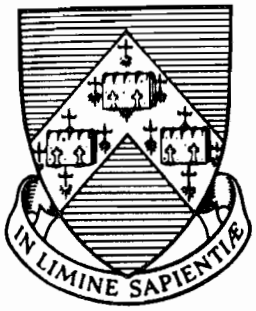

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Cost-Effectiveness in Community Care

by

KEN WRIGHT

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in

COMMUNITY CARE

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Abstract

This paper summarises the cost-effectiveness work which has been carried out on alternative patterns of care for elderly people, people with a mental handicap and people with chronic mental illness. The amount of work completed varies according to the client group concerned. There is, for example, a considerable number of studies on the care of elderly people which have helped to inform policies on the provision of services across many forms of care. There is much less work on which to draw for the other groups of people. A summary of policy conclusions is set out at the beginning of the paper and a review of the cost-effectiveness studies follows in the next three main parts. The methodology of cost-effectiveness in community care is set out in an appendix.

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SUMMARY OF MAIN POLICY CONCLUSIONS

Care of Elderly People

(i) Care at home is cost effective for the great majority of elderly people. Costs are lower than in other forms of care and the preferences of the elderly people themselves are met.

(ii) Residential care can also be very satisfactory for a minority of elderly people with a range of characteristics according to their preferences.

(iii) On the margins of the different forms of care there are several groups of people for whom the cost-effectiveness of different forms of care is more uncertain. Taking these groups in turn the current evidence suggests that:

(a) Housebound people living alone may find it difficult to cope at home especially if they feel very lonely and insecure. Good management and a guaranteed delivery of intensive domiciliary care supplemented by day and respite care can keep substantial numbers of frail elderly people at home. Possibly around one-third of applicants for local authority residential care could be kept at home with appropriate services. Recent evidence suggests that only a small (17%) proportion of people entering private residential care could have been maintained at home.

(b) Very disabled people at home with carers in danger of not being able to cope would also benefit from similar schemes of intensive domiciliary care. Success will depend on care organisers having command over the necesssary resources. This conclusion applies to people on the margin of hospital, nursing home or residential care.

(c) Disabled people already in residential care are often classified as "misplaced" but this ignores the needs of elderly people for continuity and 'homely' types of care.

(d) Some elderly people in continuing care wards in hospitals may well have been placed more efficiently in a nursing home (public or private).

(iv) There is also considerable scope to improve cost-effectiveness within each form of care. For example:

(a) In domiciliary care there is a need to recognise the importance of housing aspects because appropriate housing accommodation:

- allows elderly people to stay put and reduces the demand on scarce specialised housing
- prevents admission to long-term care
- substitutes for domiciliary services.

Recent evidence suggests that elderly people who are owner-occupiers are able and willing to finance in whole or part their own improvements,

repairs and adaptations, but need advice, encouragement and information on all the administrative, technical, legal and building work involved. Similar schemes need to be devised for the rented (public and private) sector.

(b) In residential care good qualtiy care does not appear to be associated with greater cost in the local authority sector or higher charges in the private sector.

(v) Current policies offer elderly people much greater choice about forms of care. This desirable development has two implications:

(a) Elderly people with similar characteristics will be found in each of the different forms of care. This reflects their different preferences not necessarily inefficiency.

(b) A policy priority should be to enable elderly people to make informed choices about all the different services and forms of care open to them. There should be a detailed examination of the relative advantages and disadvantages of allowing users to choose services they wish to use or giving the power to allocate services to an "appropriate professional".

2. People with a Mental Handicap

(i) There are no British cost-effectiveness studies of alternative forms of care for people with a mental handicap although major research projects have been commissioned for England and Wales.

(ii) There is a small amount of information on the costs of different forms of care. These suggest that community care will be more expensive for people with greater physical or behavioural disabilities. Costs also tend to increase as size of community unit decreases.

(iii) There is general agreement that the quality of care in the community is greater than in hospital. Quality of care may well improve as the size of unit decreases. However, judgement about cost and quality of different types of provision must await further work now in progress.

3. People with a Mental Illness

(i) While it may generally be held that community care is preferable to hospital care, there are no British cost-effectiveness studies of alternative forms of community care for people with chronic mental illness. Some work is in progress but until more evidence is available it is not possible to provide appropriate policy guidance.

COST-EFFECTIVENESS IN COMMUNITY CARE

Foreword

The cost-effectiveness work that has been carried out in the care of elderly people, people with a mental handicap and people with mental illness are reviewed in the three main parts of this paper. The picture presented is a very varied one. In the care of the elderly there have been numerous studies to draw on and there is also a considerable amount of closely related work which can be used to supplement the results of cost-effectiveness analysis. In addition, although there continue to be innovations in the methods of care for elderly people, the main forms of care have been established for many years and it has been possible to make comparisons between them in terms of how well they provide a satisfactory life for elderly people. For the other two main groups of people, the major form of care has been provided in hospitals, new community-based facilities are being developed but progress is slow and unevenly distributed throughout the country. In the case of people with a mental handicap the generally favoured form of care is moving towards the provision of small units offering homely care and promoting an 'ordinary life' for the people who live in them. However, the cost of small units for people who need regular full-time care and supervision can be very costly and the disparity between the cost of caring for such people in the community as compared with hospitals or larger residential homes is acting as a deterrent to their development in some authorities. For people with a mental illness progress to community care has been very

slow and there is a dearth of information on both the costs and the effectiveness of different forms of care in Britain.

The three parts reflect this imbalance in the cost-effectiveness work. It would be possible to write a book about the evaluation work in the care of elderly people and Part I has had to summarise a great deal of work to keep it of a manageable length. For the other two groups the search for suitable British studies has proved fruitless. It is significant that in a recent critique of economic appraisals in health care (Drummond et al, 1986) no British study of alternative forms of care for people with a mental handicap and only one British study of care of people with a mental illness were deemed worthy of inclusion.

