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Should old age psychiatry develop memory clinics? A comparison with domiciliary work

AIMS AND METHOD

Memory clinics have become very popular in old age psychiatry and there is some pressure for them to be developed in old age services. However, there is little evidence to suggest that they are more advantageous over the traditional domiciliary visits or who should be seen in clinic. This was a naturalistic comparison of 76 consecutive new referrals to a memory clinic, with 74 consecutive new domiciliary requests within

the same service over the same period of time. A retrospective case note review collected the clinical features and an 18-month prospective follow-up examined the subsequent clinical management.

CLINICAL IMPLICATIONS

The two groups were characterised more by their similarities than their differences. However, the domiciliary group had greater behavioural and psychological complications. The memory clinic patients were less

likely to receive psychotropic medication and here more likely to be followed up.

RESULTS

We conclude that memory clinics might be less suitable for patients with prominent psychiatric complications. Memory clinics could complement the domiciliary model by providing early psychosocial/neuro-psychiatric approaches, although this is likely to lead to an increased clinical case-load.

Historical perspective of memory clinics

The earliest memory clinics in the UK were described in the 1980s (Philpot & Levy, 1987; Van der Cammen *et al*, 1987) and offered an out-patient diagnostic, treatment and advice service for people with memory difficulties (Knight *et al*, 1998). In the UK, the number of clinics has risen from 20 (Wright & Lindsay, 1995) to 102 (Lindsay *et al*, 2002). Memory clinics are typically multi-disciplinary and tie assessments together the same day, providing the skills of neuropsychiatry, psychology and sometimes social work. Originally, memory clinics were thought to be academic and ill-equipped (Wright & Lindsay, 1995) to provide for post-diagnostic care, but more recent clinics have integrated into mainstream psychiatric practice (Lindsay, 2001; Lindsay *et al*, 2002).

Just as community mental health teams have enabled psychiatrists to manage higher case-loads (Richardson & Orrell, 2002), memory clinics might enable psychiatrists to care for greater numbers of patients by appropriate delegation of aspects of the diagnosis and therapy to well-trained and qualified members of the multi-disciplinary team. Memory clinics have taken off with enthusiasm across the UK, yet little data is available on the type of patients who might be best suited to this very clinical model. Some evidence exists that memory clinics are more appropriate for early onset dementia (Allen & Baldwin, 1995), less cognitively impaired and

younger patients (Luce *et al*, 2001). Given the lack of evidence for memory clinics old age psychiatrists may feel unsure whether to conform and develop memory clinics, or to persevere with the traditional, and possibly less clinical, domiciliary approach. Especially because as recently as 1992, powerful arguments were given for all new referrals to be seen on domiciliary as a policy (Shah, 1992). Conversely, more recent national guidance from the National Service Framework for Older People (2001) and the Audit Commission (Department of Health, 2000) have suggested that memory clinics should have a role in dementia care.

The purpose of this study was to perform a naturalistic comparison of the memory clinic and domiciliary models of working, the aim being to look for clinical features that might characterise the model that suits patients best and evaluate their subsequent clinical management.

Methods

A total of 76 consecutive patients seen initially at the memory clinic were compared with 74 consecutive patients seen as domestic visits. All patients were new referrals to a rural old age psychiatry service. The patients were recruited from early 1998 to October 1999.



The old age psychiatry service

The service is a non-academic rural service orientated around three community hospitals over a large geographical area (2500 sq miles). The service did not provide cholinesterase enzyme inhibitor treatment at the time of this research. The two groups were naturalistically referred according to the wishes of the patient, carer or general practitioner (GP) and there was no randomisation. Nurses, psychiatrists, social workers and a nurse specialist in neuropsychiatry staffed the clinics. Once seen in the clinic, the tendency was for clinic follow-up and vice versa for domiciliary appointments. Psychiatric therapies, day hospital therapies and respite were available regardless of where they were initially seen, in memory clinic or on a domiciliary visit. The memory clinic protocol included a standardised family/carer assessment, clinical history, neurovascular physical examination and a neuropsychology battery that examined IQ, general cognitive ability, language, visual and verbal memory, and visuospatial and executive frontal lobe functioning. Brain scanning was not offered routinely; however, all patients and families are offered routine post-clinic feedback with diagnostic information counselling and to agree a subsequent care plan. All the domiciliary assessments were new referrals with a fee invoiced to the GP. The community mental health teams comprised ten community mental health nurses with no psychologist, one consultant psychiatrist and a part-time associate specialist covering a catchment of 25 000 older people.

