

response to an extension of value added tax. For example, Marshall's assumed elasticity of  $-1.0$  for whole milk is eight times larger than that of Oskam.<sup>7</sup> Oskam's estimated elasticity of  $-0.125$  means that a 10% increase in the price of whole milk would decrease consumption by only 1.25%. If 17.5% value added tax were imposed on whole milk the reduction in dietary saturated fat would be 0.02% rather than the 0.15% estimated by Marshall (table 4). Further, estimates of cross-price elasticities (responses to changes in other food prices) suggest further dilution of the effect of value added tax on fat consumption as consumers adjust overall diets.

There are more consumer friendly interventions for improving diet that Marshall does not consider, such as the introduction of functional or fabricated foods that do not require a change in consumer dietary behaviour. A modified food is simply substituted for the traditional food. One recent possibility is new margarine produced using plant sterols derived from naturally occurring plant extracts. Hendriks et al recently found that consumption based on one to two servings of spread per day in adults decreased serum

cholesterol by 7-10%.<sup>8</sup> At a similar cost, the functional foods provide an attractive means of reaching the consumer.

Competing interests: None declared.

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## The home treatment enigma

M G Smyth, J Hoult

Why is home treatment for acute psychiatric illness generally ignored as an alternative to conventional admission to hospital in the United Kingdom? Despite evidence showing that home treatment is feasible, effective, and generally preferred by patients and relatives, its widespread implementation is still awaited. Furthermore, no study has shown that hospital treatment is better than home treatment for any measure of improvement. In general, patients are denied the option of home treatment as a realistic, less restrictive alternative to formal admission under the Mental Health Act 1983, although the recent white paper *Modernising Mental Health Services* recommends that it should be provided.<sup>1</sup>

In any economic analysis, hospital admission remains the most expensive element of psychiatric care. Although the pressure on acute beds in inner city psychiatric hospitals in the United Kingdom is increasing—and it has reached breaking point in some areas<sup>2-3</sup>—it is claimed that managing these patients outside hospital would be out of the question.<sup>4</sup> The pressure on hospital beds has been linked indirectly with the practice of discharging psychiatric patients too early and with well publicised reports of official inquiries into "psychiatric scandals." In a recent article that was critical of the current state of British psychiatry, it was alleged that the Department of Health and health authorities had misconstrued research into home treatment and that this had resulted in a reduction in the provision of acute beds.<sup>4</sup> We aim to examine the issues, real and imagined, that are behind the resistance to treatment at home.

### Summary points

Home treatment is a safe and feasible alternative to hospital care for patients with acute psychiatric disorder, and one that they and their carers generally prefer

Hospital treatment has not been shown to have major advantages over home treatment and is more expensive

Home treatment has not been widely supported and adopted in the United Kingdom

This delayed implementation reflects criticism that is largely unfounded

Home treatment is valuable in its own right, but its ultimate usefulness is as part of an integrated comprehensive community strategy that includes assertive outreach services

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### What is home treatment?

By home treatment we mean a service for people with serious mental illness who are in crisis and are candidates for admission to hospital. A home treatment team does not stand alone. It is an integral part of the overall provision for psychiatric care and plugs a gap between community mental health teams and inpatient units. The features of an effective home treatment team are set out in the box.

### Features of an effective home treatment team

- Available 24 hours a day, 7 days a week
- Capable of rapid response—usually within the hour in urban areas
- Able to spend time flexibly with the patient and their social network, including several visits daily if required
- Addresses the social issues surrounding the crisis right from the beginning
- Medical staff accompany the team at assessment and are available round the clock
- Is able to administer and supervise medication
- Can provide practical, problem solving help
- Is able to provide explanation, advice, and support for carers
- Provides counselling
- Acts as a gatekeeper to acute inpatient care
- Remains involved throughout the crisis until its resolution
- Ensures that patients are linked up to further, continuing care

### The research evidence

Home treatment has been shown empirically to be safe, effective, and feasible for up to 80% of patients presenting for admission to hospital.<sup>5-12</sup> In these studies patients have been randomised to home or inpatient treatment at the time of admission. Five reviews have endorsed positively the overall findings.<sup>13-17</sup>

### Advantages

Research points to the advantages of home treatment. These are set out below.

