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COMMUNITY MENTAL HEALTH SERVICES:
RESOURCES AND COSTS

Ph.D Thesis, submitted 1 July 1996

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COMMUNITY MENTAL HEALTH SERVICES: RESOURCES AND COSTS

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COMMUNITY MENTAL HEALTH SERVICES: RESOURCES AND COSTS

ABSTRACT

The development of community-based services for people with mental health problems has been a long-standing policy in England, but assessing the levels of provision that comprise 'community care' is not easy. Routinely collected data may enumerate the number of hospital beds or mental health professionals but give little information on how services are delivered, what type of support is provided and to whom, and to what effect. Such information has become increasingly important following implementation of the *National Health Services and Community Care Act, 1990.*

The reforms introduced by that Act have also bought care and cost issues closer together. No longer solely the province of finance personnel, costs data are also essential to inform both purchaser and provider activities. Moreover, the drive to provide evidence-based health care creates a demand for information on both the costs and the effectiveness of services.

Six broad evaluative questions are addressed in this thesis, each of which has relevance for medium- and long-term planning in mental health care. What do care services cost? What are the components and costs of clients' care packages? How can costs data be used in the broader evaluation of mental health care? Can the resource requirements of a particular policy be predicted? What are the associations between costs and outcomes? What incentives do finance mechanisms provide?

Frameworks, methodologies and techniques derived from economics are used to evaluate available costs and resource information, to consider the role of research in filling some of the information gaps, and to examine the ways in which research results can inform mental health policy and practice.

Although considerable progress has been made to date in addressing these questions, many research techniques still require development. Furthermore, there is a broader research agenda yet to be addressed by mental health economics.

COMMUNITY MENTAL HEALTH SERVICES: RESOURCES AND COSTS

ACKNOWLEDGMENTS

The people who have contributed to this thesis one way and another are too numerous to mention. However, I am particularly indebted to Professor Martin Knapp of the Personal Social Services Research Unit (PSSRU) for his guidance and support over the last ten years: without him this thesis would never have been started. The thesis draws upon a number of research activities undertaken while I have been employed at the PSSRU and funded by the North East Thames Regional Health Authority and the Department of Health.

My thanks are offered for the input from members of the Team for the Assessment of Psychiatric Services and the PSSRU Care in the Community Team. Rachel Dean and Amanda Dansie undertook the CSRI interviews for the Domus and MOSTT studies. The contributions of staff and users of all the services evaluated should not be forgotten. Reference is made at various points throughout the thesis where work was undertaken with other researchers, and where relevant, details are given of the publications from which certain sections have been developed.

Thanks are also extended to Professor Bleddyn Davies as Director of the PSSRU. Cliff Netten receives high honours for editing the final version while suffering from a slipped disc and although it may be unusual for a PhD thesis to contribute so directly to a low handicap, Peter Cook's weekend defection to the golf course has been as important as his presence and his cooking. This thesis was only finished because friends and colleagues provided emotional and practical support when my confidence and technical skills needed bolstering.

PART I INTRODUCTION

CHAPTER 1

150 YEARS OF MENTAL HEALTH SERVICES

CHAPTER 2

CURRENT DEMANDS FOR COST INFORMATION

CHAPTER 1

150 YEARS OF MENTAL HEALTH SERVICES

1.1 INTRODUCTION

This chapter sets the context for the thesis by discussing the development of mental health care services over the last 150 years and identifying an underlying concern with the costs of caring for people with mental health problems. There are two broad themes: the creation of psychiatric hospitals so that people with mental health problems could be segregated for care and treatment and the development of locally-based services which would enable care in the community. These are not totally distinct for

> current ideas and practices incorporate the residues of past thought and action, and the social and economic conditions that gave rise to them; they are shaped by the past as well as by existing social conditions (Busfield, 1986, p8).

Tracing the historical development of mental health care, this chapter outlines the policy and service development for adults with mental health problems. In the next section the rise and fall of psychiatric institutions is outlined[1] and is followed by an examination of national trends in the development of specialist psychiatric services. Local variation within the national pattern is examined in section 4, and the final section outlines the role that economic evaluation can play in improving the low level of knowledge about mental health care provision.

1.2 THE CREATION AND DISSOLUTION OF PSYCHIATRIC HOSPITALS

At their peak, in 1849, there were 146 private asylums for the insane in England, catering for some 700 patients. On the one hand there were members of rich families

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[1] Many writers have charted the rise and fall of the psychiatric hospitals and the move toward community-based care (Butler, 1985; Busfield, 1986; Jones, 1972; Scull, 1979; Bachrach, 1984; Scull, 1984; Brown, 1988; Ramon and Giannichedda, 1988; Thornicroft and Bebbington, 1989; Goodwin, 1990; Bachrach, 1993) and in section 1.2 only a brief sketch is drawn.

who could afford the high fees in the private sector and on the other, the pauper patients who were sent to the public madhouses through a contracting arrangement with the poor law authorities (Busfield, 1986, p173). In addition, the 1844 Report of the Metropolitan Commissioners in Lunacy found 1,442 lunatics in the voluntary or charitable hospitals, a third of whom were paupers. In the mid-nineteenth century the number of county asylums was small (only 24) but the passing of the *Lunatics Asylum Act 1845* signified their growth in numbers by requiring all local authorities to provide separate institutions for the pauper insane. Lancaster County Asylum, for example, opened in 1851 for 300 patients and accommodated 400 patients by the end of its second year at a cost of 7s 6d per patient week (Brady, 1973). The Act enabled local authorities to collect rates to support the asylums and empowered those authorities to inspect, regulate and control both private and voluntary hospitals.

During this period, the legislative framework set by the Poor Laws reflected the prevalent attitudes - separating people who were ill from those who were considered 'workshy'. But there were other, more specific tensions concerning the treatment of people with mental health problems. The medical profession was looking to increase their sphere of activity and reformists had visions of finding a cure for mental illness. Members of the criminal justice system were also providing a strong lobby, demanding increased powers of custody. On the therapeutic side,

> the motives of the original builders were of the best ... (they) typically choose sites on the high ground on the edge of towns. This was partly for the view ... but also for health reasons. In 1847 the *Westminster Review* noted that at 50 to 100 feet above the earth "the air is drier ... Low spirits are synonymous with moisture, the nerves become flaccid and unbraced, like string instruments out of tune. Moist air carries off the electricity from the body, dry air does not" ... (Barwick, 1988, p47).

Jones (1972) saw the *Lunacy Act 1890* as indicative of the ascendance of the legal profession over the reformists and medics. The Act focused on the legal status of the patients and recommended compulsory detention as a precondition of treatment in the English County Asylums. To receive treatment, therefore, the patient's condition had to be sufficiently advanced for a layman (the Justice) to acknowledge the need for detention. This policy stood in contrast to the medical view that early treatment enhanced the possibility of a cure (Butler, 1985, p76).

By 1900 there were 4,025 inmates of voluntary and charitable hospitals (Busfield, 1986, p204) but a far greater number were living in the 77 county or city (public) asylums which now housed some 74,000 patients (Busfield, 1986, p259). Increasing demand for beds caused larger and larger hospitals to be built; the Middlesex County Pauper Lunatic Asylum (Friern Hospital), for example, was built for 1,250 patients and some of the later hospitals had 2,000 beds. The result was overcrowding: in 1886 the Lancaster County Asylum housed 638 patients, but by 1891 this figure had risen to 1,761. The sheer size of the patient population often meant that the aim of a therapeutic environment was subsumed under the need to maintain order and, under the poor law system, this was to be done at least cost. Indeed, the cost per in-patient week remained remarkably consistent between 1870 and 1920 at around £20 per week (1985 prices; Raftery, 1995). Whilst the quality of care may have been poor inside the asylums, it was a considerable improvement on the "arbitrary and cruel treatment of individuals in private, unregistered madhouses which preceded them" (Korman and Glennerster, 1990, p7). Lancaster County Asylum, for instance, could boast that by 1868 it no longer had any straw beds in the hospital (Brady, 1973).

The high walls surrounding many hospitals emphasised their custodial function but by 1920 the Ministry of Health had taken the responsibility for lunacy from the Home Office thus, in public policy terms, redefining the problem as one of health rather than public order. But it was not until 1915 that the reformists' views gained any headway when there was pressure to allow the shell-shocked soldiers of the First World War to be treated without certification or compulsory detention. With the *Mental Treatment Act 1930* came further evidence of this change in attitude. Introducing voluntary admission, the Act was founded on "a belief in discretion rather than coercion, therapy rather than confinement" (Butler, 1985, p93). Permissive powers were given to local authorities to make arrangements for the provision of out-patient and after-care services but central government imposed no standards for care - either quantity or quality - so there was considerable local variation in interpretation of the law and provision (Butler, 1985, p99).

The number of psychiatric hospital in-patients continued to increase. By 1952 there were 144,537 patients in 177 designated mental hospitals - some 67 per cent were voluntary patients but many continued to be admitted under the Lunacy Act of 1890 (Butler, 1985, p149-150). The 1955 Ministry of Health Report noted that mental health services were under-financed. The Regional Boards had allocated only 22 per cent of their capital finance to mental hospitals, and in 1954 it cost £15 15s 5d to keep a patient in a general hospital compared with only £4 12s 6d for a voluntary admission to a mental hospital (1954 prices; Butler, 1985, p166). By this time the hospital population had reached its peak (see figure 1) but the lack of investment had left its mark in the poor state of repair of the buildings and in low staff/patient ratios. Added to these problems were concerns about the large size of the facilities, overcrowding, and the treatment of the patients, all of which caused the quality of care provided within the institutions to be brought into question. However, another pressure can be identified - the rising costs of public sector psychiatric in-patient care. Between 1920 and 1955 the unit cost almost doubled from £20 to £38 per week (1985 prices; Raftery, 1995).

The Ministry of Health Report for 1957 reinforced these concerns and specifically welcomed the suggestions contained in the *Report of the Royal Commission on Law Relating to Mental Illness and Mental Deficiency* (known as the Percy Report, after its Chairman). This report was to give mental health policy a new direction and provide a cornerstone for community care for people with mental health problems. The Ministry Report, however, warned that adopting this policy would impose increasing financial pressures on the new local authorities who were to provide care for discharged patients.

Jones (1972) suggested that the mid-1950s saw a revolution in mental hospital care: the combination of pharmacological developments, the open (rather than locked) door policy in hospitals and the increasing use of voluntary admissions had led to a watershed in treatment attitudes. Butler (1985) was less optimistic.

> What emerged was a dual system of provision for acute and chronic patients. The former group were given chemotherapy to promote speedy recovery through out-patient and short-stay care. The latter group were given drug therapy to make them more manageable in the long-stay hospital wards ... (the new drugs) created signs of cure through early release, but also allowed for better regulated wards for those who were left uncured ... (p208-209).

Goodwin (1990) was even less sanguine, suggesting that mental health policy took on board the idea of community care as a means of *intentionally* separating the short-term treatment of mental illness from longer-term care for people with mental health problems. Community care policy was a deliberate attempt to devolve the 'care' function away from health services and the medical profession (p197).

The Percy Report laid the foundations for the *Mental Health Act 1959*. The assertions about community care followed from the Commission's belief that mental illness should be treated in the same way as physical illness, for which in-patient treatment was not always necessary; the term 'community care' was coined to refer to services provided by the state which did not involve hospital admission. Community care was seen as preferable to hospital care although the Commission held the view that in-patient care and compulsory admission would still be needed for some people. Public spending was an area of contention, but the Report recognised that increased resources would be required to bring the hospitals up to standard and to introduce a policy of community care. By the end of the 1950s, achieving the policy of community care had come to mean either increased public expenditure *or* closing old institutions (Butler, 1985, p175-176). Unfortunately, the 1959 Act did not instigate a legal requirement for community care provision, although a Ministry of Health circular did remind local authorities of the recommendation to reorient mental health services to local communities. The rate of discharge from the hospitals did increase, despite concerns about the lack of services in the community and a "distinct policy of running down the old mental hospitals and even of closing them began to emerge" (Busfield, 1986, p346-47).

The case for closing psychiatric hospitals gained further ground with a series of adverse reports appearing from the end of the 1960s onwards, which condemned conditions in psychiatric hospitals. J. Martin (1984) identified common features from nineteen Committee of Inquiry Reports:

> geographic and professional isolation; abandonment of patients by their community; lack of support towards staff by management; failure of leadership among all professional groups and poor interaction and cooperation between professions; shortage of resources; 'corruption of care' - subversion of prime objectives of the hospital to the preservation of order, quiet and cleanliness (Korman and Glennerster, 1990, p15).

To these scandals can be added other pressures to close the psychiatric hospitals. In the Preface to their book, Ramon and Giannichedda (1988) suggested that "more people are becoming to realise that psychiatry is not only a professional issue, but a political and moral one too, because it is about care and control of a growing number of people who need our support" (pxiii). Busfield (1986) set her analysis of changes in attitudes to mental health in the context of the social problems and social policy of the last four centuries. Butler (1985) added political and legal dimensions and both writers examined the rise in power of the medical profession. Bachrach (1993) noted that the civil rights climate probably contributed to pressures to reduce hospital populations in America. Scull (1984) concentrated on an analysis of the power balances and suggested that a policy of 'decarceration' was advocated by politicians because it was less costly to a state in economic crisis than the custodial policy of the previous years. It cannot be doubted that all these factors played a part in the push and pull to create contemporary policy and practice yet, even the briefest examination of mental health policy documents reveals (almost without exception) a common thread of concern about the costs and financing of mental health care.

Concerns about under-funding for community care, raised by the Ministry of Health in 1957, were reiterated throughout the 1970s and are common today. The *Hospital Plan 1962* predicted a halving of mental illness beds in the following 15 years. While recognising the enormity of the tasks involved in achieving this target, the Plan stated that the cost of improving the mental hospitals was simply too great and expenditure on the buildings should be minimised. The *Memorandum on Hospital Services for the Mentally Ill 1971* advocated the replacement of psychiatric hospitals with out-patient and day-patient departments in District General Hospitals but added two cautionary notes. The first concerned the growing 'new' long-stay group in hospitals and the second questioned the adequacy of some of the community services. In particular, the memorandum highlighted the absence of mandatory powers to ensure local authorities provided community services.

Better Services for the Mentally Ill (DHSS, 1975) explicitly recognised the need for sufficient community services to be in place *before* hospitals closed and pointed to the lack of non-medical, non-hospital services but also said that "in the present economic circumstances there is clearly little or no scope for additional expenditure on health or personal social services ..." (para 8). In the following year, cash limits on public expenditure were introduced and *Priorities for Health and Social Services in England* (DHSS, 1976) was published. The report expressed concern about the lack of resources and re-emphasised the important role of the private and voluntary organisations in providing services for people who required long-term support.

In 1979 the *Report of the Royal Commission on the National Health Service* was published. It recognised the need to expand public community-based services and suggested care in the community might be cheaper than hospital care. By this time the average cost of psychiatric in-patient care had risen to £240 per patient week (1985 prices; Raftery, 1995). More cautious statements can be found in later policy documents as a value-for-money position was asserted, bringing costs issues closer to those concerning effectiveness of the service. By 1981, the *Care in the Community Consultative Document* suggested community care costs were difficult to calculate but that there were good reasons for expecting that the costs would be lower that for long-term hospital care for many patients and would provide better value. Evidence to support this statement had come mainly from the United States where dehospitalisation was proceeding at a faster pace than in England. However, in a review of hospital closures in New York state, Pomrinse (1983) commented:

> there is not ... a clear answer to the financial question of whether closing (hospitals) saved money. They probably do, but not much ... Even if the state saves some money in this process, one must balance this with other outcomes ..." (p578).

Two specific financial incentives were promoted in England during this period to encourage service development (see Chapter 8 for more information on funding services). First, joint finance, introduced in 1976, was to move some way towards financing services provided by local authorities, although the tapering arrangements and the limited duration of the funding acted as a disincentive. Originally, the funding was to last 5 years (including two years for tapering arrangements) but was extended to seven years in 1977 and to 13 years in 1983. The transfers were exempt from the cash limits imposed on local authority spending. The second financial incentive came in the 1983 *Care in the Community Circular* (Department of Health, 1983) which encouraged the permanent transfer of resources from hospital to community budgets, including those managed by social services departments and the independent sector, to facilitate the relocation of care. (This circular also announced the release of funding for the Care in the Community demonstration programme, some information on which can be found in chapter 8).

It was unfortunate that the *Mental Health (Amendment) Act 1982* and the *Mental Health Act 1983* did little to stimulate a change in the balance of services. Neither required health or local authorities to improve services (although the latter made provision of after-care compulsory for some groups of former patients) or addressed the financial problems that beset the development of community care in the 1960s and 1970s. In 1985, the House of Commons Social Services Committee, reporting on adult mental health care, estimated that £268 million (1989-90 prices) was needed in bridging finance to facilitate development of community-based alternatives while hospitals closed and also called for existing mental health budgets to be ring-fenced to prevent 'leakage' into other care expenditure areas (Social Services Committee, 1985). Its position on resources and costs was clearly stated.

> A decent community-based service for mentally ill people ... cannot be provided at the same overall cost as present services. The proposition that community care can be cost-neutral is untenable ... We are at the moment providing a mental disability service which is under-funded and under-staffed both in its health and social aspects. Proceeding with a policy of community care on a cost-neutral assumption is not simply naive: it is positively inhumane (para 21).

In 1992, the Mental Health Task Force was set up to further the development of locally-based services which would replace long-stay institutions. By 1993, its survey showed that despite all the attempts to close psychiatric hospitals in the previous 30 years, 89 public sector psychiatric hospitals remained open. Table 1.1 shows the number of psychiatric hospitals open from 1969 through to 31 March 1990.

Table 1.1 Downsizing of psychiatric hospitals, 1969-1990

Hospital size	**Number of hospitals**				
	1969	1976	1980	1986	1989-90
under 50 beds	70	123	152	286	224
50-249 beds	95	109	112	115	127
250-499 beds	34	49	59	73	69
500-999 beds	62	68	75	60	41
1,000-1,999 beds	59	44	26	8	-
2,000 and over beds	9	-	-	-	-
Total number	329	393	424	542	461

Source: Department of Health (1982, 1992) *Health and Personal Social Services Statistics for England*, HMSO, London. From 1988 data were collected for the year ending 31 March rather than the year ending 31 December. 1989-90 is the last year for which these data were published.

The total number of hospitals appears to have increased over the period, particularly the number of units with less than 50 beds. Some of this increase is the result of the general trend to downsize hospitals, shifting the number of hospitals from the larger to the smaller size categories. However, over recent years there has also been a growth in the number of health authority residential facilities which have been developed outside or near the hospital boundaries as part of the reprovision process. As these facilities come within the purview of the health authority 'residential' services, they are often included in the hospital data returns. Among the 92 hospitals surveyed by the Mental Health Task Force, the average size had reduced from 468 patients per hospital in 1986 to 223 patients in 1993 (Davidge et al., 1993, p8). Depletion and closure of hospitals requires a concomitant increase in community-based support for former residents and those who would have used the hospitals had they remained open. The expansion of community-based services is considered in the next section.

1.3 PROVIDING A LOCALLY-BASED MENTAL HEALTH SERVICE

1.3.1 Overview

While there has been clear policy guidance from central government on the matter of closing hospitals, there is less of such information on the development of community care. There have been

> ... rather vague and general statements of aspiration, but a conspicuous lack of clarity and specificity in formulating objectives ... the 1975 White Paper, for example, which laid down 'norms' for the provision of hostel and day-centre places in terms of units per thousand population, produced figures out of the air without any indication of the means by which they were calculated or the assumptions on which they were based (F. Martin, 1984, p169).

The identification of an adequate level of welfare state provision has been an issue since the reforms of the late 1940s but despite its limitations, *Better Services for the Mentally Ill* is the only national policy document which has suggested any norms for provision (see table 1.2). In promulgating a *district* rather than *hospital* service this

White Paper gives some guidance on provision of residential accommodation and day care, but there are few specific targets mentioned for level of community-based personnel required to improve the service. Indeed, only a minimum standard for the number of psychiatrists was given - one per 60,000 of population with a target of one per 40,000 of population. The paper advised that services provided by other professions should be increased according to need and available resources.

Table 1.2: Service provision levels recommended in *Better Services for the Mentally Ill*[1]

Service	Places per 100,000 population	Places per health district[2]
Health		
DGH psychiatric unit[3]	50 beds	125 beds
Day-activity unit	65 places	165 places
Long-stay, elderly severely mentally ill	38-45 beds	95-115 beds
Day care, elderly severely mentally ill	30-45 places	75-115 beds
'New' long-stay	To be determined	-
Social Services		
Short-stay, hostels	4-6 beds	10-15 beds
Long-stay, residential care	15-24 beds	38-60 beds
Day care	60 places	150 places
Long-stay, elderly mentally ill	Residential care	-

Notes:
1. Audit Commission (1986) *Making a Reality of Community Care*, HMSO, London, table 7.
2. Assumes a population of 250,000.
3. Includes assessment unit for elderly people.

Concerns about the absence of national policy direction also appeared in the *Social Services Committee Report* (House of Commons, 1985) and *Making a Reality of Community Care* (Audit Commission, 1986). Some 10 years later, central government is still hesitant to lay down minimum guidelines, preferring that local service provision should reflect variation in local needs.

> Both health and local authorities should involve (a range of) organisations in the planning process ... This dialogue will: assist them in identifying the needs of the local population; enable them to assess the services which are currently available ... and help identify services which could be stimulated in response to their assessment of the care needs of the local population (Department of Health, 1990, para 2.8).

Is there then, an ideal vision of community care for people with mental health problems? The 1985 House of Commons Report formulates the basic principle underlying community care. "Appropriate care should be provided for individuals in such a way as to enable them to lead as normal existence as possible given their particular disabilities and to minimise disruption of life within their community" (para 11). This statement refers to individual care. Principles for the programme or service provision level are given as: a preference for home life over 'institutional' care; the pursuit of the ideal of normalisation and integration and avoidance so far as possible of separate provision, segregation and restriction; a preference for small over large facilities; and a preference for local services over distant ones (para 9).

Since the 1985 Report, and including the more recent policy documents, statements are clearer about the components for a comprehensive community service but no more specific in terms of quantities of services. Box 1.1 summarises the policy position taken in *Caring for People*, which very broadly identifies groups of people who may require services and the different types of services which should be provided.

Box 1.1 The community care framework for the 1990s

The Act and policy guidance provide the framework within which local authorities and NHS bodies responsible for planning, commissioning or providing community care services should work in order to make a reality of the Government's policy on community care for all clients groups. The Government's policy is to continue to encourage the development of locally-based health and social services, working with the voluntary and private sectors ... The main components of a proper locally-based service are: provision for children and adolescents with psychological problems; adequate services for the assessment and treatment of adults whose condition require short term admission to hospital, or for the longer term treatment ... where there is no realistic alternative; sufficient places in hospital and local authority hostels, sheltered housing, supported lodgings or other similar forms of provision ... together with an adequate range of day and respite services; effective coordinated arrangements ... for the continuing health and social care of people with a mentally illness living in their own homes or in residential facilities ... including suitable provision for domiciliary services, support to carers ...; joint working arrangements between health and social services and the criminal justice system over the identification and care of mentally disordered.

Source: House of Commons Report (1991) *Development of Services for People with a Learning Difficulty or Mental Illness*, HMSO, London, para 5.

The *MIND Policy Pack* (1993) is more comprehensive and prescriptive but still gives little in the way of concrete guidelines. Their policy builds on *Common Concern* (MIND, 1983) which advocated the retention of hospital care for some people and stated that community care was only preferable if adequately funded. With respect to community care their vision differs little from government policy (see box 1.2) but MIND believe that national standards for community care should be set. More recently, MIND have suggested that users should have a legal right to assessment of their needs and a legal right to have those needs met through provision of a range of services which local and health authorities would have a duty to provide (MIND, 1994).

Box 1.2 Guidelines for a local mental health service

MIND believe a comprehensive local policy should:

- transfer the focus of care to the community with all the resources from the large psychiatric hospitals invested in a comprehensive local mental health service.
- extend the range of services to include non-medical crisis houses, housing with flexible support, home care, employment advice and opportunities, drop-in centres, support for self-help groups, counselling, befriending and therapies.
- set national standards for community care services.
- build services around users needs and provide services on the basis of consent.
- link users into ordinary opportunities, in particular the barriers which prevent people moving from specialist to generic services should be removed.

Source: MIND Policy Pack, 1993.

In the absence of centrally determined guidelines or minimum standards it is difficult to assess how far we have moved toward fulfilling these vision statements. At the national level there is little evaluation; the community care monitoring documents available to date only include one special study on mental health, focusing on the Care Programme Approach (Department of Health, 1993a). There is a greater body of research evidence on the development and effectiveness of *local* services, some of which is referred to in later chapters. In this section an overview of service development is presented by exploring national trends in the provision of mental health services.

Table 1.3 Provision of mental health services in England, 1974-1990

Service	**1974**	**1980**	**1990**
Hospital (available beds)	104,400[1]	87,000[2]	59,000[2]
Hospital day care places	11,200[1]	17,000[1]	19,000[3]
Consultant psychiatrists	835[4]	880[5]	1,100[5,6]
Psychologists	130[4]	N/A	2,096[6]
Community psychiatric nurses	N/A	1,590[5]	3,600[5]
Residential care places[7]	3,500[1]	6,900[7]	11,700[7]
Day centre places[8]	5,400[1]	5,600[8]	9,900[8]
Psychiatric social workers[9]	N/A	N/A	N/A

Notes

1. Audit Commission (1986) *Making a Reality of Community Care*, HMSO, London, p17.
2. Department of Health (1992) *Health and Personal Social Services Statistics for England*, HMSO, London, table 4.2. Figures include child, adolescent and forensic psychiatry and psychogeriatric beds.
3. Office of Health Economics (1989) *Mental Health in the 1990s: From Custody to Care*, OHE, London.
4. Department of Health (1975) *Better Services for the Mentally Ill*, HMSO, London. A further 470 psychologists were working in psychiatric hospitals.
5. House of Commons (1992) *Fourth Report Prepared Pursuant to Section 11 of the Disabled Persons (Services, Consultation and Representation) Act 1986*, HMSO, London.
6. Department of Health (1993) *Health and Personal Social Services Statistics for England*, Tables 6.6 and 6.11, HMSO, London. For psychologists the total number in all clinical specialities is shown.
7. Department of Health (1991) *Personal Social Services: Provision for People with a Mental Illness in England 1980-90, Statistical Bulletin 3(8)91*. Includes residential care provided by the local authority and registered residential and nursing care establishments provided by the voluntary and private sectors. The figures exclude other types of accommodation such as sheltered housing or adult fostering placements.
8. Department of Health (1991) *Personal Social Services: Provision for People with a Mental Illness in England 1980-90, Statistical Bulletin 3(8)91*. Includes day services provided by the local authority and voluntary and private sectors.
9. No national information is routinely collected on the number of psychiatric social workers. Information from a research survey is given in the text.