The research nurse (D.B.) collected all the data from the notes and by face-to-face interviews with the community key workers 18 months after diagnosis.

Inclusion criteria

Patients were only included if they had a memory disorder. An ICD-10 diagnosis of dementia (World Health Organization, 1993) was not required because the service encouraged early referral before patients would meet current criteria for dementia (World Health Organization, 1993).

Exclusion criteria

Patients with functional mental illness were excluded.

Clinical variables

Demographic details included age, gender, social class and marital status. Cognitive function was estimated with the Mini-Mental State Examination (MMSE; Folstein et al, 1995). Behavioural and psychological symptoms of dementia (BPSD) were recorded using the Mini-MOUSEPAD (Allen et al, 1996). A global estimate of physical health was made using the Physical Health Questionnaire (PHQ) scale (Baldwin et al, 1993). A psychiatrist's recommendation for psychotropic medication as a result of the consultation was recorded as present or absent. An 18-month follow-up determined

the patients' clinical management in the psychiatric services.

Statistics

Statistics were analysed using the Statistical Package for Social Sciences (SPSS) version 10. Significant differences between categorical variables were examined with chi-squared tests (χ^2). Continuous variables were examined with one-way analysis of variance (ANOVA) and the *F*-ratio is quoted with the *P*-value. Where multiple variables were related to a categorical outcome, logistical regression was used to calculate the significantly independent predictors. Odds ratios are quoted with their 95% confidence interval (CI) and level of significance (*P*-value).

Results

Demographics and psychiatric characteristics of the sample

Table 1 presents a descriptive summary of the 150 patients. The characteristics of the two groups were similar, with the exception of behavioural and psychological complications (Allen et al, 1996) being more severe ($P=0.005$) in the domiciliary group.

Clinical management

As can be seen in Table 2, patients seen in clinic were significantly less likely to have a psychotropic drug prescribed, but more likely to have documented risk management, go to the day hospital and use the care programme approach. It might be assumed that it was the reduced psychiatric morbidity that accounted for less prescription of psychotropic medication in the memory clinic because urgent domestic visits are commonly requested by GPs for patients who are psychiatrically disturbed. We tested this further with a binary forward step-wise logistic regression equation. Using psychotropic medication as the dependent variable and the memory clinic and behavioural symptoms as the independent predictors, the regression showed that the memory clinic effect was the only independent predictor of less drug use, with an odds ratio of 0.32 (95% CI=0.16–0.64; $P<0.0001$).

More patients were taken on case-load post-memory clinic despite their less severe behavioural and psychological complications. As can be seen from Table 3, patients seen in clinic were less likely to need residential care or admission to a psychiatric ward. Given that entry to long-term care or ward admission are confounded by behavioural symptoms, living alone, cognitive impairment and poor physical health, logistic regression analyses were used to determine the independent predictors of these outcomes. The MMSE (Folstein et al, 1995) was the only independent predictor for long-term care (odds ratio=1.12; 95% CI=1.04–1.20; $P=0.002$) and the behavioural and psychological complications were the only



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Table 1. Summary table describing the demographic and psychiatric characteristics of the sample