#### Reduced admissions and bed use

Studies show that home treatment can reduce admissions to hospital by a mean of 66%.<sup>5-11</sup> The most pessimistic calculation, based on adequately randomised controlled studies only, yields a figure of 55%.<sup>14</sup> Those who advocate this model have never claimed that inpatient beds are no longer necessary. The disadvantages of admission to hospital include: cost, emotional trauma,<sup>18</sup> stigma (still attached by the

public to patients who have been admitted to a psychiatric hospital), delay in recognising social problems, increased likelihood of readmission (at worst, leading to the “revolving door syndrome”), and “medicalisation.” With regard to this last point, the focus in hospital may be on symptoms and behavioural conformity. Patients in hospital quickly learn that staff are interested in symptoms and this can dominate the discourse and clinical decision making. However, even when a patient is admitted to hospital, the length of stay can be reduced appreciably by home treatment. This has been described as a reduction in the stay of up to 80%<sup>19</sup> or a home:hospital bed day ratio of 17:60.<sup>15</sup>

#### Patients' and relatives' preference

We know of no study in which most subjects have preferred hospital admission to a reasonable alternative. When asked by researchers why they did not like hospital, inpatients discussed issues such as deprivation of liberty, lack of autonomy, unsatisfactory surroundings, lack of status and recognition, an emphasis on behavioural conformity, and removal from their family.<sup>20</sup>

#### Equal clinical outcomes

Studies mainly involve patients with severe mental illness (functional psychosis accounts for 75% of cases on average). Most reports show that the clinical outcome is similar in patients treated at home or in hospital.

#### Burden on relatives

Carers are more willing to help the patient at home and avoid the disruption and trauma of admission when they know that immediate help is at hand. Carers witness at first hand the interaction of staff and patients and are better informed about the disorder and the management of eventualities, and of the rationale for different drug treatments. In hospital, carers may never see the medical or nursing staff working directly with the patient.

#### Better service retention

Higher patient satisfaction should not be dismissed as a “soft” finding. This preference is reflected in significantly higher rates of service retention for home treatment compared with standard hospital treatment.<sup>11 17</sup> This issue is central to good psychiatric practice.

#### Other advantages

There are rich descriptive and conceptual studies of the widely differing impact of hospital admission or home treatment on the lives and experience of patients and their families during an acute episode.<sup>21-23</sup> Avoiding admission to hospital provides a critical opportunity to alter for the better the personal set of meanings surrounding mental illness and to impact on the trajectory and personal narrative of the psychiatric patient's experience of his or her illness. These meanings attract powerful emotions and can affect the patient's clinical condition and become inseparable from the individual's life history.<sup>24</sup>



SUE SHARPLES

## Problems of implementation

Since the research evidence points in its favour, why has implementation of home treatment in the United Kingdom been delayed? Mosher believed that early opposition in the United States resulted from resistance to change and a desire to protect vested interests within the medical profession.<sup>25</sup> UK research reports which view home treatment positively have commonly been accompanied by critical editorials written by those with no clinical experience in this area.<sup>26,27</sup> These critiques reflect the polarised debate around an unhelpful dichotomy between hospital and community care. They highlight issues which are discussed and refuted below.

## Specific criticisms

### Burnout among staff

Until recently there has been no research at all on the phenomenon of burnout in members of home treatment teams. This lack of evidence has not, however, stemmed speculation. Minghella et al found low levels of burnout and significantly higher job satisfaction in home treatment teams compared with results from a previous large study of community mental health nurses and ward based staff.<sup>12</sup>

### Homicide and suicide

In the 25 years since home treatment became reality, there has been only one reported instance of homicide carried out by a patient who was participating in an experimental home treatment initiative.<sup>10</sup> All the other homicides perpetrated by psychiatric patients over this period occurred while they were being treated by other parts of the mental health service. The most recent meta-analysis concurs with previous reviews—it finds no evidence for higher rates of suicide or deliberate self harm in patients having home treatment compared with hospital care.<sup>17</sup> The risks of suicide and homicide remain a critical issue in the decision to admit patients to hospital when there are other options. However, recommendations for admitting these patients have been advanced in the published reports on home treatment.<sup>5</sup>

### Sustainable and generalisable

It has been claimed that home treatment is not generalisable or sustainable. In Madison, Wisconsin, and in Sydney, Australia, model home treatment programmes are still going strong after 20 and 17 years respectively. The Madison model, which included a mental health crisis team, has had a major impact on US psychiatric care. After the Sydney initiative, emergency mobile psychiatric teams were developed in several Australian states. In north Birmingham, the availability of home treatment has expanded so much that it is the first line of response for psychiatric emergencies in a population of over half a million.

## Conclusions

Negative editorial propaganda is not the sole reason for delayed implementation of home treatment in the United Kingdom. We suspect that the rapid developments in community psychiatry involving closure of

institutions; cuts in numbers of psychiatric beds; and a high profile culture of blame after tragic, untoward events have created the sort of environment that promotes the more defensive practice of psychiatry. It is worth remembering that these most unfortunate events have occurred even though home treatment is not widely available.