Table 1.3 charts the changes in levels of mental health service provision from just before *Better Services for the Mentally Ill* was published. Data on residential and day care places are the most easy to find and are those most commonly cited. Information on other mental health professionals, such as psychiatrists or social workers has been gleaned from a number of sources and, where possible, supplemented by research and other evidence. The range of sources used mean the scope for comparison between service types is limited but some general themes are discussed. The focus is mainly on specialist mental health services and neither drug utilisation patterns nor the input from informal carers are examined. The role of generic services, which may be part of a comprehensive care package, is discussed in later chapters.

1.3.2 Hospital services

During the 1980s the number of hospitals residents declined by 24 per cent leaving only 57,000 unfinished consultant episodes in 1990. The figures in table 1.3 show a reduction in the average daily available bed-rate for each year but, as with many health sector data, are not directly comparable over time as the data collections systems changed with the introduction of the Körner returns in the late 1980s. The downward trend, however, is clear and within this two other trends have occurred; an increase in the number of admissions and discharges and a decrease in the length of stay (Department of Health, 1992). Over the period there also has been an increase in the number of general hospitals which provided in-patient psychiatric services, mainly for acute care. In 1975, 126 District General Hospitals provided in-patient psychiatric facilities (5700 beds), in 1981 these services were provided by 164 general hospitals and by 1987 only eight of the 191 district hospitals did not provide a psychiatric in-patient service (Goodwin, 1990, p174). Laing (1994) reported that in 1985 there were 23 for-profit hospitals, rising to 36 in 1994 which provided 1,313 in-patient beds in acute psychiatry or substance abuse. A further 513 in-patient beds were provided by the not-for-profit (pA173-A175). Beds in special hospitals are excluded from all these figures.

Out-patient and day-patient services show large increases in utilisation rates. Goodwin (1990) reports that in 1975 there were 188,000 new out-patient attendances within a total of 1.55 million attendances. There were also 36,400 new patients at psychiatric day hospitals within a total of 2.7 million attendances. By 1985 there were 201,000 new out-patients within a total of 1.8 million attendances and 58,000 new day patients (p128-129, 159). In 1990-91, there were 800 psychiatric day cases; 1,694,600 out-patients appointments (of which 210,900 were new cases); and 138,600 ward attenders (Department of Health, 1992, table 9.2). Again, the advent of the Körner data-sets makes comparison over time difficult: not only have the categories changed but the definitions do not appear to be used consistently in all districts.

There is no evidence to suggest what types of support was provided within hospital services. For example, how many out-patients attendances were for consultations with a psychiatrist? Or a psychologist? How many were visits to depot clinics?

1.3.3 Residential care

Table 1.3 reports Department of Health statistics which show that the number of non-health sector residential places in the community almost doubled between 1974 and 1990. The figures in table 1.3 exclude places for people with mental health problems living in residential facilities for mixed client groups (830 places in 1990; para 11). The count is for homes registered under the *Registered Homes Act 1984*, thus also excludes places in other accommodation facilities such as smaller group homes, sheltered housing, or adult foster schemes. In 1990, the local authority provided 37 per cent of the 11,706 places available in 672 homes, about a quarter of which were staffed. Voluntary organisations provided 200 premises (23 per cent of places) and there were 364 private sector homes (40 per cent of the places). There was little variation in the average size of homes between sectors: local authority staffed homes accommodated an average of 14.5 residents (although unstaffed homes were smaller with an average of 3.7 residents); the voluntary sector averaged 13.3 residents per home; and the private sector homes had 12.9 residents. The Mental Health Foundation (1994) suggested a further 2,450 places were provided by the NHS and 400 new places are developed each year with Housing Corporation funding.

Between 1980 and 1990, two thirds of the increase in registered homes for people with mental health problems occurred in the private sector, though the rate of growth was slightly slower between 1987-90 than in the early 1980s (para 5). By 1993, private sector proprietors reported a significant drop in the number of people referred from social services departments (Hudson, 1994, p67). Netten (1994) summarised the research on inter-sectoral differences in the provision of residential care services.

A report from the Mental Health Task Force suggested that the fall in the number occupied of hospital in-patient beds for people with mental illness since 1955 had been steady (125,000 occupied beds in 1965; 87,000 in 1975; 62,000 in 1985; and 45,000 in 1992) but is matched by a rise in the number of locations available for care: from 1000 to 2500 in the last decade. The authors suggested that the loss of beds in large hospitals had been matched by alternative provision in smaller NHS hospitals or homes, and other public or independent sector facilities (Davidge et al., 1993, p2 and figures 1, 2, 3). However, without a much more detailed study it is impossible to say who is using these places. Is it only former hospital residents? Are some former hospital residents living in other types of accommodation? Are some previously unmet needs amongst those who have not had prolonged hospital stays now being met? Although an encouraging finding these figures do not tell us how well the services have been targeted on those who were resident in hospital.

1.3.4 Day care

The Department of Health report that day-care provision for people with mental health problems increased by 77 per cent between 1980 and 1990 (see table 1.3) but this needs to be set against a low service provision base. In 1974, 63 local authorities had no day care facilities (Department of Health and Social Services, 1975, para 3). In 1990, local authorities provided 71 per cent of the places available (Department of Health, 1992) with an average of 36 places in their 200 centres. As with residential care, the figure of 9,900 could be an underestimation of the total number of places available as some centres (not included in the table) cater for more than one client group. In 1990 there were 20,000 places in 325 mixed client group centres but the proportion of these places for people with mental health problems cannot be estimated (para 11). Again the rate of growth in day care services has been much faster in the independent sector, mainly through the activities of voluntary organisations (often grant-aided by local authorities). The number of places increased almost five-fold in the independent sector whilst local authority places increased only four-fold. The Mental Health Foundation suggested there are currently less than half the number of places recommended in 1975 (1994, para 3.22).

As described in *Better Services for the Mentally Ill,* there are still overlaps and differences between local authority day care and health authority day hospitals. "Day centres, like day hospitals, have a broadly therapeutic role, but their orientation is social - unlike that of the day hospital where the activity and therapy form part of a treatment programme under medical supervision" (para 4.26). Holloway (1988) suggested day hospitals have four main functions: as an alternative to admission for people who are acutely ill; as a source of support and supervision during the transition period between an in-patient stay and life at home; as a source of long-term support for those with chronic handicaps; and as a site for brief intensive therapy or short-term focused rehabilitation (p164-165). The number of day hospital places available in the 1980s has also increased (see table 1.3 - the figures exclude places provided for hospital in-patients) and many are now provided away from hospital sites although may still follow a more treatment-orientated model. The number of places allocated to each of the functions defined by Holloway cannot be estimated.

A simple un-weighted extrapolation from one survey (Thornicroft, 1990) suggested that in 1989 there were 9800 day hospital places available in England and Wales - a far lower figure than that presented in table 1.3. This study received responses from only 69 per cent of the extant health authorities which may have produced a biased figure, however, the wide discrepancy of the numbers gives cause for concern on three counts. The discrepancy may indicate considerable variation in levels of provision, inaccuracies in the national figures, or lack of knowledge on the part of the consultants surveyed, which would reduce individuals' treatment options.

1.3.5 Psychiatrists

Despite an increase in the number of consultants over the previous 15 years, in 1970 concerns were expressed by the Department of Health and the Royal College of Psychiatrists about the low numbers of people entering psychiatry. In 1970 there were only 375 trainees to the specialty, 50 less than there had been in 1965, with a substantial number entering psychiatry only as a second choice. Sixty-one new consultant posts in England and Wales were approved for 1972-73 and a further 57 for 1973-74 (Department of Health and Social Services, 1973). The Office of Health Economics (OHE, 1989) report that in 1976, there were 2.2 psychiatric consultants for every 100,000 people in England and by 1986 this had risen to 3.1 (p15). (In 1986, there were 300 consultant psychiatrists in Britain with a significant commitment to private practice and 60 consultants were employed full-time in independent hospitals; Laing, 1995, pA178.) At the average, the OHE figure exceeded the target set in *Better Services* but considerable regional variations still existed. Moreover, the figure included psychiatrists working in all specialties: in 1992, for example, there were some 300 consultants working in old age psychiatry (Dening, 1992).

There has also been a growth in the number of psychotherapy consultants working in hospitals, rising from 47 in 1981 to 75 in 1991 (Department of Health, 1993b). Psychotherapy is closely allied to social psychiatry and was recognised as a separate specialty by the Department of Health four years after its recognition by the Royal College of Psychiatrists in 1971 (Leff, 1991). In defining psychotherapy, Leff quotes Sutherland (1968) who said:

> by psychotherapy I refer to a personal relationship with a professional person in which those in distress can share and explore the underlying nature of their troubles, and possibly change some of the determinants ... through experiencing unrecognised forces in themselves (Leff, p6).

On the role of the psychiatrist in comparison with other mental health care professionals, the Royal College of Psychiatrists stated that

> the Consultant represents ultimate medical authority within the hospital service for patients in his care ... Multi-disciplinary (work) ... is a process of

> consultation, the final decision resting with the Consultant on matters where the Consultant has final responsibility (F. Martin, 1984, p138-139).

Nine years later, Muijen (1993) identified three elements in the consultant's role: leading a multi-disciplinary team, active involvement in management, and functioning as a personal physician. He suggested that to meet the demands of a community-based service, psychiatrists' training required re-thinking by the College.

Consultants, of course, are supported by a team of other doctors and in 1981 the Royal College of Psychiatrists had 4,482 members on their register for the UK and the Republic of Ireland (post-training membership is mandatory). By 1990 this figure had risen to 5,965 (RCP; personal communication). In 1989, and across all specialties, there was one senior registrar, two registrars, 3.5 senior house officers and one house officer for every five consultants (Department of Health, 1990). Between 1983 and 1993 the junior doctor to consultant ratio fell from 1.65:1 to 1.53:1 (Department of Health Press Release, 1994).

In 1989 there were 799 members of the Royal College of Psychiatry registered in the general adult psychiatry and community and social psychiatry sections, each of whom was sent a questionnaire to gather information on the local availability of services for adults with schizophrenia (Thornicroft, 1990). The response rate of 58 per cent included 226 valid completed questionnaires (that is, excluding consultants working with children, or not working for the NHS); 51 per cent of respondents were based in specialist psychiatric hospitals and 42 percent were based in district hospitals. Very few psychiatrists worked solely in community settings although almost half the sample spent some time in a primary care setting and a quarter worked part-time in a community mental health centre. In view of the drive for developing community-based services these are surprising findings but it is perhaps more remarkable that some respondents expressed a reluctance to leave the large institutions, preferring to retain a hospital-centred model of care.

1.3.6 General practitioner services

Primary care medical services, although not providing a specialist psychiatric service, give much support to people with mental health problems: general practitioners are usually the first port of call for people with psychiatric disorders. (Indeed, nearly 40 years ago the Percy Report had advocated integrating psychiatric services with GP services.) One recent study estimated that 13 per cent of people with schizophrenia received their highest level of care from the GP (Kavanagh et al., 1995) and other surveys have found an even higher figure. In their Camden-based study, Campbell et al. (1990) found 25 per cent of people with schizophrenia were followed-up only by their GP and similar rates were found in Harrow (Leary et al., 1991). Studies such as these suggest that contrary to popular belief, GPs do not only care for people with less severe mental health problems (see also Kendrick et al., 1994).

In 1989 there were 30,000 NHS general practitioners, a 50 per cent increase since the beginning of 1960. Between 10 and 20 per cent of their time was taken up with care for people who are mentally distressed (OHE, 1989, p15). The *Third GP Morbidity Survey* (RCGP, 1986) found psychiatric disorders accounted for 9.6 per cent of all consultations in 1981-82, the third most common group of illnesses. MIND (1993) suggested that GPs should receive more training in psychiatric care with particular attention paid to their responsibilities and duties under the *Mental Health Act.* More information on the role of GPs is given in chapter 6.

1.3.7 Psychologists

Clinical psychologists must have a degree in psychology and a post-graduate qualification in clinical work. Between 1989-1991 nearly 25 per cent of graduates who gained permanent employment went into the health service (BPS, 1994). The 1977 Trewthowan Report recommended employment of 1,100 clinical psychologists in the health service, a target which was reached in 1981. By 1983 there were around 1,300 clinical psychologists working in the health services in England, rising to 1,960 in 1988 and 2,335 in 1991 (Department of Health, 1993). Körner activity statistics (which cover the health services only) report 1,038,700 face-to-face contacts in England. Fifty-five per cent of these occurred in hospitals and a further 28 per cent in other health sector locations (Department of Health Statistics Division, 1993a). In publicly available data, this provides the only basis on which the location of psychology services can be identified.

Körner statistics also report that face-to-face contact with clients absorbed 44 per cent of clinical psychologists' time. In a smaller study, Cape et al. (1993) estimated that in adult mental health services, clinical work with patients and families absorbed 39.7 per cent of their time. Other activities were support (23.7 per cent of total hours); service and organisational development (13.4 per cent); teaching, training and supervision (13.4 per cent); clinical consultancy and project work (10.4 per cent); and research and evaluation (2.9).

There is an increasing tendency for a range of professionals to provide psychological support. Guinan (1990) found that service descriptions from the community psychiatric nursing team in one region came very close to describing the work undertaken by clinical psychologists. An initiative in the North Western Region allowed GPs to re-route patients referred for psychology to the community psychiatric nursing service on the grounds that it would save money and reduce waiting lists. However, later evidence showed that nearly 40 per cent of the patients rejected the nursing service and a further 25 per cent were referred back to psychology or to psychiatric services. One central issue, therefore, is how psychology services should be provided and by whom (Guinan, p502). But purchasers should also seek to find out *to whom* a particular care delivery mode should be directed. Nurses may be a more cost-effective group to provide some psychological services to some clients.

Registration of clinical psychologists with the British Psychological Society is not mandatory, but even if it was a pre-requisite to practising this may not stop other professional groups using psychological therapies in their work. Guinan (1990) suggested that the British Psychological Society should publish minimum standards of training, monitoring and supervision for the safe practice of psychological therapies.

1.3.8 Community psychiatric nurses

Only 22 community psychiatric nursing services had been established by 1970 but by 1979 almost all districts had access to such a service (F. Martin, 1984). The OHE (1989) reported there were 1000 community psychiatric nurses at the start of the 1980s and over 3,000 by 1988. The Audit Commission recorded 1,100 in 1979 and 2,200 in 1984 (1986, p61). Data from the health service indicators showed that between 1984 and 1986 most districts had fewer than one in six of their mental illness nurses working in the community (Department of Health and Social Services, 1988). The figures cover slightly different time spans to those reported in table 1.3 but reflect the concerns found in the House of Commons Report (1985)

> ... because of the difficulties of definition, and gaps in the Department's system of statistical returns, nobody knows how many community psychiatric nurses there are ... (para 192).

The Third Quinquennial National Community Psychiatric Nursing Survey gave the clearest picture of the numbers, activities and workloads of community psychiatric nurses (White, 1990)[2]. For 1989, the survey estimated the UK community psychiatric nurse workforce at 4,990, the majority of whom worked full-time. There had been an increase of 54 per cent in the number of nurses since the previous survey which in turn represented a growth of 65 per cent on the 1979 figures. The mean caseloads were slightly larger than that found for social workers (see below) at 35.6 clients; ranging from zero for nurses with only support and supervisory functions to a reported maximum of 270. Tyrer et al. (1990) listed the tasks community psychiatric nurses undertake: maintaining and administering medication; assessment of clinical status; development of behavioural and treatment programmes; counselling; various forms of psychotherapy; and management of the patient (see also Mental Health Nursing Review Team, 1994, p17-18).

The national survey found people with schizophrenia constituted a quarter of the mean average caseload. In the smaller study, Tyrer et al. (1990) found sixty per cent of

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[2] Three edited volumes of research on community psychiatric nursing are available; Booker (1990), and Booker and White (1993 and 1995).

nurse visits were to severely ill clients with schizophrenia or manic-depressive psychosis. The 1993 Körner statistics reported a total of 3,794,300 face-to-face contacts in England, 55 per cent of which were in the patients' homes. This was six per cent fewer contacts at home than in 1988-89 but the figures showed an increase in the number of contacts in GP premises or clinics (Department of Health Statistics Division, 1993b).

Over the three quinquennial surveys a significant change was found in the main base of the nurses and by 1989 only a third of the community psychiatric nursing services were operating from psychiatric or general hospitals with 40 per cent based in a primary care setting or community mental health centre. The move away from psychiatric hospitals loosened their links with the psychiatric service which had implications for their referral sources and the type of client seen. In 1984, 59 per cent of referrals to the community psychiatric nursing services came from psychiatrists, but by 1989 this had decreased to 43 per cent with only one in 13 nurses receiving referrals solely from psychiatrists. GPs referred 23 per cent of the cases in 1984, and this had risen to 36 per cent in 1989. Under the care programming arrangements, community psychiatric nurses are often key workers (see chapter 2). Clients receiving care programmes should be patients of the specialist psychiatric service so this referral trend may be reversed by the next quinquennial survey. Care programme clients are likely to be more severely ill than general practitioners' referrals so this shift also will have implications for nurse training and education. Psychiatric nurses will need training in managing more severely ill patients and training nurses in family work has proved effective in support of people with schizophrenia (Gamble et al., 1994; Lam et al., 1993). Practice nurses may also need training as they take on the support of people with less severe mental health problems (White, 1990).

1.3.9 Social workers

In the mid-1960s there were 1,684 psychiatric and medical social workers based in hospitals and a similar number of social workers in the local authority mental health departments (1,625). Few of the latter group had any professional qualifications; in 1968 there were only 226 qualified psychiatric social workers in local authority departments (Julia, 1978). Mental welfare workers had specific powers under the *Mental Health Act 1959*, but the administrative reorganisations of both health and social services in the 1970s brought about a change in the focus of social work. Specialism was replaced with a generic approach and the role of social work in mental health became less easy for other practitioners to define and, for the purposes of this chapter, means psychiatric social work services are less easy to enumerate. The new social work departments found themselves under-funded, subject to financial restrictions and under pressure from other client demands, particularly in child care. "Many witnesses suggested that mental health work had a low priority within social work" (House of Commons, 1985, para 200).

The need for specialist training in mental health social work was recognised in the *Mental Health Act 1983*, which emphasised the duties of social workers and required that they should have appropriate training and local recognition. 'Approved' social workers were given statutory responsibilities for people compulsorily admitted to hospital and a duty to examine alternatives to hospitalisation. Social services departments had a statutory duty to employ "a sufficient number of approved social workers for the purpose of discharging the functions conferred on them by this Act" (Gostin, 1983, p21). No guidelines were provided on what constituted a 'sufficient number'. By 1985 there were 26,214 social workers in England and Wales of whom between 4,000 and 5,000 were approved for mental health work under the 1983 Act, however, only 1,200 had passed the qualifying CCETSW examination (Prior, 1992).

A recent survey gives some of the most accurate information to date on the availability of approved social workers (Huxley and Kerfoot, 1994). Extrapolating from a survey of 82 local authorities (out of 117 in England and Wales) the authors estimated there were 4,364 approved social workers in 1991. Fifty-five per cent were based in generic settings and the remainder in specialist teams. With the exception of those working in out-of-hours or duty teams, the average caseload was fairly consistent - between 25 and 29 clients. Problematically, some clients of approved social workers may not have mental health problems and, of course, some people with mental health problems may see non-approved social workers.

The boundary between mental health social work and community psychiatric nursing is not always clear. Nurses tend to see social workers as solely dealing with welfare benefits and housing, and social workers think nurses are providers of medication, particularly depot injections; both tend to minimise the therapeutic and counselling role of the other. However, the advent of multi-disciplinary community mental health teams has made both professions more aware of each others' skills (Sheppard, 1991) and most commentators see their roles as complementary rather than interchangeable (Wooff and Goldberg, 1988; Wooff et al., 1988). It is interesting to note that while there is now a mandatory requirement for approved social workers to receive training there is no such requirement for community psychiatric nurses. In 1990, only 38 per cent of community psychiatric nurses had undertaken the relevant courses in community mental health work yet they are almost certainly working with a more severely ill group than social workers (Huxley and Kerfoot, 1993a).

1.3.10 Multi-disciplinary services

To explore the extent of provision of multi-disciplinary services it is necessary to rely entirely on research and survey sources. No national compilation of routinely-collected data records information on the number of these services or their composition. It is, therefore, impossible to assess the extent to which individual professionals included in the categories above are 'double-counted' by inclusion of this section.

The first Community Mental Health Centre (CMHC) opened in the UK in 1977. The ideas behind these services came from Italy and the United States, where they were intended to be the central care-coordination and provision point for former (or potential) psychiatric hospital users. A range of services were provided within the centres, including access to in-patient beds, clinics, and peripatetic and outreach services. Between 1977 and the late 1980s, the number of CMHCs in the UK rose to 122 (either open of with funding agreed) and a further 155 were at the planning stage (Craig et al., 1990).

There still appears to be no standard model for these centres but generally CMHCs aim to provide an integrated service which is more accessible to the user. Service elements within the centres may include long-term support, a walk-in or resource centre, day activities services, and/or emergency and crisis care. (In one survey of 82 local authorities, 77 per cent of counties and 40 per cent of London boroughs and metropolitan areas had a CMHC which provided emergency services; Huxley, 1993 and see Johnson and Thornicroft, 1995). While internal services may be provided in a more integrated manner, one of the original aims for the CMHCs was to coordinate their services with those provided by other organisations in the locale to ensure a cohesive mental health care system. There is some evidence to suggest that CMHCs have improved user access to mental health services but less to show that the whole mental health service is more coordinated in areas which have CMHCs or that CMHCs have improved client outcomes (Huxley et al., 1990, p41 and 53).

Community Mental Health Teams (CMHTs) are probably more common. In 1993, Onyett et al. (1994) identified 517 such teams in 144 district health authorities and just under half of these (47 per cent) were based in a CMHC. The second most common base was a hospital and accounted for only 14 per cent of the sample. Mirroring the results of the earlier work on CMHCs (Craig et al., 1990), those teams based in CMHCs were found to be least likely to place an emphasis on care for people with severe and long-term mental health problems.

A community mental health team was included in the study if there were four or more team members from two or more disciplines (Onyett at al, 1994). The team had to be recognised as a CMHT by the service manager and work with people with mental health problems as their identified client group. Members had to do most of their work outside the hospital setting and offer a wider range of activities than structured day care. The average size of the teams was 15 people, eleven full-time-equivalent staff.

Table 1.4 provides a breakdown of the teams' composition and shows the pivotal role of community psychiatric nurses but also indicates a relatively low input from psychiatrists, perhaps providing some evidence to support the preferences reported in an earlier section of this chapter. About 90 per cent of the teams offered individual therapy or counselling, direct work, individual service planning, consultation to other mental health workers and support or education for carers. Only 23 per cent were open after normal working hours or at the weekends and all teams made use of in-patient beds with three-quarters having direct access to beds through a team-member.

Table 1.4 Composition of community mental health teams[1]

Discipline	% of teams containing discipline	mean input per team FTEs (people)
Community psychiatric nurse	93	3.55 (3.83)
Social worker	86	1.53 (1.87)
Administrative staff	85	1.32 (1.87)
Other nurses	34	1.01 (1.22)
Occupational therapists	69	0.75 (0.95)
Community support worker[2]	38	0.65 (0.88)
Consultant psychiatrist	79	0.62 (1.02)
Other doctor	68	0.59 (1.34)
Clinical psychologist	72	0.50 (0.90)
Others	28	0.36 (0.57)
Other specialist therapist	32	0.21 (0.44)
Volunteer staff	14	0.07 (0.45)

Notes:
1. This table has been reproduced from Onyett et al. (1994) p9.
2. The term community support worker includes generic mental health workers, the term which was used on the questionnaire.

With the notable exception of in-patient beds, there has been a general expansion of specialist mental health services since the publication of *Better Services*. Even within hospital services, the number of specialist medical staff in the mental illness specialty rose between 1979 and 1991; from 2,800 whole-time equivalents to 3,447. (Specialist medical staff comprise consultants, senior and registrars, senior and house officers, hospital practitioners and clinical assistants.) Although it is rarely possible to separate the numbers of staff based in either community or hospital facilities, the general trend and the downsizing of the specialist hospitals leads to the conclusion that much of this expansion has been in general hospitals and other community-based services, away from the large segregated psychiatric hospitals.

1.4 LOCAL VARIATION

Within the national trend of expansion in communiyt-based services there is a deal of variation at the local level. Hospital bed availability and use, for example, varies tremendously between districts. Department of Health (1992) data show that, on average, 270,334 hospital beds (all specialties) were available per day in England in 1989-90 but that there was a greater than two-fold difference between the lowest rate (11,291 in East Anglia region) and the highest (24,554 in Trent). The average daily available *mental illness* beds per 1,000 population ranges from 0.7 (Oxford region) to 1.6 (Northern and Mersey regions) around a mean for England of 1.3. Throughput also varies, from five cases treated per available bed in Wessex to three in Trent (mean for England 3.4). In their survey of twelve districts, the Audit Commission (1994) found a two-fold difference between six-month readmission rates. In 1989, one survey found consultants in four percent of districts had no access to acute hospital beds for people with schizophrenia and 35 per cent managed their service with no long-stay beds (Thornicroft, 1990). The same survey found that psychiatrists in nine per cent of the study districts had no access to day hospital places and a similar number had no access to day centre places.

The distribution of clinical psychology services is also uneven throughout the country, exacerbated by a national shortage (BPS, 1994). Körner activity statistics report the total number of contacts (1,038,700) by region. In 1992-93, the highest contact rates were reported for the North Western region (107,900) and West Midlands (106,700), dropping to 99,000 contacts in the South Western region, down to a low of 38,500 contacts in Mersey (Department of Health Statistics Division, 1993a). The national survey found ratios of community psychiatric nurses per 100,000 population of between 3.21 and 21.67 (White, 1990, p17).

These figures report variation in provision or use of services. There is less evidence which connects variation to provision to variation in need - a long-standing policy dictum and specifically restated with regard to the purchaser/provider split in health and social care. Need assessment is complex - current policy advocates assessment at the individual level to ensure that each user receives a cost-effective care package *and* at the local population level to ensure that sufficient services of good quality are contracted to meet the needs of the residents (see chapter 2).

At the individual level the Mental Health Foundation (1994) suggested that the consideration of 'needs' should encompass the following dimensions: an appropriate place to live; an adequate income; a varied social life; employment or other day activities; help and support; respect and trust; and choice and consultation. But purchasers need a broader level of information: the needs of the resident population; the number of people who will require support; the type of support they are likely to need and in what quantity; and how this can best be provided. For mental health care the main service area in which such work has been undertaken is in-patient hospital care. Epidemiological evidence suggests there is likely to be a higher prevalence of certain disorders in urban environments and that there will be higher rates of treated mental disorder among those living in the least desirable districts, in lower status jobs and with less education. Social isolation, marital status and ethnicity are other socio-demographic characteristics shown to be related with higher psychiatric illness rates (Glover, 1994).

Thornicroft (1991), in a statistical examination of admission data alongside socio-demographic and census data (Jarman indices), identified the characteristics of groups at high risk of psychiatric admission. Using a multiple regression model, he suggests hospital admissions can be predicted allowing targeted provision of services to better meet the needs of the population. There is, however, a certain circularity to this approach for it calculated high risk factors based on *treated* cases and existing levels of provision. Extant untreated morbidity is not absorbed into the model, which also assumes the current level of provision is sufficient and effective. Recent data from the MILMIS group suggest this is not the case in London's acute in-patient units where there were 22 per cent more patients needing admission on the census day beds available (MILMIS, 1995).

