communication	10	19	5	5	**39**

Use of medical and hospital services prior to entry

Baseline profiles contain information about client use of medical and hospital services in the 6 months prior to entering the DBAMS—the 'pre-entry period'.

Four clients were reported as not having visited a general medical practitioner in the pre-entry period. The number of visits to a medical practitioner in this period varied from zero to 12 per client. Cumulatively, the 36 clients who had visited a medical practitioner recorded 124 visits to a medical practitioner outside of a hospital setting over an estimated 6,480 person days.

Sixteen clients contributed to a total of 19 hospital admissions in the pre-entry period. One client had a planned admission only, and one client had both a planned and an unplanned admission. The remaining 14 clients with one or more hospital admissions recorded solely unplanned or urgent admissions. The 15 clients with unplanned admissions collectively accumulated 200 patient days for unplanned/urgent admissions over approximately 2,700 person days. Individually, they recorded between one and 30 days in hospital for unplanned admissions.

Conditions recorded as occasioning admission to hospital for DBAMS clients in the pre-entry period include:

- delirium
- urinary tract infection
- diseases of the intestinal tract
- head injuries
- skin and subcutaneous tissue infections
- heart disease
- transient cerebral ischaemic attacks
- cerebrovascular disease
- psychoses and depression/mood affective disorders
- other mental and behavioural disorders.

Five of the recorded unplanned admissions in the pre-entry period were coded with a principal diagnosis of delirium.

Four clients suffered a fall with injury and three clients were rendered immobile and without assistance for more than 30 minutes during the 12 months before entering the project. Five clients had experienced another type of serious medical emergency.

1.3 Client assessment results

Cognitive function

Mini-Mental State Examination (MMSE) scores were recorded for all 39 clients when they entered DBAMS (Table B1.14). The 31 non-zero baseline MMSE scores range from 1 to 28 points out of a possible 30 points (mean 15.5).

Table B1.14: Dementia Behaviour Assessment and Management Service, number of clients by Mini-Mental State Examination score at entry

MMSE score	Number of clients
Zero	8
1–15	16
16–18	1
19–24	10
25–30	4
Total	**39**

Zero scores for community-based clients are excluded from calculations of MMSE summary statistics.

Clients in a private residence (n = 16) recorded scores ranging from 1 to 28 with a median score of 19 points (mean 17.6; standard deviation 8).

Clients in residential high care (n = 12) recorded scores ranging from zero to 23 with a median of 4.5 points (mean 8.1; standard deviation 9.3).

Clients in residential low care (n = 11) recorded scores ranging from zero to 26 with a median of 8 points (mean 9.3; standard deviation 8.7).

Cut-points to account for educational attainment were applied to the scores (Uhlmann & Larson 1991), indicating cognitive impairment in 10 of the 16 community-based clients, in 11 of the 12 residential high care clients, and in 10 of the 11 residential low care clients.

The MMSE administered at a later date for the remaining eight clients produced a positive screen for cognitive impairment.

Activities of daily living

Level of functioning in activities of daily living (ADL) was measured using the Modified Barthel Index (MBI). A classification scheme for the MBI (Shah et al. 1989) indicates that, at entry to DBAMS, 10 of the 16 community-based clients were moderately dependent in ADL (Table B1.15). Most clients in low level residential care were moderately or severely dependent in ADL, and most clients in high level care were severely or completely dependent in ADL when they entered the project.

Table B1.15: Dementia Behaviour Assessment and Management Service, number of clients by dependency in ADL by usual accommodation setting

	Usual accommodation setting			
Dependency in ADL	**Community**	**RAC—low**	**RAC— high**	**Total**
Independent	1	—	—	1
Slight dependency	—	1	—	1
Moderate dependency	10	4	1	15
Severe dependency	5	6	10	21
Complete dependency	—	—	1	1
Total	**16**	**11**	**12**	**39**

— Nil.

Community-based clients

Community-based clients needed assistance in most tasks involving self-care and mobility (Figure B1.1). Total MBI scores at entry ranged from 7 to 20 out of a total 20 points. The mean score was 13.5 points (Table B1.16). Thus, the middle of the distribution of MBI scores for community-based clients was in the range of moderate dependency in ADL.

Eight community-based clients required management for bladder and bowel incontinence. Fourteen clients were unable to bathe or shower without assistance. Fifteen clients were independently mobile.

Final ADL assessments for community-based clients were conducted on average 15.8 weeks after the baseline assessment.

Changes in MBI scores between baseline and final assessments ranged from –5 points (a 5-point decline in function) to 9 points (a 9-point improvement in function) (Table B1.16). The median change across all community-based clients was 1 point, that is, on average, level of functioning in ADL as measured by the MBI improved by 1 point between the baseline and final assessments. Of the clients with a non-zero change score, five clients moved to a lower dependency category and one client moved to a higher dependency category. Other clients did not record a marked change in ADL dependency during their time with DBAMS.

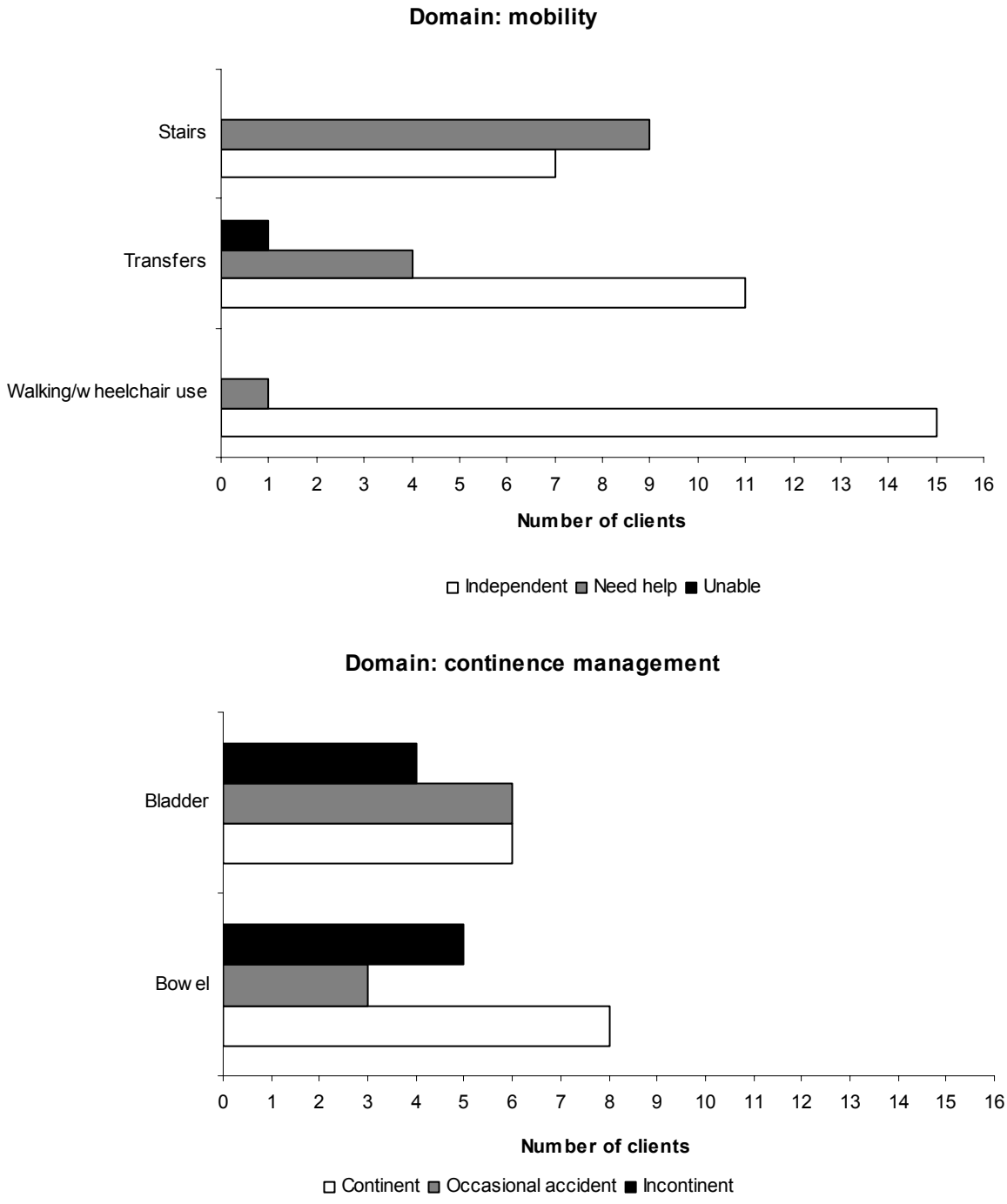

Figure B1.1: Dementia Behaviour Assessment and Management Service community-based clients, number of clients by level of ADL function

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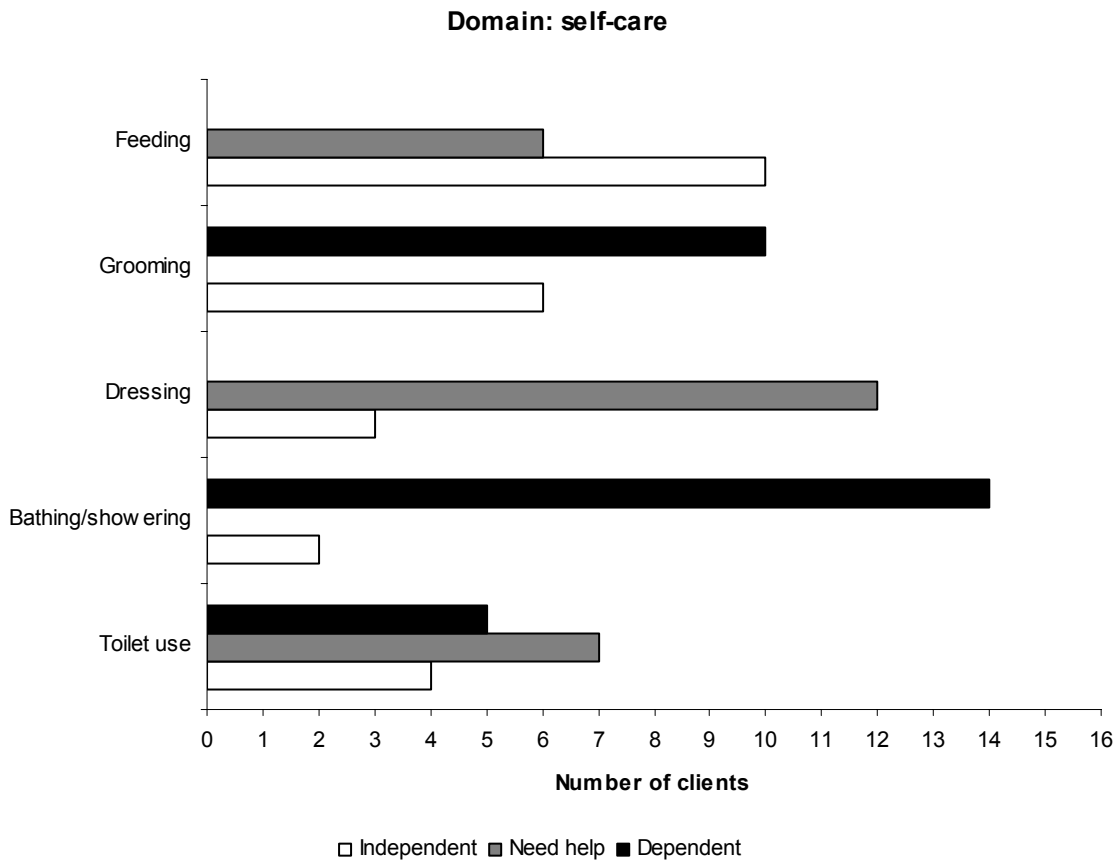
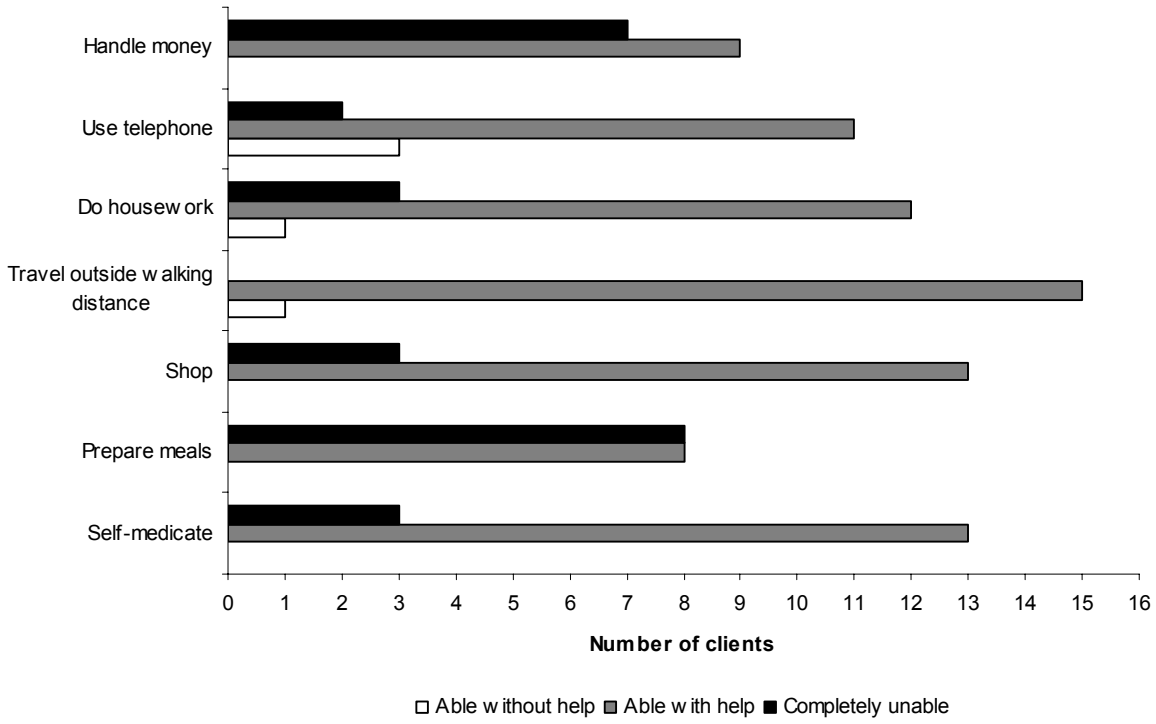