Each client group is considered in the following parts and a concluding part is added to bring together some of the issues which are common to all groups.

Part I

Cost-effectiveness and Balance of Care for Elderly People

I. Introduction

The purpose of this paper is to review the work that has been carried out on the cost-effectiveness of alternative forms of care for elderly people in the UK. In particular, a number of studies are analysed in terms of the methodology used and the policy conclusions that emerge from the results. Although most balance of care studies are concerned with alternative forms of care e.g. care at home, in residential homes, nursing homes and hospitals, there have been several studies which have examined the cost-effectiveness of alternatives within one form of care, e.g. intensive domiciliary care schemes. It was therefore considered useful to include some of this work on the grounds that in trying to achieve a "correct" balance of care, it is important to achieve and compare best practices (i.e. most cost-effective) within each form of care.

The methodology of cost-effectiveness of alternative forms of care is explained in the Appendix and emphasis is placed on the criteria by which cost-effectiveness studies can be assessed. A review of several British studies is set out in Section II together with their results and the implications for policy. In Section III some of the current developments in the care of the elderly are reviewed and the final section is concerned with the present state of the art of cost-effectiveness

analysis in policies for the care of elderly people and possible methods of ensuring efficient provision of care in the future.

II A Review of Cost-effectiveness Analysis of Alternative Patterns of Care for Elderly People

A comparison of the major British studies on the balance of care for elderly people at home, in residential care and in hospitals is set out in Table 1 overleaf. The comparisons are made in terms of the comprehensiveness of the cost categories. None of these studies has been able to carry out work on the relative effectiveness of different forms of care. In addition they have been unable to cost informal help. Both these major omissions have therefore limited the policy relevance of much of the work. However, if all this work is taken as a research programme, some interesting policy implications emerge.

There are three main problems in interpreting the results of this work:

(i) Economy or neglect. Many very dependent people are maintained in the community at costs below that of the local authority residential homes for the elderly and of long-stay hospital care. However, a few authors have been concerned that this lower cost is achieved through depriving dependent people of the level of services from which they would gain most benefit. This problem

Table 1

Costs used in the comparative studies

Location and author	Hospital			Residential Care			Community Care		
	Capital	Running Cost	Personal Consumption	Capital	Running Cost	Personal Consumption	Housing	Personal Consumption	Services
Essex Wager, 1972	Not included in the study			Yes	Yes	Yes	Yes	Yes	Yes
London Boroughs Plank, 1977	Not included in the study			Yes[a]	Yes	No	Yes[b]	Yes	Yes
Birmingham Opit, 1977	No	Yes	No	No	Yes	No	Yes[c]	Yes	Yes
Aberdeen Mooney, 1978	Yes	Yes	No	Yes	Yes	No	Yes[d]	Yes	Yes
Humberside[e] Ferguson & Bagnall, 1979	No	Yes	No	?[f]	Yes	No	Yes[c]	Yes	Yes
Yorkshire, Midlands & London Wright et al., 1981	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Several areas Tinker, 1984	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: (a) included as interest charges
(b) included as public expenditure flows
(c) included as amount spent on housing(e.g. rent, rates)
(d) based on rateable value
(e) This study also included costs of informal help provided
(f) Not clear from study whether capital counted as interest payments

occurs because the studies cost services actually delivered rather than those which might maximise benefit.

(ii) The neglect of costs of the informal sector. Very few studies have been able to document the work carried out by the families and friends of the dependent person. If an elderly person is well maintained by an active relative, the costs on the public sector can be very low. However, the costs to the relative in terms of the physical and psychological strain involved or the loss of employment and wages and loss of leisure are ignored, but may be quite substantial.

(iii) The lack of benefit measurement. The concentration on costs can be misleading if the relative benefits of different forms of care are quite different from the relative costs. For example, if it is quite cheap to maintain someone in their own home until they reach a heavy state of dependency, people may be kept at home until their state of dependency is so great that they find it difficult to adjust to any change in the mode of care.

Despite these difficulties it has been possible to produce results which indicate how different forms of care produce a cost-effective range of services. There are, though, certain groups of people for whom

it is not very clear which services will produce the most efficient form of care. These groups are set out below and then discussed in detail in the following subsections:

(i) people who were housebound, lived alone and had no close relatives living near to them;

(ii) very disabled people living at home with a helper who had difficulty coping with the daily care routines;

(iii) slightly disabled and very disabled people in residential care;

(iv) people in continuing care wards in hospitals.

Each of these groups is considered in turn.

1. Housebound people living alone

The problems faced by housebound people living alone were identified particularly in the York study (Wright, Cairns & Snell, 1981). The costs of caring for people living alone were found to be increasing with disability, but there was only a small number of people in the sample who were more disabled than not being able to walk out of doors without help from someone. This is not surprising given that only about 3.8% of elderly people living alone cannot walk out of doors without help and only 0.8% are unable to walk around the house or flat (Hunt, 1978).

Further support of this evidence of the risks of living alone for elderly people comes from two separate sources. The first of these is evidence from other European countries. In a recent survey of economic appraisals of strategies for the health care of the elderly (Wright, 1986) it was found that one major cause of the breakdown of care at home was the social isolation of living alone and the ensuing feelings of insecurity and loneliness. Low incomes and unsatisfactory living conditions (lack of basic amenities) were also factors which encouraged people who lived alone to seek admission to residential care.

The second source of support comes from studies of people entering or awaiting admission to residential care. Recent studies show that a large proportion of people waiting for admission are living alone (Sinclair, 1986). An analysis of recent admissions to all forms of residential care showed that 29% of people admitted to local authority homes, 47% to voluntary homes and 33% to private homes had previously been living alone (Darton, 1986). In addition 35% were admitted to local authority homes from hospital and it is possible that a large proportion of these people would have been discharged to live alone in their own home.