Sophisticated evaluation of the clinical and other factors that determine admission to hospital with acute psychiatric illness remains a neglected area in the United Kingdom compared with the United States.<sup>28,29</sup> As clinicians faced with the daily decision to admit or not, we believe that the availability of home treatment allows us to scrutinise the factors influencing this decision in a more refined way. We mostly decide on home treatment as the preferred option to hospital admission, but we also recognise when this is not a safe or feasible alternative. It is our experience that the availability of home treatment in parallel with hospital admission means that beds are readily available (rather than too few) when we need them. This further promotes safe practice. Rapid response alleviates suffering and stems the patient's clinical deterioration and the social escalation that commonly dictate admission to hospital. Finally, while endorsing home treatment in its own right, we also emphasise that its ultimate usefulness is within the context of an integrated comprehensive community strategy that includes assertive outreach provision.

Competing interests: None declared.

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## Home treatment—enigmas and fantasies

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It is vital to be clear about what Smyth and Houlton are not considering in their review. Politicians and health service managers are under pressure to establish comprehensive, 24 hour psychiatric crisis intervention services and telephone help lines. They are being lobbied by enthusiasts for crisis theory, who advocate that short term psychiatric input should be given to people experiencing serious life stresses in order to help them develop greater psychological strength for the future.<sup>1</sup> Some inexperienced clinicians have bowed to this pressure and established crisis services that are as unsuccessful now as they were during the 1960s and 1970s. With a few exceptions, evaluations are not published, probably because failures of these teams are so embarrassing. This is compounded by the political difficulty of closing down a service once it is established—so the waste of time, for patients as well as staff, and public money continues. Our local trust managers established an out of hours crisis team, but fortunately conducted a pilot study before committing themselves to longer term funding. Not surprisingly, assistance was not requested by or for mentally ill people and the team became involved with emotional and social problems. It cost an average of £1500 for each call out (internal report available from AJP on request).

Consultant psychiatrists see it as their duty to resist any diversion of resources from those people with the most severe psychiatric and neuropsychiatric illnesses. In spite of Smyth and Houlton's apparent approval of crisis intervention theory,<sup>2</sup> they seem to have focused fairly successfully on people with serious and enduring mental illnesses.<sup>3</sup> Why then do most UK psychiatrists remain opposed to the introduction of these emergency home treatment teams?

### A cause for concern

Firstly, enthusiastic reports of treating patients undergoing severe psychotic relapses outside hospital are a cause for concern. Here is an example. "Mark, a 20 year old schizophrenic ... began hallucinating and hearing voices earlier this year. In the middle of an acute attack in which he was threatening to kill people, his father took him to Highcroft Hospital in north Birmingham. Mark was on the brink of being admitted as a psychiatric inpatient when a unique team of mental health professionals stepped in and took him home, saving him from what can often be a disruptive and frightening experience ... [The] 24 hour crisis service

... visited Mark up to three times a day until he was well enough to be transferred to a key worker."<sup>4</sup>

We are keen exponents of community care, but we are not heroic clinicians. If Mark lived in our area he would have had a permanent key worker who would be trying to prevent this situation. If this failed, the key worker would decide—in collaboration with Mark, his family, the consultant, and the general practitioner—when admission to hospital was necessary. Mark would be admitted to hospital until the ward and community multidisciplinary teams could advise his consultant, who would make the final decision on a discharge date. Houlton's other tales of "derring-do," such as driving around on home visits accompanied by an acutely psychotic patient who had relapsed, fail similarly to impress.<sup>2</sup>

### Lack of professional respect

Secondly, devotion to this model of care seems to have led to a lack of respect for other clinicians. Psychiatrists in Birmingham or Sydney or Wisconsin face different challenges from, for example, colleagues in the West of Scotland, where so many referrals for admission are related to alcohol or drugs. Smyth and Houlton are particularly unfair to imply criticism of psychiatrists in central London who are trying to cope with the extremes of inner city psychiatry (see their reference 4). Even Smyth and Houlton will surely accept that it is difficult to be enthusiastic about emergency home treatment when many patients do not have a home.

### Outdated

Thirdly, the research cited in favour of home treatment teams is out of date since it compared a package of assertive community treatment with old fashioned asylum care. Nowadays, community mental health teams provide long term assistance to people with major mental disorders throughout their relapses and remissions. Smyth and Houlton concentrate on incident referrals or rereferrals and do not seem to appreciate what it is like to work with patients with incurable conditions over many years. No keyworker would wish to transfer care in the community to another team just when a patient whom they have known for years is going through a personal crisis or a relapse of their illness.

