

Hospital outreach service: Helping to prevent nursing home placement

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Abstract

An outreach service from a post-acute metropolitan teaching hospital delivered an intensive, multidisciplinary and coordinated allied health service, and achieved both early hospital discharge and the prevention or delay of nursing home placement. This article reports on three types of cases which illustrate how the service assisted ward teams, families and patients to determine whether nursing home placement was essential. For a group of 20 cases, the total reduction in hospital length of stay was 556 days, and home accommodation as an alternative to nursing home accommodation was achieved for a total of 7505 days. The article outlines a matrix of advantages and disadvantages, both tangible and intangible, of home versus nursing home accommodation. It is suggested that a full costing of this matrix would inform debate on the comparative merits of long-term home and nursing home accommodation.

Introduction

The Home Based Rehabilitation Service (HBRS) was an allied health outreach service from a major post-acute metropolitan teaching hospital (Bairstow et al. 1997). It delivered an intensive, multidisciplinary and coordinated service which achieved the following objectives: early discharge and increased throughput of inpatients; provision of home and community-based rehabilitation targeted to the needs of patients and caregivers and less costly than inpatient services; improved links between hospital and community-based services.

A number of patients whose hospital discharge was delayed because of uncertainty about whether nursing home placement was essential were referred to the HBRS. Inpatient staff envisaged that the provision of a coordinated multidisciplinary assessment and intervention might not only achieve early discharge, but also avoid nursing home placement.

Support for the latter proposition can be found in various publications. In a review of the effectiveness of community-based assessments of geriatric patients (Smith, O'Malley & Lawson 1993) it was reported that some clients who are referred for placement in nursing homes and who meet standard criteria for admission can be maintained in the community. Furthermore, home-based multidisciplinary assessments can accurately identify needs (Quartararo et al. 1991), and the provision of home and community services may prevent or delay nursing home placement (Gunner-Svensson et al. 1984; Montgomery & Borgatta 1989; Stuck et al. 1995).

Examples of three types of cases are reported here, which illustrate how ward teams, families and patients can be assisted in determining whether nursing home placement is essential. The three types of cases are as follows.

Case type 1: The ward team has difficulty assessing in the hospital setting whether living at home is possible, even with a range of support services.

Case type 2: The ward team believes that nursing home placement is necessary, but the family wishes to care for the patient at home.

Case type 3: The ward team believes the patient can live at home, but the patient is doubtful.

Case type 1: Assisting ward teams determine whether patients can live at home

CS, a 70-year-old male with diabetes, heart disease and peripheral vascular disease, who lived alone and had no local family contacts, had a left below-knee amputation. He was unable to return to the flat which he had occupied for 15 years because of stairs. He was placed in hostel accommodation for nine weeks, then was moved to a State-subsidised independent ground floor flat in a distant and unfamiliar suburb. Nursing and other services provided in the home at this time indicated that he coped very poorly.

Four days after moving into his flat, he was admitted to hospital for prosthetic fitting and gait retraining. After another 21 days in hospital, the ward team was unsure whether to discharge CS to a nursing home, or whether he could return to his flat, for the following reasons:

- early dementia, poor insight, possible alcohol abuse
- non-compliance with medications for diabetes and a known psychiatric condition
- anger and non-compliance with rehabilitation programs, refusal to take advice on the easiest and safest way of carrying out activities of daily living
- non-familiarity with his new environment, lack of social support.

CS had minimal experience living in his new accommodation. With poor insight, he was unable to predict the difficulties he might encounter on returning home, and the ward team was struggling to prepare him for discharge.

CS was referred to the HBRS for intensive allied health input to determine whether he could be re-established at home with a range of support services. Without the HBRS, the ward team estimated that CS would remain in hospital for another 21 days before a decision could be made whether to discharge him home or to a nursing home. Accordingly, the HBRS provided a coordinated service for the 21-day early discharge period.

Once at home, CS gained insight into the practical difficulties that needed to be addressed. He became more compliant with rehabilitation programs. The physiotherapist made three home visits each week, providing the following interventions:

- practice in walking with prosthesis and walking frame
- education in correct application of interim prosthesis
- provision of strengthening exercise and a home exercise program
- education for the home visiting nurse regarding the correct method for stump bandaging
- education for a paid caregiver regarding the importance of patient compliance with the home exercise program and safe transfer techniques
- referral to outpatient services for continued gait retraining.