Source: Appendix Table B1.

Figure B1.1 continued: Dementia Behaviour Assessment and Management Service community-based clients, number of clients by level of ADL function

Most community-based clients either needed help to perform or were completely unable to perform IADL when they entered DBAMS (Figure B1.2). On average, these clients were completely dependent in one or two out of seven IADL at the time of entry to the DBAMS. All community-based clients were unable to prepare meals, shop, handle money or manage their own medication regimes without help. Although most clients registered as being able to walk independently, the mobility item on the IADL scale reveals that in all but one case, independent mobility was limited to the home environment.

The median baseline score on the IADL scale was 6 points (out of 14), with scores ranging from 2 to 9 points. Baseline results indicate that all community-based clients had lost some IADL function by the time they entered the project. The median change score on the IADL scale (between baseline and final assessments) was –1 point, with variation within the range of –3 to 2 points (Table B1.16). Sixty-three per cent of clients registered a decrease in IADL function between baseline and final assessments.



Source: Appendix Table B2.

Figure B1.2: Dementia Behaviour Assessment and Management Service community-based clients, number of clients by level of IADL function

Table B1.16: DBAMS community-based clients, baseline[(a)] and change[(b)] scores for ADL and IADL measures

	Count	Min.	Median	Max.	Mean	Standard deviation
ADL						
Baseline MBI	16	7	13.5	20	13.5	3.4
Change in MBI	16	–5	1	9	0.9	3.7
ADL						
Baseline IADL	16	2	6	9	5.7	1.9
Change in IADL	16	–3	–1	2	–0.6	1.6

(a) Clients with complete (baseline and final assessment) records.
(b) Score at final assessment minus score at baseline for an individual client.

Residential high care clients

According to MBI scores, all residential high care clients needed assistance in most tasks involving self-care and mobility (Figure B1.3). MBI scores at entry range from 1 to 16 out of a possible 20 points. The mean score recorded by this group was 9.3 points with a standard deviation of 3.5 (median 9), which indicates that the middle of the small sample of MBI scores for residential high care clients was in the range of severe dependency in ADL (Table B1.17). Nine of the 12 residential high care clients were doubly incontinent and all were unable to bathe or shower, dress or groom without assistance. Ten clients were independently mobile, one with the aid of a wheelchair.

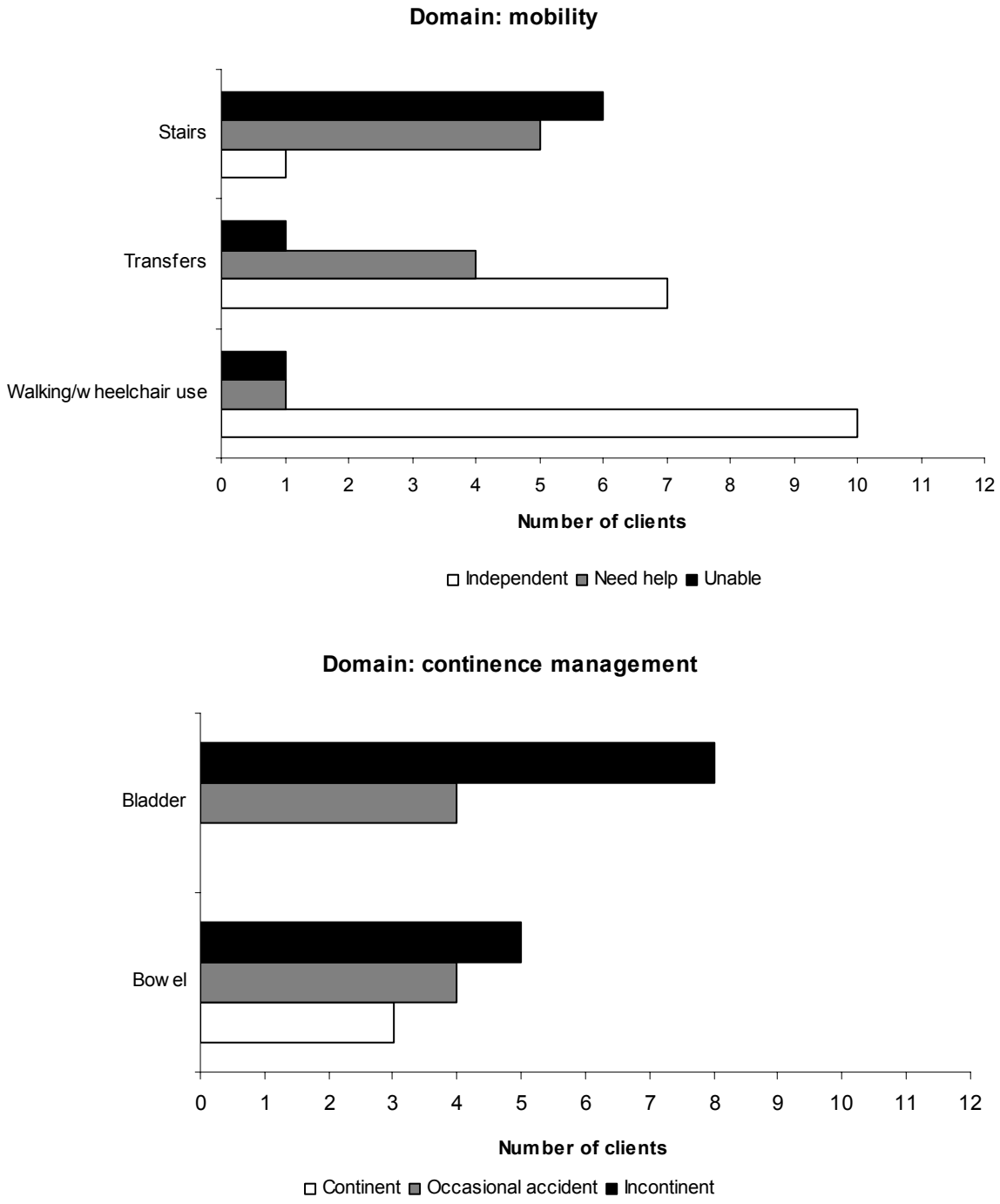


Figure B1.3: Dementia Behaviour Assessment and Management Service residential high care clients, number of clients by level of ADL function

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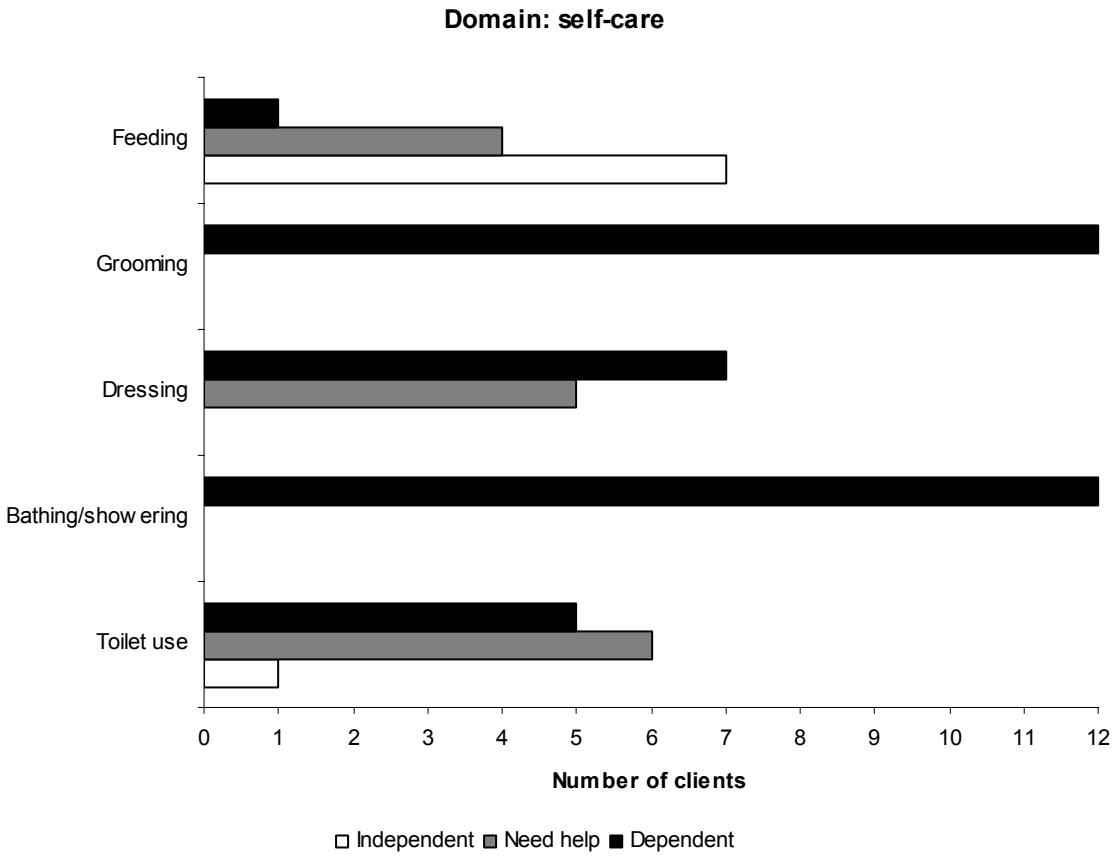


Source: Appendix Table B3.