The Audit Commission advocate a more complex 'bottom-up' model of need assessment which involves counting the number of residents with particular levels of need (dependency) and aggregating the components of cost-effective care packages to estimate the service requirements of the local population (House of Commons, 1993 and see chapter 2). This case-identification approach has been used in one area of South London (PRiSM, 1993). From a research perspective, the analysis of requests for social work assessments for compulsory admissions comes closer to estimating the relationship between client needs and service provision (Huxley and Kerfoot, 1993b). However, the authors found no association between the Jarman Index score and requests for assessments under sections 2 and 3 of the 1983 *Mental Health Act.* Only in the London authorities was there a strong association between the indices and the number of requests for assessments under section 4 (admission in circumstances of urgent necessity). At a more detailed level of analysis, Carr-Hill et al. (1996) found the role of such deprivation indices in predicting consultation rates with general practitioners to be much reduced when the characteristics of individual patients were included in the model.

The Audit Commission's approach also highlights another important facet of providing a mental health service; the need to focus on *packages* of care. Care package elements often complement each other, and in some circumstances can be substitutes for each other. For example, where there are insufficient sevices to support people in their own homes, more expensive residential options may be used. There is some evidence of substitutability between community psychiatric nurses and social workers (Huxley and Kerfoot, 1993a) and between nurse therapists and psychiatrists (Ginsberg et al., 1984; Mangen et al., 1983). Fewer in-patient beds may be required in a district where alternative modes of support have been developed such as crisis teams, home-support or day treatment programmes (Miller and Turner, 1993; Knapp et al., 1994).

1.5 CONCLUSION

The closure of psychiatric hospitals has been re-stated as governmental policy several times over the latter half of this century with specific targets incorporated into the recommendations. This level of prescription cannot be found for community mental health services. Section 1.3 attempted to enumerate the development of community mental health services over the past 15 years but found a worrying lack of detail. Not only is there little guidance on how mental health services should be developing but there is little evidence with which to gauge *current* levels of provision. The Health Committee (House of Commons, 1994) recommended that the Department of Health issue instructions on minimum acceptable levels of provision across a range of services, supported by triennial inspections to ensure the standards are met (para 46, and see Mental Health Foundation, 1994; Audit Commission, 1994).

Even where there is information on, say, how many workers there are in each profession, it is difficult to find out where they work, what type of work they do, which clients are served or how workers divide their time between different tasks. The Audit Commission (1994) also found a complete absence of information about outcomes, noting that "the number of service contacts, which is often recorded, reveals nothing about the type of needs that are being met nor the type or level of service provided" (para 145). Professional organisations such as the Royal College of Psychiatrists, the British Psychological Society or the British Association of Social Work collect some information on their members but few surveys are undertaken on workloads or activities.

The picture is not much better at the local level, yet the *Health of the Nation Key Area Handbook* identifies local health and social services managers as those responsible for developing an information data base. 'Resource inventories' are far from complete in most districts and the database to be complied by the Mental Health Task Force will rely on existing data collections (House of Commons Health Committee, 1993, para 2.6). A recent survey of Community Care Plans found few areas had more than the most basic understanding of the supply of care in their area. Although most plans specified aims and objectives these were rarely linked to financial allocation processes or described how resources and services were linked to levels of need (Hardy et al., 1994).

The extant funding of mental health care is mentioned in several of the policy documents referred to above, and many of the more recent documents note that reduction in specialist hospital-based services and the concomitant development of locally-based services must occur without the injection of new funds. The government's response to calls for more money is consistent: developments should occur by using the available resources more effectively. It is, therefore, of prime importance that data is easily accessible on what resources (both services and money) are currently available and how these limited resources can be best used. Without that information both service and finance planning will occur in a vacuum and it is likely that the variation in quality and quantity of services found during the 20th century will continue into the next.

Research, as shown in sections 1.3 and 1.4, can add depth to routinely-collected data and can address specific policy and practice questions for which national data compilations provide insufficient detail. Research is commonly undertaken at the local level and often concentrates on particular client groups or sub-groups. Given the long-standing policy to develop a lcoal mental health service which responds to local needs this is an appropriate focus, moreover, good quality research studies can provide generalisable information to inform national policy.

This thesis explores the way in which such research can be undertaken, provides illustrations of the attendant methodologies, and reports the results of some costs research on care for people with long-term mental health problems, particularly former long-stay psychiatric patients. In the next chapter, however, the demands for cost and cost-effectiveness information thrown up by the implementation of the *NHS and Community Care Act 1990* are considered.

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CHAPTER 2

CURRENT DEMANDS FOR COST INFORMATION

2.1 INTRODUCTION

Concerns about the costs of mental health care have been pervasive in the documents reviewed in the previous chapter. With the introduction of health and social care markets as enshrined the *NHS and Community Care Act 1990 (NHSCC)*, these concerns have turned into implementation requirements. The Act contains many of the proposals set out in the White Papers *Working For Patients* and *Caring For People*. In themselves they are built on the recommendations to be found in, for example, the House of Commons Social Services Committee (1985), the Audit Commission (1986) and the Griffiths Report (1988). What type of costs information is now required and by whom?

The *Caring for People Policy Guidance* states that:

> in drawing up Community Care Plans (organisations) should draw up joint resource inventories and analyses of need which enable them to reach an agreement on the key issues of who does what, for whom, when, *at what cost and who pays* ... (Department of Health, 1990a, para 2.11; italics added).

There is also a demand for cost information at the client level. The policy guidance document suggests that one of the tasks of care management is to "design a care package in agreement with users, carers and relevant agencies, to meet the identified needs *within the care resources available* ..." (para 3.9) and that care management:

> will have its greatest impact where most of the processes involved are carried out by a single care manager who has some measure of responsibility for a devolved budget (para 3.7).

The development of health and social care markets has thrown up new roles and activities for all levels of staff which, alongside these explicit demands from central government, mean that local planners, purchasers, providers and service organisers must become much more concerned about cost issues. To examine who needs such information, section 2 outlines the main groups of players in the health and social care markets and their coordination and commissioning activities. Section 3 examines the client-level coordination processes by describing discharge planning, care management and the care programme approach, and the needs for costs data they generate. The final section in this chapter suggests that many of the demands for cost information can be met through costs research and identifies the main issues addressed in each of the succeeding chapters.

2.2 HEALTH AND SOCIAL CARE MARKETS

2.2.1 The health care market

The UK National Health Service (within which the internal health care market operates) is funded by general taxation with only a small proportion of income generated by patients' fees and charges. In 1992-93 mental illness services absorbed about 12 per cent of total expenditure on hospital and community health services, with £1,775 million spent on in-patient services, £155 million on out-patient services, £195 million on day-patient services, and £255 million on community mental health services (Jenkins and Knapp, 1996). Resources for hospital and community health services are allocated by the Department of Health to the regional health authorities and thence to district health authorities and to GP fundholders. Under the current arrangements only about 20 per cent of the NHS budget could come under fundholders' control but it tends to be less; only 4 per cent in 1993 (Glennerster, 1993) rising to 14 per cent by April 1996 (Wainwright, 1996).

In the health care market, there are three main groups of players. First, the district health authorities whose main role is in service commissioning (including needs assessment of the population). Their service provision role is much smaller than in the past with few Directly Managed (provider) Units retained under their contracting procedures. The purchasing or commissioning role of district health authorities is central to the operation of the health care market allowing decisions about the deployment of resources to be made separately from decisions about the supply of services, and also independent of professional interests. Instead of managing services, health authority personnel now manage flows of money. They must write, negotiate, and monitor contracts which include specific price information. The NHS Executive has given approval for purchasing consortia which cover populations of up to 750,000 (Hudson, 1994, p44), more than three times the average size of a district health authority. Such consortia have access to very large budgets and, as the major purchasers in one area, may exercise considerable control over pricing and service options. However, similar attempts at market management have been reported where provider units in one region were "beginning to form a cartel" to counteract the effects of a large purchasing consortium (Dobson, 1992).

General practice fundholders retain their primary care provider function and can purchase secondary care within a cash-limited budget (estimated at an average of £109 per patient; Glennerster and Matsaganis, 1993). Since 1993, fundholders' budgets were extended to cover the whole of the primary care team and some out-patient services. In 1995, 'multifund' practices were allowed and 60 'total purchasing' schemes were approved. In 1996, a Department of Health initiative was announced allowing some fundholders to purchase mental health in-patient services (Boulton, 1996).

By 1995, about 40 per cent of the population in England was covered by fundholders who controlled around 8 per cent of the hospital and community health services budget (Dixon and Glennerster, 1995). Fundholders operate as 'micro' or individual level purchasers of care but where they serve large populations they can have an impact on the delivery of a range of services. There is some evidence of 'fast-tracking' (where fundholders can procure services more quickly; Shaw, 1995) but little systematic evidence of 'cream-skimming' where GP fundholding practices refuse to accept on to their list patients who are likely to make large demands on their budget (Dixon and Glennerster, 1995). Problematically, only where joint District and Family Health Services Authorities have been set up are there clear links between fundholders and district health authorities so fundholder purchasing may compromise strategic planning. One district health authority claimed that the growth of fundholding in their area meant it was unable to pay for any non-urgent hospital cases in 1993-4 (Hudson, 1994, p40). Glennerster and Matsaganis, however, found "a substantial presence of fundholders enhanced the competitive environment" (1993, p185).

The third group of players in the health care market are the providers, of which the NHS self-governing trusts together are the major force. Trusts still come within the state's purview but are separate from the health authorities and tend to vary in size and in the breadth of their activities. Some cover a wide range of services (perhaps all community health services) and some are service, or client group specific - perhaps containing only the ambulance services or mental health care. After April 1994, more than 90 per cent of hospital and community health services revenue for England was spent through NHS trusts, and only 44 Directly Managed Units remained (Shaw, 1994).

Health care services can also be provided by private and voluntary organisations. In 1994, one study identified five large commercial groups which dominated the market in acute in-patient mental health care (Warner and Ford, 1996). For the same year, the *Review of Private Health Care* identified 36 for-profit hospitals or units and 16 hospitals run by charitable organisations. Three for-profit organisations operated 45 per cent of the total capacity of psychiatric hospital care (Laing, 1994, pA173).

Rather than being both funder and provider of services, the health care market means the state is primarily the funder of services which are to be provided by a variety of private, voluntary and public suppliers, all operating in competition with one another (Le Grand, 1990, p2). Maynard suggested the health care market should be more correctly described as regulated competition on the supply side (1993, p194) and Rea (1995) suggests the British Government's enthusiasm for markets is in practice limited to the *delivery*, and not the *supply* of health services as the government remains committed to controlling the availability of finance (p144). Probably the most commonly used definition is a quasi-market in which consumers are represented by agents (third party purchasers) and in which the public sector, funded by taxation, is the major purchaser of care (Le Grand and Bartlett, 1994).

Regulation has an important role to play in minimising problems resulting from greater provider freedom. Some regulatory mechanisms have been established by the Government to act as a set of rules to govern behaviour within the market, such as legislation or policy guidance notes. Codes of conduct have developed to regulate professionals' behaviour and individuals do have some recourse through the courts. Contracts provide more detailed specifications: "work previously carried out directly by public sector organisations and controlled through organisational hierarchies is increasingly being carried out by contractors who are controlled through the terms of a contract" (Hudson, 1994 p3). Inspections, analysis of routine statistical returns, and research and surveys each play a part in regulating and monitoring market activities. The NHS Executive, its outposts and the health authorities have overall monitoring roles. (See Hughes, 1993, for more detail.)

2.2.2 The social care market

In social care services, market development has taken a different course in which, as set out in *Caring for People*, social services departments act as purchasers through an "enabling" role. Social services departments are funded mainly through Department of the Environment grants (using the Standard Assessment Formula), supplemented with business rates, local taxes and user fees and charges. In 1990-91 social services expenditure exceeded the figure central government estimated by 13.9 per cent with the difference made up by local taxation (Harding, 1992). In 1990-91 expenditure on dedicated mental illness services (excluding generic activities such as social work and support services) amounted to £102 million, about one-third of which was spent on residential services. This figure represented about 2-3 per cent of gross personal social services expenditure, a proportion which had been fairly constant over the previous 10 years or so. The 1991-92 Mental Illness Specific Grant allocation (£21 million) supported expenditure of £28 million and produced nearly 800 new projects nationally (House of Commons, 1993). In 1993-94 the central government MIS Grant was £34.4 million.

In supporting people with severe and enduring mental health problems the health sector takes the major role, but the recent re-organisation of social services departments has implications for the provision of comprehensive care for all people with mental health problems. One of the functions of the enabler authorities is to encourage the development of a *mixed economy of care* in which public sector service provision is reduced in favour of greater levels of provision by the independent sector. (Note that the NHS can be included within the independent sector for local authority expenditure of the Special Transitional Grant; LASSL(92)12 and LAC(94)12.) The mixed economy of care is, of course, not new. Chapter 1 of this thesis described how, in the late 18th and early 19th centuries, both private and public sectors were providing mental health services and the many philanthropic or charity organisations played a provider and a reforming role, a duality which continues to the present day (Schneider and Pinner, 1993). Knapp (1989) developed a matrix in which the mixed economy can be described, combining both supply and demand dimensions (see also Judge and Smith, 1983). Table 2.1 reproduces this framework and provides, for each cell, a service example which existed *before* the current reforms were fully implemented. Current policy encourages greater movement from the top left-hand cell.

In the social care market, unlike health, there is only one major purchaser - the social services department. (Care managers may be responsible for purchasing care but usually work within a social service department.) Ostensibly this puts social services in a strong market provision, but running down their provider function and encouraging greater independent sector provision has not been easy. One study of the mental health sections of 33 Community Care Plans (compilation of which is the responsibility of social services departments who must liaise with other agencies) found consultation with the independent sector was rarely mentioned (Department of Health, 1993; see also KPMG, 1992). Moreover, doubts have been expressed about the ability, or desire, of voluntary organisations to take on a larger, more formalised role and the for-profit culture sits uneasily alongside the characteristics normally associated with public sector social care (Knapp and Thomason, 1989; Lewis, 1993; Kramer, 1994; Kendall and Knapp, 1995). Hiving- or floating-off their service provision arms and the development of provider consortia have been common strategies for social services departments.

Table 2.1 The mixed economy of mental health care: service examples

Purchase, demand or funding route	Provision or supply of services			
	Public sector	**Voluntary sector**	**Private sector**	**Informal sector**
Coerced collective demand	LA psychiatric hostels	MIND day care under contract to a local authority	Publicly-funded placements in privately nursing homes	Adult foster care
Uncoerced or voluntary collective demand	Voluntary organisation payments for public sector training programmes	Self-help group paying for expert advices from larger voluntary organisations	Purchases of goods and services by National Schizophrenia Fellowship	Volunteers providing respite care organised through voluntary organisation
Corporate demand	Private residential home payments for LA registration	Corporate donations to charities	Counselling offered to company employees	Redundancy payments for mental ill health
Uncompensated individual consumption	User charges for meals in LA day centre	Self-funding meal clubs run by voluntary organisations	Payment for private residential care by family or resident	Exchanges in kind between neighbours
Compensated individual consumption	LA hostel charges funded by social security entitlements	Income support payments to voluntary homes	Housing benefit subsidies for private housing	Attendance allowance used to purchase informal care
Individual donation (for use by others)	Volunteers working in a LA psychiatric hostel	Donations to the Alzheimer's Disease Society	Volunteers in private residential homes	Intra-family transfers of resources and care

Source Beecham et al. (1995), developed from Knapp (1989)
Provider sectors: the *public sector* includes health and local authorities (LA) and the Department of Social Security; the *voluntary sector* is made up of formal organisations which are independent of government but cannot distribute profits to owners or share-holders; the *private sector* is profit-seeking and distributing and is again separate from government; and the *informal sector* comprises individual carers (such as family members or neighbours) and small groups which have no formal constitution.
Purchasing routes or types of demand: *coerced collective demand* is where the public sector acts as purchaser on behalf of citizens with funding from central and local taxation; *uncoerced collective demand* is the use of voluntarily-donated funds to purchase services on behalf of donors; *corporate demand* is funding (or support) from private sector corporations; *uncompensated individual demand* is payment for goods or services used by the payer but not subsidised from social security or other transfer payments; *compensated individual consumption* is also payment for use of services by the payer but these are subsidised through transfer payments; and *individual donation* is payment for goods or services to be used by someone else.

Table 2.2 The range of service relationships for social services departments

Local authority (LA) as buyer	**Local authority (LA) as supplier**			
	Major owner	**Major stakeholder**	**Minor stakeholder**	**Token/nil funder**
Major/monopoly buyer	LA enterprises sell all/most of their services to the social services department (SSD).	Consortia in which LA has major stake sell all/most of their services to the SSD.	Consortia or other organisations in receipt of significant LA funds sell all/most of their services to the SSD.	Totally or almost totally independent external suppliers sell all/most of their services to the SSD.
Major purchaser	LA enterprises sell some of their services to other LAs or externally but mostly to the SSD.	Consortia in which LA has a major stake sell some of their services to other LAs or others but mostly to the SSD.	Organisations in receipt of significant LA funds sell some of their services to non-LAs but mostly to the SSD.	Totally or almost totally independent suppliers sell most of their services to LAs.
Casual user	LA enterprises selling most of their services to buyers other than the SSD.	Consortia in which the LA has a major stake sell bulk of their services to others.	Organisations in receipt of significant LA funds sell most of their services to others.	Totally or almost totally independent organisations sell little or none of their services to the SSD.

Source: Miller, C. (1989) Social services departments and community care, *Public Money and Management*, Winter, p29.

Miller (1989) described how social services departments might develop a social care market using their supply and purchasing functions to create a range of service relationships. As a purchaser their position could range from the major or sole buyer to casual user; as a supplier (provider) of services, the local authority could take the role of a major stakeholder through to being almost totally dependent on independent organisations (see table 2.2). Both Miller (1989) and Netten (1993) point out that social services departments can manipulate the market by carving out shares for different contenders through contract specifications and quality control and assurance mechanisms. Moreover,

> ... as local authorities are the major provider in most of these markets, their pricing strategy will have a profound effect and they need to assess the current market structures and the likely impact of their strategies (Netten, 1993, p102).

Regulation through contracts has a longer history in social services than in health care due to the long-standing arrangements with the independent sector for the purchase of residential care, particularly for children. (Indeed, as chapter 1 showed, local authorities were given powers to inspect, regulate and control private and voluntary sector psychiatric hospitals in 1845.) A similar range of regulatory activities operate as can be found in the health sector and much of the responsibility is devolved to local inspection units (LAC(94)16). The Social Services Inspectorate now has powers to inspect public sector facilities, however, there are as yet few mechanisms to regulate domiciliary services, despite policy intentions to move away from residential forms of care.

2.2.3 Coordination and contracts

In current practice, a mixed economy of service provision is viewed positively. Problematically, the resulting diversification may also increase fragmentation of care. Some 40 years ago the Mackintosh Report noted that

> without ... coordination there would be a real danger of mental health becoming separated into compartments in such a way as to cause inefficiency in service to patients ... (quoted in Butler, 1985, p135).

How can the greater service diversity created by market conditions be coordinated into a comprehensive mental health service? Joint working between agencies has long been considered important in coordinating care but has not set a good precedent (Goodwin, 1990; Audit Commission, 1986; House of Commons, 1985; Griffiths, 1988). New incentives came with the recommendation in *Caring For People* to introduce joint commissioning which would entail health and local authorities working together to develop needs assessment processes, and audits of services and resources. Joint plans for service purchasing were to be based on these data.

In the 1993-94 Community Care Plans the emphasis was on "a conviction about the advantages of joint commissioning for mental health, not on how it operates" (Department of Health, 1993, p27).

> The appeal of collaboration is that it brings together the skills of different agencies or professional groups and can lead to a more holistic and effective response to users' needs ... (Nocon, 1994, p22).

Joint commissioning can be particularly useful where it is not easy to draw a distinction between health and social care needs - thus it can have particular relevance for mental health care - or where a coordinated purchasing strategy can help avoid service duplication or gaps but a clear strategic vision is required into which such agreements can be incorporated (Nocon, 1994, p22 and p75). Time is needed for trust and confidence to develop between collaborators, to agree a shared set of values and to agree the types of services required (Wertheimer and Greig, 1993), and resources are required to set such structures in place (Audit Commission, 1994; Glennerster and Matsaganis, 1993). For example, it took two years of preparation to develop a pilot scheme in North Yorkshire which involved initiatives in respite care, personal care at home, and support for carers (Hornby and Wistow, 1994). Knapp et al. (1994) suggested such strategic level collaboration carries the potential for better use of resources, less cost shunting between agencies, economies of scale, greater flexibility and a better balance of care.

Pooling health and social services' resources is central to joint commissioning but such budgets proved very hard to establish for mental health (Department of Health, 1993, p31). Generally, agency staff may have concerns about losing control over part of their budget or losing responsibility for purchasing a service area. Shared responsibility and the provision of better services for users was intended to provide the incentive (Mawhinney, 1992, para 27). There are also legal issues around the removal of resources from the democratic control of social services departments, whether health services can be purchased with budgets which include social services departments' money and each authorities' obligations to carry out specific duties (House of Commons Health Committee, 1993; Wertheimer and Greig, 1993; Nocon, 1994). The lack of boundary coterminosity can still cause problems: in 1993 the National Association of Health Authorities and Trusts reiterated concerns about the deleterious effect of different bureaucratic cultures, accountability and financial arrangements (House of Commons Health Committee, 1993, p47). Although some commentators have suggested that bringing community health services, social work and primary health care together could benefit mental health care services (Huxley and Kerfoot, 1994), the Department of Health study noted that the effectiveness of joint commissioning in mental health will need to be monitored (Department of Health, 1993, p31). Given the formidable challenges each of these factors presents and the uncomfortable history of joint working, perhaps it is not surprising that progress in joint commissioning has been slow.

The main objective for commissioners is to meet the needs of the local population. Put simply, this can be achieved by assessing those needs and then purchasing appropriate services within a given level of resources. In 1993, the Audit Commission proffered a model to assist authorities in linking budgets with need and eligibility criteria (House of Commons, 1993). The model has six components which, despite their apparent simplicity, require a considerable knowledge base:

- estimate the needs within each client group in broad categories, for example, high, medium and low dependency;
- determine the average cost of a 'typical' package of services for a client at each level of need;

- calculate the total cost of supplying such a package to the numbers of people identified at each level of need;
- compare total costs, resources and service requirements with existing provision;
- prioritise and revise eligibility criteria to bring total cost into line with the budget; and
- allocate the resources according to the revised set of eligibility criteria.

An approach similar to this has been used for child psychiatry services in one authority. Light and Bailey (1993) brought together an estimate of how many children in the district had different kinds of psychiatric problems with the costs of treatment programmes for them and indicated the future savings which could be made by treating more children. The budget required to meet the newly identified needs was far larger than the existing one and in this case, the work led to an increase of six posts for the unit over the next two years (Light, 1994).

Costs and need, therefore, should be inextricably linked in the market environment and contracts are the means by which that link is operationalised. The relationships between purchasers (commissioners) and providers in both the health and social care markets are enshrined in contracts which the Audit Commission (1994) suggested should cover:

- the nature and level of service to be provided;
- the prices to be paid for these services and the mechanisms for payment;
- the duration of the contract;
- the facilities to be employed;
- quality measures; and
- the means by which the contract is to be monitored.

There tend to be three broad types of contract (see Hudson, 1994). *Block contracts* where purchasers pay providers a fixed annual fee (usually in instalments) in return for access to a given capacity of a defined range of services. Block contracts may distort knowledge about the relationship between costs and prices as the single payment may not reflect the different costs of the various activities agreed within the contract and cross-subsidies cannot easily be identified (see EL(90)173). *Cost-per-case contracts* reflect payment on a case-by-case basis without any commitment on either side as to the volume to be purchased or provided. Prices for each individual treatment are specified, so more detailed cost information is required than with block contracts. These contracts are likely to be more costly to arrange and less secure for providers. *Cost-and-volume contracts* are a mixture, with a base-line of activity funded on a 'block' basis and further requirements arranged on a cost-by-case basis.

The availability and quality of both costs and activity data will effect the type of contract chosen (Raftery and Gibson, 1994) but the National Standards Group on Costing (see below) advocates the eventual use of cost-and-volume contracts at a sub-specialty level, based on case-mix data and healthcare resource groups (Reeves, 1994). Price-banding by the main treatment types within a specialty represents a move in this direction (Raftery et al., 1994).

2.2.4 Improving costs information

There has been considerable reluctance to assimilate costs into care decisions but costs data cannot be used if it cannot be accessed in an appropriate form. With the aim of better meeting the demands of the new market environment, costs data collections in both health and social services have been subject to recent revisions.

In the health sector, the National Steering Group on Costing (NSGC) was set up to assist in the development of the internal market and its initial survey found difficulties at the provider level in calculating appropriate service costs. (Prices had been found to be unreliable indicators for costs. In one region, prices for a skin biopsy showed a thirteen-fold variation and the lowest price for varicose vein treatment was only a quarter of the most highly priced; CIPFA, 1992a.) The NSGC response was to initiate the *Costing for Contracting* project to ensure price differences in contracts were not due to different costing approaches (Phase 1) or inconsistent definitions of services or their product (Phases 2 and 3; Reeves, 1993, 1994). The initial guidance set minimum costing standards: prices were to be based on full average costs (including all unit indirect and overhead costs, capital charges and costs of services received from the district health authority) and there should be no planned cross-subsidisation between contracts (Ferguson and Palmer, 1994).

> It is intended that prices will reflect the *precise* costs of the specialty by encouraging providers to *analyse* their costs in terms of direct ... costs (and) to be more *responsive* to contractual changes by having a better understanding of the interrelationship between their cost structures, activity levels, specialty mix and prices (Reeves, 1994, p28).

The preliminary guidance published in April 1993 (EL(93)16) concentrated on standardising the approach to costing by defining minimum standards for each type of cost (direct, indirect and overheads) and for their apportionment. This would encourage more accurate provider costing and allow valid comparisons of prices to be made across providers. Such guidelines, along with the need to devolve budgets, have put finance departments under considerable pressure. In the past, finance personnel have tended to prioritise collecting money over spending money, and completion of retrospective annual accounts and statistics over the development of flexible money management systems. Ineffective communication with other departments, lack of training, and inappropriate information technology have all contributed to the difficulties of producing costs data to meet today's needs (Richardson, 1993; Woodgates, 1995). Lapsley (1996) stresses the importance of accounting procedures:

> ... individual managerial responsibility and accountability is the driving force for the dramatic change in service delivery, accounting is a vehicle for making this process work (p110).