The York study showed that the cost difference between residential care and care at home for people living alone but not receiving any services was £30 per week (1977 prices). This was the equivalent of

approximately 20 hours of home help per week. One of the important subsequent research questions has been whether or not such a level of service delivery would keep at home a moderately disabled person living alone. The results of the Kent Community Care experiment (Challis & Davies, 1986) suggest that well organised community care can achieve such a result. The key components of this approach appear to be case management and the social workers' ability to ensure that a prescribed set of services is delivered.

Where social workers are unable to ensure the delivery of a suitable set of services they are more likely to refer to residential care many of the people at risk. There is some evidence that about one third of applicants for places in local authority residential care could be maintained at home with a guaranteed delivery of intensive domiciliary care (Sinclair, 1986). However, it must be stressed that this opinion has never been put to the test for local authority care. For admission to private residential care recent work suggests that only a small proportion (17%) of people entering care could be/have been kept at home with an appropriate mix of services (Bradshaw et al, 1987).

This group of people were also found to be using day hospital care for 'social' rather than rehabilitative reasons (Donaldson, Wright & Maynard, 1985). The Consultants were, in effect, using the service over which they controlled access and avoiding services

where they had little or no influence on resource use.

2. Very disabled people at home with carers unable to cope

Although none of the studies set out in Table 1 was able to cost informal care, most of them were able to point out the consequences of failing to provide services which supported and complemented the help of carers. The most common household with this problem is that of the married couple elderly household where one spouse is too frail, ill, disabled or fatigued to provide regular daily assistance to the other. In the cost-effectiveness studies the provision of community care looks cheap because the informal carer is substituting for the statutory services. This is why many studies and notably the London Boroughs study (Plant, 1977) have complained that the costs of community care are low because standards of provision are low. All the studies have in fact been concerned with the costs of services presently delivered rather than the costs of the optimum set of services.

The alternative form of care for people being nursed at home by a spouse is often hospital or nursing home care rather than residential care because the person in need of help is usually very disabled. In these cases the cost difference between care at home or in hospital is £75 per week (1977 prices),

(Wright, Cairns & Snell, 1981). Again this means that there is considerable scope for the use of intensive domiciliary care schemes and there is growing evidence that these schemes can be very cost-effective when aimed at supporting and complementing informal care. So far good results have been shown to augmented nursing schemes (Gibbins, et al, 1982), home care for the elderly mentally infirm (Kyle, Drummond & White, 1987), hospital-at-home (Wright & Haycox, 1982) as well as the Kent Community Care scheme previously cited. Unlike the Kent scheme the other three schemes do not use case management, but the success of the schemes is related to the command that a clinician or nursing officer has over the required resources which in these cases are mostly community-based nursing staff augmented by other domiciliary care services, day care and respite care.

However, an important factor in demonstrating the cost-effectiveness of these schemes has been the use of hospital costs in comparison with community care costs. If the comparison had been made with nursing home care instead of hospital care the results may have been different since nursing home costs are about 40% lower than hospital costs (Audit Commission, 1986).

Some recent studies have pointed out that the provision of more domiciliary care may not affect carers' preference to see the person they are helping move into residential care. For example, a study of people suffering from senile dementia noted that where carers lived in separate households or were employed, they saw residential care as a preferred option

for the old person because it preserved job opportunities or prevented co-residency. (Gilhooley, 1986). One of the difficulties, however, in this study is to ascertain whether a lack of correlation between service provision and preferences for residential care is due to the ineffectiveness of domiciliary care or the failure to provide the right type of service at the right time.

3. Slightly or heavily disabled people in residential care

Concern has been expressed in recent years that residential care is being used on the one hand to care for people who need a considerable amount of daily nursing care and on the other hand to care for people who appear to be very independent. It was thought that dealing with more disabled people would cause the costs of residential care to increase for two reasons. Firstly, that the conditions of service for residential care staff provides for increases in salary gradings where residents are generally more disabled than usual and secondly that staff time in a home will go increasingly to people who need regular help with personal care routines. The first of these reasons is easy to detect and homes which are designated for higher grades of pay generally cost more than other homes (Wright, Cairns & Snell). The second reason is more difficult to establish. Certainly, homes with a greater than average proportion of very disabled people are likely to have above average costs per resident (Darton and Knapp, 1986). The difficulty arises when information is needed on the effect on costs of increasing the proportion of very disabled people within a particular home, which already has staff paid on the higher salary grade. There are very few homes in this category which makes for difficulties in compiling a suitable sample for statistical analysis. However, there is a further problem which relates

to costs and outputs rather than average cost per resident week.

There has been considerable discussion in the literature about 'misplacement' of people in residential care. This discussion has focussed on the minimally disabled who could be kept at home and very disabled people who might be better cared for in hospitals. This would imply that residential care would be provided for people in a 'medium' type of dependency range. However, to achieve such uniformity may present considerable difficulties. One has already been mentioned and this is the cost and risk of leaving people to live alone in their own home. The second is concerned with the problems of switching disabled people between forms of care. One of the main objectives of residential care is to provide a substitute 'home' for people who cannot manage on their own. Once settled into that environment, people will accept the place as 'home', to move them on when they become disabled would not reflect a caring attitude or the provision of 'homely' care. Thus, many of the people in residential homes who are very disabled have become more disabled during the term of their residency. The important outcome of residential care is the provision of continuing 'homely' care over several years for people who become too frail (mentally and/or physically) to maintain themselves in their own home. Once that is accepted a distribution of disabilities of residents is to be expected. More

recent admissions will tend to be slightly disabled and people with the longer length of stays will tend to be more disabled. Comparisons of this distribution of disability with other forms of care and talk of 'misplacement' is not very helpful. Instead, attention would be centred on admission and the need to explore alternative forms of care, especially the effectiveness of intensive domiciliary care, and transfer to hospital care or specialised facility (e.g. for people with severe mental illness) if the staff in the home can no longer cope with the necessary demands for care.