An occupational therapist made two home visits each week for the following:

- retraining in self-care
- retraining in meal preparation and provision of assistive equipment to promote independence
- referral to community nursing for assistance with showering
- liaison with the State housing organisation regarding home modifications required.

The social worker successfully encouraged CS to accept additional services and liaised with relevant service providers and the general practitioner to ensure that long-term needs would be met. The following community-based services were required to enable CS to remain at home:

- assistance with showering, cleaning, shopping, paying bills
- social support, assistance with providing daily structure
- daily nursing for stump bandaging, monitoring drugs and blood sugar levels
- meal delivery five times per week
- regular visits by a general practitioner.

Besides enabling CS to be discharged early from hospital, the HBRS was able to realistically assess the various facets of his needs in the home and community environment, provide CS and his various caregivers with instruction about how best to continue with rehabilitation and management, and ensure that necessary community-based services were in place. He lived at home for six months and was then transferred to hostel accommodation.

Case type 2: Assisting families determine whether patients can be cared for at home

AF was a 48-year-old male who had a Grade IV subarachnoid haemorrhage from an aneurysm on the anterior communicating artery. The aneurysm was clipped, he developed secondary hydrocephalus, had a bifrontal craniotomy, and a VP shunt was inserted. Later complications included the development of extensive bilateral cerebral infarction, removal of infected VP shunt and subsequent reinsertion of the shunt. After 276 days in an inpatient rehabilitation setting, he was still highly dependent, had no functional use of his limbs, poor head control, poor visual tracking, severe communication impairment, was doubly incontinent and required full nursing care.

While it was clear that AF was suitable for nursing home placement, his wife was committed to caring for him at home. The ward team doubted that this would be a practical possibility, but referred AF to the HBRS for intensive allied health input to help his wife evaluate whether he could be cared for at home. Without the HBRS, the ward team estimated that AF would remain in hospital for at least another 28 days before it could determine whether he could be safely discharged home. Accordingly, the HBRS provided a coordinated service for the 28-day early discharge period.

The HBRS confirmed that AF was severely disabled and fully dependent in all aspects of functioning. Without his wife, there would be no option other than nursing home placement.

The physiotherapist made three home visits each week for four weeks, providing the following interventions:

- chest monitoring and treatment
- passive movement and stretching of limbs
- instruction to the wife regarding her own back care and energy conservation techniques, and in the following aspects of patient care – hoist transfers, passive movement and stretching of limbs, bed mobility and pressure care, positioning in the wheelchair and facilitating head control, use of suction for chest care.

An occupational therapist made two visits each week for four weeks for the following:

- instruction to the wife regarding operation of the hoist and electric wheelchair, in conjunction with the physiotherapist
- provision of assistive equipment for personal care (for example, shower commode)
- liaison with a service overseeing essential home modifications.

The speech pathologist made two visits each week for three weeks for the following:

- education for the wife regarding speech dyspraxia, and instruction regarding methods of monitoring AF's speech output, and strategies for increased communication
- liaison with physiotherapist regarding communication during treatment.

The social worker had weekly contact with the wife to provide support, and arrange for the following:

- home help, assistance with turning AF at night, assistance with showering
- Domiciliary Nursing Care Benefit, disability parking permit, taxi subsidy vouchers
- liaison with dietitians regarding long-term provision of special feeds
- outpatient specialist medical review
- assessment for weekly day hospital attendance at a local hospital and assessment to allow for future respite care admission.

The following services were required and organised for the longer term:

- outpatient physiotherapy, speech pathology and social work
- home help as well as home-based physiotherapy, showering assistance, night turning
- respite care.

Besides enabling the early discharge of AF, the HBRS provided a supported trial of living at home, a realistic assessment of the needs of AF and his wife, the receipt of necessary entitlements, and referrals to services required for the longer term. AF remained living at home, attended a day hospital, and there were episodes of respite care. He was never admitted to a nursing home but was admitted to hospital with complications after 15 months, where he died.

Case type 3: Assisting patients determine whether they can live at home

WP, a 95-year-old male, had a right above-knee amputation secondary to ischaemia. A decision was made not to fit a prosthesis and after WP had been 67 days as an inpatient in a rehabilitation setting, the ward team believed he had regained sufficient independence to be discharged to his unit on a retirement estate. He had lived in the unit for some years, sharing it with his wife until she died two months before his admission to hospital.