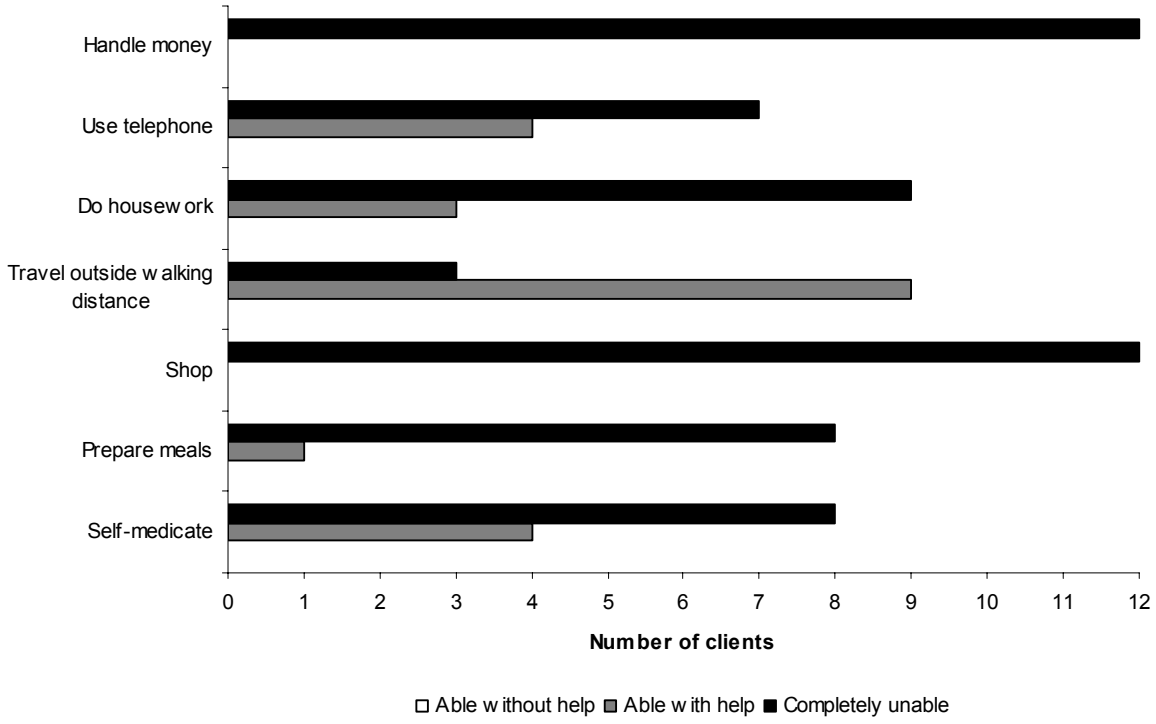
Figure B1.3 continued: Dementia Behaviour Assessment and Management Service residential high care clients, number of clients by level of ADL function

Final assessments for residential high care clients were conducted on average 14.4 weeks after entry.

Changes in the MBI between baseline and final assessments ranged from –6 points (a 6-point decline in function) to 4 points (a 4-point improvement in function) (Table B1.17). The median change was –0.5, i.e. on average, level of functioning in ADL as measured by the MBI decreased slightly between the baseline and final assessments. Of the clients with a non-zero change score, three moved to a higher level of ADL dependency, four moved to a lower level of ADL dependency, and four clients remained at broadly the same level of ADL dependency.

Most residential high care clients were highly dependent in IADL when they entered DBAMS (Figure B1.4). On average, a client in this group was completely dependent in five out of seven types of IADL.

The median baseline IADL score was 2 points, with scores ranging from zero to 5 out of a possible 14 points. Baseline results indicate that all DBAMS residential high care had experienced extensive loss of IADL capacity prior to entering the project.



Source: Appendix Table B4.

Figure B1.4: Dementia Behaviour Assessment and Management Service residential high care clients, number of clients by level of IADL function

The median change in IADL function was zero, with variation within the range of –1 to 1 point, reflecting minimal change in this functional domain over the period of observation (Table B1.17). Little change in levels of IADL functioning among this group of DBAMS clients largely reflects their very low levels of functioning at entry.

Table B1.17: DBAMS residential high care clients, baseline[(a)] and change[(b)] scores for ADL and IADL measures

	Count	Min.	Median	Max.	Mean	Standard deviation
ADL						
Baseline MBI	10	7	9	16	10	2.7
Change in MBI	10	–6	–0.5	4	–1.0	2.9
IADL						
Baseline IADL	10	0	2	5	2.1	1.4
Change in IADL	10	–1	0	1	0	0.9

(a) Clients with complete (baseline and final assessment) records.
(b) Score at final assessment minus score at baseline for an individual client.

Residential low care clients

Most residential low care clients needed assistance in some areas of self-care and mobility (Figure B1.5). MBI scores at entry range from 7 to 19 out of a total 20 points. The mean score was 12.9 points with a standard deviation of 4.1 points (Table B1.18). The mean baseline MBI score indicates that the middle of the small sample of MBI scores for residential low care clients was in the range of moderate dependency in ADL.

Four residential low care clients were doubly incontinent. All 11 clients were unable to bathe or shower without assistance. All clients were independently mobile when at home.

Final ADL assessments for residential low care clients were conducted on average 13.8 weeks after the baseline assessment.

Changes in the MBI between baseline and final assessments ranged from –3 points (a 3-point decline in ADL function) to 3 points (a 3-point improvement in ADL function). The median change was –2 points (Table B1.18), indicating that on average, level of functioning in ADL as measured by the MBI declined by 2 points between the baseline and final assessments. Of the clients with a non-zero change score, two clients moved to a higher level of ADL dependency and the remaining clients did not show a marked change in ADL dependency.

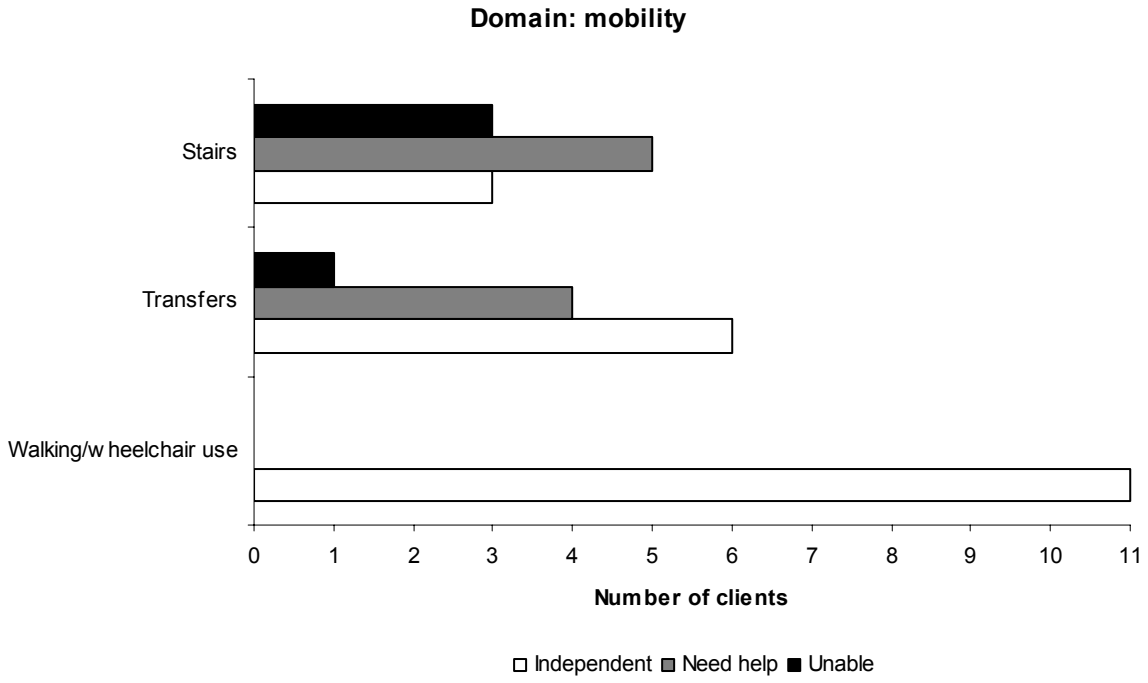


Figure B1.5: Dementia Behaviour Assessment and Management Service residential low care clients, number of clients by level of ADL function

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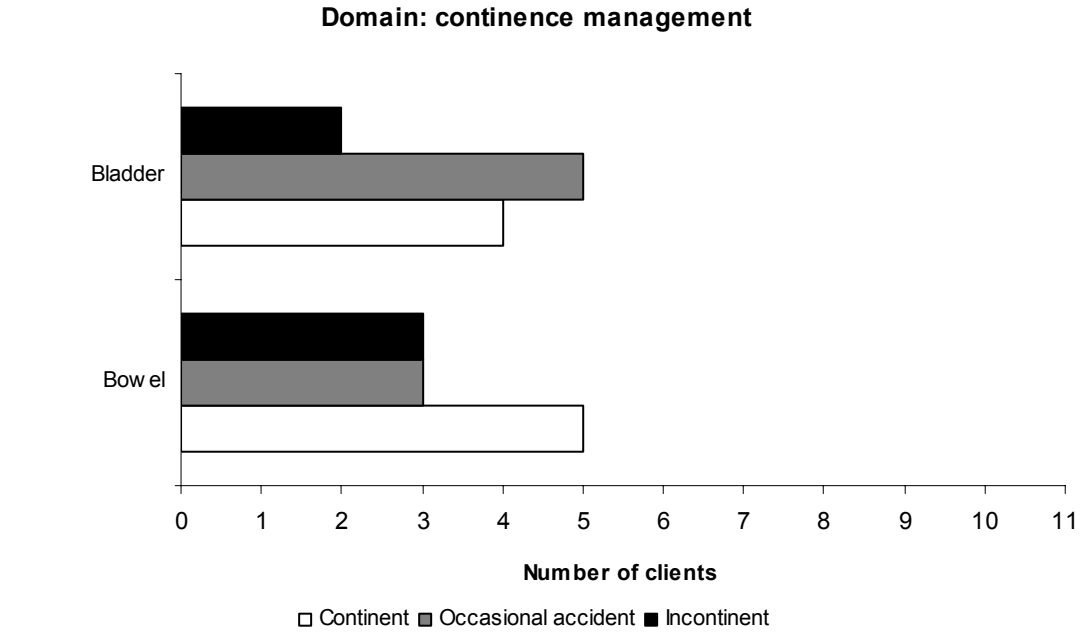
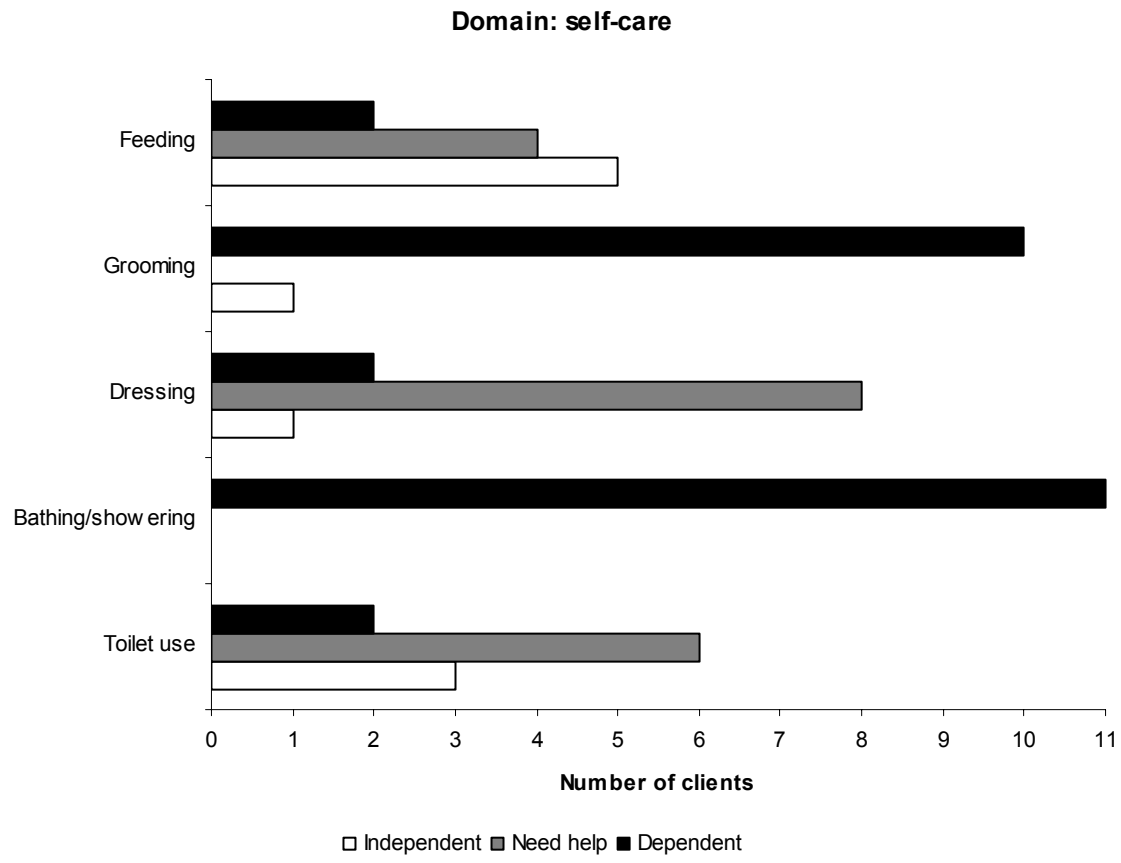