There also have been changes to routinely collected data for social services departments. The Chartered Institute of Public Finance and Accountancy (CIPFA) recognised that the standard format for collecting and recording social services income and expenditure data was inappropriate for post-1990 requirements (CIPFA, 1993). The *1983 Personal Social Service Statistics* were the last nearly complete set and even by 1990 about 20 authorities failed to provide data (there is a greater level of missing data in most columns), often because their practices did not allow aggregation in the required format or because services were subject to competitive tendering (Bebbington et al., 1993; KPMG, 1993). This study found a similar decline in completion rates for the RO3 returns (the Department of Environment *rate fund services revenue account*, completion of which is a statutory requirement) and the Department of Health returns (published as the *Local Authority Social Services Activity Statistics*).

The 1985 CIPFA standard accounting classification identified five *client-based divisions* within social services, each divided into residential care and day care or support services: children and families; elderly; physically disabled; mentally handicapped; and mentally ill. The sixth division was *support services*, itself subdivided into six; residential care, day centres, management and central services, research and development, fieldwork and training. With the implementation of the *NHSCC Act 1990*, the financial emphasis needed to shift from reflecting the type of provision to reflecting accurate service costs, including a more appropriate allocation of fieldwork and overhead costs.

Allocation of overheads was addressed in 1992 (CIPFA, 1992b). In 1993, CIPFA identified ways of reallocating *support services* costs to service provision and recommended seven new activity and cost subdivisions to identify chargeable and non-chargeable costs. First, *Service Strategy and Regulation* which included the corporate management and regulation functions which would be required even if there were no directly managed social services. The *five client groups* remained as subdivisions and included the costs of staff responsible for purchasing, assessment and ongoing care management. Finally, *Social Services Management and Support Services* were identified. These comprised elements which support the direct provision of services, such as management, transport, personnel, property services, quality assurance and contract negotiation. CIPFA left authorities considerable discretion in determining accounting structures to allow for their different organisational patterns but stated "there should be little or no costs remaining once the charging/apportionment process has been carried out" (p23)

The recent costing guidelines for both the health sector and social services departments recognise that to facilitate price-setting, costs must be calculated more accurately and disaggregated to the service level, but there has been little co-ordination to ensure their practices provide comparable data. Different practices may also be apparent in the independent sector. Private sector organisations have long recognised the need to be inclusive in their costing practices but implicit in their for-profit motivation is a desire to ensure their prices (in the longer-term) are higher than their costs. In the past, many voluntary organisations tended to under-price their services by relying on volunteer input or by subsidising services from non-fee income (Knapp and Fenyo, 1985) but this is less common today (Kendall and Knapp, 1996).

Knowledge of such cost-related information is a necessary condition of health and social care markets (Ferguson and Palmer, 1994). *Costing for Contracts* positively encourages the sharing of information between purchasers, and between purchasers and providers as a means of improving the quality of the data and value for money in health care (EL(93)26, para 8). Unfortunately, rather than the market encouraging transparency in transactions, commercial confidentiality is becoming more widespread; "it places us at a disadvantage if our competitors know our costs" is a common cry across all sectors (Beecham and Netten, 1993, p3).

2.3 CARE PACKAGES

2.3.1 Coordinating care at the individual level

Hunter (1993) notes that the policy emphasis to date has largely been on encouraging collaboration through structural change but findings from the Robert Wood Johnson Foundation Initiative in the United States should give rise to some concern. Targeting nine US cities, the initiative aimed to show that with increased financial help (little of which has been forthcoming for the English reforms), it was possible to change large and complex organisations so that mental health services would be centralised and coordinated at the local level. The re-organisation was intended to improve services and thus in turn improve client outcomes (Shore and Cohen, 1990). The research evidence showed that the programme had improved services but no improvements in client quality of life were found which were related to either service delivery improvements or the programme as a whole (Goldman et al., 1994; Shern et al., 1994). Three years earlier, Jones et al. (1991) expressed similar concerns for the UK. They suggested that despite the organisational and managerial changes in England which have allowed the old psychiatric hospitals to close, nothing fundamental about the social or professional attitudes towards clients and their families had changed. Without such a change, real improvements in mental care could not occur.

Structural re-organisation, therefore, may be a necessary condition of improving the mental health care service but it is not sufficient by itself. A clear focus on individual clients, their needs and the different ways of meeting those needs is also required. Psychiatric hospitals, for example, were designed to respond to all areas of need for in-patients (shelter, food, medical treatment, employment opportunities, social contacts and so on) within one therapeutic environment. Thus the *form* which community care takes - say, the responsibilities of the various responsible agencies and their coordination arrangements - is akin to the hospital campus. However, moulding the services contained within that form into care packages suitable for individual clients, particularly given the dispersed location of many services, requires other coordinating mechanisms.

Discharge planning, care management and, specifically for people with mental health problems, the care programme approach, are all intended to overcome the fragmentation of mental health service provision by working with individual clients to create cohesive and internally consistent packages of care. All three stem from the notion of the key worker which became increasingly popular during the 1970s. The key worker is an identified person who has responsibility for organising clients' care packages and acts as a single contact point for both services and clients.

Discharge planning is advocated for all people leaving hospital and includes people who have had a prolonged stay in hospital and patients suffering from a psychiatric illness. The Circular and guidance notes issued by the Department of Health in 1989 required that discharge procedures should: define the responsibilities of all hospital staff; include arrangements for two-way communication with community health and social care services; and give specific responsibility to an appropriate member of staff to ensure all procedures have been completed before discharge.

The aim of discharge planning, as the title suggests, is to bridge hospital and community care by providing a short-term administrative process to allocate tasks and 'to put on alert' all parties from whom services may be required. However, the boundary lines between discharge planning and care management, for example, may be blurred. In the Care in the Community demonstration programme, key workers and care managers were often involved with potential clients *before* their discharge from long-stay hospitals. The evaluation found that this resulted in better continuity of care (Knapp et al., 1992, p210). Other research suggests territorial issues may be important. In the intensive home-based Daily Living Programme (DLP), community-based key workers originally retained responsibility for their clients during admissions to psychiatric hospital. DLP workers felt they were in a better position to judge the condition of the patient in the light of their knowledge about patients' home circumstances and the level of support they could provide. However, 31 months into the evaluation, a hospital audit transferred the responsibility back to the ward team with the aim of increasing their input into discharge procedures. This action appeared to result in a trebling of the length of admissions with no discernable improvements in clients' welfare (Marks et al., 1994).

Two main approaches to care management for people with mental health problems can be identified; the 'service broker' and the 'clinical' models. Each implies a very different relationship between the client, the care manager and the mental health system (Shepherd, 1990). In the former, para-professionals may be responsible for the assessment and implementation of a package of care but will not necessarily provide any direct care elements (Bachrach, 1983). The *Caring for People Policy Guidance* on care management advocates this brokerage model.

> Care managers should in effect act as brokers for services across the statutory and independent sectors. They should not, therefore, be involved in direct service delivery; nor should they normally carry managerial responsibility for the services they arrange. This removes any possible conflict of interest. Care

> managers should be able to assume some or all of the responsibility for purchasing the services necessary to implement a care plan. Such a devolution of responsibility brings decision-making closer to service users and thus makes it more responsive to their needs (para 3.10, p24-25).

In the clinical model, the care manager is usually a psychiatric professional who is directly concerned with all aspects of their patients' physical and social environment. The clinical care manager not only arranges access to appropriate services but also provides a range of interventions (Kanter, 1989; Harris and Bergman, 1987). Shepherd raises two dilemmas. First, is the clinical care-manager's primary responsibility to the client or to the system? In a therapeutic or advocacy role the care manager acts for the clients, possibly encouraging increased use of services, therefore increasing the costs to the mental health care system (see, for example, Rössler et al., 1992). Where the care manager is aware of, or accountable to, a service budget there would be a contrary pressure to reduce service use to contain costs (Intagliata, 1982; Shepherd, 1990). The second dilemma raised by Shepherd is whether people with long-term mental health problems, particularly those who are violent, are going to be seen as an attractive client group for "therapeutically ambitious young professionals who see their primary role as treating people and making them better" (1992, p60).

Huxley (1991), in a review of 14 US studies, concluded that more effective care for people with mental health problems resulted from case management services which had specific target groups, specific objectives, and which attempted to match the model of case management to these (p200). More recently, Marshall et al. have described an evaluation of a social services-based case management service which was similar to the clinical model. Case managers were required to undertake a minimum set of activities (assessing and meeting needs, and monitoring progress) and then could offer personal support as they saw fit. The group who received case management showed little improvement over the people (randomly) allocated to receive standard services without case management input. The authors suggested that even though their results could not be generalised, the lack of research into case management practices in the UK *before* its adoption was concerning (1995, p412). Indeed, the editorial from the same volume suggested case management for people with mental health problems "should be abandoned ... the resources for the severely mentally ill ring-fenced and given to the providers ... to be used for what is currently called care-programming" (1995, p401). (Note both papers use the term "case management" rather than "care management" which is more commonly used in the UK.)

In many ways the 'clinical' care manager has a role closer to that of the key worker in care programming, for they are both responsible for organising care packages and the delivery of some services. Both processes tend to be set in a health service context and, although the worker's grade and status within the health service tends to be different, the service coordinator in care programming and clinical care management is most likely to be a health professional. In one study of care programming, only 15 of the 60 key workers interviewed were from non-health professions, (Schneider, 1993).

There has been some confusion between care programming and care management. The Department of Health aimed to clarify the situation by stating that care programming would be able to identify people who had complex health and social care needs for whom care management would be appropriate. (Earlier, the Griffiths Report had recommended that care management was most appropriate for people who would use a significant level of resources; 1988, para 6.6). Care management would also be appropriate for those people with mental health problems who were *not* in contact with specialist psychiatric services (Department of Health, 1993). Operational confusion remains, however. The four sites covered by one study of care management arrangements displayed a range of organisational and operational relationships between social work and psychiatric nursing (Newton, 1994). North and Ritchie (1993) highlight a further overlap which has consequences for both staff training and practice: they found that some community psychiatric nurses and social workers acted as key worker for some clients *and* care manager for others.

The exact form of the Care Programme Approach (CPA) is agreed locally but the circular suggested that all those in receipt of care programmes should be patients of a consultant psychiatrist. The Care Programme Approach (CPA) was intended to introduce

> more systematic arrangements for deciding whether a patient referred to the specialist psychiatric services can, in the light of available resources ... realistically be treated in the community (and) ensuring proper arrangements are then made, and continue to be made, for continuing health and social care ... (Department of Health, 1990b, p80).

The importance of inter-professional working and in particular, the importance of agreeing social care needs with the relevant social services authorities was stressed and the role of the key-worker, to keep in touch with the patient and to monitor the agreed health and social care package, considered central. No requirement to provide new services was placed on either health or social services although health authorities were expected to meet any health service costs of introducing these procedures (Department of Health, 1990b, para 7.7).

Three years after its introduction, only 75 per cent of health and social services authorities had established criteria for who was to receive the care programme approach: furthermore, its implementation was still patchy (Audit Commission, 1994). One study describing CPA activities in three districts found that care programming appeared to be used selectively, concentrating on those defined locally as being most in need (Schneider, 1993). Staff involved in care programming cited both advantages and disadvantages. Care programming helped "tighten up" care delivery, clarified their roles, improved staff morale, ensured greater integration of services and allowed service users to have a greater say in what they required. The disadvantages centred around two main themes: resources and administration. Staff felt that the lack of additional finance and the way care programming allocated resources were problematic and expressed concerns that their increased administrative activities took time away from face-to-face contact with clients. Some key workers said it inhibited creativity in service delivery and enhanced their gate-keeping role (Schneider, 1993, p390-391).

2.3.2 The cost imperative

Many writers regard resource allocation at the client level to be an essential component of care management (see, for example, Dickey et al., 1986; Franklin et al., 1987; Meuller and Hopp, 1987). There is no recommendation that care programming should be linked to budget-holding, but many key workers in Schneider's study were concerned this would be the natural way forward. Although many authorities have devolved their budgets to local patch or cost centre levels (Stalker et al., 1994), *Caring for People* recommended giving care managers responsibility for budgets. Huxley et al. (1990) clearly set the case for and against this and cite two major problems. First, the absence of a budgetary management component in social work training led, understandably, to operational difficulties. Second, by concentrating on where the budget is located, attention is distracted from its absolute size: staff may become preoccupied with meeting financial targets at the expense of creative initiatives fundamental to long-term objectives (p198-208).

Research evidence on budget-holding care managers for other client groups is more encouraging. In the early 1980s, the case management experiments in Kent used shadow service pricing and nominal charging against a budget to achieve client-level resource allocation. These mechanisms were set alongside an efficient recording system and encouragement of creativity and risk-taking in service responses (Davies and Challis, 1986). Two of the Care in the Community demonstration projects also incorporated devolved budgeting into their models of care management. Personnel at the projects located in Maidstone (providing services for people with learning difficulties) and Darlington (for elderly people) developed shadow price lists and ensured care managers were fully informed about service availability and cost (Knapp et al., 1992). The evaluation results suggested that devolved budgeting gave clearer financial signals, increased opportunities for service substitution and was likely to result in greater service flexibility, efficiency and equity. Autonomy in spending helped clarify accountability and was again found to encourage creativity. The single point of contact for both users and professionals promoted more consistent and continuous support (p207-234).

The Department of Health monitoring study on community care packages for older people found that "the approach to devolved budgets overall was positive and encouraging but needs to be considerably developed" (Department of Health, 1994, para 4.22). Lapsley (1996) reports that

> while devolved budget implementation is going through a transition phase, there is evidence that (1) devolved budgets are apparent, but uneven in their filtering down the organisation and (2) the codes and values of social workers remain important in determining courses of action (p117).

To allocate resources at the client level and implement devolved budgeting care managers require accurate information on service costs. First, realistic budgets must be set for individuals or groups. Many authorities currently set domiciliary care budget ceilings with reference to a form of institutional care, perhaps using the costs of residential care or hospital care as a benchmark, but the costs of care could vary considerably both between and within client groups. (Moreover, as people with mental health problems tend to require care packages whose elements cross traditional boundaries, cost calculations which consider only the costs to one agency will be insufficient.) A more sensible way to set the budget would be to base it on cost information compiled about clients with similar needs who have already received cost-effective care packages (see, for example, chapters 6 and 7). Care managers also must be able to use budgets flexibly, in response to individual client's needs, so the second set of financial data required is a 'menu' stating how much a unit of each service costs - again these costs should recognise that services are likely to be funded from a number of sources. Costs can then be offset against the budget according to the amount of each service clients use.

One social services director has commented that "having identifiable costs for all services provides the basis for reasonable, rational, consistent and cost-effective allocation to service users" (Richardson, 1993, p28-29). In practice, the costs measurement in both the health and social care sectors falls short of this ideal. Principles derived from economics can help the production of more accurate unit costs (see chapter 4 and Appendix B).

2.4 STRUCTURE OF THE THESIS

In summary, the main themes of the previous two chapters are as follows. First, concerns about costs and mental health care can be traced back to the age of asylums and have been reinforced by current policy initiatives which tie planning and provision of care very closely to costs. Today, costs data are required to operationalise the market in mental health care through contracts, so all parties need to know the full cost implications of services. Providers need cost information so that they can price their services appropriately. Good quality cost information from a range of providers will enable commissioners to purchase services more effectively. Whilst it is possible to hold discussions and take decisions in the absence of reliable cost information (Rea, 1995), it is obviously not ideal; purchasing becomes like a game of 'Spot the Ball' where not only the football is missing from the photograph, but also the position of the players.

Second, those involved in mental health care must also know whether spending money in one way, rather than another, better meets their objectives. Many of the policy documents reviewed in these two chapters have noted the extant under-funding of mental health care. Central government's responses to calls for new resources, with a few notable exceptions (such as the Mental Illness Specific Grant), has usually been that no new money will be made available and developments should occur by using the available resources more effectively.

The remainder of this thesis is focused around these two themes by describing research which examines the community mental health care resources available to certain groups of clients and examines issues of cost-effectiveness. In Part II, Chapter 3 examines how research can be structured by introducing the conceptual framework that underpins the research reported in succeeding chapters. The use and appropriateness of evaluative techniques from micro-economics are illustrated with examples of mental health research. Four 'cost rules' are outlined which should be followed when undertaking economic evaluations and which guide the research described in later chapters: costs should be measured comprehensively; variations in costs should be explored not ignored; only like-with-like comparisons have validity; and costs data is most useful when combined with information on outcomes.

Chapter 4 continues to discuss the topic of research methodology. It begins by describing the *Client Service Receipt Interview*, a schedule developed to collect systematically information on all the support services individual clients use. The chapter then outlines the methodology for costing services and for combining these data with the service receipt information to estimate the total, comprehensive costs of care packages.

Part III of the thesis considers the application of the conceptual framework, the four costs rules and their attendant methodologies. In Chapter 5, the practical application of the costing methodologies is illustrated by detailing the activities undertaken to cost the care received by clients of two innovative mental health services; a model of residential care for elderly people with mental health problems (Domus care), and an outreach nursing team providing home-based support for people who are considered ‘hard to reach’ through standard service provision.

Chapters 6 and 7 describe the economic evaluation of psychiatric reprovision in the North East Thames region. Chapter 6 outlines the local policy context and the finance mechanisms which enabled the relocation of long-stay hospital services. Descriptive analyses are presented of the receipt of community-based support services (and their associated costs) for former long-stay hospital residents, highlighting the considerable variations in the costs of care. Chapter 7 explores these variations further by bringing together costs data and evidence on client characteristics, needs and outcomes (welfare changes). The chapter also discusses the statistical associations between costs and clients’ needs, analyses which also allow the likely the costs of community care to be predicted for people who were still in hospital. In later sections, the chapter shows how including outcomes data in the model allows the cost-effectiveness of different community care arrangements to be explored.

Chapter 8 examines funding sources for mental health care. Costs data from four research projects are used: the Care in the Community demonstration programme and evaluations of the outreach nursing service, the Domus residential facilities and psychiatric reprovision. Although the data were all collected before the *NHS Community Care Act 1990* was implemented, the mixed economy of provision appears to be well advanced, but closer examination of the funding sources shows there is still some way to go before resources are equitably and appropriately distributed. The funding contribution of social security benefits and dowries under contemporaneous conditions are more closely examined.

In the final part, Chapter 9 presents the conclusion of this thesis. The results and findings from previous chapters are summarised, and in some cases updated. The chapter is organised around a series of broad questions which are relevant to policy and practice for people with severe and long-standing mental health problems and which are addressed in this thesis:

- What do care services cost?
- Care packages: what are their components and their costs?
- How can costs data be used in the broader evaluation of mental health care?
- Can the resource requirements of a particular policy be predicted?
- What are the associations between resources and outcomes?
- What incentives (or disincentives) do financing mechanisms provide?

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PART II PRINCIPLES

CHAPTER 3

RESOURCES, COSTS AND RESEARCH

CHAPTER 4

CSRI, LRMC AND SEAN

CHAPTER 3
RESOURCES, COSTS AND RESEARCH

3.1 INTRODUCTION

Since the 1960s, the main thrust of mental health policy has been to reorient care services away from specialist hospitals. This policy was fuelled by concerns about the quality of care available in the old Victorian institutions and their rising costs, and was underpinned by a number of policy directives. Against that 'push', the 'pull' toward community-based care was neither so strong nor so well supported by guidance notes specifying activities. It was instead energized by visions of what community care *should* be like and in particular that it would provide a better quality of care than in the hospitals at no greater cost.

Chapter 1 notes the paucity of useful information on community-based services at the national level. What resources are available for mental health care? How many hospital beds and out-patient appointments? How many residential or day care places? What peripatetic staff are available to support people with mental health problems? To what extent are generic services used to support people with mental health problems? It is not easy to get an accurate picture of the number of each service type available (let alone identify what they do and with whom) even if routinely collected data are supplemented with research-based data. Moreover, there are still no national guidelines or minimum standards against which to match local levels of community-based provision despite recommendations from clinicians (for example, Thornicroft and Strathdee, 1991), from the Health Committee (1994, para 46) and from various voluntary organisations (see *The Community Care (Rights to Mental Health Services) Bill*).

Chapter 2 moved the time frame further forward by identifying some of the demands for resource and cost-related information that the post-1990 health and community care arrangements engender, particularly at the sub-national level. Essentially, cost measures are required at all organisational levels; for central government departments to allocate money between geographical areas, for health authorities or local government to allocate money to local areas, and for purchasers to allocate resources between client groups and to contract services to meet the needs of the resident population. Providers require cost information to inform their pricing structures and marketing plans, and to allocate resources between individuals. Again, the current information base is insufficient to meet fully these requirements (Secretary of State, 1993, para 2.6) and yet "the careful stewardship of NHS spending demands knowledge of the economic costs and benefits" (Department of Health, 1994).

The multeity of issues identified in earlier chapters and their concomitant demands for information create a wide-ranging research agenda that is, as yet, not met. Routinely collecting the required information, although maybe ideal, would be both time-consuming and costly. Two recent initiatives, the Contract Minimum Data Set (Stevens and Raftery, 1992) and the Health of the Nation Outcome Scales (HoNOS; Curtis and Beevor, 1995) are attempts to improve the quality of routinely available micro-level information but will not (and perhaps should not be expected to) provide sufficient data to answer all the questions. Findings from good quality research can fill some of the gaps and feed through to inform policy and practice at all levels.

> Evaluation research is a robust arena of activity directed at collecting, analysing and interpreting information on the need for, implementation of and effectiveness and efficiency of intervention efforts to better the lot of humankind. Evaluations are undertaken for a variety of reasons: to judge the worth of ongoing programs and to estimate the usefulness of attempts to improve them; to assess the utility of innovative programs and initiatives; to increase the effectiveness of program management and administration; and to satisfy the accountability requirement of program sponsors. (Rossi and Freeman, 1989, p13).

Culyer (1987) summarises the role of health economics research as a series of linked topics starting with two central questions - What is health and what is its value? What influences health (other than health care)? An examination of the demand and supply of health care follow these two questions and together they form Culyer's 'analytical engine room'. The main empirical fields of application are then defined as: market analysis; micro-economic appraisal; planning, budgeting and monitoring mechanisms; and evaluation at the whole system level. It is the examination of one of the 'application' fields - micro-economic appraisal - to which this thesis is directed: the methodologies and techniques are illustrated in the evaluation of care of people with long-term mental health problems.

There have been a number of reviews of economic evaluations in the mental health field. Chapman (1979) summarised the results of US analyses of national databases on hospital care, hospital and community alternatives, and the treatment of schizophrenia. Two years later, Frank reviewed five research studies and concluded that at that time cost-benefit analysis had limited use for policy and practice as not all the relevant costs and benefits could be quantified (see also Glass and Goldberg, 1977). Cost-benefit analysis was deemed to be only useful for comparing programs with identical or similar benefits (p171). Dickey et al. (1986a) considered the problems of cost estimation in a number of studies.

In 1987, Wright provided a review of the UK research evidence on cost-effectiveness in community care. O'Donnell et al. (1988 and 1992) highlighted some of the methodological problems found in a number of studies. Only eight UK studies were found and the authors considered this to be insufficient evidence on which to base decision-making. Goldberg (1991) took a clinician's viewpoint and examined findings from fifteen published studies to identify broad guidelines on the cost-effective options for care of people with schizophrenia. *Current Opinion* invites an annual review of costs-related studies. Three articles have covered cost information and mental health services (Knapp and Beecham, 1991), the relevance of studies to service development (Knapp and Kavanagh, 1992), and an examination of the wider role economics can play (Gilchrist and Knapp, 1994).

Mason and Drummond (1995) found fewer than 10 cost-effectiveness studies in diseases of the nervous system and sense organs or mental disorders among the 147 studies listed on the Department of Health *Register of Cost-effectiveness Studies*. One commentary on the quality of evaluations published in English between 1966 and 1993 found only 67 articles covering mental health (Evers et al., 1994). Sixty-three percent of the studies were undertaken in the USA, primarily directed at people with long-term mental health problems (often with a diagnosis of schizophrenia) but covering a range of mental health programmes. As in the Mason and Drummond paper, the authors developed a 'toolkit' for assessing the quality of economic evaluations and identified one cost-minimisation analysis, 16 cost-effectiveness analyses, one cost-utility analysis and 11 studies which used the concepts behind cost-benefit analysis. Twenty-eight studies were considered to be partial economic evaluations or cost analyses (describing the cost inputs for treatment options) and a further six were cost of illness studies.

In evaluating mental health provision, as in any other field of research, a sound theoretical underpinning is required. As this thesis discusses costs and resources in mental health, it is axiomatic that economic theory and principles, in particular those developed for use within the topic of health and welfare, provide the foundation. The next section of this chapter presents a conceptual framework based in such principles within which research data can be structured, analysed and interpreted, and which underpins the research reported in later chapters (section 3.2). Section 3.3 describes the types of economic evaluations, their relevance to mental health and their use in previous studies. This section is not intended to be a fully comprehensive review but to illustrate some definitional and measurement issues which the framework can help clarify. The final section summarises the approach by outlining four broad cost 'rules' or principles which follow from these conceptual underpinnings and which should guide any economic evaluation of mental health care.

3.2 THE INFORMATION SHORTFALL AND A CONCEPTUAL FRAMEWORK

How can research fill the gap between information demands and supply? Summarised considerably, the issues raised in previous chapters suggest a number of broad questions, the answers to which can inform policy and practice.

- What quantity and quality of resources (labour and capital) are used in the provision of adult mental health care?
- Can these resources be quantified and what do they cost?
- How are resources combined to produce different services?
- Who uses what combinations of services?
- What effect will such service combinations and levels of expenditure have on the clients who use them and on their friends and family?

Addressing these issues at the various levels of the mental health care system will not alter the questions, but the scope and scale of the necessary measurement will change. At the national level, the effects of a service might be measured as a reduction in the number of suicides (one of the *Health of the Nation* targets) and set alongside the change in the number and type of services which aim to prevent suicide. Resources may be summarised as millions of pounds spent, perhaps using a disaggregation of the programme budget data. Purchasers of, say, day care would be interested in a different level of information. Resources might be measured in terms of staffing, buildings used and fuel and food dedicated to day services, allowing the overall costs of day care provision to be calculated or the costs of different facilities to be identified. Information on staff qualifications, characteristics of service users, the physical environment, and quality of care would indicate the mix of services available, and purchasers also need to know the level of services produced, perhaps measured as the number of places, attendance rates or turnover. In the UK, and as chapter 2 suggested, such 'resource inventories' are less than comprehensive (in terms of coverage of the country and within each area). Farrow (1991), in an examination of district annual reports found that only 13 of the 133 reports gave information about mental health services and found there was little evidence of attempts to evaluate quality or performance.

The questions posed above should also be considered at the individual level, as this is where mental health treatments and interventions are directed. This level of investigation has particular relevance for care management and care programming practices (see chapter 2) where one expectation is that client-level budgets will encourage the use of effective services as measured by their impact on the individual client, perhaps improving or maintaining mental health or social functioning. Resources would be summarised as the costs of the 'care package' (the sum of the cost implications of all labour and capital from which the client receives support).