4. People in continuing care wards in hospitals

One of the problems of the cost-effectiveness studies has been the inability to identify hospitals which provide different standards of care. In the York study, the hospitals that were costed provided fairly basic care and there was a general lack of day space, privacy, choice and other factors which the Health Advisory Service would deem satisfactory (see Health Advisory Service Annual Report 1985-86, p.18).

The main alternative to hospital care for these people will probably be nursing home care. The NHS nursing home evaluation is still in progress. Private nursing home care offers a good alternative for many people at costs which are well below those of hospitals (Audit Commission, 1986). Health authorities in some parts of the country have also been able to contract-out patient services to nursing homes at considerable

saving to the NHS (Wright, 1985), but this policy has been undermined to a great extent by the growing use of social security to meet board and lodging charges.

III. Cost-effectiveness within each form of care

The previous section was concerned with comparisons across different forms of care. There have been some important studies on the costs and/or effectiveness within forms of care which are summarised below.

1. Community care

Apart from the development of intensive domiciliary care schemes previously cited, the important recent contributions to helping the elderly stay in their own homes have centred around the provision of good standard housing accommodation. Sometimes this has been sheltered housing or very sheltered housing. The people who have been able to rent or buy this accommodation have secured a safe, clean, warm and easily maintained domestic environment (Butler & Oldham, 1984). However, one of the main worries has been that the demand for this type of dwelling greatly exceeds the supply and, consequently, there has been a search to find ways of maintaining, improving and adapting dwellings to bring a similar domestic environment within the reach of all elderly people. The benefits of encouraging elderly owner-occupiers to liquidise and use the equity locked up in their houses were clearly demonstrated in the "Staying Put" evaluation (Wheeler, 1985). Over the last year or two a number of schemes operated by voluntary societies, housing associations and local authorities have been developed to advise and help elderly people to proceed with the required building work.

The lessons that are emerging from this work are that it is impossible to separate the housing aspect of care from the delivery of an appropriate set of domiciliary services. Agencies which have been established to deal specifically with housing matters have quickly found themselves involved with advising on matters such as entitlement to supplementary benefit and the access to various domiciliary services. There is a parallel here between the need to provide comprehensive information, advice and practical asistance and the lessons learned from the Kent Community Care experiment on the need for case management.

The role of suitable housing accommodation in the prevention of both ill health and the need for domiciliary services has only just started to receive the attention it deserves from researchers and policy-makers. The co-ordination of help across a wide variety of voluntary statutory and private agencies will present an interesting challenge for methodological and practical work.

The role of housing in the community care of elderly people is one under-researched area, the various forms of day care (in hospital day centre or at home) are also lacking in evaluation and it is far from clear which is the best form of day care for very frail people who do not need medical care but often need help with personal care routines and are often at risk in terms of paucity of social contact and lack of useful occupation.

2. Residential and Nursing Homes

Some useful research has been carried out in recent years with methods of improving care in residential homes which is probably applicable to nursing home and hospital care. This research has highlighted the factors which improve the residents' satisfaction with the place and style of care. The important qualities in this respect have been found to be the control that a person has over the organisation of daily activities, ease of access for visitors, privacy and an appropriate mix of people in terms of the physical and mental impairments they suffer (Kellaher, 1986). Alternative styles of care have not been costed, but it is interesting that a general analysis of the costs of residential homes provided by local authorities found that high costs were not associated with high standards and quality of care (Darton & Knapp, 1986).

This conclusion has been reinforced by a study on value for money in private care where it was found that the best quality homes as assessed by Registration Officers in Local Authorities were not always the most expensive ones (Bradshaw et al, 1987).

IV Future Research

The balance of care models set out in Section II were very useful in developing the necessary methodology for comparing the relative efficiency of different forms

of care for elderly people and pointing out some of the major risk factors which cause the costs of community care to rise rapidly. However, they were carried out at the level of major strategic policy appraisals while their results pointed out the need for more detailed evaluation for particular groups of people using carefully prescribed sets of services.

The encouraging element about policies for the care of elderly people is the increasing variety of choice of forms of care which are now being established. One implication of this is that it is to be expected that elderly people with similar characteristics will be found in different forms of care. This is not to be taken superficially as a sign of inefficiency, when it is a result of revealed preferences. The future research agenda needs to include some experiments on different methods of helping elderly people to make informed choices. Present experiments such as the Kent Community Care scheme and the various housing agency services provide some important foundations on which to build future research but they need to be expanded to encompass all aspects of advice and service delivery across the whole range of services irrespective of whether they are administered by DHSS, NHS authorities, local authorities, private organisations or voluntary bodies. At the same time work is needed on several aspects of care including:

(a) ensuring that the factors associated with good quality care in residential homes are applied in both the public and private sector; to nursing homes (public or private) and to geriatric hospitals;

(b) ensuring that domiciliary care services are tailored to individual requirements;

(c) experimenting with different methods of day care;

(d) attempting to identify an optimum mix of public and private residential and nursing home care in particular localities;

(e) developing comprehensive community care schemes which recognise the importance of the role of satisfactory housing accommodation in complementing or substituting for care services;

(f) ensuring that a thorough assessment is made before elderly people are encouraged to leave or discouraged from returning to their own homes;

(g) developing good case management to advise elderly people on all aspects of the alternative forms of help which are available to them.

V. Policy Implications

1. For the great majority of elderly people the costs of care at home are lower than the costs of residential, nursing home or hospital care. Since most elderly people would prefer to remain in their own homes, community care is clearly the most cost-effective alternative for them.

2. Elderly people can be helped to stay at home by ensuring that they occupy satisfactory housing accommodation. House owners can find help to maintin their properties through the housing grants system. Owner-occupiers can also be helped to finance housing repairs, adaptations and improvements through the release of equity 'tied up' in their properties.