	Domiciliary visit (n=74)	Clinic (n=76)	Significant difference using χ^2 or ANOVA with <i>F</i> ratio
Age	82.9 (81.2–84.7)	82.1 (80.4–83.7)	$F=0.48$; $P=0.49$
Female gender	65.8% (56)	59.5% (44)	$\chi^2=0.64$; $P=0.26$
Lives alone	30.3% (23)	35.1% (26)	$\chi^2=0.44$; $P=0.60$
Social class			
I	54.8% (17)	45.2% (14)	
II	50.0% (20)	50% (20)	
III	38.1% (8)	61.9% (13)	$\chi^2=1.45$; $P=0.83$
IV	50% (8)	50% (8)	
V	50% (18)	50% (18)	
Alzheimer's disease	39.5% (30)	36.5% (27)	
Cerebrovascular	39.5% (30)	33.8% (25)	$\chi^2=3.5$; $P=0.84$
Lewy body	5.3% (4)	5.4% (4)	
Other memory disorders	15.8% (12)	24.4% (18)	
Mini-Mental State Examination (Folstein et al, 1995)	21.4 (18.6–24.2)	21.7 (19.2–24.1)	$F=0.72$; $P=0.40$
Physical Health Questionnaire (Baldwin et al, 1993)	1.4 (0.9–1.8)	1.1 (0.7–1.5)	$F=0.45$; $P=0.50$
Behavioural and psychological complications of dementia MOUSEPAD (Allen et al, 1996)	8.6 (6.7–10.5)	5.1 (3.6–6.6)	$F=8.0$; $P=0.005$

predictor of ward admission (odds ratio=1.11; 95% CI=1.03–1.19; $P=0.004$).

despite having fewer psychiatric complications and less use (odds ratio=0.32) of psychotropic medication.

Discussion

Methodological considerations

The patients' clinical features were rated by case-note review and, as such, are subject to all the methodological limitations of retrospective research. The main purpose of this study was to gain an insight of the type of patients being seen in memory clinics, and evaluate any differences in their subsequent clinical management, in a naturalistic way. One strength of the study is that the messages are likely to have a strong clinical application for old age psychiatry services because the sample were consecutive referrals to old age psychiatry with no exclusions. Although there was no randomisation, the sample size was statistically powerful ($n=150$) and there is little literature on this subject with such a sample size or even using a control group for comparison. With this perspective the results can be interpreted as showing two major groups of findings:

- (1) The memory clinic and domiciliary groups of patients were more characterised by their similarities than their differences, with the exception of greater behavioural and psychological complications in the domiciliary group.
- (2) The memory clinic group of patients were more likely to be taken on case-load and engage with the service,

Patient characteristics

Despite the fact that memory clinics promote intervention at the early stages of the illness, the patients seen in the memory clinic had levels of mild cognitive impairment similar to those seen on domiciliary. Therefore, it would not appear that the memory clinics encouraged earlier referrals than the domiciliary service. Domiciliary fees are attached to home visits in the UK, but not clinic appointments, which might encourage a consultant to do more domiciliary visits. One might think that the GP's fee might bias the type of patient seen at home. For example, does social class, physical health or severity of dementia influence the GP's preference for a home visit? In fact, despite a wide range of patient variables such as age, social class, physical health and diagnosis, the only features that discriminated patients seen at home from those seen in clinic were the behavioural and psychological complications (Allen et al, 1996). Given the lack of controlled trials, there is very little literature to refer to that might give external validity to the findings from this study. However, in the only similar study that we are aware of, a small retrospective case-note study, Allen & Baldwin (1995) describe a similar finding, in that those patients seen by the traditional domiciliary old age psychiatry service

Table 2. Clinical management

	Domiciliary visit (n=74)	Clinic (n=76)	Significant difference (χ^2)
Psychotropic drug prescribed	52.6% (40)	27.0% (20)	$\chi^2=10.2$; $P=0.002$
Risk management	43.4% (33)	67.6% (50)	$\chi^2=8.85$; $P=0.002$
Care programme approach used	51.3% (39)	81.1% (60)	$\chi^2=14.8$; $P<0.0001$