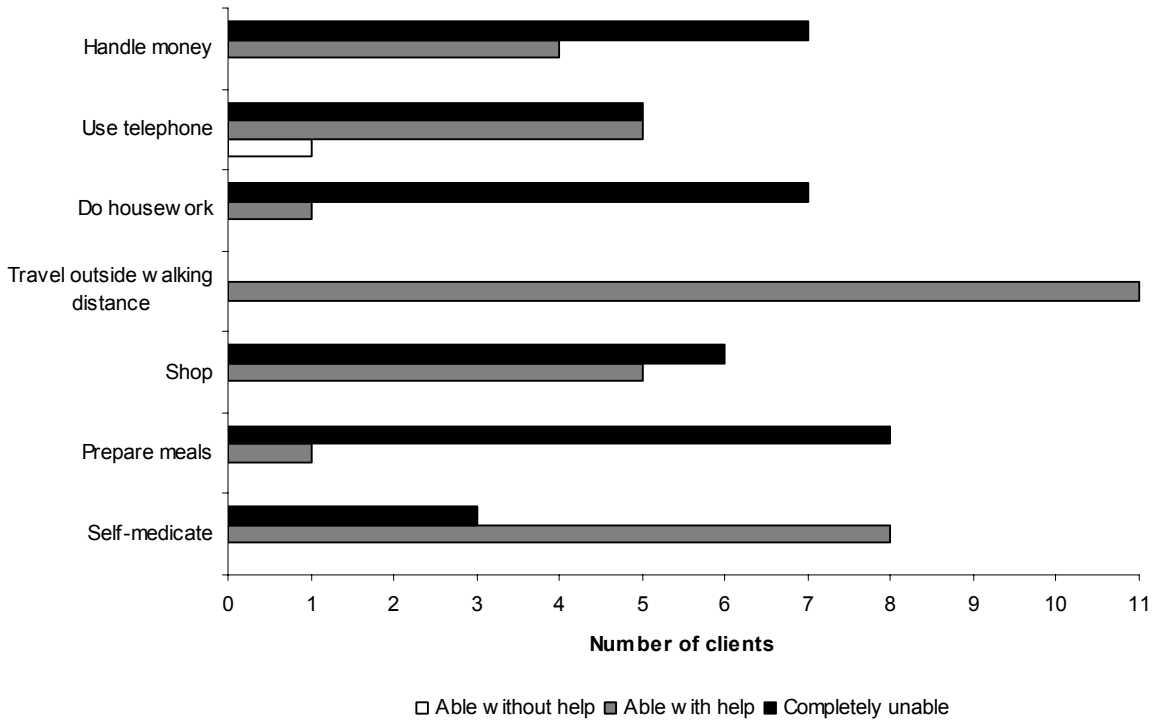


Source: Appendix Table B5.

Figure B1.5 continued: Dementia Behaviour Assessment and Management Service residential low care clients, number of clients by level of ADL function

Most residential low care clients had lost function in IADL by the time they entered DBAMS (Figure B1.6). On average, a client in this group was completely dependent in between three out of seven IADL by time of entry to the project.

The median baseline score on the IADL scale was 4 points, with scores ranging from 1 to 7 out of a possible 14 points (Table B1.18).



Source: Appendix Table B6.

Figure B1.6: Dementia Behaviour Assessment and Management Service residential low care clients, level of IADL function

The median change in IADL function between baseline and final assessments was –0.5, with variation within the range of –4 to 1 point (Table B1.18).

Table B1.18: DBAMS residential low care clients, baseline[(a)] and change[(b)] scores for ADL and IADL measures

	Count	Min.	Median	Max.	Mean	Standard deviation
ADL						
Baseline MBI	7	7	13	19	12.9	4.1
Change in MBi	7	–3	–2	3	–0.6	2.8
IADL						
Baseline IADL	6	1	4	7	4.2	2.1
Change in IADL	6	–4	–0.5	1	–1.0	1.8

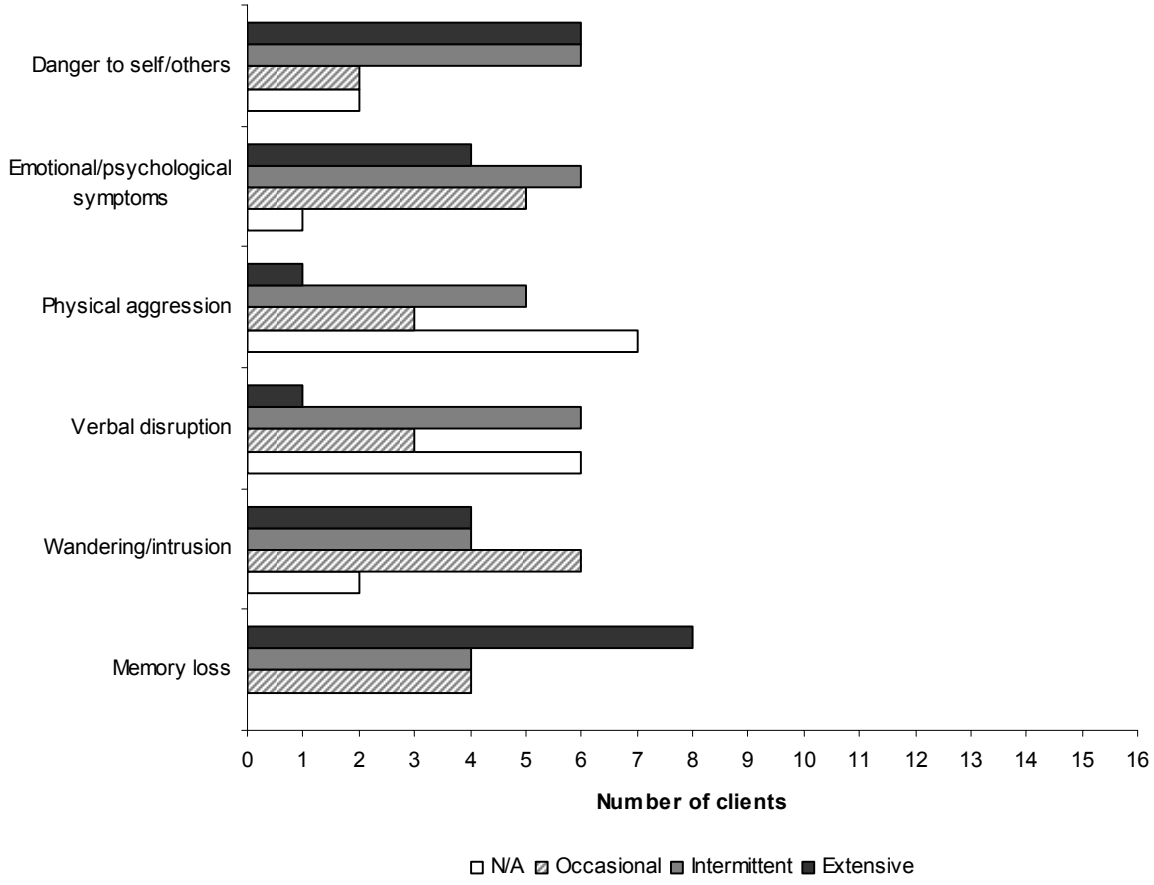
(a) Clients with complete (baseline and final assessment) records.
(b) Score at final assessment minus score at baseline for an individual client.

Psychological and behavioural symptoms

Community-based clients

Twelve of the 16 community-based clients showed signs of memory loss on an intermittent or extensive basis at time of entry to the project (Figure B1.7). Fourteen clients presented a danger to self or others at least occasionally. One client was reported to be physically aggressive most of the time and another six clients were physically aggressive on an intermittent basis. Fourteen clients exhibited four or more psychological and behavioural symptoms on an intermittent or extensive basis, 11 of whom exhibited two or more symptoms on an extensive basis.[2]

2 Includes the six categories of behaviour shown in Figure B1.7 plus another category called 'other'.



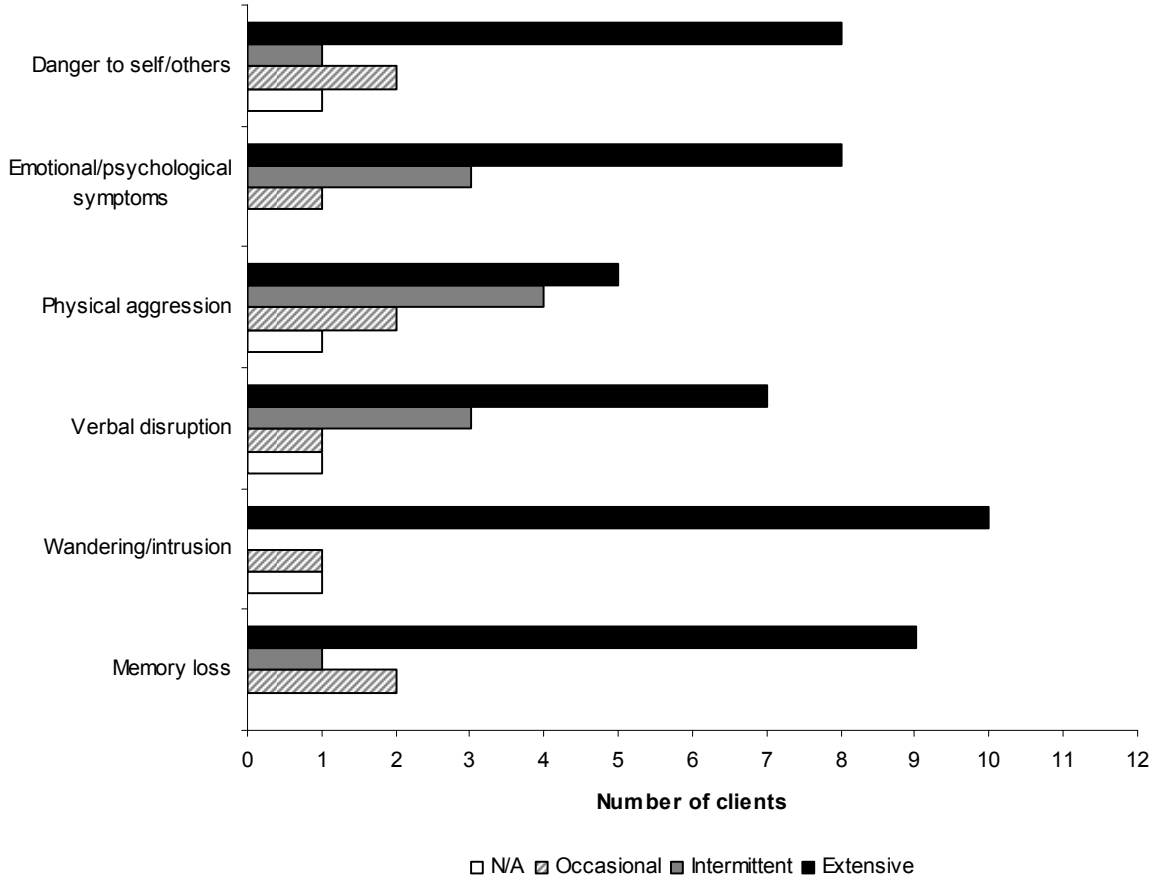
Source: Appendix Table B7.

Figure B1.7: Dementia Behaviour Assessment and Management Service community-based clients, frequency of psychological and behavioural symptoms at entry to DBAMS

Residential high care clients (RAC—high)

At least half of the 12 RAC—high care clients showed signs of memory loss, wandering or intrusive behaviour, verbal disruption, emotional and psychological symptoms, and/or presented a danger to themselves or others on an extensive basis (Figure B1.8). Five RAC—high clients were physically aggressive on an extensive basis. All clients exhibited three or more behaviours on an intermittent or extensive basis, and 10 out of 12 clients exhibited two or more psychological and behavioural symptoms on an extensive basis.[3] As a group, DBAMS RAC—high clients display some of the highest prevalence and frequency of psychological and behavioural symptoms of dementia of any client group in the Innovative Pool Dementia Pilot.