3. Frail elderly people living alone and more disabled people cared for by an able principal helper can be kept at home by the use of intensive domiciliary care schemes. Domiciliary care needs to be carefully co-ordinated across different agencies and tailored to individual needs. The role of good advice, information and case management is also important.

4. Residential care becomes increasingly cost-effective for people who have difficulty managing at home because of either mental or physical infirmity and for people who suffer loneliness as a result of social isolation.

5. Residential care is satisfactory for people with a wide range of disabilities. The overlap of disabilities with other forms of care does not imply inefficiency. The efficiency of this form of care is best judged by whether people who enter it could have been maintained equally as satisfactorily at home within a given cost difference.

6. The development of private residential homes has produced an important opportunity to provide elderly people with greater choice. Recent evidence suggests that only a small proportion of people (17%) entering residential care could have been kept at home even with the provision of intensive domiciliary care.

7. Neither costs of local authority nor charges in private residential homes appear to be related to quality of care.

8. There is good evidence on the qualities people seek in residential care. These include the importance of privacy and control over personal space and choice over some aspects of daily life. There are few studies which test whether these qualities are produced in public or in private care and whether or not they are applicable to continuing care in hospitals.

9. Since choice is becoming an important element in policies for the care of the elderly, there is

a need to examine the ways in which the system can be made responsive to consumer needs. This may mean giving elderly people more resources to command the services they need, or giving similar resources to an appropriate professional to organise the optimum set of services.

Part 2

Cost-effectiveness and the Care of People with a Mental Handicap

I. Introduction

There are no cost-effectiveness studies of alternative forms of care for people with a mental handicap of the type discussed in the previous paper on the care of elderly people. The main experiments on alternatives to hospital care have produced very little in the way of comparative costs between different forms of care. Their main emphasis has been on the greater effectiveness of care in community-based units compared with care in hospital. The main current experiment of the "All Wales Strategy" will hopefully produce information on costs and effectiveness of different forms of care.

The interesting feature of community care for people with a mental handicap in recent years has been the development of strategies of care based on ensuring that people lead as full a life as possible and the effect this strategy has had on the form of both residential and day care with a movement aimed at providing care in "ordinary" housing and the use of community facilities provided generally for the local population. This has meant that there has had to be a reappraisal of the type of unit developed in the experiments of the 1970's and a new focus on

the resource consequences of this move. During the research project carried out by the Centre for Health Economics in 1982-84, a general concern was identified amongst health authorities about the problems of what are now regarded as large (24 beds) Community Units and how authorities which had provided them were keen to replace them with smaller units (Wright and Haycox, 1985).

These changes in strategy have endowed us with a range of cost data on different types of provision, although the main area of ignorance is the costs of schemes promoting the "ordinary life" philosophy since many of them are not yet operational. This paper sets out the costs of different types of unit and relates them to hospital costs and dependency group wherever possible. Unfortunately, it is not possible to say how quality or outcome of care varies by type of unit since this research is only just starting.

This paper is restricted to the costs of care for adults with a mental handicap since most children with a mental handicap are now cared for in the community.

II The Costs of Different Types of Unit

1. Hospital Care

The costs of care in hospital vary according to the age and dependency of the residents. The highest costs are associated with the care of children but

it must be remembered that there are very few children now being cared for in hospitals. The costs of caring for adults varies with dependency as can be seen from the range of costs calculated by ward at the Royal Albert Hospital in Lancaster (Wright and Haycox, 1985). The variations were as follows:

Low dependency	medium dependency	high dependency
£18.20 - £23.52 per day	£26.45 - £34.33 per day	£36.00 - £42.24 per day

Although these costings are taken from one hospital, it is considered that they are not too unrepresentative since that hospital was operating at costs and standards of care close to the national average. A similar range of costs and dependency has also been found in subsequent work (Buckingham, 1985).

2. Larger units in the community

The revenue costs of larger (24 places) units in the community vary by the dependency characteristics of residents as follows at 1984-85 prices (Wright and Haycox, 1985)

Low dependency	£18-24 per day
Medium dependency	£28-32 per day
High dependency	£41-46 per day

These costs are taken from units providing care for adults with a mental handicap in the Trent and South Western Regions.

3. Smaller units in the Community

There is a general lack of cost information for units which are based on "normal" housing. The NIMROD experiment estimated the revenue costs of housing units in South Wales to be around £80,000 per year (1983-84 prices) but the average costs would vary according to the number of residents who could be cared for in each house. It was estimated that total costs for caring for 6 people would not differ much from those of caring for 4 people but the average cost for 6 people is £39 per day whereas for 4 people the average cost would be around £58 per day (1984-85 prices). A scheme in Bristol where six people were accommodated in ordinary housing produced costs of £45 per day (1984-85 prices), (Davies, 1987). It appears, therfore, that economies of scale may well operate around units catering for 3-9 people but the three unknowns are whether housing stock of this size is available generally, whether quality of care deteriorates with size and whether the general principles of leading an "ordinary life" are broken as places provided in units increase.

III Conclusions

Forms of care for people with a mental handicap are developing at a fairly slow pace for many of the reasons identified recently by the Audit Commission

(1986). The research evidence so far suggests that schemes based on small units and the "ordinary life" philosophy provide good quality of care. Costs of existing schemes suggest that units of 4 or less places may be considerably more expensive than other forms of care.

Research on these issues is now being conducted in separate projects in England and Wales.