Table 3. Outcomes at 18 months

18-month outcome	Domiciliary visit (n=74)	Clinic (n=76)	Significant difference (χ^2)
Moved to residential care	32.8% (20)	20% (13)	$\chi^2=2.6$; $P=0.078$
Psychiatric ward admission	17.1% (13)	8.1% (6)	$\chi^2=2.7$; $P=0.078$
Day hospital admission	27.6% (21)	33.8% (25)	$\chi^2=7.79$; $P=0.039$
Carers using respite	18.4% (14)	18.9% (14)	$\chi^2=0.98$; $P=0.55$
Death	15.8% (12)	14.9% (11)	$\chi^2=0.875$; $P=0.53$

were most clearly differentiated from the population seen in the local neurology/neuropsychiatry clinic by their greater severity of behavioural complications.

Clinical management outcomes

This was not a randomised trial and does not seek to predict whether domiciliary or memory clinic models have better or worse clinical outcomes. We are merely investigating naturalistic differences in management style between the two models, accepting that there are wider confounding influences. For example, the greater psychiatric behavioural disturbance seen on domiciliary appointments could be the reason why the GP requested a home visit in the first place. Other differences in long-term management will be confounded by the underlying reasons that a domiciliary appointment was requested. Patients unwilling to leave home for a clinic appointment might be reluctant to attend the day hospital for the same reasons, leading to a reduced day hospital follow-up in the domiciliary patients. Certainly, geographical distances in such a service as this will limit the input of psychiatry to community settings, and make follow-up less feasible and more rationed than in clinics. However, there were some more intriguing differences in the way patients were managed over the 18 months post-assessment period that are worth commenting on. Even after adjusting for the confounding effects of the psychiatric disturbance, fewer psychotropic drugs were prescribed in the memory clinic. Yet, memory clinic patients were more likely to be followed up. This could signify one or a mixture of three phenomena: over-prescribing in the community; under-prescribing in the clinic; or psychosocial approaches to deal with problem behaviours or carer strain instead of drugs. Perhaps the memory clinic model of care highlighted extra early interventions, which were the basis for greater follow-up. There is a growing literature of evidence supporting the psychosocial benefits for patients and carers post-memory clinic (Moniz-Cooke & Woods, 1997). In particular, Moniz-Cooke & Woods highlight the importance of formally breaking the news (Rice & Warner, 1994; Gilliard & Gwilliam, 1996), advice on dealing with memory problems (Gilliard & Gwilliam, 1996), psychoeducational programmes (Brodady *et al*, 1997) and the post-memory clinic benefits to carers (Logiudice *et al*, 1999). Most of these psychological techniques are valued during memory clinic follow-up from the service presented in this article, and could have been the main focus of follow-up and contributed to the lesser use of psychotropic drugs. Although specific early interventions were not recorded

as part of the research, qualitative review of the notes over 18 months showed routine evidence of early interventions such as breaking the news, psychoeducation and longitudinal diagnostic evaluation during memory clinic follow-up. Yet, there was little evidence of these approaches in the domiciliary patients' care, who were often not taken on case-load. Qualitative review of the notes found that the community mental health team often offered no follow-up for reasons such as they had no role, the care programme approach was not necessary, or that they felt unsure about the early interventions. Travel time was also a big factor in such a rural area as this. These perceptions might have been different were there to be more psychiatry and psychology available on regular domiciliary follow-up. Whatever the reasons for greater follow-up in the memory clinic patient group, it might be important to realise that the development of a memory clinic will lead to greater numbers of patients/carers coming onto case-load and old age psychiatrists need to consider these resource issues before developing memory clinics. Much research is required to determine the health economics, benefits and consequences of developing memory clinics in old age psychiatry.

Conclusion

We have found that the development of a memory clinic can supplement the traditional domiciliary service. There was little to suggest who might be most appropriate for clinic appointments, other than they were less psychiatrically ill. Patients seen in memory clinic might be more likely to be taken on case-load. Research of a more controlled and randomised nature is needed to find what memory clinics might add to the traditional domiciliary approach of old age psychiatry.

Declaration of interest

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