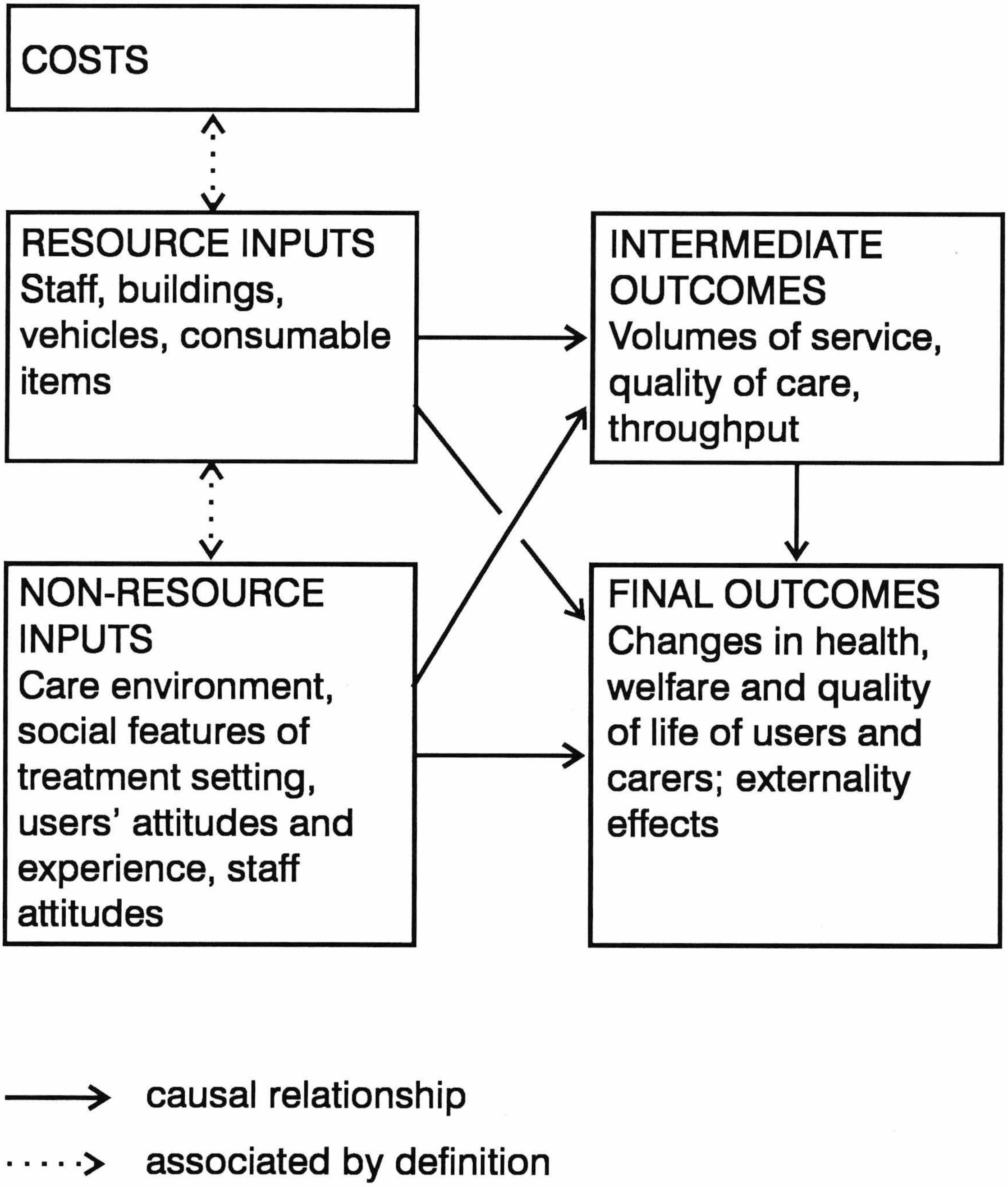
The grouping of information demands is not accidental: it forms the core components of one conceptual model within which the implications of providing mental health care can be examined. The model was developed in the early 1980s with respect to the evaluation of care of elderly people (Davies and Knapp, 1981, 1988; Knapp, 1984), and since then has proved its usefulness in a number of social care research areas including children's services (Knapp and Smith, 1985; Beecham and Knapp, 1995), domiciliary-based care for elderly people (Challis and Davies, 1986; Davies et al., 1990), informal care (Netten and Davies, 1991), and care for people with learning disabilities (Cambridge et al., 1995; Wright et al., 1994).

Like any other model, figure 3.1 does not attempt to replicate the complexity of the real world but to abstract its central features. However, the *production of welfare model* does expand it's predecessor in traditional micro-economics. The classic theory of production summarises a basic assumption that inputs (labour and capital) are combined to produce outputs (say, cars); it is concerned with the actions of individuals and firms in the production process. In producing 'welfare' (health, quality of life and so on), people form the basis of both inputs and outcomes and, as people are infinitely variable, their attributes will affect to a far greater degree both quantity and quality of inputs (the services produced) and outcomes (the changes in their welfare).

The four core components of the *production of welfare* model can be summarised in this way. First are the *resource inputs,* which are the labour, and buildings and equipment (capital) which comprise a mental health service. These can be summarised in monetary terms as costs. The *intermediate outcomes* can be measured as the levels of provision, turnover or volume of services produced. *Non-resource inputs* are less easy to measure but can help explain vital differences between ostensibly similar services. Non-resource inputs will include the social features of the care environment, and the characteristics, experiences, personalities and attitudes of the main actors in the system - both staff and users. Identifying these components ensures the model moves away from the more mechanistic view encapsulated in the theory of production. Similarly, in producing welfare the aim is to produce not services, but changes in the health and welfare of people. These are the *final outcomes* of the system and maintaining the focus on individuals allows recognition that different people will respond differently even if they receive similar combinations of resource inputs. Figure 3.1 illustrates the model and is taken from Knapp (1995). The *production of welfare model* allows a more detailed level of disaggregation than McGuire and Drummond's model which suggests there are only three components to consider when undertaking an economic evaluation in health care: *inputs* or the resource consumed (measured as direct, indirect or intangible costs); the *health care programme* for which no measures are given; and *outputs* or health improvements which can be measured as the associated economic benefits, or in utility or natural units (1993, p214).

A clear conceptual framework can help structure the research, explain, justify and clarify the reasons why certain data are collected and analyses undertaken, and can help interpret results sensibly. Just as the framework suggested above can structure the information demands and the research questions from a number of perspectives, so it can be used to structure the research activities to meet them. Moreover, as the component parts of the model are clearly defined, the links which can sensibly be made between them can also be indicated, giving evaluative meaning to the research. For example, figure 3.1 suggests there is a clear causal link between resource inputs (summarised by costs) and the final outcomes (or product) of the mental health system, which are changes in client welfare. This relationship is mediated by the intermediate outcomes and the different combinations of non-resource inputs.

Figure 3.1 The production of welfare (Knapp, 1995, p16)



Such a model also indicates what links cannot be made sensibly; costs and resource inputs are, for example, linked by definition (at least in part) and to use one to explain the other is tautological.

While optimal solutions (using some definition of 'perfect health') cannot be tested, people's situation in relation to each other and to available resources can be explored. (The total level of resources devoted to mental health is a political and financial decision and not the topic of this thesis.) The substantive theory behind the provision of mental health services is that although providing formal care is more expensive than leaving the care of potential clients entirely in the hands of families, such services are more effective as they will improve both symptoms and social performance and behaviour (adapted from Marinoni and Grassi, 1990). But how much more expensive? How much more improvement should we expect for this extra outlay of resources? Moreover, in mental health care, there are a myriad of ways in which resources can be combined to provide a single service or a care package. What do such options cost and what improvements do they generate? Are there ways in which resources dedicated to care for people with long-term mental health problems can be used to produce a greater level of outcomes for some without reducing the benefits accruing to others? The central question is clear: are there alternative ways of using limited mental health resources to produce greater wellbeing?

As well as a conceptual framework, if research results are to withstand close scrutiny a sound methodology is required to ensure they can be replicated.

> ... the key goal is to implement an evaluation that is as objective as possible - that is, to provide a firm assessment, one that would be unchanged if the evaluation were replicated by the same evaluator or conducted by another group (Rossi and Freeman, 1989, p44).

Health economics espouses four main forms of analysis: cost analyses, cost-benefit analysis, cost-utility analysis and cost-effectiveness analysis (see box 3.1). Only the first of these does not attempt to address the central question of what benefits (outcomes) are bought for what level of resources. Describing resource inputs and measuring their associated costs is a complex process (see chapter 4). Moreover, the measurement and valuation of final outcomes for mental health is the subject of an even greater level of debate within the mental health clinical, policy and research communities and also between economists. These problems aside, in the next section each type of analysis and its role and contribution to mental health care research is discussed.

Box 3.1 Measurement and valuation of outcomes

Cost-minimisation analysis	No measurement: consequences assumed or shown to be equivalent.
Cost-effectiveness analysis	Natural units (eg. life-years gained).
Cost-utility analysis	Health state preference values (eg. quality-adjusted life-years gained).
Cost-benefit analysis	Monetary units.

Source: Drummond, M. (1994) *Economic Analysis Alongside Controlled Trials: An Introduction*, Department of Health, London.

3.3 TYPES OF ECONOMIC EVALUATION

Regardless of the level at which the evaluation is pitched, economists do agree on some areas of the methodology for economic evaluation: the terminology for different types of studies (although these are not always used consistently by researchers from other disciplines); that the purpose of economic evaluation is to consider options; that marginal (rather than average) costs ideally should be calculated; that the analytical viewpoint should be specified and (generally) a broad societal viewpoint taken (see also Johannesson, 1995); and the need for sensitivity analyses where estimates are subject to debate or where there is methodological controversy (Drummond et al., 1993; and for a discussion of the role of sensitivity analysis, see Briggs et al., 1994). There is less agreement, even between economists, about what should be included in the study (for example, indirect costs and benefits) and to which circumstances these are relevant, how uncertainty and sensitivity analyses should be handled, the inclusion of quality of life measures and how to address issues of distribution and equity. This chapter does not attempt to resolve these issues but to look at the role played by economic evaluation in mental health research.

In many studies, the words 'outcomes', 'benefits' and 'consequences' are used interchangeably, and it is the approach to outcome measurement, valuation and integration which differentiates between the four types of analysis. Arguably, this criterion removes cost analyses from the list of evaluation modes as they do not measure outcomes or assume (implicitly or explicitly) outcomes are equivalent in the options for which costs are presented, however, a description of cost analyses is retained for completeness. Cost-effectiveness or cost-utility analyses use natural units of outcome measurement and cost-benefit analyses aim to value costs and outcomes in the same unit. It is here that the *production of welfare model* is particularly useful. The measures that have been used to quantify outcomes, and the inferences that can be drawn from the analyses, can be clarified. Each form of analyses is considered below with regard to its use in the economic evaluation of mental health care and its relevance and application to that context. It should be noted that in many of the studies considered below the scope of costs included and their measurement are less than ideal but, as this issue is covered in later chapters (and see McCrone and Weich, 1996), the following sections concentrate illustrating on more general issues.

3.3.1 Cost analyses

Cost of illness studies are probably the most common type of cost analyses in mental health and aim to assess the cost implications of particular diseases or diagnoses, thus by implication the comparator is the absence of the particular disease or diagnosis. In adult mental health care, a number of cost of illness studies have been undertaken since Rice's work of the mid-1960s in which the costs of a range of diseases were calculated. Evers et al. (1992), for example, calculated the costs of schizophrenia in the Netherlands by identifying those borne by the health sector. Rupp and Keith (1993) included health and social welfare expenditure, and other public assistance (food stamps, housing) in their estimate of the support costs for a person with schizophrenia. Gray and Fenn (1993) calculated the costs of Alzheimer's Disease in England and included the costs of in- and out-patient care, general practitioner consultations, residential, day and home care services, and payments to informal carers.

The arguments for and against such studies are summarised by Behrens and Henke (1988) and Shiell et al. (1987). The former suggested cost of illness studies are "one means to improve the informational basis of decision-making in health care with respect to allocating scarce resources among competing ends" (p193). Cost estimates for different diseases can be compared, information on the relative direct costs can be used to identify areas for cost containment or for increased resource allocation, and mortality or morbidity rates (measured in work-years lost) can identify areas for preventative programmes. Shiell et al. argued that cost of illness estimates "are based on unsound theory which leads to circularity and bias in their policy prescriptions" (p317)

> ... costs do not arise from illness *per se* but from decisions to commit resources to the treatment of disease. There is a symmetry between economic costs and forgone benefits but this should not lead one to confuse the two and mistakenly ascribe costs to illness or claim these 'costs' are the benefits of alternative treatment options. The objective of health care policy is to maximise a combination of the quantity of life and its quality ... the benefits of alternative treatment options, therefore are reflected in improved health status and not the potential averted costs of disease (p320).

Smith et al. (1995) go some way to resolving these issues by putting cost of illness studies within a wider framework of economic evaluation and explicitly state that these studies should be used only "to identify the avoidable costs resulting from the successful development of health promotion or prevention programmes" (p9). They do not, however, resolve one of the central measurement problems in such studies (particularly relevant to mental health) which is to how measure the impact of care on morbidity rather than mortality rates. Moreover, in execution cost of illness studies tend to reflect the cost implications of existing service provision (ignoring the under- or over-provision that might exist) and present the economic costs of responding to an illness (or not) at that time and in the area or county to which the data pertain.

Smith et al. also point to technical problems. The measurement of total costs is hampered by the limited availability of data on service use, data with which to estimate the costs of non-wage earning activities, and data to assess the impact of psychiatric disorders on productivity. Cost of illness studies are also sensitive to prevalence estimates. Kind and Sorenson, for example, found prevalence estimates for depression ranged from 1.3 per cent to 4.9 per cent (1993, p191) and eventually used a far higher estimate than the Smith et al. paper (3.52 as against 0.8 per cent). The estimates for total costs of supporting people with that disorder will be greater or lesser depending on method of identifying the diagnostic categories (say, ICD-9 or DSM-III) and the prevalence rate identified. The *Survey of Psychiatric Morbidity* (Meltzer et al., 1994) collects data on symptoms and behaviours (rather than diagnostic category) and will aid more accurate cost of illness estimates for Great Britain.

Of course, the presence of technical problems in undertaking costs studies is not a reason to stop undertaking such work as long as the results are used with some caution. Moreover, such studies can point to such data deficiencies and help to develop better ways of collecting, collating and understanding costs data. Potentially, some of the most useful findings from such work are data describing the distribution of costs, that is, presentation of results which show the relative burden of costs falling to different agencies within and between disease categories, between service providers, and between sectors of provision (including informal care). Examining costs data over time for changes in the proportional burden of costs to different agencies may reflect changes in the balance of care in a particular direction - perhaps from hospital to community based services, or moving from health sector dominated provision to a more 'mixed' economy. These data would provide no information on the non-financial benefits gained from the implementation of such initiatives, but might highlight cost savings in particular areas.

There are two further types of costs analysis to consider. First, there are cost-offset or cost-minimisation studies; closely allied to cost of illness studies but tending to use local rather than national data. Salvador-Carulla et al. (1995) provide an example of a study in which a significantly greater cost-offset was found when people with panic disorder were treated than was found for other general psychiatric disorders (quoting Hankin et al., 1983 and Borus et al., 1985). Provision of proper psychiatric services for people with panic disorder was found to increase the costs to specialist services but decrease general health service utilisation (and costs) and when absenteeism rates were included, overall costs were reduced. Ginsberg et al. (1994) calculated the costs savings when varying numbers of patients were treated within an effective nurse-therapy programme. Stilwell (1981) calculated that reducing the average in-patient stay to 40 days "would yield enough savings to double the community nursing service or the psychiatric hostel provision" (p34). Menzies et al. (1993) highlighted the costs of prison, in-patient and out-patient care over the previous year for a group of patients using a hospital-based therapeutic community and the authors ask whether the short-term savings (on the part of purchasers who delay buying an apparently expensive form of care at the therapeutic community) are worth the long-term costs of leaving people with severe personality disorders without appropriate treatment.

The final type of costs study usually occurs at the programme level and provides information on the resource inputs and cost implications of particular services. Blumenthal and Wessely (1994) for example, calculate the costs of mental health review tribunals; Hyde and Harrower-Wilson (1995) explore the resource implications of aggressive incidents in an intensive psychiatric treatment unit; and Peck and Cockburn (1993) examine the costs of a number of treatment models for people with acute psychiatric problems. Williams et al. (1992) provide a useful discussion of treatment costs (and their calculation) in a hospital-based psychiatric service set in the context of epidemiological data and results from a quality of life interview.

3.3.2 Cost-benefit analysis

In its ideal form, a cost-benefit analysis should value both costs and benefits in the same unit so they can be compared. Commonly a monetary value is used but most cost-benefit studies in the welfare field make a distinction between monetary and non-monetary benefits, and do not value the latter in money terms. For example, if a benefit is defined as a reduction in the number of in-patient days or increase in number of days in work (intermediate outcomes) these are easier items to place a monetary value on than benefits expressed in terms of changes in clients' welfare (final outcomes). Frank (1981) noted

> the direct estimation technique associated with costs is not usually appropriate for benefit calculation. Estimating the costs averted (for example, those relating to losses in output) of implementing a mental health program has become the most popular technique ... Mental illness often means diminished productivity, a major cost for the patient. This can be measured by the wage rate that would have been paid to the individual had he or she been well. The difference between this wage and the patient's actual wage represents both the loss of income to the individual and the value of lost productivity to society (p163-4).

In the seminal work evaluating the Training in Community Living programme in Wisconsin, the researchers are very clear about which costs and benefits can be ascribed a monetary value and which cannot (Weisbrod and Hemling, 1980). The cost-benefit calculations are based on only those items for which a monetary value could be estimated[1]. However, listing non-monetary outcomes alongside the monetary data and clearly outlining the problems of data collection and transformation represented an important methodological advance in the economic evaluation of mental health care (Dickey et al., 1986b). Similar difficulties had been highlighted by Glass and Goldberg (1977). They divided their measures into 'hard' costs and benefits (that is, those for which a monetary value could be computed) and 'soft' costs and benefits - such as patients' psychopathology or social behaviour for which less tangible measures could be used. The authors pointed to one of the main difficulties

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[1] Monetary costs were calculated as the resource implications of direct and indirect treatment, law enforcement, maintenance, and family members' lost earnings. Monetary benefits were calculated as earnings from open or sheltered workshops. (These benefits may be difficult to obtain in a period (or location) of high unemployment and in a UK near-replica of this service, employment rates were no different between the experimental and control groups and decreased over time for both groups; Knapp et al, 1994). In the TCL programme, monetary values were *not* calculated for burden on family members or other people, number of arrests and patient mortality (costs), other elements of labour market behaviour, improved client decision-making, satisfaction with life, and symptoms (benefits). The average scores of the non-monetary items supported the cost-benefit decision (net-effects) for the experimental model (Weisbrod et al, 1980; Weisbrod, 1981).

of this approach. A cost-benefit analysis should allow a clear judgement to be made of the relative value of costs and benefits, but if items are measured in different units then no clear preference can be stated particularly when, for example, monetary and non-monetary effects point in different directions (perhaps the hard costs suggest one service is less expensive and the soft measures indicate a service of lower quality). Thus, the limitations to this modified cost-benefit approach are similar to those experienced in cost-effectiveness analyses (see below). However, as with any evaluation, the value of making explicit the costs and benefits of a programme cannot be denied, particularly where some items are considered in both the calculation of 'net effects' (hard costs and benefits) and in the soft measures. In two later 'modified' cost-benefit analyses (neither of which were comprehensive in their measurement of financial costs) the results favoured the new services (Goldberg and Jones, 1980; Jones et al., 1980; Hyde et al., 1987).

Some years earlier, Halpern and Binner (1972) had aimed for a 'purer' form of cost-benefit analysis with which to evaluate the Fort Logan mental health programme. 'Improvement' was seen as the primary 'product' and benefit, therefore, was defined as the degree of improvement in clients while enroled in the programme. To quantify improvement, the authors developed a composite measure of demographic and mental health state variables using data from the assessments of patients at enrolment and at termination of treatment. This allowed "Estimated Response Value" to be calculated and assigned to each individual[2]. While collapsing the multitude of potential impairment and improvement variables may mean a loss of useful data, this method did allow the 'final outcomes' of mental health care to be valued and a cost-benefit

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[2] The possible levels of impairment at admission (slight, moderate, marked or severe) were combined with the possible levels of response at discharge (regressed, no change, slight improvement, moderate improvement or marked improvement) to create a matrix in which the 20 cells were assigned a percentage to indicate the relative degree of improvement. Scores ranged from -40 per cent (severe impairment and regressed at termination of treatment) to 100 per cent (severe impairment but marked improvement). To assign an economic value to the resulting improvement scores (and to keep the measurement in line with those assigned for economic productivity) the average productivity measure of the group (the value attached to returning a patient to the community) was used. This yielded an Estimated Response Value for the degree of improvement attained which could be set against the costs of achieving that response. A number of criticisms could be made about the design of this study (for example, the valuation of improvement assumed a direct relationship between productivity and impairment), but these were made explicit by the authors.

ratio (output value index) to be calculated for the programme, its constituent parts and the different client groups who attended the programme. A later paper examined the effect of discounting the value of the program if the patient was readmitted within a year of discharge (Potter and Binner, 1975).

Today, the techniques used to measure and value benefits are still the subject of debate between economists and between researchers in other disciplines. The modifications to cost-benefit analyses suggested by these papers stand testimony to the difficulties of undertaking this type of study in mental health care. Such debates and difficulties have led researchers in two different directions. One direction has been to investigate the potential of developing a standard uni-dimensional measure of 'utility' to which all costs can be attached more easily and the application of cost-utility analyses to mental health care is considered in the next section. The second direction has been a move toward using cost-effectiveness rather then cost-benefit analyses as this mode allows the outcome measures to retain a non-monetary value and be presented in their natural units. This approach is considered in section 3.3.4.

3.3.3 Cost utility analysis

Cost-utility analysis has attracted considerable interest in recent years, much of which has centred around the development of indices to measure health status, which Culyer (1987) identified as one of the central tasks for health economics. The importance of developing a reliable and valid measure of health status which is applicable across programmes and diagnoses is central to the ideas behind this mode of analysis. Lying part way between the ideal of cost-benefit analysis (because of its potential to inform macro-level resource allocation) and those cost-effectiveness analyses which measure outcomes along a single dimension, cost-utility analysis aims to measure and compare the effectiveness of interventions through assessing the personal preferences of patients for different health states. These scores can be set against the costs of consuming health care resources to improve their utility. "Utility refers to the value of a specific level of, or improvement in, health status and can be measured by the preferences of individuals or society for a particular set of health outcomes" (Stoddart and Drummond, 1984, p1432).

Williams (1987) in exploring how quality of life can be measured suggested a number of dimensions, such as physical mobility, pain and distress, capacity for self-care, and the ability to pursue normal roles. More recently, he has discussed the properties of five generic measures used to describe health states; the Rosser matrix, the EuroQol, the Nottingham Health Profile, the Sickness Impact Profile and the Quality of Well-being Scale (Williams 1995a). The commonly-used Rosser matrix, for example, defines eight categories of disability and four categories of distress to give 32 possible combinations, although where death is rated on the disability score the three levels of distress are impossible to rate (Rosser and Kind, 1978). The Euro-QoL includes measures for mobility, self-care, main activity, social relationships, pain and mood to provide 245 possible combinations (Euro-QoL Group, 1990; and see also Williams, 1995b).

Valuing and combining quality and quantity of life scores presents enormous technical difficulties (see Looms and Mckenzie, 1989). Gudex et al. (1993) compared four methods to value health states (category rating, magnitude estimation, standard gamble and time trade-off) and found the different methods, when applied to the same health states by the same people, yielded different valuations and would change the rank order of cost-effectiveness in two earlier QALY league tables. (For a description of the visual analogue and willingness-to-pay approaches, see Williams, 1995c.)

Cost-utility analysis has most commonly been applied to evaluations of acute care (Gerard, 1992) but there have been a few studies of long-term care for elderly people (see, for example, Donaldson et al. 1988; Drummond et al., 1991). Kavanagh and Stewart (1995) provide two examples of the application of cost-utility analysis to new psychiatric drug therapies, and Wimo et al. (1994) and Wilkinson et al. (1992) compare the properties of disease specific (psychiatric) schedules to scores produced by the Rosser matrix[3].

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[3] Wimo et al (1994) explored the effects of a day care programme on the quality of life for people with dementia by converting scores from standard psychogeriatric outcome measures to the Rosser index and the Index of Well-Being. Neither were found to be sensitive to changes over time between the groups but some of the underlying measures showed statistical differences; the ability to dress deteriorated less in the group receiving day care, cheerfulness improved (deteriorating in the reference

Four obstacles to the use of generic health status measures in mental health care evaluations can be identified (see also Chisholm et al., 1996). First, the scope of measurement does not, as yet, adequately reflect factors important to people with mental health problems such as psychological wellbeing, personal autonomy, social participation and quality of professional help. Although the measurement of outcomes is central to the economists' perspective, ensuring the quality of evidence on effectiveness may require collaboration with those who have expert knowledge of the specific health area (Salkerd et al., 1995, p121).

A generic QALY measure may not be feasible where objectives of care are very different: acute care services may aim to relieve pain or reduce disability whereas long-term care objectives may be to reduce loss of quality of life or offer autonomy and choice (Donaldson et al., 1988, p246). Any 'health' improvements sought for chronic care services will be much less dramatic than in acute care and are likely to be found along a number of related dimensions yet the QALY is not a finely-tuned instrument and is not intended to pick up small changes in individual quality of life (Drummond et al., 1991). Moreover, showing a statistically significant difference in QALYs may require far larger samples than commonly included in clinical research so the service contexts in which it has been used to date may not be the ideal development or testing ground (Drummond et al., 1991, p217).

Third, few mental health interventions are aimed at prolonging life so the scaling of health states will require attention. The current state of knowledge about the course of mental disorders is insufficient to allow assessment of the quality of future years (Normand, 1991). Wilkinson et al. (1992) noted that there is no way of knowing the exact prognosis of a mental disorder without treatment, and the course of many mental health problems varies. Moreover, little is known about the impact of age, gender,

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group selected from the waiting list for day care) and death wishes were less frequent.

As part of an evaluation of a home care programme, Wilkinson et al (1992) explored whether QALYs were applicable to mental health. The authors found absolute scores on the Rosser index did not adequately reflect severity as measured on Clinical Global Impression scale and that it was less sensitive in measuring change over time.

race and income on the value given a healthy year of life expectancy (Donaldson et al., 1988; Williams, 1995a).

Finally, in any long-term care services, QALY gains will also accrue to people who are not the focus of the intervention or service under study - the transfer of a severely ill person to an institution may not produce any QALY gain for the clients but may considerably improve the quality of life for erstwhile principle carers (Looms and McKenzie, 1989, p306). Health gains to carers may be relatively more important in the provision of long-term care than in acute care.