Part 3

Cost-effectiveness in the Care of People with a Mental Illness

I. Introduction

A recent article in the British Medical Journal succinctly pointed out some general worries about the evaluation of community care of people with a mental illness "The most cost-effective way to deliver mental health care is not clear. In the move from hospital to community care the patterns of use and financing of mental health services are changing rapidly - as are the distribution and responsibilities of staff. And developing optimal services is difficult because of the lack of reliable measures of process and outcome and the costs and benefits of identification and treatment". (Wilkinson and Pelosi, 1987). Similar fears were expressed a few months earlier "... the movement towards community care rests on unexamined contentious assumptions about the community, the family and the nature of mental illness, its course and treatment". (Watt, 1986). The Audit Commission Report (1986) is no less critical and points to the general lack of information about the destination of many people who have been discharged from hospital, the failure to provide suitable residential and day care services and to enormous variation in expenditure per capita amongst local authorities with a majority of them spending £2 or less per capita per year on services for mental health.

Questions must therefore be asked whether this lack of progress is due to lack of professional interest, lack of a strategy, lack of finance or the methodological problems inherent in evaluating mental health services. The lack of professional interest has been noted (Sturt and Waters, 1985). The main question for this paper is whether the methodological difficulties are too severe to encourage service evaluation.

II. Methodological problems

As with all health care regimes, there are many methodological problems for appraising alternative treatments for mental health including the measurement of costs and outcomes. However, they are no more or less formidable in this instance than for the care of elderly people or people with a mental handicap. All the cost categories set out in the Appendix are relevant to mental health care. Some costs may be particularly difficult to measure in the current shift of the balance of care from hospital to community such as the estimation of the capital effects of closing psychiatric hospitals. However, many of the costs of care in residential homes, hostels and group homes present practical rather than technical difficulties (e.g. in collecting information on all the services used).

In the case of measures of outcome, it is possible to identify the major dimensions along which effectiveness can be assessed such as presence of

symptoms, behavioural difficulties, social functioning, morale, engagement in activities, social contact and life satisfaction. Instruments are available for developing these measures although there is no doubt that there are immense difficulties in combining these dimensions with a single composite measure of outcome. (Renshaw, 1985). The main gap in information is how these measures can be combined with costings in the appraisal of alternative methods of treatment or care. The current research being carried out by the Personal Social Services Research Unit at the University of Kent on the Care in the Community initiatives may throw some light on this. In addition North East Thames RHA have commissioned work on the resource effects of the closure of Friern and Claybury Hospitals in London but it may be two or three years before these research results are published.

III. Cost-effectiveness work in mental health care

Most of the existing cost-effectiveness work in mental health care is about the substitutability of different types of staff, particularly the use of nursing staff to provide therapies usually provided by consultant psychiatrist (for example Marks, 1985). There are no British cost-effectiveness studies of some of the most important policy issues in mental health care, including such areas as alternative forms

of long term care outside hospitals, relief of burden on families caring for younger mentally ill people, alternative forms of day care (especially outside hospital) and alternative ways of rehabilitating people who have had a mental illness into employment. All these topics are worthy of economic appraisal and inter-disciplinary research. Thus, while it may appear from studies in other countries (Fenton et al, 1982; Hoult et al, 1983) that care in the community is on the whole more efficient than hospital care, there is a need for more studies which parallel the work that has been undertaken for the care of elderly people in matching forms of care to the diverse characteristics of people suffering chronic mental illness. Until more evidence is available there will not be any clear guidance to the most cost-effective forms of community care.

POSTSCRIPT

SOME GENERAL ISSUES IN COMMUNITY CARE

1. The General Issues

The previous three papers have raised some issues which occur across all the three main groups of people for whom community care is considered appropriate. These issues are:

i. The general problems involved in economic appraisals of measuring costs and outcomes.

ii. Policies on day care

iii. The optimum mix of private and public provision

iv. The identification and exercise of consumer choice

v. The general resource effects of community care.

Each of the issues is considered in turn in the following sections.

2. Methodological problems of measuring costs and outcomes

Economic appraisal of alternative locations of care has often failed to provide conclusive evidence of the best form of care for people with a given set of characteristics because certain costs (e.g. of informal care) or measures of effectiveness have had to be omitted from the analysis. This applies to some key areas of resource allocation such as the substitutability of community for residential care of elderly people because it has not been possible in most studies to follow people over a sufficient period of time to ascertain whether it is better to

keep people at home until they are very disabled and then admit to care or whether it is better to admit people to care before they become too disabled because they are able to adjust to new surroundings if they are in better health.

In the case of people with mental handicap the general objective is to provide care in ordinary housing stock on the grounds that this is the only way in which these people will find the opportunities to lead an "ordinary life". However, there is little or no evidence about the effectiveness of different types of accommodation in achieving this objective. For people with mental illness there is little or no evidence of the most effective form of community care for people with chronic conditions which will almost certainly require care in staffed facilities.

A further challenge for new research is to develop measures of quality of life for people with chronic diseases and impairments and test whether these measures can be fitted into the QALY methodology developed for the treatment of acute illness (Williams, 1985).

3. Day Care policies

Day Services for people with mental illness especially services away from hospitals are still in very short supply. Day care policies for people with mental handicaps are very much in a state of

change. There are various forms of day care available for elderly people but there is evidence of a failure to match supply to demand in the sense that day hospitals are used by people who require social care rather than medical, nursing or paramedical treatment (Donaldson, Wright and Maynard, 1985). All these factors indicate that there is massive potential for the evaluation of alternative forms of day care for elderly people, people with mental illness and people with mental handicaps.

4. The optimum mix of private and public facilities

The development of private residential and nursing home care has been a feature in the development of alternative forms of care for all groups of people with chronic disabilities. There has been growing concern that this development is encouraging the inefficient allocation of resources in the sense that people who are using this form of care could be cared for at lower cost and with at least equal effectiveness in public facilities. However, there is little evidence to substantiate this claim and recent research suggests that only a small proportion of elderly people entering private care could be kept satisfactorily at home. At present Working Parties have been established to look at the purpose of residential care and at the financing of private care. However, one future problem will be how to develop a good mix of residential, nursing home and continuing hospital care in each

area and the financial arrangements which will ensure that people enter that form of care which best meets their individual needs and preferences.