Based on the abilities he displayed as an inpatient, there was every reason to believe that WP would be able to cope with living independently with input from support services. However, recent events had led to his losing confidence and he needed considerable reassurance that a return to his independent unit was a possibility, rather than being discharged to nursing home accommodation. The ward team referred WP to the HBRS to establish whether he could be settled back in his unit. Without the HBRS, the ward team estimated that WP would be kept as an inpatient for another 14 days in order to build his confidence. Hence the HBRS planned services for the 14-day early discharge period.

On initial home assessments, allied health staff confirmed that while WP had the ability to live independently with support services, strategies were required to combat loneliness and anxiety, and the following factors contributed to his lack of confidence:

- poor physical endurance
- poor wheelchair access within the unit
- supervision required for transfers to shower commode and assistance required for showering and dressing.

The physiotherapist made two home visits each week to achieve the following:

- practice at rolling, transfers and standing
- provision of limb mobility and strengthening exercises.

An occupational therapist made two home visits each week providing the following intervention:

- review of access to the unit and reorganisation of the internal layout to improve wheelchair access
- increase in the bed height, provision of monkey bar and bed rail for mobility and transfers
- review of kitchen skills and facilitation of independence in light meal preparation
- provision of special sheets and mattress protectors, and instruction on their use.

The social worker carried out the following tasks:

- discussion with WP about the procedure required to arrange nursing home accommodation in the future should this become necessary, in order to allay current anxiety
- liaison with WP's son regarding potential referral to Aged Care Assessment Team for assessment for possible future nursing home placement
- referral to community nursing for home help, and another community agency for home assistance.

In reorganising WP's environment to facilitate independence, improving his physical strength and confidence, and ensuring that appropriate support services were provided, the HBRS enabled WP to continue to live independently, and he was not transferred to a nursing home.

Discussion

The above cases illustrate how an intensive multidisciplinary hospital outreach service involving assessment, treatment and referral to other services can not only achieve earlier discharge from hospital, but also a trial and evaluation of whether individuals will be able to continue living in their home. It has been shown that the immediate post-hospital period can provide a 'window of opportunity' during which case-managed and coordinated care of patients can prevent or delay nursing home placement. The key aspect of the approach was intensive work with patients and their caregivers.

Considering first the achievement of early discharge, the HBRS provided services to 20 such cases (6 neurology, 5 neurosurgery, 5 rheumatology, 3 amputation, 1 orthopaedic surgery) of median age 68.2 years (range 42.4 – 95.8 years). The total reduction in hospital length of stay was 556 days (median 27.5 days, range 14–75 days). The cost of a patient day on the HBRS has been estimated on a marginal costing basis at \$67 (Bairstow et al. 1997). On the basis of the published inpatient cost per day of \$630 (Royal Perth Hospital Annual Report 1994–95), the 556 days reduction in length of stay represented a saving for the hospital of \$313 028 for these inpatient admissions.

Considering now the prevention or delay of nursing home placement, there are advantages and disadvantages for society, both tangible (that is, savings and costs) and intangible (that is, social and emotional issues), associated with people living long-term at home, or living in a nursing home (see Table 1). While a full analysis of this matrix would inform debate on the comparative merits of long-term home and nursing home accommodation, such an analysis is outside the scope of the present article. However, a number of observations from a follow-up of the 20 cases can be reported.

Contact was made during a one-week period three years after the commencement of the service to determine the longer-term status and placement of the 20 patients: 5 had eventually required nursing home accommodation, 6 had died while still accommodated in their home, and 9 were still living in their home. For the group as a whole, home accommodation (quadrants 1, 2, 3 and 4 in Table 1) as an alternative to nursing home accommodation (quadrants 5, 6, 7 and 8) had been achieved for a total of 7505 days (median 327, range 42–1065).

For the nine cases still residing in their home, a varying range of services were in place, most of which had been arranged by the HBRS, including outpatient allied health services, home visiting nursing services, home help, meal deliveries and respite services for caregivers. While no attempt was made to calculate the comparative tangible advantages and disadvantages of supported care in the home versus care in a nursing home (quadrants 1 and 3 versus quadrants 5 and 7 in Table 1), it has been determined elsewhere that the cost to taxpayers of a patient being maintained in the community is far less than the cost of being maintained in a nursing home (Smith, O'Malley & Lawson 1993).

In 14 of the 20 cases, a family caregiver had a crucial role in maintaining the patient at home. Beside the tangible disadvantages of providing accommodation and care, there were intangible disadvantages associated with performing the caring role, for example, anxiety and stress. While all caregivers who were still providing care at home at the time of follow-up remained committed to their role, no attempt was made to systematically document the intangible disadvantages (quadrants 2 and 4 versus quadrants 6 and 8 in Table 1).