### Ignoring general practice

This issue of continuity of care brings us to the most important flaw in Smyth and Houlton's home treatment

model, at least as it applies to the United Kingdom. They ignore the role of general practitioners who have known their mentally ill patients for years, and sometimes for decades. Smyth and Hoult's summary of an effective home treatment team emphasises practical assistance, counselling, use of medication, knowledge of underlying social issues, involvement with patients and carers for as long as necessary, and 24 hour availability seven days per week. This describes the primary care system in Britain. General practitioners cannot carry out the most labour intensive parts of treatment, but unlike the staff of home treatment teams they are properly trained as gatekeepers to appropriate secondary care and they carry out this function more effectively than other health professionals.<sup>5</sup>

### Accepting the advantages of community care

In the end, disagreement about the desirability of emergency home treatment teams (and crisis intervention services) boils down to whether or not one accepts the advantages for patients of continuity of care from general practitioners and specialists. We accept that some people with chronic psychotic illnesses fall through the safety net of community care and that

general practitioners cannot always give enough time to patients when they are facing health or social crises. We know that communication between community mental health teams, general practitioners, and inpatient units could be improved, and we are only too well aware that staffing levels and facilities in some psychiatric wards are inadequate. However, clinicians and health service managers should be doing everything in their power to tackle these shortcomings. Their efforts can only be hampered by costly, short term psychiatric treatment teams that are totally unnecessary within the health care system of the United Kingdom.

Competing interests: None declared.

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### *A patient who changed my practice*

#### How we improved our treatment of hypertension

In my early years of general practice I was enthusiastic about controlling blood pressure. One particular patient, a retired civil servant, presented with a sore throat, and an incidental finding showed a blood pressure of 200/130.

I was not sure how much of this was caused by meeting a new doctor so I took his blood pressure several times and it continued to be high. A general physical examination was unremarkable apart from a soft ejection systolic murmur at the left sternal edge. In particular, he had no protein in his urine and his fundi showed only grade 1 retinopathy. Baseline investigation showed his renal function was normal, mid-stream urine specimen was negative, and serum urate was normal. I initially started him on bendrofluazide at a dose of 5 mg a day, which was the accepted starting dose in those days in our practice. His blood pressure came down to only 200/120 after five weeks of treatment and necessitated an addition of atenolol 50 mg a day. His blood pressure came down a little further to 170/100. However, as he had no side effects from his medication, I increased the dosage of bendrofluazide but omitted to check his electrolytes. He developed cold fingers at this stage although his blood pressure was normal. I stopped his atenolol and prescribed nifedipine.

Two months after the increased dose of bendrofluazide he collapsed. His wife described this as him going very grey, nearly blacking out, and then being profusely sick. He did not have any obvious seizure. He was seen by a local GP who found nothing abnormal but advised that someone else should drive him home. He had another similar turn later in the day and was admitted to hospital. He was found to have hypokalaemia—his potassium level was only 2.7. He was treated with intravenous potassium and his diuretic dose was reduced to 2.5 mg of bendrofluazide.

I have seen this patient frequently since then as his blood pressure has proved quite difficult to control and has necessitated use of different ACE inhibitors. A referral to the cardiologist has shown that his heart murmur was not due to any structural abnormality as an echocardiogram was normal.

Over the years I have built up quite a strong relationship with him and I am always interested to hear about his trips to Italy where he visits his daughter and grandchildren.

I have always felt responsible for inducing his hypokalaemia. However, I have subsequently written various protocols for the practice to follow in controlling hypertension, including the suggestion of a starting dose for bendrofluazide of 2.5 mg a day<sup>1</sup> and not increasing this dose because of the increased risk of side effects. Ideally, serum electrolytes should be checked both before and after starting treatment and on an annual basis while on treatment. I have also been involved in searching our practice database for patients who are on high doses of thiazide diuretics and have changed them all to the maintenance dose of 2.5 mg bendrofluazide. We are also scrutinised by our local prescribing department of the Prescription Pricing Authority, which as one of its quality markers of prescribing provides the ratio of bendrofluazide 2.5 mg to 5 mg a day. We are now one of the better performing practices in the Exeter area at maintaining this ratio.

I hope that through my overzealous use of diuretics we now have a better control of patients with hypertension and certainly have fewer episodes of drug induced hypokalaemia.

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- 1 Carlsen JE, Kober L, Torp-Pederson C, Johansen P. Relation between doses of bendrofluazide, anti-hypertensive effect, and adverse biochemical effects. *BMJ* 1990;300:975-8.

We welcome articles of up to 600 words on topics such as *A memorable patient, A paper that changed my practice, My most unfortunate mistake*, or any other piece conveying instruction, pathos, or humour. If possible the article should be supplied on a disk. Permission is needed from the patient or a relative if an identifiable patient is referred to. We also welcome contributions for "Endpieces," consisting of quotations of up to 80 words (but most are considerably shorter) from any source, ancient or modern, which have appealed to the reader.