5. The identification and exercise of consumer choice

The development of a whole range of new services has been a feature of community care in recent years. This raises the question whether consumers or users of services can choose the services they wish to use or whether the services have to be allocated by an appropriate professional. The Kent Community Care Experiment in the Care of the Elderly (Challis and Davies, 1986) which used Social Workers in a key case management role is the only evidence available along these lines. The success of this work may well encourage experiments in other authorities and in extending the idea to other client groups.

The use of professionals in this case management role equipped with a budget which can be used in a flexible manner to purchase the most appropriate services for a disabled person overcomes one of the major problems in the delivery of Community Care in that the case manager who is responsible for a client's welfare has the command over resources to achieve the specified care objectives. The problems in day-to-day management frequently arise because one professional is not able to prescribe services or ensure their delivery and

therefore keeps the client within a setting where resources can be guaranteed. This type of problem has occurred in several contexts whether it be the familiar argument about bed-blocking where consultants cannot ensure that appropriate resources will be available when a patient is discharged, or the entry of people into residential care or nursing homes without trying a a period of intensive domiciliary care or the use of day hospitals to provide social care when day centre provision would be more efficient. It may well be that social workers are likely to be the most suitable professionals to carry out the case management role but it may be worthwhile to experiment with other staff such as health visitors or community nurses or by linking professional staff with voluntary key workers.

An alternative method of improving consumer choice for those people who would be able to manage their own affairs is to encourage the substitution of cash grants for service delivery. The use of mobility allowance, attendance allowance and invalid-care allowance has been a movement in this direction and it gives disabled persons and principal helpers greater flexibility over the ways they can acquire the goods and services that they need. However, there is little or no evidence of people's reaction to receiving help in cash or kind and more research is needed on this topic.

One obvious limitation to this approach is the ability of people to be able to use money and purchase the services they require. People with mental

disabilities are usually quoted as the main example of this problem. This has led to recommendations to use an advocate to act on the disabled person's behalf. This advocate could be a relative, volunteer or professional, but, again, there is no evidence on how well this system works and more research is indicated.

The great requirement for consumer choice apart from the need to ensure that command over resources is given to those who are responsible for client welfare, is information on the services available. One of the main difficulties which recurs in many studies is that people need help to find their way to the various services on offer. In some current research being carried out at York University on housing services for elderly people and the use of agencies to help elderly people to improve, adapt or maintain their property, one of the key findings which is emerging is not just the need to provide help with matters relating to the property, but also advising on all the other services which are available to ensure that people who wish to stay in their own homes can do so as safely and comfortably as possible. The range of services available is large and the access to them is often rather complicated. Thus, advisory services are becoming an important element in providing satisfactory domiciliary care.

6. The resource effects of community care

Since many appraisals of community care have to be carried out selectively on specific issues or groups of people, there is little or no information about the total impact of community care on certain community resources such as the supply of voluntary care, the acceptability of the changing use of housing stock and the increased demand on leisure and educational facilities. There was some work of this type, especially developing the complementarity of formal and informal care in the Dinnington project (Bailey, Syd and Tennant, 1985) and this identified several problems along the lines of ensuring co-operation across organisational boundaries and of improving the satisfaction of clients and carers with the services provided. The problems of the effects of growing demand for housing accommodation has been recognised in some areas by the development of housing consortia (MIND, NFHA, 1987).

Much of this work is of a preliminary nature and it is possible that the development of community care will be gradual enough for its impact to be absorbed without too much difficulty. Present indicators, although based mostly on anecdotal evidence, are that there are major community-wide issues which cannot be picked up in what are essentially appraisals of individual projects. Local area studies based on both supply of and demand for resources brought about by the growth of community care would provide valuable data for policy-decisions.

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APPENDIX ONE

The Methodology of Cost-effectiveness of Alternative Forms of Care

There are three main methodological issues to be discussed in this Appendix:

(a) What are the relevant alternatives?

(b) What costs are to be included and how are they to be measured?

(c) How is effectiveness to be measured?

Each of these issues is taken in turn.

1. The Alternative Forms of Care

Although it is possible to set out a fairly simple schedule of different forms of care such as hospital, nursing home, residential home, hostel, group home and domiciliary care, each form covers a wide variety of different types of provision. Quality and standards of care vary in all the institutional types of care and domiciliary care covers a variety of provision in terms of different mixes of services, housing accommodation and tenure and household size (one person, two person, two generation, three generation households). All these factors have to be taken into account in a cost effectiveness analysis of alternative forms of care in the sense that it has to be made clear what type of care regime is being used in the institutional sector and the specification of household care type and size is important to domiciliary care.

2. Measurement of Costs

Economic appraisals measure costs in terms of opportunities foregone which mean that a resource is valued in terms of the payment it could command in its next best alternative use. The implication of this methodology for costing alternative patterns of care is that the analysis has to identify which resources will be used and which resources will be freed if a person moves from one form of care to another, whether each resource used or freed would have been or will be available to other people and whether cash paid or savings made in these changes of resource use reflect the value of these resources in their alternative uses. This very complex concept it often more easy to put into practice than to explain. The main practical implication of the concept is the questioning of whether the cash paid for the use of a resource reflects its value and the important point to note is that for many resources it is true that their market or cash value reflects their opportunity cost.

It is important in the cost-effectiveness analysis of alternative patterns of care to identify all the resource consequences of moving people from one form of care to another, even if it might be difficult at times to establish their correct value.

The main resource effects of changing the balance of care in terms of encouraging care in the community are as follows:

(a) Housing Accommodation If a person moves to long-term residential, nursing home or hospital care, the housing accommodation previously occupied is available for use by someone else. If the person who moves is the sole occupant a whole house or flat becomes available, but for people who share accommodation with others, only a part of the accommodation is freed and consequently it is difficult to value housing accommodation freed where one or more people continue to occupy the house. If people move from one of the above locations to ordinary housing accommodation then they occupy a dwelling which could have been used for some-one else, and therefore a cost is incurred.