Results from cost-utility analyses, like those stemming from cost-benefit analyses, have the advantage of providing decision-makers with a clear, easy-to-use measure; cost-per-QALY results *look* conclusive. However, such simplicity is deceptive. It hides the fact that the QALY is an outcome measure under development with numerous unresolved technical problems and that there has been tremendous variation in its practical application (Gerard, 1992). Moreover, its implications for equity and medical ethics are still under attack and some commentators recommend the use of other measures such as Healthy-Year Equivalents. (For a defence of QALYs see Williams, 1995c. For a discussion of the relative merits of the QALYs and HYEs, see *Journal of Health Economics*, 14, 1.) Cost-per-QALY estimates have the potential to inform decision-makers and resource allocation patterns but to do so, a measure must be developed which adequately reflects preferences in mental health contexts.

3.3.4 Cost-effectiveness analysis

Fewer cost-benefit analyses in mental health have been undertaken since the mid-1980s and as the era of cost-utility analyses has not quite arrived, the temporal lacunae appears to be filled by cost-effectiveness studies. It is, however, worth noting that Lee and Sanchez (1991) found cost-effectiveness had been misinterpreted as cost-savings in 36 of the 65 economic studies published in pharmaceutical journals (quoted in Mason and Drummond, 1995) and is often misused in evaluations of other interventions and treatments (see above).

As with cost-benefit and cost-utility analyses, the essential component of a cost-effectiveness analysis is the comparison of the costs and effects (consequences or final outcomes) of alternative interventions with an emphasis on exposing the most effective use of resources. Box 3.1 defines cost-effectiveness analysis as one where a single outcome dimension is measured and valued in its natural unit; life-years gained is given as an example, and QALYs were also suggested by Mason and Drummond in their review of cost-effectiveness studies (1995). If the outcome produced by the interventions is identical then the least expensive option is more cost-effective *or* if the costs of the interventions are identical, then the more cost-effective option is that which produces a greater level of outcome. (Wimo et al., 1995, provide a nine-celled matrix describing the potential choices within this decision rule.)

There are problems with this uni-dimensional approach to measuring outcomes. First, as Halpern and Binner (1972) described, it often means collapsing a number of important variables into one composite measure. Such a loss may obscure changes that have occurred in other areas of clients' welfare thus providing a less accurate indication of the relative effectiveness (O'Donnell et al., 1992). Receiving home-based support from the Daily Living Programme rather than in-patient services, for example, did not produce greater changes in either symptoms or behaviour but it was preferred by both clients and their families (Marks et al., 1994). Okin et al. (1995) traced 53 previous users of long-term hospital care four to ten years after their index discharge (and baseline assessment) to assess changes in their functioning in self-care, substance abuse, social function, psychiatric symptoms, cognitive function, verbal communication, activities of daily life, vocational and educational functioning, and perceptions of their quality of life.

> Of particular interest was the finding that the lower the patients' initial level of social functioning, the more this area improved after discharge (p77) ... It is important to disaggregate ... the many categories of functioning because they may have different implications for treatment intervention and different prognostic significance (p78).

Second, commonly used uni-dimensional measures, such as life-years gained, are less relevant in the evaluation of mental health care services. Again, difficulties can be seen in transferring perfectly reasonable methodologies from (acute) health economics to the study of services in which the social dimension may be more important, particularly long-term or mental health care issues. Life-years gained is a reasonable measure to assess, say, the impact of smoking cessation interventions (Lowin, 1995). However, only for suicide prevention services would such a measure be relevant for mental health care.

The third problem with using a uni-dimensional outcome is that often a proxy measure is chosen[4]; using production of welfare terms these are likely to be intermediate, rather than final outcomes. For example, Linn's early work on the effectiveness of mental hospitals used 15 factors "thought to be related to hospital effectiveness" such as release rate, average size of wards, ratio of nurses to patients, and the percentage of patients in therapy (1970, p19). Glover (1991) used similar data when exploring the adequacy of the size of acute psychiatric wards and provision of hospital services for homeless people with mental health problems. Hospital and nursing home efficiency analyses in the USA have been dominated by these types of measures and the findings from several studies are described in the *Journal of Health Economics*, 13, 3. In that volume, Newhouse suggested:

> an analog to patient-days or stays *(as commonly used measures of outcome)* in air travel is passenger miles or the number of passengers; without adjustment, however, such output measures would make the additional costs *(to cover wider seats, more space, higher steward/traveller ratio)* associated with the first class section appear as inefficiency, not as something consumers valued (1994, p318).

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[4] Jenkins (1990) suggested "a *health care* indicator is a variable that reflects aspects of the state of the health care in a community. Health care indicators can be categorised, using a general systems approach, into input, process, and outcomes. The resources put into the health care system in terms of finance, personnel, building, etc, are the input, the activity of the personnel form the process, and the changes in functioning, morbidity and mortality are the outcome (p500) ... The measurement of outcome is a more complex task, and the fact that outcomes information is hard to obtain has led health services inputs and processes being used as proxy measures for outcomes" (p501).

So where the 'number of the days in the community' or 'hospital in-patient days avoided' are used as outcome measures, these are likely to be confounded by such factors as the level or in-patient beds available or differing admission policies and will not indicate directly whether the service changed clients' health and welfare. Davies and Drummond (1993) used 'symptom-free days' (akin to life-years gained) as the outcome measure in their study of clozapine and although this may be a less 'cluttered' measure of health production, it has also led to the exclusion of other dimensions which may alter the cost-effectiveness conclusions[5].

One common approach in psychiatric cost-effectiveness studies is to present a detailed report of the multi-dimensional outcomes of the services which are compared (perhaps changes in symptoms or behaviour). The outcome findings are then summarised to present one (or neither) option as the more effective and the costs accruing to each option then described. (In many of these clinical studies the costs methodology and results tend to receive less attention than the outcomes data.) This process allows a global decision to be made on their relative cost-effectiveness.

Mangen et al. (1983) took this approach when comparing out-patient with nurse care for people with neurotic disorders. Burns et al. (1993a) provided a more recent example - and incorporated more detailed information on costs. The authors showed that the experimental service (prompt multi-disciplinary assessments in the patients' home with no other limitations on clinical practice) and the control service (out-patient assessments or domiciliary visits as clinically indicated) were similar in terms of

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[5] The authors calculated that the use of this drug resulted in a gain of 5.87 years with no symptoms or mild symptoms as measured on the Brief Psychiatric Rating Scale and net savings of £91 per year. Although clozapine reacted positively on the BPRS score (thus allowing the calculation of symptom-free days) other outcome dimensions were not included. The Global Clinical Impression score had already been used in the US study (Revecki et al., 1990), as had measures of adverse effects (sedation, hypersalivation and tachycardia tended to be more severe with clozapine than other neuroleptics) and the risks of agranulocytosis (Fitton and Benfield, 1993). Weight-gain was still reported as a persistent problem for five per cent of study members who had used clozapine for two years (Honigfeld and Patin, 1990). On the positive side there is some evidence to suggest clozapine increases users' perceptions of their quality of life (Meltzer et al., 1990) but patient motivation is an important factor in maintaining clozapine therapy because of the necessity for frequent blood sampling. By concentrating on only the BPRS scores it is difficult to tell, by definition, the extent to which these other outcomes might have altered the cost-effectiveness decision.

outcome produced (Burns et al., 1993b) but the former service could be purchased for less cost.

> ... clinical outcomes were so similar in the two treatments that we were able to compare cost-effectiveness without elaborate and questionable weightings of different outcomes ... there is a clear cost advantage to the experimental service" (Burns et al., 1993a, p60).

The study is interesting as the authors suggested that, within a randomised control trial, only resources which show significant difference in use between the groups need be costed. For example, no differences between the groups were found for income or employment (indirect costs) or for use of specialised accommodation so costs were not estimated for these items. Drummond et al. (1991) took a slightly different approach by reporting both comprehensive costs and the additional cost of the intervention, calculated as the sum of the individual *cost* items for which a significant difference was found (p216).

Many clinical evaluations use a randomised control design to assess the effectiveness of the service under study and thus a simple comparison of group costs is considered appropriate. (There are, of course, concerns that sample sizes which are calculated as being large enough to show a valid significant difference in effectiveness may not be large enough to present cost differences with such confidence: Drummond, 1994; Kluiter and Wiersma, 1996). However, there can be considerable variations *within* groups. Wiersma et al. (1994), for example, found differential outcomes for people with schizophrenia and affective disorders in their comparison of day and in-patient treatment; Robson et al. (1984) found a clinical psychology service generated significant improvement for people with anxiety and stress over the control group whereas the trend was not significant for people with habit disorders, interpersonal problems or depression; and Tyrer et al. (1995) found people with schizophrenia had significantly more contacts with psychiatric services that people with mood disorders or other diagnoses combined.

Where an RCT design is not feasible (for example, in the study of the closure of a psychiatric hospital) exploring the variation within the samples under study is even more important (see chapters 6 and 7). It is illuminating to explore variation in needs, characteristics and outcomes in relation to costs, particularly as outcome measures might move in different directions, some showing improvement and other remaining constant or showing deterioration. Okin et al. (1995) reflected this view;

> Our finding that outcome is multifactorial, that parameters vary independently of each other, and that any one parameter may have substantial variance in outcome are consistent with the findings of recent studies of the course of schizophrenia (p77).

From a methodological view point, Yates supported this contention, indicating that it is between individuals that most variation can be found:

> What researchers need to do is go beyond a tabular comparison of costs and outcomes to the point where it is possible not only to measure costs, processes and outcomes but also to discover and quantify the strength of the relationships among (a) resources consumed (b) treatment procedures funded (c) psychological and biological processes engendered by those procedures, and (d) interim and long-term outcome produced (1994, p729).

Some of these inter-relationships are not easy to disentangle or to understand, but identifying what associations are sensible to look for is important. The *production of welfare approach* provides just such an overarching structure within which to explore the multi-dimensional nature mental health where the basic premise is that

> final and intermediate outcomes are determined by the level and modes of combination of the resource and non-resource inputs (Knapp, 1984, p25).

3.4 CONCLUSION

This chapter has shown how the evaluative techniques of micro-economics are used in mental health research. Although many studies which include a costs component have not been identified (notably the recent work of researchers based in Manchester and in Mannheim, Germany) a number of themes emanate from this short review that can be encapsulated in four 'rules' or principles to guide any evaluation which incorporates costs measures (see, for example, Knapp and Beecham, 1990; Beecham and McCrone 1996).

Costs measures should be comprehensive and range over all support services used by sample members within the time-period covered by the study. There is some disagreement between researchers as to whether economic evaluation is more usefully rooted in the health economics tradition (generally advocating a societal view of costs) or whether it should be a vehicle for the systematic examination of choices in the public sector by the decision-maker (Drummond et al., 1993, p31). Henderson (1985) provided an example of the use of option appraisals which were introduced into NHS decision-making in the early 1980s. The limited parameters of this approach are less relevant today given current policy initiatives to encourage greater diversity in the provision and funding of care (see chapter 2). Programme budgeting often takes a single agency approach but can more usefully be extended across traditional agency boundaries to explore the expenditure of client group budgets (Jones and Wright, 1995a and 1995b).

In evaluating care for people with mental health problems, a common finding is that although care packages are dominated by health sector provision (such as hospital services or community psychiatric nursing services), closer examination reveals that people also use an array of social care services (such as day care or social workers) and informal care services provided by family members or friends. Moreover, voluntary organisations, who have long been active in advocacy and campaigning, are becoming major service providers and the private sector's role is expanding, particularly in residential care. Evaluating services for, say, acute mental health care might involve comparing in-patient hospital care with a crisis team (Cobb, 1995). To compare the two properly, the 'knock on' costs of crisis team care should be recognised; users will still require shelter, food, an income, a range of other community-based health and social care support services, and are likely to place considerable burdens on informal carers. While the distribution of resource inputs should be examined, it should not be used to guide the scope of costs measurement (see chapter 4).

Costs variations will inevitably be revealed and should be explored to inform policy and practice. Costs will vary - between services, between users, between areas and so on - this is an indisputable fact. Limiting information to the average cost (of services, for groups of people, etc.) will not allow any exploration of *why* costs vary. McCrone and Strathdee (1994) suggested the following categories of cost determinants (examples given in brackets): patient-related determinants (employment, symptoms); social factors (social networks, attitudes of others); service determinants (type of setting, gatekeeping influences); and outside influences (unemployment rate, level of urbanisation). Each is relevant at a different level of costs exploration.

Most clinical evaluations focus on individual clients and this, therefore, is a sensible level at which to explore cost variations, "for derivation from the average patient has a much relevance for cost as for clinical treatment" (Knapp and Beecham, 1990, p899). Descriptive information goes some way toward explaining variations: the Hyde and Harrower-Wilson study showed how (the responses to) aggressive incidents increase costs, for example. Costs, summarising resource inputs and thus care packages, should certainly reflect client differences but there will also be other influencing factors, such as professional preferences or the characteristics of the services. Randomisation of study members between the options under study is intended to remove 'undesirable' sources of variation (but as demonstrated above, does not always do this very well) and more sophisticated statistical techniques can be used to tease out such influences. Chapter 7 explains how multiple regression analysis was used to estimate a cost function to help tease out the many factors (often inter-related) which have an effect on service utilisation and costs.

When comparing costs, care should be taken to make only like-with-like comparisons. Reporting costs data and costs variations invites comparisons, perhaps finding one service is more expensive than another, this group of clients is more expensive to support than another. Unless care is taken to ensure that like-with-like comparisons are made, the evidence will lead to the wrong conclusions. If, say, a number of residential homes or hospital services are being compared, a detailed measurement of the resources which comprise each service is an important beginning as is the description of the service components each supplies. But, as the *production of welfare approach* suggests, it is necessary to look further to ensure valid like-with-like comparisons can be made. For example, commissioners are interested in contracting services for groups of people and may want to choose between an in-patient or day-patient treatment model. The latter is likely to be the less expensive to purchase, but unless the services cater for people who have the same level of 'needs' then basing their decision just on the costs data may mean inappropriate services are contracted. Some ten years ago, for example, a comparison of private and public sector care for elderly people found the latter to be more expensive but that the residents were more dependent (Wright, 1986). To cite another common example; early evidence on the relative costs of long-stay hospital and community care often showed the latter was less expensive but did not always take account of 'cream-skimming', where earlier leavers were likely to be less dependent than those still resident in hospital, and thus cost less to support in their new placements that the later leavers would.

In health authority statistics, diagnosis is often the only clinical data to be recorded yet, in both the UK and the USA, researchers have found this to be an inadequate indicator of resource use. (For a summary of the evidence on the use of diagnostic resource groups, see Donaldson and Bond, 1991 and McCrone and Strathdee, 1994). Case-mix groups which use the underlying clinical symptoms and other needs-related indicators are likely to be more robust predictors (Taube et al., 1984) and extrapolating from individual level analyses can be particularly informative (Knapp et al., 1992).

Costs data should not be used in isolation of information on outcome. This chapter has outlined a number of ways in which outcome can be defined and measured. Just as care packages (resource inputs) should be put together in response to clients' needs, so they should be associated with *changes* in individuals' needs (final outcomes) and it is the combination of these data with costs information that will provide measures of relative efficiency. The types of economic analysis described above can provide information on how outcomes can be maximised for a given level of expenditure of how cost can be minimised to achieve a given level of outcome. Cost information is rarely sufficient on its own and merging costs and outcomes data is the ideal (see chapter 7). Some researchers, for example, have explored the associations between costs, case-mix, skill-mix and quality of care, (see Shiell et al., 1993 and Carr-Hill et al., 1995). Where research samples are to small to undertake such rigorous analysis, the most practical solution is to ensure that cost information is set clearly in the context of outcomes and other relevant information (see chapter 5). The *production of welfare approach* reminds us, however, that health rather than health care is the final outcome from a health care system and that the client should be at the forefront of the research, analyses and interpretation (Darton and Knapp, 1984, p158).

The difficulties of undertaking an economic evaluation should not be glossed over, and many are highlighted in succeeding chapters. Normand (1991) suggested that "as practical people, economists accept the limitations of the tools they use. If we are attempting to choose the best programme of care we try to calculate the costs and benefits of the possible components so as to choose the combination that yields the greatest benefit for any cost. It is difficult to measure the costs, and even more difficult to measure the benefits" (p1575). Moreover, many people have made the point that it is not always appropriate to transfer evaluation results to practice as it may be the (unmeasured) attributes of the service and service users that contribute to the success of a model, rather than the model itself. Economic evaluation cannot provide all the answers, however, research has a valuable role in informing decision-making; results from research cannot make decisions but they can ensure that decisions are better informed (Weisbrod, 1983).

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CHAPTER 4

CSRI, LRMC AND SEAN[1]

4.1 INTRODUCTION

This chapter describes the instrumentation developed for collecting service utilisation data and calculating comprehensive costs. The process of costing can be broken down into three connected tasks. First, the collection of service receipt or utilisation data by individual clients or patients over a consistently defined period. Second, the costing or pricing of each of the services used and third, combining these two sets of information in order to cost full care packages. Each of these tasks is described below. The methodology has been described by reference to a single research project - the economic evaluation of psychiatric reprovision services in the North East Thames health region (NETRHA) which is described in more detail in chapters 6 and 7. The flexibility of this approach and instrument are stressed and are evidenced by a variety of other applications, including those described in chapters 5 and 8.

4.2 COLLECTING SERVICE UTILISATION DATA

In order to calculate the costs of community care a new instrument, the Client Service Receipt Interview (CSRI) was developed in 1986. The CSRI built on previous research, particularly on child care and young offender services (see Knapp and Robertson, 1989, for partial reviews), and incorporated relevant parts of previously developed instruments in the mental health field, particularly the Economic Questionnaire of Weisbrod et al. (1980). The instrument needed to be tailor-made to fit the research context, and an early requirement was easy adaptability, for the CSRI was also to be employed in the evaluation of the Department of Health's Care in the Community demonstration programme of 1984-88 under which more than 800 people left hospital. Twenty-eight projects were funded to develop community alternatives to long-stay hospital care for adults with needs associated with old age, mental health

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[1] This chapter is based on work previously published in: Knapp et al., (1987); G. Thornicroft, C. Brewin and J. Wing (eds., 1992); A. Netten and J. Beecham (eds., 1993); and M. Knapp (ed., 1995).

problems, learning disabilities or physical disabilities (Renshaw et al., 1988; Knapp et al., 1992; and see chapter 8).

The CSRI was piloted in the summer of 1986 in the Maidstone scheme for people with learning difficulties (Sussex, 1986). Under this Care in the Community demonstration project a wide range of services had been developed, affording the chance to test the instrument under different conditions. A second round of instrument refinement was based on use of the CSRI in another three Care in the Community projects. Since its introduction the CSRI has been used in more than two dozen evaluation studies (see, for example, Marks et al., 1988; Melzer et al., 1991; McCrone et al., 1994).

In this chapter the description of the CSRI refers to its development for the NETRHA study of people with a history of long-stay hospital residence who were moving to the community under a planned and well-funded reprovision programme (Leff, 1993; see also chapters 6 and 7). Clients entering the study were likely to have a key carer or case manager, or would be living in a group home where a diary would be kept of residents' activities (especially contacts with health, social care and peripatetic professionals). The questionnaire was therefore originally designed for administration by an interviewer from the research team to a principal carer, very often a member of staff at the residential unit. On occasions it was impossible to identify a carer (when a client was living in an independent flat, for example), in which case the questionnaire was completed successfully in an interview with the client. It has also been completed by staff without need for an interview, although not specifically intended for that mode of use. Although in some research projects the key questions of the CSRI have been incorporated into other schedules, experience has confirmed that a trained interviewer is needed to tease out accurate and comprehensive information.

A copy of the schedule used in the NETRHA evaluation is reproduced as Appendix A (see also Appendix 2, Knapp et al., 1987). The questionnaire is printed on ten A4 pages and takes approximately forty minutes to complete. The questions are largely structured, some with a multiple choice answer format but, given the complexity of community care arrangements, it is not surprising that a few semi-structured questions are also asked. The questionnaire design includes blank spaces to write additional comments or interpret the occasionally confused responses of the interviewee. A series of ‘prompt cards’ supplements the CSRI. These cards contain indicative lists of accommodation types, services and social security benefits.

The CSRI collects retrospective information on service utilisation, service related issues and income. The retrospective period (prior to the date of the interview) is a compromise between the greater accuracy that comes from not asking respondents to cast their minds back too far and the comprehensiveness which can only come by allowing sufficient time to elapse to capture services which are rarely used but potentially expensive. To solve this dilemma questions on service utilisation are divided into two parts, one covering the previous month - in the NETRHA case this is the twelfth month after discharge from hospital - and the other asking about less regularly received services (such as dentists or GP visits) over the past twelve months. These durations are not fixed, and can be varied to fit particular research requirements. In one study a single retrospective period of three months was used (Allen et al., 1990; Beecham et al., 1995). Repeated use of the CSRI in a longitudinal study allows one to ask only about the period between interviews and data collected at all interviews can be recorded on the same schedule (Knapp et al., 1994). The interviewer can also use data from the previous interview to prompt or guide questions.

The first section of the CSRI covers *background and client information,* recording client code number, gender, marital status and date of birth. For the NETRHA project questions on past admissions and discharges from hospital, participation in special programmes, registration with GP and medication were included here and the data transferred from schedules used in the outcomes research. The opening section also records the date and place of interview and identifies both the interviewee and the interviewer. The second section concentrates on *accommodation* and the living situation. Accommodation is usually a major component in both provision and costs of community care. The section thus covers: address, partly for the purposes of identifying facility type and budget, and partly because location influences cost (London is more expensive than the rest of the country, for example) and some adjustment may be needed; tenure of accommodation (council or private rent, residential home, owner occupier); a simple description of the size of the unit (the number of different types of rooms and the number of other residents); the amount paid by the client or household in rent or other payments; and receipt of housing benefit. Where several clients live in the same unit some of these questions need be completed only once and can be separated from other parts of the questionnaire such as in the evaluations of the Domus residential facilities and services provided by SENSE in-the-Midlands (Beecham et al., 1994; and Beecham et al., 1992).

Most clients leaving long-stay hospital care lived in specialised facilities such as residential or nursing homes, hostels or group homes (see chapter 6). The interviewee is asked for his or her classification of the facility, although later a standardised categorisation is imposed using other information on tenure, staffing arrangements and managing agency (see chapter 6). Other people, who have not moved from long-stay hospital care, are more likely to live in domestic accommodation, often with other members of their families. The CSRI has been adapted to fit these circumstances by extending the accommodation section to ask about the composition of the household and whether the clients themselves have any care responsibilities. More attention is also paid to how household expenses are covered (see, for example, Allen at al, 1990). These clients are more likely to move from one address to another, and the CSRI records such changes of address, including hospital re-admissions. Instability of accommodation obviously complicates cost calculation and can have dire consequences for clients' abilities to work, entitlements to social security or indeed mental health itself.

Research has shown that concerns about money can have an adverse effect on some mental health conditions (Brugha et al., 1985; Granzini et al., 1990) and many people in this client group have low incomes. This is due in part to the heavy reliance on social security benefits, under-claiming of benefits, low wages if work is found, and unstable work patterns. Information on *employment history, earnings and other personal resources*, therefore, provides an important data source. Questions on employment are not usually relevant to clients with a history of long-term hospital residence, and it is more important to clarify receipt of social security benefits. Although in strict economic terms these benefits should be considered as transfer payments, not representing an aggregate cost to society, they are good proxies for living expenses as these benefits are often their only source of income. In the NETRHA study, few people had any other sources of income and only very rarely had they been able to accumulate any savings. Data on *changes* in benefit status over the past year are also collected as these are likely to be linked with other major events such as changes in accommodation or employment. In some of the accommodation units managed by voluntary organisations or by private individuals, carers receive benefits on behalf of the clients. Details of these and of clients' regular outgoings, such as local taxes, debts or fines, are also collected in this section.

Former long-stay hospital residents rarely find (open) employment, but employment and its loss are important facets of both service effectiveness and cost. For some applications, therefore, more questions are needed in the CSRI on employment history and current employment activities. The costs of lost employment resulting from mental ill health or in-patient treatment will fall to clients (lower income) and to society (lost production), the actual values to be attached depending on a variety of labour market and individual circumstances (Jenkins, 1985; Kavanagh et al., 1993; Thompson and Pudney, 1990).

The *service receipt* section is at the core of the CSRI, and can take up most of the interview time. Community care is delivered and received in a 'fragmented' system, with many agencies providing a variety of services. There is certainly no standard package of psychiatric care, and so there will be a deal of variation between the care services received by clients. At this point, the questionnaire identifies receipt of services which are not funded within the accommodation budget; either health or social care services available to everybody or specialist mental health services. Information is collected on services which the client leaves the accommodation to attend, such as day activities, hospital-based services or appointments at the GP surgery. Some professional support or services are provided for the client at home; for example, a home help or community psychiatric nurse and field social worker visits. The service utilisation fields are divided into two parts. The first allows collection of information pertaining to the twelfth month since discharge from hospital (representing some form of 'steady state', for to record service use since the first day after discharge will pick up the high transition costs which were not the focus of the NETRHA study). The second allows adjustment of this picture to account for regularly, but infrequently used services such as out-patient appointments.

For each service outside the place of residence, information is collected on: type of service, such as day care or out-patient appointment; name of providing establishment, for example the name of a day centre or hospital attended; providing agency, for example, MIND or Hampstead Health Authority; professionals involved, such as psychiatrist; frequency of attendance or contact per week; duration of attendance, such as one day or one hour; mode of clients' travel to and from the service; time spent travelling; and any charges made for the service. For domiciliary services the interviewer asks for a similar range of information, but this field includes a question on the total number of clients sharing the service. This is important when a professional visits an establishment to see several clients for a group session (as with occupational therapy) or see them sequentially (as with GP visits) and the allocation of cost to individuals must take the scope of the visit into account.

Three questions complete this section. One asks about use of personal aids (for example, zimmer frame) or adaptations to property (such as a wheelchair ramp). Although more relevant for other client groups, these are used quite frequently by older people with mental health problems. The next question asks for details of time spent by the *principal (paid) carer* both on direct care activities (face-to-face contact) and indirect care activities (telephone calls, record keeping, contacting other agencies to arrange services and the like) although within residential units little variation in principal carer input has been found between residents. The final question in this section asks whether there has been above average administrative or managerial involvement with the client. However, in general, virtually no input from administrative personnel was found once the client had been living in the community for a year unless a serious threat was posed to other residents or the wider community.

The importance of clients' *informal care* networks has been highlighted in recent policy documents such as the White Paper on community care (Department of Health, 1989) and the CSRI includes questions on the input of informal carers in terms of time spent (frequency and duration of visit) and tasks undertaken (personal care, shopping, domestic tasks and social visits). The availability of informal care for people leaving long-stay psychiatric hospitals appears to be limited (Hallam et al., 1994) although where a number of study members are known to be living with other family members more weight will need to be given to this dimension in the interview.

Two aspects of *satisfaction with services* are covered in the interview. Because the interview refers to a single client, the same GP or day care facility may be considered appropriate or satisfactory for one client but not for another. Service availability is assessed very broadly on a four-point scale: usually sufficient, sometimes insufficient, usually inadequate, or service not required. Quality of contact is similarly measured: usually helpful, sometimes unhelpful, generally unhelpful, or not applicable (where the service is not used). Although not as detailed approach as that developed by others (Larsen et al., 1979; Attkisson and Zwick, 1985), it provides a broad picture, sufficient for this evaluation. The final question on the CSRI asks about *gaps* in service availability and fulfils two functions. It draws the interview to an end by providing a discussion point for the interviewee, and when completed, provides information on that supplements the data on service satisfaction. Where service gaps were identified, inadequacy and inappropriateness of day care activities and lack of personal resources were frequently noted. Aggregation of these responses can point to gaps in service provision within a particular district or locality.