3 Includes the six categories of behaviour in Figure B1.8 plus another category called 'other'.



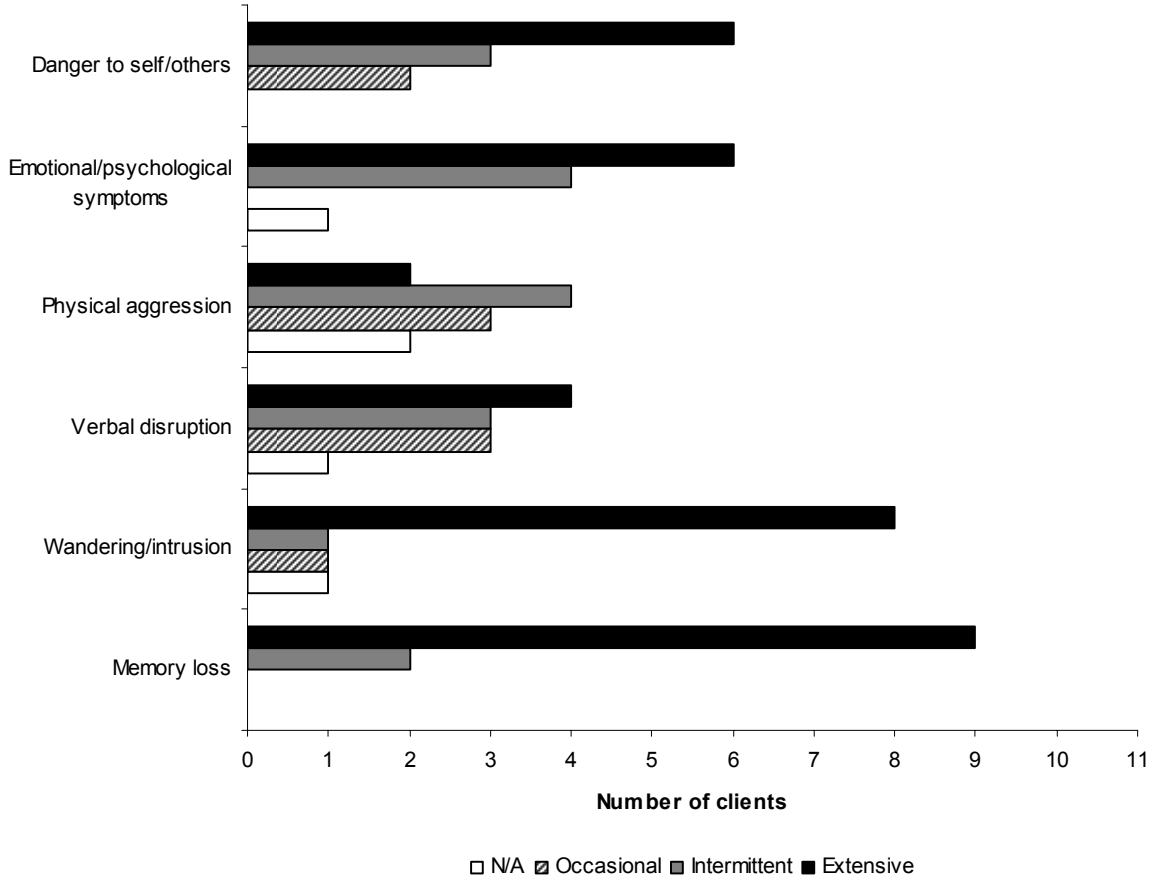
Source: Appendix Table B7.

Figure B1.8: Dementia Behaviour Assessment and Management Service residential high care clients, frequency of psychological and behavioural symptoms at entry to DBAMS

Residential low care clients

At least half of the 11 residential low care clients showed signs of memory loss, wandering or intrusive behaviour, emotional and psychological symptoms, and/or presented a danger to self or others on an extensive basis (Figure B1.9). Six clients were physically aggressive on an intermittent or extensive basis. All clients exhibited two or more psychological and behavioural symptoms on an intermittent or extensive basis, and nine clients exhibited two or more psychological and behavioural symptoms on an extensive basis.[4]

4 Includes the six categories of behaviour in Figure B1.9 plus another category called 'other'.



Source: Appendix Table B7.

Figure B1.9: Dementia Behaviour Assessment and Management Service residential low care clients, frequency of psychological and behavioural symptoms at entry to DBAMS

The RCS scale for BPSD symptoms does not lend itself to data reduction for the purposes of assessing the severity of symptoms observed in an individual. A model of service provision proposed by Brodaty et al. (2003) and summarised in Part A, provides a useful way to summarise the BPSD ratings for evaluation clients. DBAMS is the type of specialist service referred to in the model definition of 'tier 5' service delivery. Tier 5 is described as comprising services for people with severe depression, aggression and marked agitation: 'people in tier 5 may not be able to be managed within mainstream aged care services and may require tailored intervention programs administered by a specialist multidisciplinary team'. Progression to tier 6 (very severe BPSD) or tier 7 (extreme BPSD) would occur if a client could not be managed by mainstream services following DBAMS assessment and intervention. The granularity of data gathered for the evaluation only enables clients to be classified as high as tier 5 but it is possible that clients classified into tier 5 could actually belong to tier 6 or tier 7.

Using the model definitions (see Box 2.1, p. 43), at entry to the project, 94% of DBAMS evaluation clients exhibited at least severe BPSD (3% moderate and 3% mild). At final assessment 26% of DBAMS clients recorded a lessening of symptoms to the extent that their assessment results place them at a lower level of BPSD severity; 74% were maintained at

around the same level of severity but this proportion includes those clients who could have entered DBAMS at a higher level of severity than can be detected in the data, that is, there is a possible ceiling effect in the data. Assessment results for four DBAMS clients shows a lessening of symptoms equivalent to moving down two or three levels of severity, for example, from severe to mild BPSD or to dementia with no BPSD.

The DBAMS team reported that medication review and/or specialist intervention can be very successful in reducing the severity of BPSD in some clients, while in other cases the strategy is to increase understanding among primary care providers (family carers and aged care staff) of the causes and triggers for symptoms and to promote a sense of competency in providing care to a person with BPSD. The specific approach to be followed depends on the results of detailed investigation into the underlying causes of symptoms, which may be medical, historical (person's previous life experience), or related to/exacerbated by the current care environment.

1.4 Carer assessment results

Thirteen out of 22 carers who agreed to take part in carer assessments reported that they were in very good or good health at the time that their care recipient entered DBAMS. Two carers reported being in fair health. Self-reported health status was not recorded for seven carers.

Fifteen carers completed the Caregiver Strain Index (CSI) on entry to DBAMS to generate a mean score of 7.6 (median 7) with a standard deviation of 3.3 points. Scores ranged from 2 to 13 points. Ten carers recorded scores above the threshold of 7 points for high carer strain and two more carers scored just below the threshold.

Ten carers completed a repeat CSI assessment. The median change score was –1.5 points (mean –2.5; standard deviation 2.9) with a range of –7 (a 7-point decrease in carer strain) to 1 (a 1-point increase in carer strain), reflecting a decrease in the average level of carer strain. At the final assessment, three carers scored over the threshold for high carer strain, compared with seven carers at the baseline assessment.

At entry to DBAMS, 15 carers completed the General Health Questionnaire (GHQ-28). Six carers scored between 14 and 21 points on at least one subscale. Two carers recorded scores higher than 14 for somatic symptoms; six carers scored over 14 for anxiety and insomnia; and one carer scored over 14 for social dysfunction. No carer scored 14 or over for severe depression, although one carer scored 10 points and another scored 12 points on this sub-scale.

Ten carers completed the GHQ-28 at the final assessment, of whom one scored above 14 points on two sub-scales.

Change in GHQ-28 scores over time is examined in the overall profiles for the Innovative Pool Dementia Pilot projects due to small sample sizes in individual projects.

1.5 Service profile

The DBAMS service profile is more difficult to summarise than that of other projects where the focus is on ADL support and there are some notable areas of service provision missing in the evaluation data. For instance, DBAMS did not record services associated with the provision of accommodation in the intermediate care unit, Yathong Lodge. For the

19 evaluation clients who were admitted to Yathong Lodge there is no record of the level of personal assistance or meal services. Much of the service activity involves clinical review and case conferencing, the time and expense of which is not well reflected in time-based or event-based measures of service delivery. In addition, professional education has been a major aspect of DBAMS, and this cannot be summarised on a per client basis. A separate report of professional up-skilling and system capacity building through professional education is given below.

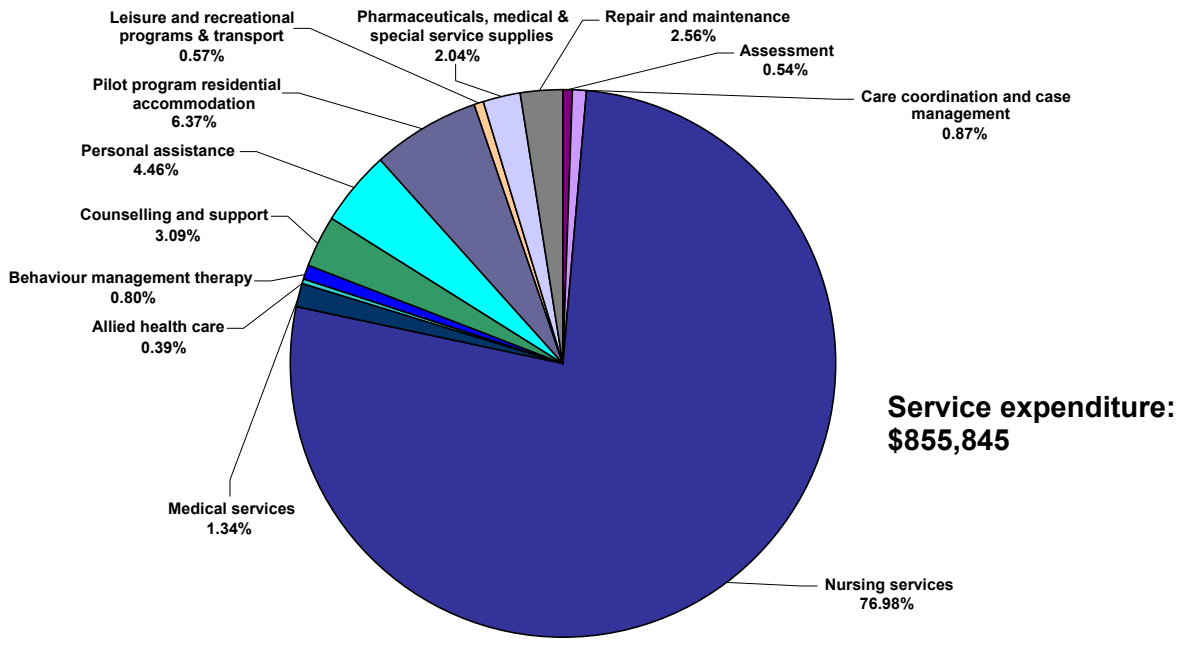
Table B1.19 provides an overview of the main areas of service delivered directly to clients from which can be seen the high clinical focus in medication review, specialist behaviour management, GP and geriatrician input and allied health care.

Table B1.19: DBAMS summary of services per client per week, June–November 2004

Service type	Service unit	Clients	Min.	Median	Max.	Mean	Standard deviation
Allied health combined	Hours	16	0.0	0.1	0.3	0.1	0.1
Social support	Hours	1	0.1	0.1	0.1	0.1	—
Medication review	No. events	37	0.1	0.3	2.5	0.6	0.6
Dementia care, memory and behaviour management	No. referrals	32	0.1	0.4	1.7	0.5	0.4
GP consultation	No. contacts	22	0.1	0.7	5.0	1.0	1.0
Geriatrician	No. contacts	22	0.0	0.3	1.3	0.5	0.4
Carer support other than respite	No. contacts	14	0.1	0.2	1.2	0.3	0.3
Nursing and medical care other	No. contacts	2	0.1	0.2	0.3	0.2	0.2
Dietetics	No. referrals	1	0.1	0.1	0.1	0.1	—
Information, advice and referral	No. events	1	0.1	0.1	0.1	0.1	—

— Nil.

A more informative picture comes from a breakdown of expenditure on client services, illustrated in Figure B1.10. Psycho-geriatric nursing care accounted for approximately 76% of service expenditure in the reporting period. This service category includes the work of specialist nurses in behaviour management and assessment for clients in Yathong Lodge and outreach clients at home. Note that reported service expenditure is expenditure from the project budget and does not include contributions from NSW Health in the form of existing infrastructure and medical expertise.



Source: Appendix Table B25.

Figure B1.10: DBAMS, expenditure on direct care services, 6 months ending 31 December 2004

1.6 DBAMS education program report

The following report summarises the DBAMS education program to December 2004.