(b) Personal Consumption People who are cared for in the community consume resources such as food, fuel, clothing and personal requisites which will form part of an institution's accounts if those people move away from home. These elements of personal consumption must therefore be counted as a cost and they will be closely related to household income. This is another reason why the costs of domiciliary care have to be related to household size.

(c) Services Provided One of the major efforts in costing community care is to develop unit costs for all the services, day care, domiciliary

care, and short stay and respite care. The problem is compounded if costs have to be related to individual usage so that records have to be created and maintained of all the services an individual receives over a period of time. Total service costs are calculated by applying the unit costs to the services provided in the period.

(d) Informal Care The use of resources such as the informal care provided by families and friends is the main area of difference between a conventional accounting notion of cost and the economic concept of opportunity costs. As is shown below, the convention in economic appraisals has been to identify this important resource use with very little attempt being made to quantify or evaluate it. The problems are, of course, that the opportunities carers lose are related to the use of time (e.g. employment or leisure) and there have been no attempts to value this time in social care policies although transport appraisals have used such values over a long period of time. A review of different methods were set out in a recent Discussion Paper (Wright, 1987).

The resource effects on institutional type care are as follows:

(e) Capital Costs of capital will vary according to different client groups. Given the growing number of people over 75 years of age in the population, there is likely to be increasing demand for all types of residential, nursing and hospital care. The substitution of domiciliary care for institutional care is not likely to avert the general need to provide more places in these forms of care but it should replace some accommodation that would be needed if domiciliary care were not provided. Thus the effect of increased domiciliary care would be to avoid new capital developments rather than to reduce the existing supply. Capital can therefore be valued in terms of the cost of new buildings and their furnishings and fittings. For other groups where institutions are being closed the cost will be the resale value of buildings, land and equipment.

(f) Running Costs As in the case of capital, increased domiciliary care will replace expenditure on the running costs of some establishments and there is usually no difficulty in identifying these costs from accounts of residential homes, nursing homes or hospitals.

(g) Personal consumption in institutional type care

People in residential, nursing home or hospital care retain an allowance for expenditure on personal

requisites and this is taken into account in line with the personal consumption element in domiciliary care.

3. Average and Marginal Costs

If the average cost of providing a service increases or decreases as that service expands, marginal cost (the cost of producing one extra unit of service) will differ from average cost. The implication of this is that it is important to identify how costs vary as a service expands. Given the growing demand for community care the analysis of alternative forms of care will be couched in terms of whether the expansion of one form of care such as intensive domiciliary care will avoid the expansion of other services. If community care services can keep or receive 40 people per year in ordinary housing accommodation the marginal costs are the extra costs borne by these services in providing for 40 people and the comparative marginal costs averted or saved in the residential care sector are the total costs of the places saved. However, if a scheme prevents the admission of 30-40 people to long-stay hospital care, the relevant marginal costs averted for the hospital are those of one ward. In this case it is often very difficult to establish what those costs would be. The main estimation problem is that of the 'hotel' type costs since it is difficult to know how much extra heating, lighting, portering, catering, maintenance and administrative costs would be generated by the addition of an extra ward to a hospital site. It is usually possible to estimate

the main staffing costs in a ward (Normand & Taylor, 1987).

Most economic appraisals of alternative locations of care have been forced to use average costs as the nearest estimate to marginal costs. This is a well recognised problem which is usually acknowledged in most studies.

4. Factors associated with variations in cost

The cost of caring for people in different forms of care varies with several factors. Some of these factors in domiciliary care - household size and type of dwelling - have already been mentioned. In institutional care, costs are likely to vary with environmental factors such as the provision of individual or shared bedrooms and the size of the unit. In addition costs will tend to vary in all forms of care according to the standards or quality of care and with the disability of the pople receiving care. The implication of this when comparing the costs and effectiveness is that it is necessary to distinguish several personal characteristics and environmental features before making judgements about the relative costliness of different facilities.

The need to standardise for quality has led to several criticisms of the methodology employed in balance of care studies. The main complaint on this score is usually made against the domiciliary care services provided.

The dilemma in most studies has been whether to cost the actual pattern of services received or to cost some ideal package. In the main the studies have opted to use the actual pattern of services but this has led to worries that low costs are due to poor quality. This problem is most acute where someone receives considerable help from both formal and informal care services but the informal care is not evaluated. Again, the costs of community care appear low, but are grossly underestimated in terms of actual resource use. The other method, the use of optimal patterns of service delivery, also presents problems because there will often be a wide range of professional opinion about optimum service packages for individuals in different circumstances. Reaching agreement and setting out all the circumstances and combinations of different services would be very time consuming. This approach also needs to take into account the inputs from informal care because the cost of care may be kept artificially low if uncosted informal care is substituted for publicly financed services.

5. Measuring effectiveness

Effectiveness is defined as the success in achieving a stated objective. For example, the main objectives in alternative forms of care of the elderly can be summarised as follows (Challis, 1981):

(a) Maintenance of independence

(b) Improvement or maintenance of morale and psychological well-being

(c) Nurture

(d) Compensation for disability

(e) Social integration

(f) Development of community support

(g) Maintaining or improving family relationships.

The effectiveness of alternative forms of care would follow very similar dimensions to those set out for the elderly as was shown in Part 3 of this paper.

If community-based care is to be clearly cost-effective it has to be not only less costly than other forms of care but also at least equally effective in achieving all the objectives set out above. Testing the effectiveness of a whole range of services in different locations has not proved possible in balance of care models and, as shown in the paper, it has been one of the major problems in translating research findings into policy prescriptions.

The measurement of effectiveness is a complex matter and is dealt with in a number of papers. It is not really worthwhile here to go into those complexities but some of the issues which arise when comparing alternative forms of care have been discussed as they occurred in the text.