4.3 COSTING HEALTH AND SOCIAL CARE SERVICES

4.3.1 Principles, reality and the model

The second major task in measuring the comprehensive costs of mental health care is the costing or pricing of the various services used by clients. Ideally, a unit cost is produced which accurately assesses what it is supposed to measure, and is correct by the criteria of the theoretical baseline on which it is built. It is usually possible to follow theoretical principles but for pragmatic reasons it is often more difficult to achieve accuracy. The aim, however, is for a truthful or valid representation of cost, which is at the same time reliable in the sense that the measure used yields the same result whenever it is applied to similar data (Kirk and Miller, 1986, p19). The following principles, derived from economic theory, provide guidelines for the costing exercise and later sections point to short-cuts' which do not contravene these principles. Service costs should be *inclusive* of all service elements, take into account *cost differences*, should be calculated as the *long-run marginal opportunity cost* of an *appropriate service unit* and should have taken into account issues of *time*.

The calculation of costs should encompass the resource implications of all elements of a service even though some service planners may primarily be interested in the cost to their own agencies. Thus the amount of social services finance routed to a voluntary sector day care unit shows the cost of that service to the social services department but does not necessarily give the total (or comprehensive) service cost. Health authority funding, central government grants or private fund-raising may also play a part. The calculation of unit costs for services should also take account of cost differences caused by input factors such as the variation in land and property values throughout the country. Services in London are considerably more expensive than elsewhere in England (Derbyshire, 1987) and additional salary points may be offered to encourage people to work in particular areas. Client characteristics, service outcomes and changes in client welfare also exert an influence on costs. These are discussed in later chapters.

Economic theory advocates basing cost measures on *long-run marginal opportunity costs*. In practice, long-run means moving beyond the immediate development of community care which could probably be achieved by using present services more intensively. Since national policy intentions are to substitute community services for most long-term hospital beds, it would hardly be credible to measure only short-run cost implications. Marginal cost reflects the addition to total cost attributable to the inclusion of one more client; opportunity costs reflect the resource implications of opportunities forgone rather than amounts spent. The opportunity cost measures the true private or social value of a resource or service, based on its value in the best alternative use. In a perfectly informed and frictionless market economy, this 'best alternative use value' would be identical to the price paid in the market but not everything is marketed, not every market works smoothly, and information is rarely complete, with the result that observed prices and opportunity costs are often different. Thus, the conventions used to record depreciation of the value of capital equipment or buildings in annual accounts may be sufficient to reveal, say, financial viability but will rarely reflect the opportunity costs of using them, nor is the social value of volunteers and informal carers reflected in their absence of payment.

Use of long-run marginal costs allows examination of the difference which the option under study (community-based mental health services) will make to the available resources. Short-run marginal costs are inappropriate for most costing tasks as they only include revenue costs and do not take account of the full costs of *creating* new services. However, knowledge about the present time is more certain than knowledge of the future, so the convention is to use short-run *average* costs which include revenue and capital elements and overheads as an approximation for long-run marginal costs. This is based on the widely-held assumption that, in the long run, relative prices will remain stable even though absolute price levels may change (see also Jones et al., 1980; Mangen et al., 1983; Davies and Challis, 1986; Wright, 1987).

Once calculated, long-run marginal costs should be disaggregated to an appropriate unit of measurement to get as close to client-level data as possible. Clients use services in discrete units; for example, hospital service use is counted by the number of in-patient days or out-patient attendances. More complex analyses allow more detailed levels of disaggregation, such as ward-level hospital costs (Haycox and Wright, 1984; Knapp et al., 1990) or the disaggregation of residential care costs in recognition of residents' dependency levels (Darton and Knapp, 1984).

The final guiding principle for costing concerns timeliness. The year chosen to calculate the costs data should be as up-to-date as possible to enhance the validity and utility of the results. Ideally, service costs information should apply to the time period in which the policy is to be implemented or the service used. Too much delay between policy and the presentation of costs data may mean that intervening variables, such as inflation, render costs data less valid. If different service costs rise by equal (proportionate) amounts, the problem of out-of-date information is less serious, especially if purchasing budgets rise equally. However, costs may change in relation to each other. The annual general inflation rate for health services in 1990-91 was 7.4 per cent and was slightly higher (8.8 per cent) for the personal social services. But for the period 1986-1989 the health service annual inflation rate was the higher. Pay and prices within the public sector may also rise at different rates (Netten, 1994). Decisions based on inaccurate information about relative costs is less valid and may lead to inefficiency.

These principles and the economist's concept of opportunity costs underlie the methodology for costing services and should guide the search for practical solutions to costing problems. Reality presents two main obstacles to achieving an ideal costing: the scarcity of resources, including time, with which to undertake costing; and the lack, or inaccessibility, of data. Decision-makers' desire for quick results, presented concisely, to be provided within a limited budget counteracts efforts to achieve perfection. Compromises may be necessary, but these should be made on the basis of the principles set out above.

In translating cost principles into practice three points can be made. First, the degree of effort expended in picking up cost differences should depend on an estimate of the size of those differences. Employment costs for a public health service worker of a certain profession on a certain grade will not vary throughout the country (except where regional weighting applies). However, building costs are likely to vary considerably with local land and property prices. Linked to this point, the degree of effort expended in pursuing costs data should be roughly proportional to the benefit of the data in terms of meeting the evaluation or other objectives of the exercise. Thus, where a service is likely to make up a large proportion of the total cost of care packages, more effort should be made to achieve accuracy.

Second, the level of detail required for the collection of cost information depends crucially on the objectives of the study. A study that describes the costs of a service provided by one day activity unit (see, for example, Bebbington, 1993) requires a very different level of disaggregation to that required for services used by clients in the NETRHA evaluation. Similarly, if an exercise is focused on national policies then detailed information on regional variations may be unnecessary.

Third, the methodologies described below will identify some hidden costs. For example, the full description of a social services day care centre will reveal some service elements (costs) that are 'hidden' if only the facility accounts are considered, such as sessional staff funded by the health authority. Similarly, calculation of the long-run marginal costs recognises the cost implications of buildings and equipment which do not always appear in revenue accounts. In practice, therefore, costs are only hidden in relation to the starting point of the costing process.

A four stage building-block approach to costing services is described below (see figure 4.1) which also allows classification of services into two categories determining the choice of costing methodology.

Stage one: identify and describe the elements of the service

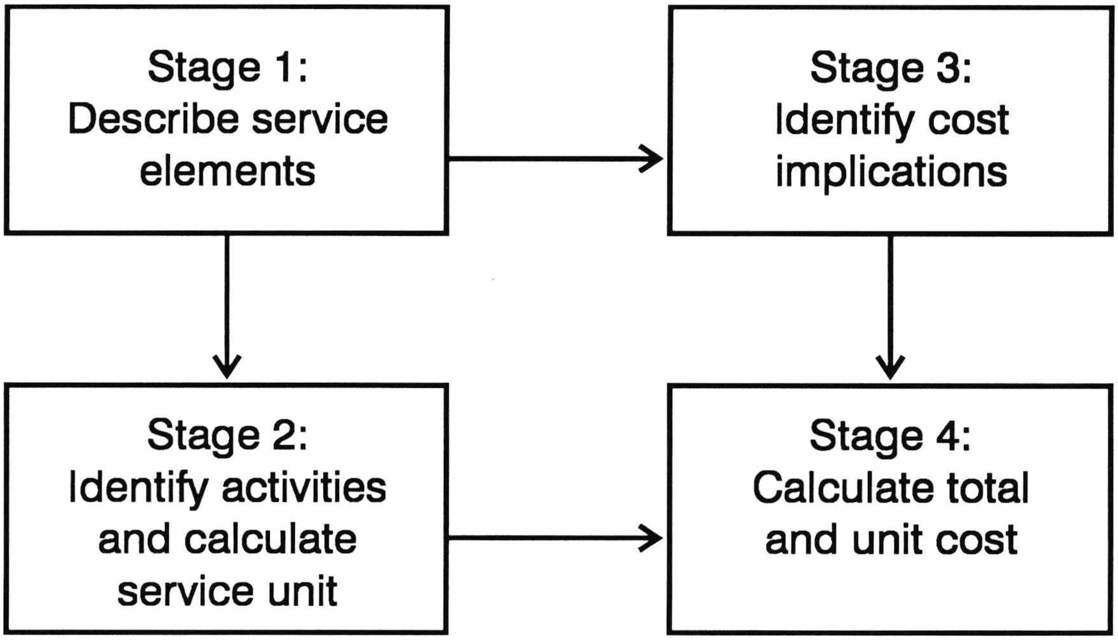
Before costing can begin, a detailed description of the service is required. This should include all elements of the service, including those provided by other agencies and those which appear to have no cost relevance. Dimensions might include the building used, the number, grade and hours of staff in different professions and roles, provision of other elements such as food and travel, and the number of clients or caseload. This description allows services to be divided into two categories for which different costing methodologies are appropriate. First, *facility-based services* where groups of clients visit a building in which the service is provided, for example, residential or hospital-based services and day care (see section 4.3.2). Second, *peripatetic services* which are usually delivered by a single member of staff to individual clients or groups of clients (see section 4.3.3). Clients may be seen either at an office or clinic, but staff also have the flexibility to visit clients in their own homes or at other locations. Examples of peripatetic services are social work or community nursing.

Stage two: calculate a constant and relevant service unit to which a cost can be attached

Routinely-prepared expenditure accounts usually span one year and there may be times when it is most useful to present costs information annually. It is often easier, however, to understand the cost consequences of policy and practice if data are presented in smaller units. Moreover, clients rarely use the whole of a service for a year; they use services in smaller units, perhaps seeing a social worker for 20 minutes a month, or attending day facilities for three days each week. For a social worker, therefore, it is useful to calculate the cost per minute (so that this unit can be multiplied by the number of minutes used by each client per week) or per appointment. In contrast, there can be very few purposes for which it would be useful to represent the costs of day care per minute, a cost per 'session' may be more appropriate.

The choice of a unit of measurement for each service and the method by which it is calculated is an integral part of the costing exercise. The unit should be relevant to the service, relevant to the objectives of the exercise and take into account the nature of the available data. It should also remain constant for each type of service, although elements of the costs may be calculated separately. Thus, a home help visit may be costed on the basis of the number of minutes spent with the client, but the associated travel costs may be more easily expressed as a cost per visit.

Figure 4.1 The service costing model (Beecham, 1995, p69)



Stage three: identify and collect data on the cost implications of all service elements

For each service element there are different cost implications. A building in which a service is located is usually intended to last longer than one year so there has been a long-term investment of resources. On the other hand, the running costs associated with use of that building are recurrent expenditure, usually presented annually. Provider agencies can be approached for building valuations and facility expenditure accounts which provide the basis for costing. Staffing costs present different problems. The cost of employing a member of staff includes their salary, but also additional costs such as the employer's national insurance contributions. Travel may be a staff-related cost but could also be provided for clients. At this stage *hidden costs* can also be identified, such as costs to the clients of using a service (a charge or personal expenditure) or direct management costs.

Obtaining access to this information is not always easy and data specific to some items may not be readily available. Information that allows an estimate will be required to set alongside the description of the service. Price indices are also important when data are obtained for a different year to that used to calculate service costs. Earnings indices for public administration, education and the health service (Department of Employment), the Retail Price Index (Central Statistical Office), a variety of local authority statistics (Chartered Institute of Public Finance Accountants), and the Housing and Construction Statistics (Department of the Environment) have all been used in the construction of the unit cost list in Appendix B.

Stage four: calculate the unit cost for the service

The service description and the collection of cost information allow the total cost of the service to be calculated. This final stage is more complex and is explained in detail in the following sections and in Appendix B. The aim is to calculate a relevant cost for each service which reflects the long-run marginal (opportunity) cost of an appropriate unit, calculated by dividing the total cost of the service by the unit of measurement.

4.3.2 Costing facility-based services

Box 4.1 identifies the main groups of service elements which comprise a facility-based service and the data requirements that allow a cost to be attached to each element. The text below discusses in some detail the cost calculations for buildings and other *capital expenditure* and continues by examining *revenue cost* implications using routinely-produced annual accounts.

Box 4.1 Costing facility-based services

Service elements	**Information required**
Building (location and size), equipment, furniture and fittings	Valuation of capital
Building-related expenses (power, rates, maintenance)	Expenditure accounts
Full staff complement including details of professions and grades	Salary-related costs and expenditure accounts
Other service-related expenses (food, stationery, transport, etc.)	Expenditure accounts
Ex-budget services such as other agency-funded resources, direct management, client-borne costs	Salary-related costs and expenditure accounts

Source: Beecham, J (1995) Collecting and estimating costs, in M. Knapp (ed) *The Economic Evaluation of Mental Health Care*, Arena, Ashgate, p71.

Capital costs

Many community services are based in a building which is visited by clients. To estimate the long-run marginal (opportunity) costs of these services, the cost implications of the buildings (capital resources) must be included in the total costs. Furthermore, it is most useful if they are calculated in a way that is commensurate with revenue costs, allowing the total costs to be presented as one figure. The convention for calculating the opportunity costs of capital is to assume that the best alterative use would be to invest the resources to earn interest over the lifespan of the building, commonly estimated at 60 years. (Shorter periods, such as five or ten years, can be used for other items such as medical equipment which reflects their shorter life expectancy.) The opportunity cost of capital, therefore, is often calculated as the constant stream of cash payments, or *annuity*, which will deplete the lump sum over the lifetime of the capital (Bromwich, 1976). Annuitisation necessitates the choice of an appropriate value for the resources 'tied up', estimated with regard to the likely future use of the building. Most mental health services are expanding to meet demand and it is appropriate to value buildings at 'new-build' replacement costs. Data available from the NHS capital charging system may facilitate these calculations but the valuations should be treated with caution (Mayston, 1990). However, many long-stay psychiatric hospitals are due to close and the resale value of the property, adjusted to reflect its future use may be more appropriate.

The second component required to calculate capital costs is the appropriate rate of interest and one that is applicable in the market where the resources would be invested should be selected. For example, in calculating the costs of public services, the real (inflation-adjusted) rate of return on public sector investments is estimated by the Treasury to be 6 per cent (H.M. Treasury, 1989). Standard interest rate tables show the annuity generated by (the replacement costs of a building estimated at) £1 million is £61,876. This represents the annual opportunity cost of the capital investment in that building.

There are, of course, cases where this approach cannot be used. For example, when costing private sector residential or nursing homes, valuations for buildings and other capital-intensive items are rarely available and convention suggests that the fee (for shelter and care) is set at a level that covers both revenue and capital costs. Given the public policy focus of many mental health cost evaluations and the likely proximity of the fee (as a market price) to the real cost, using the fee to reflect the cost is an acceptable compromise. Similarly, when costing privately rented accommodation, residents are unlikely to know the value of a property (and it is often inappropriate to ask landlords) and convention suggests that the rent (fee for shelter) covers the cost implications of the original capital investment.

Domestic accommodation sits a little uneasily in the category of facility-based services for, although a building is provided, the services related to that specific facility are limited. Public sector rented properties, for example, provide shelter for many clients of care services but disaggregated data on the cost implications of individual properties are not available. The cost calculations, therefore, need to be built up from a variety of sources, including the resident's level of living expenses (see below) and information on the value of different-sized properties which is available from the Local Authority Valuation Officer. The introduction of valuation bands for Council Tax purposes has made these data more easily accessible. In addition, statistics compiled by the Chartered Institute of Public Finance and Accountancy (CIPFA) suggest that the local authority housing departments also bear the costs of supervision and management, repairs and maintenance, debt management, and some miscellaneous expenditure. These data allow the average cost of the subsidies to be calculated per household. Similar data for housing association-owned properties are available.

Revenue costs

Routinely-produced annual income and expenditure accounts provide the starting point for calculating the revenue costs of facility-based services provided by the public or voluntary sector. To these accounting costs are added those borne by other agencies – a form of hidden costs. In residential care these may be forgone local taxes (such as rates, community charge or council tax). These are 'forgone' because residents are rarely liable, so the local authority must bear the cost of not receiving them. It may be necessary to remove items from the revenue accounts. For example, rent paid for the property or expenditure on structural alterations is removed as the capital investment has already been costed; double counting is as great a sin as incomplete costing. However, expenditure on recurring maintenance is a revenue cost. In a residential facility, staff attached to outreach or day care services for non-residents are not resource inputs to the residential service but the costs of another service that is based in the same building. These joint costs are often difficult to allocate, but expenditure on these services should be separated.

Residential services and day activity facilities exhibit tremendous inter-facility variation in objectives, services provided, client characteristics and so forth. Facilities, therefore, should be costed individually. In costing day care the description of the service is particularly important since the labels (for example, "day care", "social club", or "drop-in centre") rarely describe the service. Some facilities cater for a particular client group, others are open to everyone; some are based in a special building, others are provided in village halls or community centres; the service may be available each day of the week or for just one or two sessions; staff/client ratios vary with the function each facility performs and the clients served. Each of these is a potential *cost-raising factor* so the choice of an appropriate unit of time is crucial. Special attention should be paid to the level of resources which do not come from the main provider agency, such as sessional workers or income generated from fund-raising, otherwise total costs are easily underestimated.

Hospitals also show wide variation in purpose and scale and warrant facility-based costing exercises. They may range in size from more than 650 beds to perhaps 50, providing services in acute or long-term care and any combination of in-patient, out-patient, day-patient and accident and emergency services. Information from individual hospital expenditure accounts is ideal as this allows costs to be more accurately allocated to each of the service units; per day for in-patient and day-patient services and per attendance for out-patient and accident and emergency services. These data are not always available so other estimates must be made. Unfortunately, since 1987-88, hospital expenditure data have been aggregated at regional level by specialty categories, for example, psychiatric or surgical care. These costs are misleading as they include only direct patient treatment services, excluding support services such as maintenance, estate management, utilities and catering (although amendments to the system in 1994 have rectified this). Furthermore, specialty costs cross types of hospital, amalgamating costs from psychiatric hospitals and wards in general hospitals. The Körner Report (1987) also recommended altering some of the workload definitions and this has meant, for example, that day-patients are now rarely identified separately and may be either counted with out-patients *or* in-patients. In 1989-90, the cost per in-patient day for the psychiatric specialty was reported as £45.28, and was

£35.20 for an out-patient attendance (from the FR12A forms submitted by district health authorities to the Department of Health). A brief study of hospitals in five regional health authorities suggests that patient treatment services account for only 71.5 per cent of the total revenue costs so these figures should be adjusted to include an estimate for general services (see Appendix B for more details). To the adjusted revenue figure should be added costs borne by other agencies, such as social work provided by local authorities or clients' living expenses, and the resource implications of capital as described above.

The advent of NHS Trust hospitals has made calculating hospital costs more difficult. There is no requirement that their income and expenditure data should be publicly available (although annual accounts must be submitted to the NHS Executive) and even when the data can be accessed, their accounting practices often do not allow the level of disaggregation required. Trusts do calculate prices for their services but although these should be based on the *Costing for Contracting* guidelines (where cost equals price) these rarely reflect long-run marginal costs. They will be affected by the local market conditions and are likely to be distorted by cross-subsidisation between profitable and non-profitable service elements within the Trust.

Client living expenses

It is particularly important to take into account the client-borne costs of services when comparing different modes of care that include residential services. The calculations are complex as there is a great deal of variation in the extent to which living expenses are met from the accommodation budget. In residential homes the fee paid includes provision of food, furnishings, domestic and social care as well as shelter, and the resident retains only a small allowance ('pocket money') for personal expenditure. In other specialised accommodation and care settings (hostels, for example) the amount of money available to the client after paying for shelter is larger, but they will often have to pay other household expenses, such as for heat, light, food and leisure (see also, Berthoud and Casey, 1989). Some of these variations have been reduced by the financing arrangements introduced with the *NHS Community Care Act 1990*. Even so, to ignore the client-borne costs of living expenses would underestimate the total costs of care and, in comparative evaluations, the level of underestimation will vary for each setting.

The calculations become even more complex where the client lives with family or friends. The precise amounts of their expenditure or income may be unclear, as it is difficult to collect information on the allocation of income within the household in many types of cost study. The most practical assumption to make is that total household income is divided evenly between all household members. *Family Expenditure Survey* data (OPCS) can be used where more accurate data are not available but this may overestimate expenditure when a client's income comes mainly from social security benefits. In these cases benefit levels for the relevant year should be used as a proxy for personal consumption costs.

Following the above procedures the total revenue costs can be added to the annuitised capital cost of the facility to obtain the total long-run marginal cost per annum. The choice of a unit to which costs are attached depends on the function of the facility. Thus, for short-term or respite care a resident-day may be appropriate but for long-term residential care a resident-week may be more useful. Both should be calculated by taking into account the number of residents at the facility's long-term level of provision, multiplied by the number of weeks per year the facility is open. (There are 52.18 weeks per year, including leap years.) This is the time divisor with which the *unit cost* is calculated.

The importance of accurate recognition of the cost implications of these facility-based services cannot be overestimated as these services are costly to provide. For example, in 1989-90 adult residential services still absorbed nearly 30 per cent of the personal social services gross current expenditure (Department of Health, 1991). In addition, the type of accommodation (and therefore the cost) affects the other range of services a client might receive. Thus, residents of a nursing home would be unlikely to receive home help visits as domestic services are usually provided within the residential service and therefore included in that budget. People living in private households rarely receive waking night cover from professional staff, but may use several other peripatetic services.

4.3.3 Costing peripatetic staff

As with facility-based services the focus of the evaluation guides pragmatic decisions on the level of detail required to cost peripatetic staff. The methodology set out below illustrates the building-block approach with national data and can be used for a range of staff groups, such as field social workers, community nurses, chiropodists and home helps. The costs are calculated cumulatively using the elements identified at stage one (see box 4.2).

Box 4.2 Costing peripatetic services

Service elements	**Information required**
Staff: profession, grade, hours	Salary scales, regional weighting, NI and superannuation, travel and subsistence payments)
Office/clinic: location, size	Valuation of capital
Building-related expenses (power, rates, maintenance	Expenditure accounts
Service-related expenses (supervision and clerical support)	Salary-related costs and expenditure accounts

Source: Beecham, J (1995) Collecting and estimating costs, in M. Knapp (ed) *The Economic Evaluation of Mental Health Care*, Arena, Ashgate, p76.

Salary-related costs

The decision to use national-level data on *pay scales* can short-cut a number of research tasks without losing too much detail. Many staff groups have nationally-applicable pay and work conditions (although local pay-bargaining is becoming more common) and it is often difficult to identify precise pay scale points for different staff members. If the costing exercise is focused on one local authority the following methodology can still be used, but local working conditions should be substituted for the national-level data.

Most categories of employees are paid on a variety of scales, each with incremental points. The appropriate salary level is calculated using either the mid-point for likely grade for staff providing care to the client group under study or the numbers of staff in each grade. In the latter case, the average pay in each grade is multiplied by the number of whole-time equivalent staff in that grade. Dividing the total pay by the total number of whole-time equivalent staff gives a weighted average pay. The appropriate *regional weighting* and the percentage rate for employer's *national insurance* and *superannuation contributions* for each professional group are then added.

Although staff do not always travel to provide care for clients, the payment of *travel and subsistence expenses* is a cost to the service provider. The approach taken in the NETRHA study was to spread the cost of travel evenly throughout the cost of the service (using standard car and mileage allowances) and add the travel time to contact time. An alternative approach, requiring much more detail on staff activities, is to calculate the cost of travel per visit separately, perhaps the relevant bus fares, and add this to the cost of each visit.

Overheads

The immediate overheads are the support provided by clerical and supervisory staff (calculated as salary-related costs) and the resource implications of the office or clinic base. The capital cost implications can be calculated using the methodology described for facility-based services where an appropriate size of office space is attributed to each staff member and multiplied by the average value of office space for that year. Running costs for the building, such as power and light, can be apportioned from the revenue accounts.

The focus of the evaluation again dictates what other overheads should be included in the cost calculations. For example, should a proportion of the costs of the finance department, the social services director or community care planning groups be included? With the development of the enabler role in social services departments and the split between purchasing and providing functions in the health service this question has taken on an added dimension and accounting practices have begun to include these costs more accurately (see chapter 2). There obviously must be a practical limit to any service costing exercise. Administrative sections may have an important support function for, say, a social worker, but the cost of this support will be only a small proportion of the cost of providing a social work visit. Unless this disaggregation task has already been adequately undertaken, the benefit of such a time-consuming allocation of resources is too small for evaluations such as that undertaken in North East Thames. Moreover, with a public policy focus, the assumption is that, in the long run, the input from these sections into individual services is unlikely to change as a result of an expansion of the service.

There are two exceptions to this approach. First, where there is a specific input into a particular client's care package, perhaps where an assistant director chairs a meeting or authorises an unusual course of action; and second, where a middle-management arrangement has been set up to oversee a particular service. A new post might have been created (costed as peripatetic services) or a resource centre developed (costed as a facility-based service) to provide centrally-based services. It is often difficult to apportion these costs in any other way than allocating them equally across service users.

4.3.4 A top-down approach

For some professionals it is more difficult to build up an average cost per minute or per consultation using the above procedures because of the complexity of their payments. General practitioner services (provided by Family Health Services Authorities) usefully illustrate this point as their income (as non-fundholders) largely depends on the amount and type of work done. There are different fees for different types of service, such as the removal of stitches or for the provision of contraceptive services, and higher capitation fees for patients aged over 65. There are different fixed payments depending on seniority, or whether the GP is on study leave. GPs are also directly reimbursed for some practice expenses including some staff, premises, improvements to premises, drugs and dispensing, and the level of reimbursement varies with the nature and location of the practice. A pragmatic solution to this complex problem, and in view of their small cost contribution to care packages in the NETRHA study, was to take the total cost of general medical practitioner services for the appropriate year and to divide the cost by the number of practitioners.

Similarly, data on the time implications of general practitioner activities is not easy to collect so estimates on the likely length of appointments from other research were examined. Using data in the Butler and Calnan study (1987) on GP workloads, Allen (1988) calculated that GPs spend 9.3 minutes on the care of a patient seen in surgery, and 27.1 minutes for a home visit, including time spent on administration, reading, writing, training and travel where appropriate. These figures compare well with the other estimates (Department of Health and Social Security, 1987). Using the cost (calculated per minute) and these activity data, a unit cost per surgery or domiciliary appointment can be calculated.

4.4 COSTING FULL CARE PACKAGES

The Client Service Receipt Interview is a means to an end rather than an end in itself: the interview collects the data that enable the components of an individual's care package to be identified. This information must be manipulated and joined with information on the costs of those services. The data processing stage allows receipt of the various services to be allocated at a constant unit (the same as that used for the calculation of service costs) over a defined period of time. The period of time is often defined by the research, for the NETRHA study the follow-up period was one year following discharge from hospital.