Education program content

1. Introduction to dementia: types of dementia, different symptoms and behavioural presentations, medications, overview of person-centred dementia care—3-hour session
2. Communicating with people with dementia: effects of the negative and positive aspects of communication, importance of non-verbal/body language communication—3-hour session
3. Person-centred care in detail: validation, reminiscence, problem solving, identification of triggers for behaviour, managing behaviours of concern, case discussion, managing aggressive and sexual behaviours—6-hour session
4. Aggression management—2-hour session
5. Dealing with sexually inappropriate behaviours—2-hour session
6. Experiencing dementia workshop—3-hour session

7. Carer education—3-hour session
8. Quality dementia care— 2-hour session

Sessions 1, 2 and 3 are delivered over 2 days and form the basis of the initial education delivered to staff from hospitals, residential aged care facilities, community workers, carers and volunteers across the region. The other education sessions have been delivered at the request of aged care facilities and in response to situations that have arisen with particular clients.

Feedback has been very positive: DBAMS conducted an initial evaluation immediately after the education sessions (see below) and then 6–10 months later a follow-up evaluation was sent to all facilities with staff who had attended sessions to ascertain if staff felt their ability to care for people with dementia had improved following the program.

Comments from directors of nursing of participating facilities:

'Very beneficial, having the experience and latest research shared with staff in the facility helps us in striving for excellence in our care for people with dementia.'

'The staff have gained understanding and knowledge that has helped them to manage the behaviours of concern that our residents demonstrate at times effectively and with understanding.'

'Being able to have specific scenarios and issues that are concerning staff discussed and learning how to problem solve these issues has expanded the ability of the staff to understand the behaviours of people with dementia.'

From October 2003 to December 2004:

- Dementia-specific education was delivered in 19 locations across the region
- 1,058 people attended education sessions, with an average attendance of 5.5 hours per person.

Table B1.20: DBAMS education program, location, session type and attendance figures

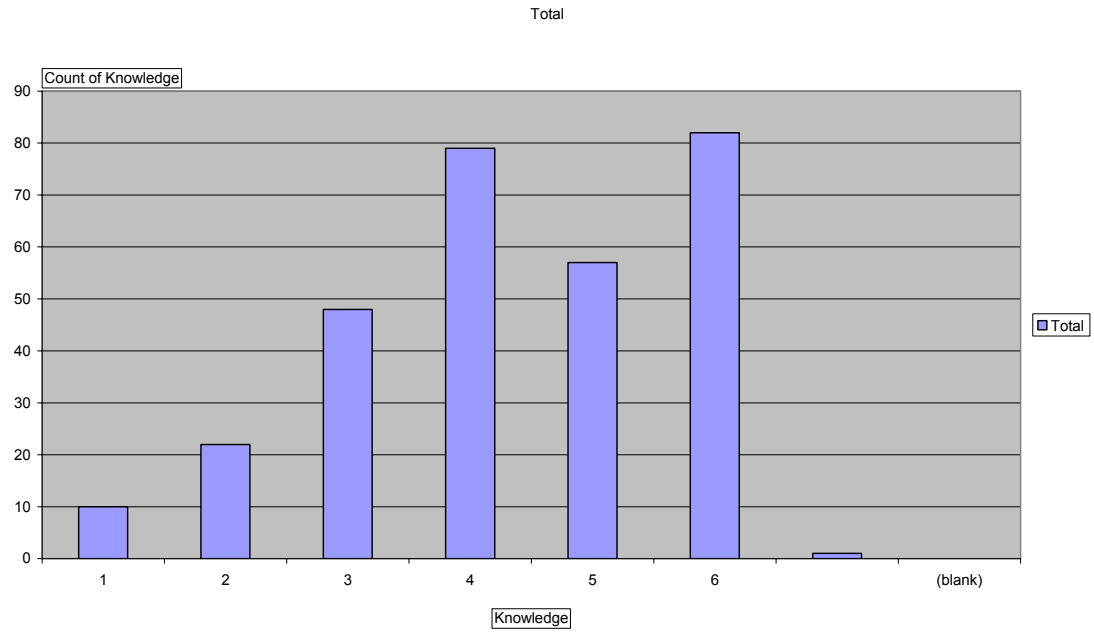
Place	Occasions	Session	Number in attendance
Albury	7	1, 2 & 3	258 (2 carers)
Albury UPA	4	8 (facility specific)	102
Albury	2	4	15
Albury	2	5	16
Berrigan	1	Client specific	8
Coolamon	2	1, 2 & 3	53
Cootamundra	4	1, 2 & 3	24
Corowa	4	1, 2 & 3	42
Culcairn	4	1, 2 & 3	34
Deniliquin	4	1, 2 & 3	156
Griffith	8	1, 2 & 3	63 (5 carers)
Gundagai	4	1, 2 & 3	42
Holbrook	4	1, 2 & 3	24
Holbrook	1	7	20 (10 carers)
Leeton	1	5 (client specific)	15
Leeton	2	2	6
Lockhart	4	1, 2 & 3	35
Moama	4	1, 2 & 3	52
Narrandera	4	1, 2 & 3	57
Temora	4	1, 2 & 3	58
Tocumwal	1	6	15
Tumbarumba	4	1, 2 & 3	28
Tumut	4	1, 2 & 3	53 (1 carer)
Tumut	1	8	12
Wagga Wagga	5	1, 2 & 3	154
Wagga Wagga	1	4	20
Wagga Wagga	1	8	15
Wagga Wagga	1	7	12 community
Wagga Wagga	1	1 & 2 (short version)	24 (4 volunteers)
Wagga Wagga	2	8	12 Yathong staff

Immediate post-education feedback (conducted on the day of training):

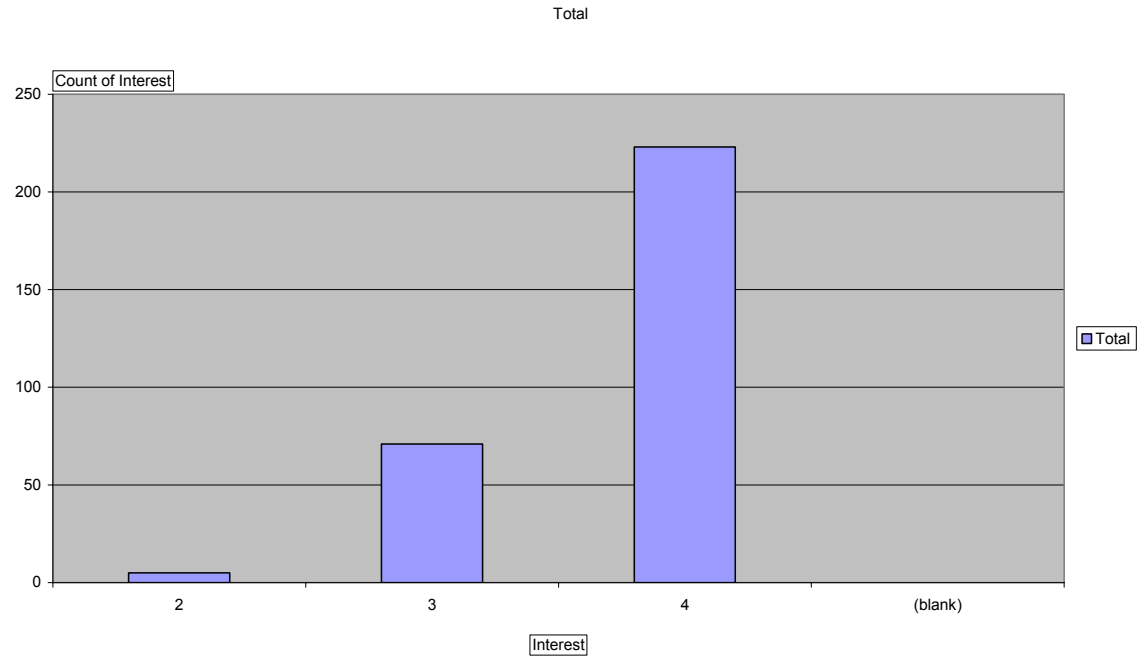
- 72% indicated a high level of interest in dementia prior to education
- 71% indicated a previous high level of knowledge of dementia prior to education.

Results of a survey completed after 2nd day of 2 days of dementia education

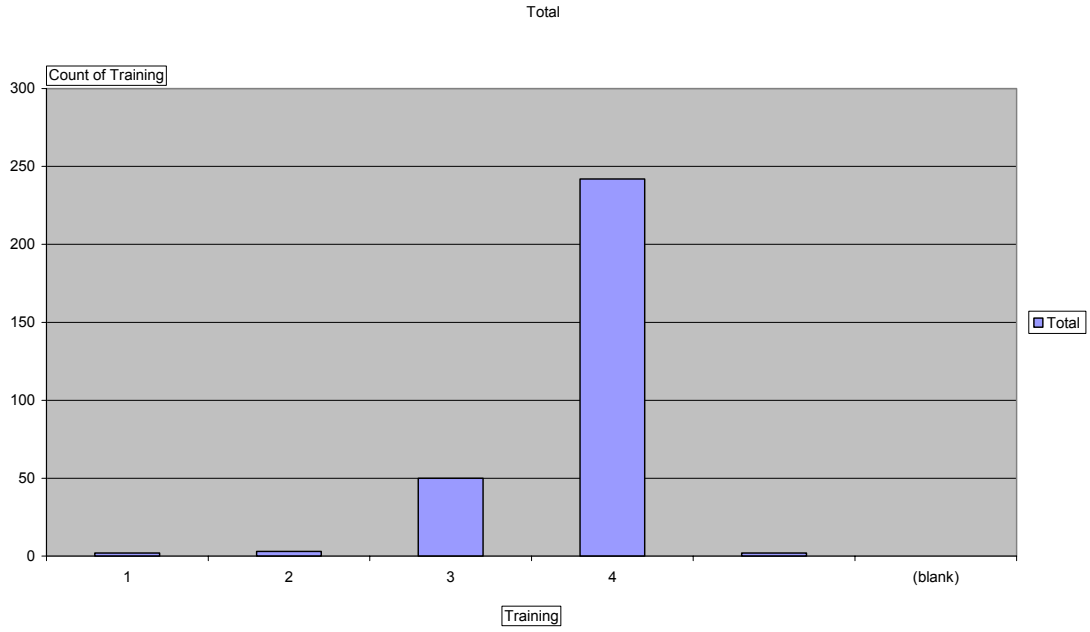
1. Rate your level of knowledge about care of a patient with dementia prior to education.
   Rating scale: (1) Little knowledge to (6) Well informed



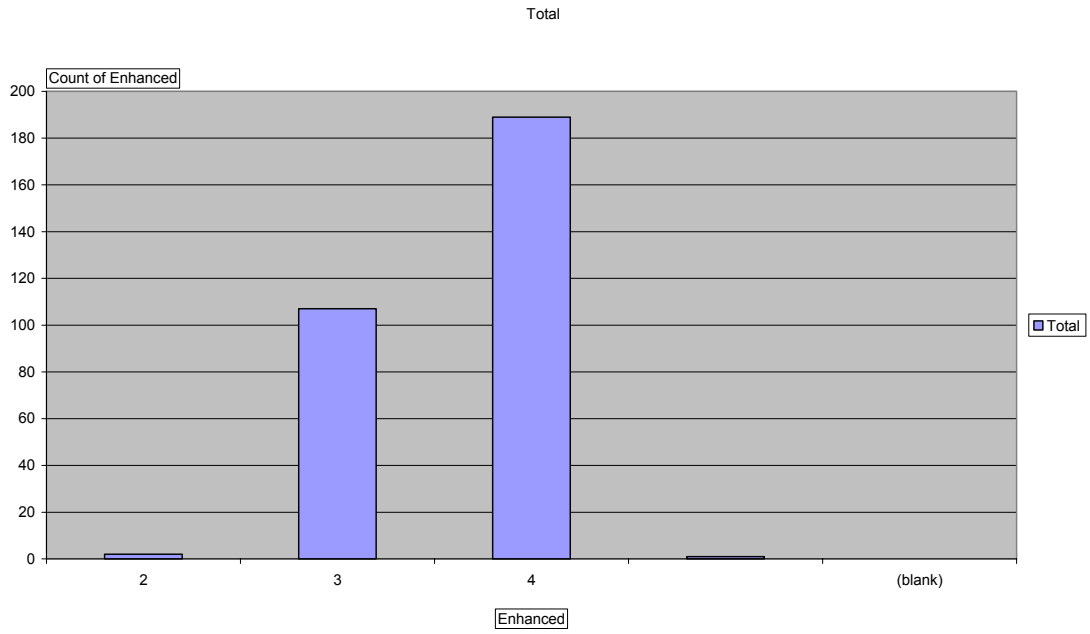
2. Rate your level of interest in training.
   Rating scale: (1) Low to (4) High