Table 1: Examples of advantages and disadvantages of home and nursing home placement

		Home placement	
		Tangible	Intangible
Advantage	1	Patient/Caregiver eg, caregiver saving on travel to a nursing home Community eg, saving on direct cost of patient care	2
			Patient/Caregiver eg, better emotional support for patient Community eg, maintenance of family unit and support network
Disadvantage	3	Patient/Caregiver eg, caregiver cost of supporting patient at home Community eg, cost of modifying the home environment and providing other support for home care	4
			Patient/Caregiver eg, practical and emotional burden for caregiver Community eg, difficulty in monitoring the standard of care
		Nursing home placement	
		Tangible	Intangible
Advantage	5	Patient/Caregiver eg, caregiver saving on supporting patient at home Community eg, saving from less extensive modification of the home environment	6
			Patient/Caregiver eg, reduction in anxiety because patient has access to 24-hour professional care Community eg, relative ease of monitoring the cost and standard of care for dependent patients
Disadvantage	7	Patient/Caregiver eg, cost of subsidising nursing home care Community eg, cost of providing nursing home accommodation and care	8
			Patient/Caregiver eg, potential loss of empowerment Community eg, premature disruption of family unit and support network

Elsewhere it has been demonstrated that community-based support services can have a major beneficial impact on caregivers. For example, it has been found that caregivers who are assisting elderly persons in the community and who receive support services, including education and consultation, report lower levels of subjective burden than similar caregivers who are not receiving support services (Montgomery & Borgatta 1989).

An Aged Care Assessment Team (ACAT) performs broadly similar roles to the HBRS, such as:

- assessing people for the most appropriate accommodation
- referring individuals to services which can keep them living in their home
- recommending nursing home placement.

The HBRS did not, however, duplicate the functions of an ACAT, but worked closely with them, for example, later referring patients for assessment and approval for nursing home placement when necessary. The differences between the HBRS and an ACAT were as follows:

- the HBRS was part of the referring hospital, and there was full hand-over from each allied health worker on the wards to their respective HBRS colleague
- the HBRS provided a coordinated multidisciplinary assessment in the patient's home, followed by intensive in-home multidisciplinary treatment and intervention involving patient and caregivers over a defined period of time
- referrals to longer term services were provided after a period of intensive in-home multidisciplinary intervention, which allowed for prediction of future progress and needs in the home environment.

The above features of the HBRS were crucial in avoiding or delaying nursing home placement in the cases described, which is the reason why the patients were referred to the HBRS rather than to an ACAT.

The case studies reported in this article indicate that a modification of ACAT services to allow for intensive intervention in the home environment would extend the ability of such services to address the needs of patients and caregivers whilst determining the most appropriate long-term accommodation, services and care. A pilot program would enable a full analysis of the matrix (see Table 1) of advantages and disadvantages, both tangible and intangible, associated with people living long-term at home, or living in a nursing home.

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References

Bairstow PJ, Ashe S, Heavens M & Lithgo PS 1997, 'The Home Based Rehabilitation Service: Rationale, operation and outcomes', *Australian Health Review*, vol 20, pp 55–67.

Gunner-Svensson F, Ipsen J, Olsen J & Waldstrom B 1984, 'Prevention of relocation of the aged in nursing homes', *Scandinavian Journal of Primary Health Care*, vol 2, pp 49–56.

Montgomery RJ & Borgatta EF 1989, 'The effects of alternative support strategies on family caregiver', *Gerontologist*, vol 29, pp 457–64.

Quartararo M, O'Neill TJ, Tang C & MacMaster M 1991, 'Assessing the residential care needs of nursing home applicants', *Australian Journal of Public Health*, vol 15, pp 222–7.

Smith B, O'Malley S & Lawson J 1993, 'The costs and experiences of caring for sick and disabled geriatric patients: Australian observations', *Australian Journal of Public Health*, vol 17, pp 131–4.

Stuck AE, Aronow HU, Steiner A, Alessi CA, Bula CJ, Gold MN, Yuhus KE, Nisenbaum R, Rubenstein LZ & Beck JC 1995, 'A trial of annual in-home comprehensive geriatric assessments for elderly people living in the community', *New England Journal of Medicine*, vol 333, pp 1184–9.

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