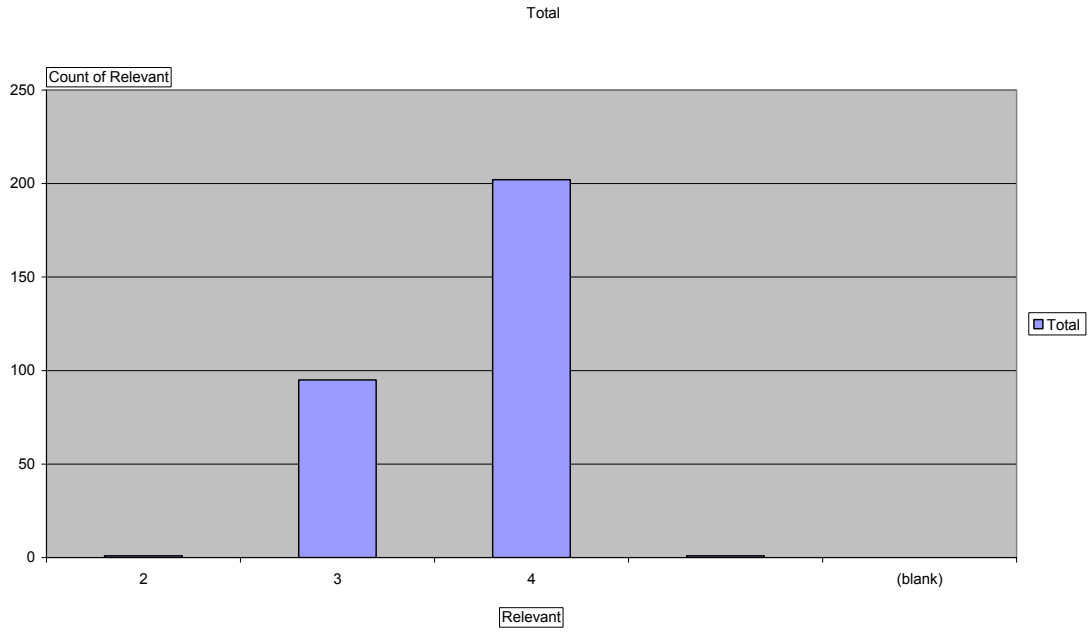
3) Rate the standard of the training.
Rating scale: (1) Low to (4) High



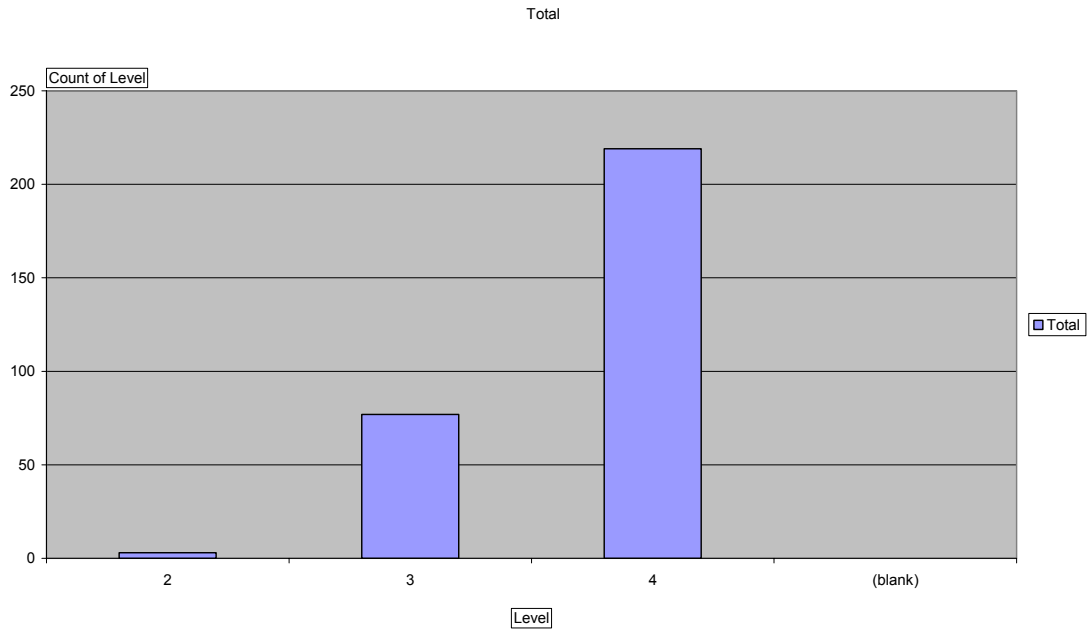
4) Has your level of knowledge of care of people with dementia been enhanced?
Rating scale: (1) Strongly disagree to (4) Strongly agree



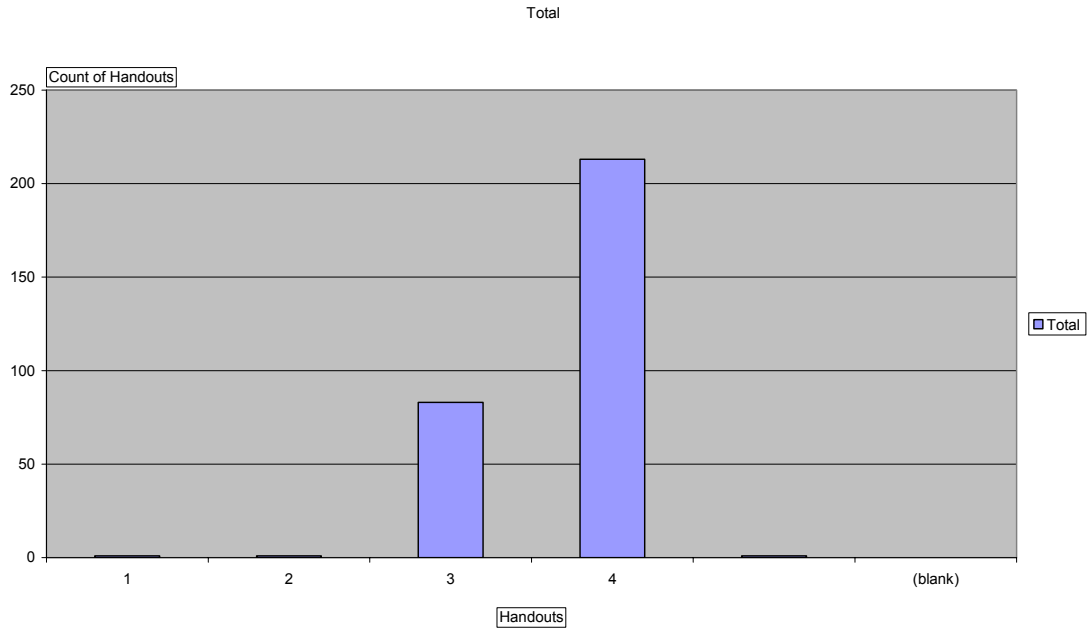
5) The education was relevant to your work.
Rating scale: (1) Strongly disagree to (4) Strongly agree



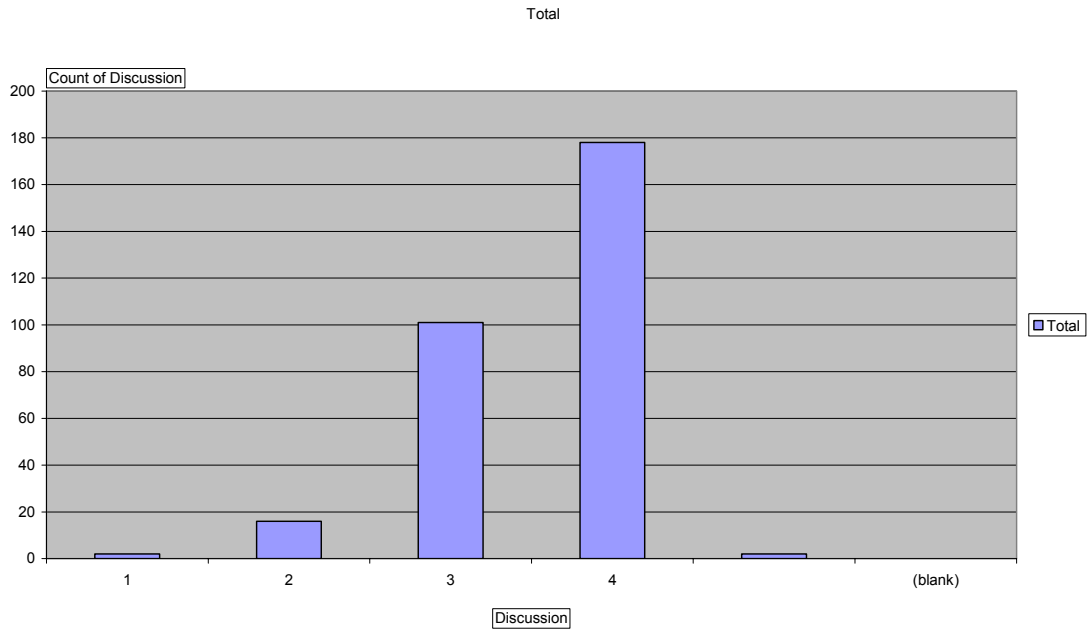
6) Content was at an appropriate level
Rating scale: (1) Strongly disagree to (4) Strongly agree



7) Handouts and visual supports useful/appropriate
Rating scale: (1) Strongly disagree to (4) Strongly agree



8) Adequate time given for discussion
Rating scale: (1) Strongly disagree to (4) Strongly agree



Comments of participants at the completion of education sessions 1 and 2:

'I will use different strategies to handle behaviours. I learned a lot about dementia'

'Helps me understand dementia and how to talk to and treat dementia patients'

'Lots of information I didn't know before, explained well'

'Before this training I had a positive attitude towards dementia clients but was not sure if it was the right thing to do. Now I am so confident about it. The training was very informative and very useful'

'Although I did know some things I still learned a lot'

'I feel the knowledge gained will greatly influence my work practices'

'It has given me a greater understanding of their actions'

These are just a few of over 200 positive responses to the question 'will your work practices change?'.

Results from a survey conducted after the delivery of DBAMS education program *Understanding Dementia and Managing Behaviours of Concern*

Results are based on 46 responses from 25 facilities.

- Did you attend both days?

  Yes 43 No 3

- Where would you rate your level of understanding and knowledge of dementia before and after the education? (1 being very limited and 10 excellent up-to-date knowledge)

Scale	1	2	3	4	5	6	7	8	9	10
Before	0	1	4	5	13	8	5	7	2	0
After	0	0	0	0	0	1	11	17	11	6

- Has your communication with clients with dementia improved since the education?

  Yes 45 No 1

- Has your ability to identify triggers to behaviours of concern increased since the education?

  Yes 45 No 1

- Have you improved the way you manage behaviours of concern experienced by people with dementia as a result of the education?

  Yes 44 No 2

- Are you better able to identify delirium and the causes of delirium in people with dementia since the education?

  Yes 39 No 4 Unsure 3

Some anecdotal reports are:

- *Aged care facilities:* Some facilities have reported decreased admission to specialist psycho-geriatric or psychiatric units but no data have been kept on actual hospital admissions. Some facilities reported that they could better manage clients with behavioural problems and those admitted to hospital would be due to medical need.

  Facilities are now requesting specific education regarding particular behaviours and the experiencing dementia workshop and for new staff to have access to the first two sessions early in their employment.

- *General practitioners:* A few GPs have begun to refer directly to the outreach service thus enabling the team to provide behavioural strategies and advice on the management of their clients. It is pleasing to know that the GPs have taken up the suggestions put forward by the team.

Learning outcomes for training sessions and education program evaluation survey results

Introduction to Dementia and Communication with People with Dementia

Expected outcomes

Participants will:

1. Be able to identify the functions of specific lobes of the brain and how the dementia affects the function of these areas and the disabilities the person with dementia will then exhibit.
2. Develop an understanding of how the health, personality, past history, current environment and social factors will influence the person with dementia's behaviour.
3. Know how to communicate effectively with people with dementia in using both verbal and non-verbal means and understand the impact of poor communication.

Understanding and Managing Difficult Behaviours in Dementia

Expected outcomes

Participants will:

1. Understand the differences between dementia, depression and delirium and be better able to identify causes of delirium developing in people with dementia.
2. Develop problem-solving skills and an ability to identify triggers that cause behaviour of concern.

3. Identify the causes of most aggressive behaviour and how to prevent or manage aggression from clients with dementia.
4. Understand both verbal and sexual disinhibition of people with dementia behaviour and how to respond appropriately.

Evaluation survey conducted on the day of training

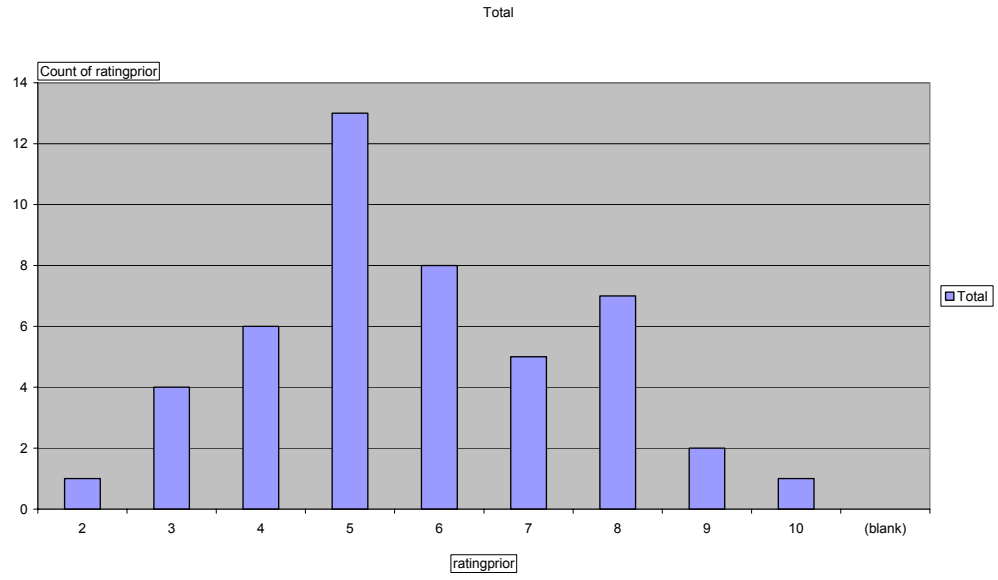
- Knowledge and skills enhanced: Yes 99%
- Relevance of training to work place: Yes 99%
- Content an appropriate level: Yes 96%
- Handout usefulness: Yes 98%
- Adequate time for discussion: Yes 92%
- Desire to improve work practices following education: Yes 99%

Comments indicated that the majority of participants believed they had gained an improved understanding of dementia, of communication with people with dementia and strategies to manage behaviours of concern, and ability to identify delirium, also ideas that they could incorporate into their work practices to improve the wellbeing of people with dementia.

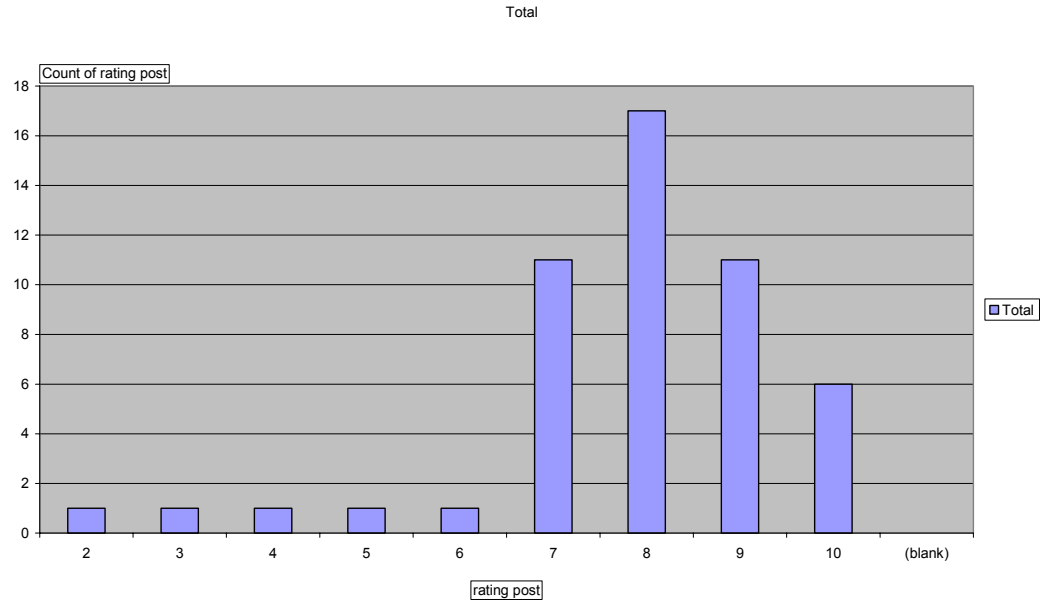
6–12 months post-education follow-up survey (49 responses from 300 participants)

39 attended both sessions, seven attended first day only and three attended second day only.

Self-rated knowledge of dementia prior to education (higher score indicates higher self-rated knowledge):



Self-rated knowledge of dementia post-education (higher score indicates higher self-rated knowledge):



Respondents indicated:

- communication ability improved in 99.5% of cases
- ability to identify triggers to behaviours of concern improved in 99% of cases
- improvement in ability to manage behaviours of concern in 89% of cases.

1.7 Accommodation outcomes

Projects were asked to record discharge outcomes during the evaluation period and at later follow-up for those clients who remained with the project at the end of the evaluation period. DBAMS follow-up was completed between 3 February and 21 April 2005.

Community-based clients

Community-based clients who were discharged from DBAMS during the evaluation period had spent between 56 and 150 days on the DBAMS program. Four clients were in the project for more than 100 days. The project reported difficulty in locating dementia-specific residential care beds in the region and this is likely to have increased length of stay for community-based clients who required a permanent residential placement following DBAMS.

By completion of follow-up, between 8 and 12 months from the start of the evaluation, 10 clients had completed DBAMS service and had entered permanent residential care (Table B1.21). Seven of these clients had been able to enter at low level care even though they had been assessed by ACAT as requiring high level care. Some of the clients who were in residential care at follow-up had been discharged from DBAMS to HACC services and had later entered a residential care facility when a bed became available.

Three clients were still in Yathong Lodge on a transitional basis.

Table B1.21: Dementia Behaviour Assessment and Management Service community-based clients, accommodation setting and government program support status at follow-up

Accommodation setting/government program support	Number of clients
At home	
CACP/National Respite for Carers Program	2
Total at home	*2*
DBAMS short-term accommodation—Yathong Lodge	3
Residential aged care	
Low care	7
High care	3
Total	*10*
Deceased	1
Total	**16**

Residential care clients

Two of the 12 residential high care clients were still with DBAMS at the end of the evaluation period and the remaining 10 high care clients had been discharged from DBAMS and were residing in their usual facility. Length of stay in DBAMS ranged from 48 to 169 days. Six clients had spent more than 100 days with DBAMS. At follow-up, nine of the original residential high care clients were still in a high care facility. One client had died, and two could not be located.

Three of 11 residential low care clients were still with DBAMS at the end of the evaluation. Four clients had been discharged back to low level residential care (length of stay in project 63–116 days), and three had entered high level residential care (length of stay in project 91–141 days). Four discharged clients had been in the project for more than 100 days. At follow-up, seven of the original residential low care clients remained in low level residential care, and three were living in high level residential aged care. One residential low care client could not be located.

The project has been successful in helping a number of clients to avoid moving to a new care facility by reducing the manifestation or impact of BPSD and/or enabling providers of care to manage clients in place. Most of the community-based clients entered residential low care instead of high care, and two clients were able to remain at home for a considerably longer period than expected.

Attachment: DBAMS education program evaluation instrument

The Aged Care Series 1/2

CARE OF THE PATIENT WITH DEMENTIA EVALUATION

WORKSHOP LOCATION: _____ **DATE:** _____

1. Using the scale below, please circle the number that indicates how well you were informed on the subject of care of the patient with dementia before participating in this training session.

Little knowledge					**Very well informed**
1	2	3	4	5	6

2. Please indicate your reaction to the training session by circling the number that best expresses your rating of each of the following statements:

	Low			**High**
My level of interest was	1	2	3	4
The standard of training was	1	2	3	4

3. Please indicate your reaction to the training session by circling the number that best expresses your rating of each of the following statements:

	Strongly disagree	**Disagree**	**Agree**	**Strongly agree**
My level of knowledge & skills in the area of care of the patient with dementia has been enhanced	1	2	3	4
The sessions were relevant to my work	1	2	3	4
The content was delivered at an appropriate level	1	2	3	4
The handouts & visual supports were useful/appropriate	1	2	3	4
There was adequate time for discussion	1	2	3	4

4. Please indicate the three major points that you gained from the training sessions.

5. Do you feel the information gained from the training session will change your work practices? Please comment.

6. What professional development activities do you believe would be appropriate to follow up after this training session?

Additional comments:

Thank you for completing this evaluation form.
Your feedback is valued and confidentiality will be respected.

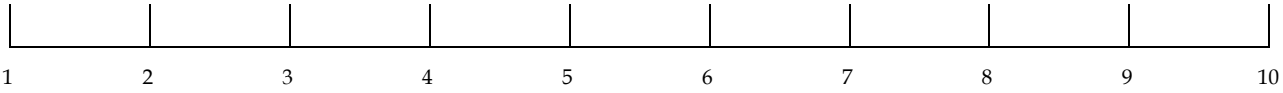
Wagga Wagga Aged Care Services

Dementia Behavioural Assessment Management Service(DBAMS): Client Evaluation of Services from RACF

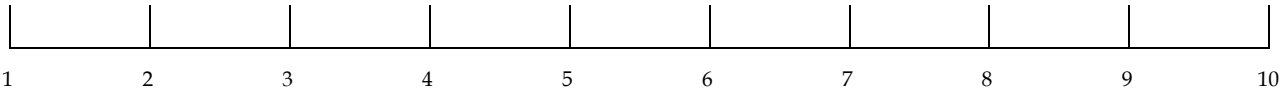
Please help us to improve this service by answering some questions about help and assistance you have received at the Dementia Behavioural Assessment Management Service (DBAMS). We are interested in your honest opinion, whether positive or negative. We also welcome your comments and suggestions. Your opinions and comments will help us to improve this service.

(*Please circle the most appropriate answer on the scale bar)*

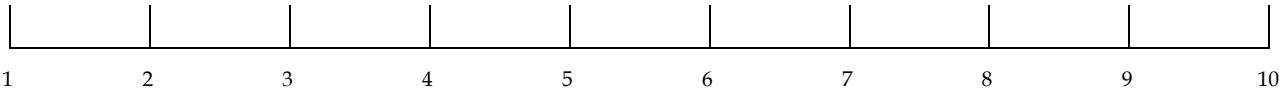
1. How would you rate the quality of dementia services received from DBAMS staff?



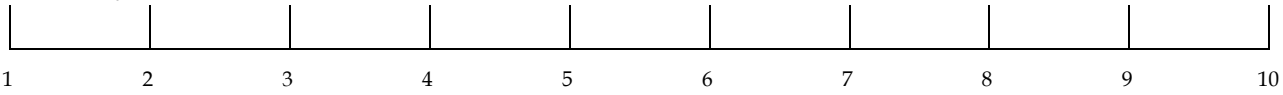
2. To what extent has the DBAMS support met the staff's needs to assist in caring for your clients with dementia?



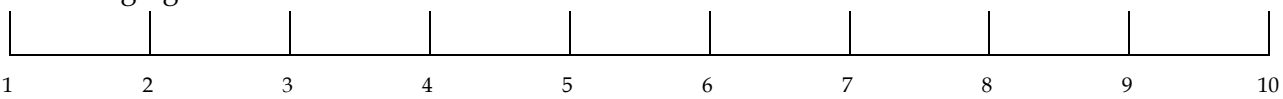
3. If you had another client with dementia and challenging behaviours would you contact DBAMS staff?



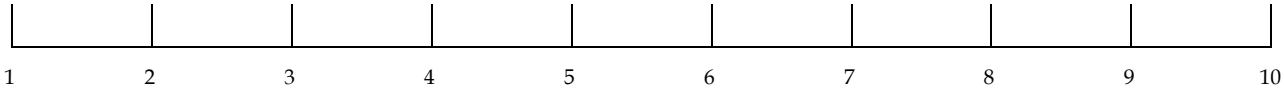
4. Have the dementia services you received from DBAMS helped you to deal more effectively with your client's problems?



5. Has the education provided by the DBAMS staff helped your staff to be successful in managing the difficult behaviours?



6. In an overall general sense, how satisfied are you with the dementia services you have received from DBAMS staff?



Comments