These data manipulation tasks employ a particular methodology. To facilitate the process, the Service Entry And Numeration (SEAN) form has been developed, which enables the components of a client's package of care to be listed alongside the amount of that service received. It is most usefully presented as "receipt per week for each individual". The version developed for the evaluation of community care in Northern Ireland (Donnelly et al., 1995) can be found in Appendix C. This is a development of the SEAN form used in the North Thames reprovision study which allows the frequency of receipt to be recorded for each service, and allows a composite measure of frequency and duration to be entered as an average per week over the study period. For the NETRHA project, the third and final task was also completed on the SEAN form: to combine each client's average weekly use of services with the unit costs for each service so as to calculate total care cost. (Using the data-entry system set by the Northern Ireland SEAN form, this activity was undertaken using a specially developed computer programme, thus reducing the time taken to make these calculations.)

In the NETRHA evaluation, client-level service receipt data were collected with the aim of calculating how much care each client received from each service or professional in a week, although adjusted for less frequently-used services. For facility-based services this calculation can be complex. Although clients may use the services in discrete units (per week for accommodation services, per day for hospital care or per session for day care activities), they do not always use them at a constant rate. Thus, a client may move to three or four different accommodation types within the year or may have been re-admitted to hospital for one or more short stays. The cost consequences of such patterns of service receipt must be incorporated into the average weekly service receipt picture. Thus, for example, four out-patient appointments per year equals 0.077 appointments per week. In any evaluation, each client is likely to exhibit a different service profile and particular care must be taken to ensure the pattern of use of these costly elements is calculated correctly.

The most appropriate unit to which the costs of peripatetic staff can be attached is one minute. This allows building-related costs to be calculated over a whole year, as most premises function throughout the year, and salary-related costs to be divided by the official length of the working year for each professional. The working year can be based on contracted hours, thus allowing for holidays and statutory leave days, or include an estimation for sick leave and other absences. The most basic unit cost, therefore, is a cost per minute which can be multiplied up in recognition of the duration of service receipt. For example, if a client saw a social worker once during a thirteen week period for 30 minutes, the social worker's contact time per week is calculated as 30 minutes divided by 13 (weeks) or 2.31 minutes. If a domiciliary visit is made, travel time might take an extra 20 minutes. The total length of time spent on providing care would then be 50 minutes, or 3.85 minutes per week. If several clients were seen on one visit, the travel time should be divided by the number of clients seen and contact time allocated to each client.

If cost per minute is not appropriate for the work undertaken, then a relevant unit can be calculated from activity data. For example, if information is only available on the duration of face-to-face contacts, this may underestimate the total cost of providing social work support. Other dimensions of workload activity may be non-direct client-based activities (such as case conferences, writing reports or advocacy), travelling to appointments, attending meetings and time spent on general administration. Dunnel and Dobbs (1983) provide useful data on the time implications of nurse's activities as well as information on travel time and office allocations but there is less activity information for local authority staff (see chapter 2).

The complexity of calculating the total costs of care packages from the components which different individuals receive is illustrated in Appendix D[2]. The costs accruing to three facilities are presented, in which each resident receives different levels of off-site support. The cost calculations include the capital and revenue costs of the residential facilities as well as the costs of services provided outside this budget. The costs data are presented by service, by clients and as a total cost. In this appendix, all costs are expressed in 1986-87 prices.

4.5 SUMMARY

The activities undertaken to cost care packages are three-fold: the collection of service related data; costing of services used; and the combination of these data at the individual level. This chapter began with a description of the interview schedule developed to gather information on the services used to support individuals in the

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[2] These data are taken from Beecham et al., (1988) *The costs of community mental health provision: A Report to the North West Thames Regional Health Authority*, Discussion Paper 600, Personal Social Services Research Unit, University of Kent at Canterbury.

community. The approach is comprehensive, spanning all the areas of community living which have cost implications; accommodation, employment, income, and use of generic and specialist health and social care services, including hospital services. The *Client Service Receipt Interview* has provided good quality information in studies that cover a range of mental health problems (for a summary of some of these studies, see Knapp, 1995). The section on costing services provided a methodology which is a good compromise between economic ideals and the constraints imposed by the real world. The final section described the manipulation of service receipt and costs data to calculate the total, comprehensive costs of care packages for each individual in the study.

The approach described in this chapter can help reduce the information gaps highlighted in earlier chapters in two ways. First, by the creation of 'price lists' for services - a compilation of accurate data on the long run opportunity costs of providing care. The list found in Appendix B builds on earlier work undertaken for the evaluation of Care in the Community demonstration programme (Allen et al. 1987; Knapp et al., 1992) and has been further developed to create nationally applicable costs for some 50 community care services (Netten and Smart, 1992; Netten, 1994; Netten and Dennett, 1995). Data such as these can be used as 'shadow' prices in some care management arrangements or as benchmarks against which local purchasers and providers can match their prices (see chapter 2). Second, the CSRI allows use of services to be examined in a way that reflects the clients' perspective as well as current directives for care managers to develop comprehensive support packages. The combination of service receipt and costs data at this individual or micro-level can help both budget-setting and the disbursement of budgets to individual clients or groups of clients. Moreover, it is only by maintaining the focus on the individual that the variation in costs of community care can be examined.

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PART III APPLICATIONS

CHAPTER 5

COSTING CARE: TWO EXAMPLES

CHAPTER 6

REPROVISION AND RESEARCH IN NORTH LONDON

CHAPTER 7

ANALYSING COSTS DATA

CHAPTER 8

FUNDING SOURCES FOR COMMUNITY CARE

CHAPTER 5
COSTING CARE: TWO EXAMPLES

5.1 INTRODUCTION

This chapter demonstrates the application of the techniques described in the previous chapter. Using data from two studies, the focus is on the data generated by the project-specific *Client Service Receipt Interviews (CSRIs)* and a description of how costs were calculated for the innovative services under study.

The evaluation of the Maudsley Outreach Support Treatment Team (MOSTT) provides the first example. The service aimed to provide support for people with severe mental health problems in South Southwark who were considered 'hard to reach' by staff in other local services. Although the CSRI data showed clients used a range of services, their main source of support was from MOSTT. The chapter describes in detail how this community-based service was costed and sets the data within the context of the clients' comprehensive care packages.

The second research project focuses on two Domus-style residential care facilities in Lewisham which provide support for 24 elderly people with mental health problems. Few services were provided to residents by other organisations so the care and support provided within each Domus absorbed a large proportion of the residents' total care costs. The cost calculations for these facilities are described in some detail.

The four general principles described in chapter 3 guided these evaluations. Costs are measured comprehensively and are undertaken at the individual client level to preserve information on the differences between clients. Only like-with-like comparisons are made. The fourth rule states that cost information can be used to greatest effect if integrated with other relevant findings, particularly client outcome data. However, as the number of clients in either project was too small to permit a thorough statistical examination of costs and outcomes data, descriptive information has been used; a comprehensive picture of service receipt for MOSTT clients and the costs associated with the Domus facilities are set alongside the results from the parallel longitudinal outcomes study.

5.2 THE MAUDSLEY OUTREACH, SUPPORT AND TREATMENT TEAM[1]

5.2.1 Background

The current focus of both academic literature and practice in mental health care reflects a strong preference for locating support services for people with mental health problems in the community. One of the intentions of this emphasis has been to enhance user and carer quality of life by improving access to more and better support services. Better targeting of services on needs and greater responsiveness to the stated preferences of users are among the key objectives of current policy: a variety of policy and practice initiatives designed to meet these objectives have been launched. Here, specific cost findings are reported from an evaluation of one such initiative: the Maudsley Outreach Support and Treatment Team. (For a full discussion of this research see Dansie et al., 1993.)

The Maudsley Outreach Support and Treatment Team (MOSTT) was set up in 1989 to serve the residents of three wards in the London Borough of Southwark. The multi-disciplinary service was developed to provide an acceptable and accessible service to people with serious long-term psychiatric problems who would only use psychiatric hospital care during crises, despite their needs for continuing support. The team included seven care staff who had been based in an office in the centre of the catchment area since October 1990. The office was open five days each week, closing only for one week over the Christmas period.

During the data collection period (June to October 1992), MOSTT was led by a consultant who held clinical responsibility for MOSTT clients and acted as the service

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[1] The research reported here was supported by the King's Fund and would not have been possible without the considerable assistance of the Director of MOSTT and the staff and users. More detailed results can be found in Discussion Paper 909/2, Personal Social Services Research Unit, University of Kent at Canterbury.

director. Three nurses acted as key-workers and worked closely with clients, relatives and service organisations to implement jointly formulated individual care plans. MOSTT aimed to engage clients with other services wherever possible, so that MOSTT staff were not the only provider of services. One of the key-worker duties, therefore, was to act as a broker between clients, other members of the team and other agencies, to pursue the most appropriate care (see chapter 2 for more information on key worker activities). Team working was encouraged, and staff members spent one or two days a week in client-related meetings. To be eligible for support, clients had to be aged between 18 and 65 years, with a major psychiatric disorder of at least one year's duration. The team also looked for evidence that standard therapeutic measures had failed clients and had resulted in a deterioration of mental health or a crisis. MOSTT services were not offered to people with primary alcohol, drug or organic conditions. Up to October 1992, over 50 people had received support from MOSTT. Both the service and the clinical research were funded by the Department of Health for three years but the service continued after this period with financial support from the Bethlem-Maudsley Special Health Authority (now a NHS Trust).

Research undertaken within the Institute of Psychiatry focused on the clinical aspects of MOSTT's work, the perceived needs of clients, and their satisfaction with hospital services. For the costs evaluation, the sample comprised 26 clients who were supported by MOSTT staff between June and October and who were also part of the clinical research. This was to ensure complementarity of samples so that the costs and outcomes data could be combined at a later date. In fact, the outcome data were not analysed and were not available for integration with the costs data.

Cost-related information was gathered from a number of sources, focusing on all activities with cost implications over the year prior to interview. To gather service receipt information, key-workers were interviewed using a variant of the *Client Service Receipt Interview* (see chapter 4). The CSRI was modified to fit the evaluation of MOSTT (for example, the section on domestic housing and informal care support was extended) and the key-worker interview could be considerably curtailed as the team's data recording systems were well-developed and accessible. Some of the accommodation-related information, for example, and data on the support provided by MOSTT staff were unusually well recorded in casenotes or available through the computerised data base.

As described in chapter 4, the collection of individual service receipt data is the first of three steps to costing care packages. The second step - costing the services used by clients in the study - is illustrated by detailing the work undertaken to attach a unit cost to the services provided by MOSTT. The costs of MOSTT and other support services are brought together in a summary of the care packages and their comprehensive costs.

5.2.2 Description of the study population

Nearly 85 per cent of the costs study sample were under 49 years and 70 per cent were male. Fifty-eight per cent had never been married, and 31 per cent were separated or divorced. For half the sample, ethnic origin was recorded as West Indian and the most common primary diagnosis (as stated on the referral form) was schizophrenia (14 clients). The most frequently cited reason for referral to MOSTT was repeated failed appointments (21 clients), followed by refusal to accept prescribed medication.

On referral to MOSTT and every three months thereafter, a number of schedules were used to assess clients for the outcomes study. First assessments (as clients started using the service) for the costs sample members were undertaken between November 1989 and November 1991. Data from the *Global Assessment Schedule* (Endicott et al., 1976) revealed a fairly high level of functioning, but nine sample members were rated as showing 'hostility toward others' (mild to moderate problem). Nearly half the sample had mild to moderate 'unusual or unnatural motor behaviour' and two-thirds were rated as having mild to moderately severe anxiety levels. On the *Social Behaviour Schedule* (Sturt and Wykes, 1986), a third of the sample members were rated as having a moderate problem in one or more of the following areas: coherence of speech; social contact; suicidal ideas; laughing or talking to self; destructive behaviour toward property; personal appearance; general hygiene; and concentration.

A Problem Profile was developed by MOSTT and completed for each sample member to help identify particular areas in which the client needed support. The rating scales run from 0 (no problem) to 8 (extremely bad). Only one third of the sample members scored more than 1 on the 'work adequacy' section. By contrast, two-thirds of the clients were considered to have a problem with payment arrears and two-thirds had a problem with budgeting.

5.2.3 Accommodation and service receipt

Accommodation

The overwhelming majority of the sample lived in accommodation rented from the local authority housing department and no-one was living in specialised community-based accommodation where staff or professional care would be available on-site. As 19 people lived on their own, the lack of on-site professional support was compounded by the limited potential for informal care from within the household. Key-workers reported that just over a third of clients had received some informal care over the study year; mainly where parents, relatives or friends made short weekly visits to help with cooking, cleaning and shopping. The cost implications of these activities have not been included as the low level of input would have only a small impact on the total costs of care. Furthermore, to calculate accurately the cost implications would require a far more detailed set of information than was possible to collect in this study (see, for example, Wright, 1991; Netten, 1993; Smith and Wright, 1994).

Employment and income

At the time of interview only one member of the sample was in employment, a full-time sheltered work-placement obtained with assistance from MOSTT staff. One person described himself as retired. This picture of high unemployment was characteristic of the whole year prior to interview. Indeed, when asked what other services they would like clients to be involved with, key-workers frequently mentioned *stimulating work experiences*.

Social security benefits, therefore, were the main source of income for sample members. Table 5.1 shows that a range of benefits was claimed by all but one of the sample (who was supported by her husband). Receipt of needs-related benefits was high, with over 62 per cent receiving income support. On average, MOSTT clients received £50.54 per week (excluding housing benefit), within a range of £21.86 to £85.06 per person in the household. Eight people were exempt from paying the local community charge (now council tax), six people were not registered and a further twelve received community charge benefit. Seven people had visited the social security offices to clarify their full benefit entitlements, usually accompanied by MOSTT staff.

Table 5.1 Social security benefit receipts

Social security benefit	No. receiving benefit
Income support[1]	15
Severe disablement allowance	6
Invalidity benefit	6
Child benefit	4
Attendance/Invalid care allowance	2
One parent benefit	2
Sickness benefit	1
Retirement pension	1
Disability living allowance	1
Housing benefit[2]	25
Number of people receiving benefit(s)	25

Notes

1. Includes two clients whose claims were being assessed.
2. Includes one client whose claim was being assessed, but who had confirmation of entitlement.

Eight people had large rent arrears and the total amount outstanding to the housing department from sample members was approximately £12,850. In addition, one client owed about £100 for electricity and another had unpaid fines of £2,500. Over the year, six clients had received Social Fund grants for between £100 and £500, and five of these applications were made with the assistance of MOSTT staff. Two other people had received Social Fund loans (interest-free but repayable) of £565 and £600.

Service receipt

Excluding MOSTT services, hospital care was the most commonly used service (table 5.2). Two-thirds of the sample had used in-patient, out-patient, or accident and emergency services provided by both general and psychiatric hospitals. Just under a half of the clients in the study had been readmitted to a psychiatric hospital (usually the Maudsley Hospital), more than half of whom stayed less than two months.

Table 5.2 Clients' service receipt (excluding MOSTT support)

Service groups	Number of clients using the service
Hospital services	**16**
Psychiatric hospital	14
General hospital	8
Primary care services	**13**
General Practitioner	11
Dentist	2
Community health services	**7**
District Services Centre	6
Chiropodist	1
Community nurse	1
Local authority services	**11**
Bus pass	8
Social worker	4
Home help	2
Day care	1
Meals on wheels	1
Law and order	**9**
Police officer	8
Court attendance	5
Probation service	2
Employment services	**5**
Education services	**2**
Department of Social Security	**7**
Voluntary sector day centres or clubs	**5**
Miscellaneous[1]	**2**

Notes

1. Environmental Health Officer and Neighbourhood Liaison Service.

Input from other community health services was surprisingly low given the traditional dominance of health sector services in the care and treatment of people with mental health problems. The most commonly used service was the general practitioner - a vitally important service for clients who are not normally in contact with specialist mental health services as GPs both provide and allocate services (see chapters 2 and 6). Twenty-four of the 26 study members were registered with a GP, eleven of whom had seen their doctor in the year prior to interview. Six clients received psychiatric treatment at the District Services Centre.

Generic services provided by the local authority and social services department were less frequently used. MOSTT key-workers were instrumental in obtaining a free bus pass for eight people and four people saw social workers during the year prior to interview, one of whom was helped to make a claim for a Social Fund grant. The lack of open employment was not compensated for by the use of employment or training services over the previous year as only five people had used any job-finding services, and then only intermittently. Two clients started further education classes but one was unable to complete their studies.

Just over a third of clients had contact with law and order services, including eight people who had contact with the police. In three cases this was to detain clients under the Mental Health Act and three people were arrested on suspicion of theft (each case was dismissed). Three people had been resident in prison for short periods over the previous year and two clients were on probation. Close liaison with the MOSTT meant that the probation service reduced their level of intervention with one client.

MOSTT services

Each member of MOSTT was a qualified mental health professional and provided support for clients. Examination of the computerised records showed the mean length of client contact with any member of MOSTT staff was nearly an hour (0.98) per week and key-worker contact ranged from 0.25 to 2.19 hours per week. Over the year preceding data collection the average number of contacts for each client was 1.65 per week, although one client was seen nearly every fortnight (0.4 visits per week) and one client was seen almost every day with, on average, 5.8 contacts per week.

The MOSTT records allowed examination of the *reasons* for contact, and it was noticeable that the most common reason for making contact was *maintenance*, that is a follow-up visit (table 5.3). These monitoring visits are crucial to the well-being of people with serious mental health problems and may well account for the low proportion of visits where *crisis intervention* was required. Nearly 10 per cent of visits were made at the client's request but very few at the behest of carers.

Table 5.3 Reason for contact with MOSTT staff

Reason for contact	% contacts
Maintenance (follow-up visit)	33.6
Patient request	8.5
Collect medication	7.8
Social activity[1]	7.4
To receive medication	6.4
Further assessment	5.8
Collect money	4.2
Welfare advice	2.3
Crisis intervention	1.6
Carer/relative request	1.2
Medical certificate	0.7
Initial assessment	0.5
Physical examination	0.3
Other (not specified)	19.7

Notes

1. Dropped in to the office for a chat, cup of tea, to read the paper, play games or meet a friend.

On the MOSTT records up to four actions or interventions could be recorded for any one visit. An intervention was recorded for 83 per cent of all contacts and multiple activities were undertaken in 37 per cent of all visits. *Support* was mentioned for more than half the contacts, referring to a wide range of interventions from provision of emotional support to that which related to purely practical matters. The role of MOSTT staff in providing general support for these clients was important as they were unlikely to receive care from on-site staff or informal carers. Notably, support for *activities of daily living* was undertaken in 10 per cent of contacts, *individual counselling* was mentioned for 14 per cent of contacts and *advocacy* for 4 per cent of contacts. Only 13 per cent of interventions were related specifically to medication.

5.2.4 The costs of MOSTT services

The methodology described in chapter 4 was used to cost the care package components used by sample members. Receipt of support from MOSTT comprised the major element of clients' care packages and was the focus for this evaluation so the costs of this service were given more attention than a peripatetic service would normally receive. MOSTT services were costed using the methodology described for a facility-based service and where possible, costs were allocated between clients on the basis of the level of service received.

Calculating MOSTT costs

The revenue expenditure accounts for the financial year 1991-92 were the most appropriate basis for these calculations as they were the most recent complete set and reflected the service provided during the data collection period. To enable accurate interpretation, the accounts were discussed with the MOSTT Director in October 1992.

The expenditure accounts had been generated by the Bethlem and Maudsley Hospitals Finance Department and presented several problems for the calculation of the opportunity costs of providing MOSTT. First, there had been a major change in accounting procedures during 1990-91. Although it was hoped that this would eventually provide more accurate expenditure data and facilitate devolved budgetary responsibility (see chapter 2), the 1991-92 end-of-year accounts still showed some anomalies that needed to be clarified at the 'cost centre' level. Second, the central accounting facilities did not allow some items in the accounts to be checked against actual use; photocopying and pharmacy services, for example, were provided centrally by the Maudsley Hospital and a charge made for their use. Some charges were calculated by dividing the total departmental expenditure into equal allocations for each cost centre, some were based on each cost centre's expenditure in the previous year, and some reflected actual use of that service.

The third problem was in certain budgeting conventions and omissions. A fixed amount was automatically attached to some elements in the accounts. For example, an amount was charged to the accounts for each cost centre for the use of agency nursing on the expectation that temporary cover would be required; no agency staff had been employed by the MOSTT service since its inception. No budget head had been allowed for property maintenance. In fact, during the period of the evaluation no maintenance work had been undertaken as the building conversion had been fairly recent. (It was not until mid-1992 that the Maudsley Hospital agreed to underwrite the costs of the remedial work required in the financial year 1992-1993.)

Many of these queries were clarified by the Director but some uncertainty remained as to whether medication returns to the hospital pharmacy (that is, supplies that had not been used) had been credited to the MOSTT account. If they were not fully credited this would result in a small over-estimation of the total costs of MOSTT.

In view of the disjunction between the working practices and accounting practices certain adjustments had to be made to the expenditure accounts before a unit cost could be calculated. These adjustments are described below by placing the expenditure information alongside a description of the resources and working practices. Expenditure on staff for 1991-92 is summarised in table 5.4 and these data were later adjusted to bring the MOSTT costs into line with costs data used for other services (1990-91 prices).

The *consultant's* salary covered the Director's post. She had no clinical or research duties elsewhere so the total was included in the cost calculations. For the study year, the expenditure elements for *senior registrar, registrar* and *registrar-locum* all related to one person - a locum attached to MOSTT for six months. (Since 1993 this has been a permanent post.)

Nurse Grade G expenditure covered the three nursing posts attached to MOSTT for the whole year. Each worked within standard NHS conditions of employment: a 36-hour week with 5 weeks annual holiday entitlement and 10 days statutory leave. The

A&C (Administrative and Clerical) Grade 5 represented the Community Liaison Officer attached to MOSTT and funded by the health authority via the local MIND organisation. The *A&C Grade 3* and *Secretary* were secretarial posts attached to the service, one of whom was employed through an agency.

Expenditure for some staff was removed from the revenue accounts where they did not provide services to MOSTT clients. The *Clinical Psychologist* salary covered the costs of the two part-time researchers and the *Administrative and Clerical Grade 4* post was for data-entry (research). The *NNS nursing* element was also excluded as no agency nursing was used.

Table 5.4 MOSTT expenditure on staff, 1991-92

Staff	**1991-92 expenditure[1] £**	**Cost per hour £**
Consultant	48,083	29.68
Senior registrar	14,283	17.63
Nurse grade G (3 fte)	59,554	12.25
Secretary (1.5 fte)	17,432	7.17
Liaison officer (0.5 fte)	9,331	11.52
Approved social worker[2]	19,202	11.85
Total staff costs	167,885	90.10

Notes

1. Includes the employer's contribution to national insurance and superannuation.
2. Costed at scale point 30 and includes national insurance, superannuation and local government pension contributions.

In addition to these employees (costs) MOSTT benefited from an unusual 'free lunch'. Southwark Social Services Department provided a full-time *approved social worker*, paid at the top of the scale, for the whole year. The social services department did not reclaim the costs from MOSTT and has continued to fund this post.

All budget components in the non-pay section of the revenue accounts (see box 5.1) were retained for the calculation of service overhead costs (see below) with the exception of *external data processing* as this was a research rather than service cost.

In fact, this item appeared as a credit in the 1991-92 revenue accounts. *Travel costs* were also retained. Ideally, these costs should have been allocated between clients in accordance with staff visiting patterns, but in working for MOSTT, staff also spent time contacting new or non-compliant clients. In the absence of sufficient detail the costs have been allocated equally to all clients using the service.

MOSTT had not been charged for *telephone calls* in the revenue accounts as British Telecom billed the MOSTT office directly. The cost of the telephone was estimated from itemised 1992-93 bills and adjusted to 1990-91 prices, resulting in a figure of £2,737. Other non-pay expenditure elements were dressings, medical and surgical purchases, uniform allowance, hardware and crockery, bedding and linen, books and journals, office expenses, and subsistence.

Ideally, the *rent* element should have been removed from the revenue accounts (as this is a payment in recognition of capital costs of the property) and replaced with the value of buildings and land, suitably annuitised (see chapter 4). A capital valuation for the property was not available so the rent element was used as a proxy for the annual cost implications of using the building. In the revenue accounts for 1991-92 expenditure on rent was recorded as £44,574. In fact, this was an over-estimate as Finance Department personnel misconstrued the underspend for MOSTT at the beginning of the grant period and were not aware that the money could be 'rolled forward' into the next year. By October 1992, the Chief Executive had agreed a rent of £19,425 per annum (a figure more in line with local rents) to be retained by the Maudsley Hospital which had bought and converted the property. *Office equipment* and *computer purchases* were also removed from the expenditure accounts and treated as a 'durables' with a lifetime of more than one year. However, in the cost calculations, the expenditure on *furniture and fittings* was retained as it was used for replacing small items on a year-on-year basis.

Using the MOSTT costs data

The question now arises as to how best to use this information. A cost per hour for each member of staff can be calculated quite easily. Table 5.4 (column 3) shows these calculations for the 1991-92 expenditure figures. This hourly cost is derived by dividing the employee cost by the number of hours they are contracted to work per annum (1,620). Similarly, an average costs per client could be calculated by dividing the total cost of the service by the number of clients using the service. However, the task for this evaluation was to cost the whole MOSTT service and to allocate this in recognition of differential use of the service by clients so two other factors had to be taken into account.

First, all the front-line workers (nurses, social worker, etc.) undertake both direct and indirect care activities, the latter being activities associated with client care but which do not involve face-to-face contact. The main indirect care activity was attendance at team meetings where clients were discussed and clinical supervision was provided. These meetings absorbed 1.5 days per week for each of the care staff. Thus the service was available to clients for only 25.2, rather than 37 hours per week. (Data were not available for time taken on telephone calls, meeting with other professional and the like for individual clients.)

Box 5.1 Adjusted service costs, 1990-91 prices

Staff costs	
Consultant	£39.15 per hour available to clients
Senior Registrar	£23.26 per hour available to clients
Nurses	£16.17 per hour available to clients
Social worker	£15.63 per hour available to clients
Overhead costs	
Non-pay items	£12,910.48 per year
Telephone	£ 2,732.53 per year
Liaison Officer	£ 8,615.91 per year
Secretarial Support	£16,096.08 per year
Office supplies	£ 8,492.18 per year
Rent paid	£17,936.35 per year

The 1991-92 expenditure information has been adjusted to 1990-91 prices using the Hospital and Community Health Services pay and prices index, 0.923).

The second factor was to include *service overheads.* These covered the costs of secretarial support, the liaison officer, cleaning staff, and the non-pay elements of the MOSTT service - the indirect costs of providing the service. Box 5.1 summarises the adjusted staff and overheads costs. The total overhead cost amounted to £66,783 and was divided equally between all 56 clients receiving MOSTT services over the year not just those people in the costs evaluation. Thus overhead costs were calculated at £1192.57 per client year.

The costs of the total amount of available direct care time (that is, the combined time of the consultant, senior registrar, nurses and social worker, less the time taken for team-meetings, etc.) could be disaggregated to client level. A proportion of these costs was ascribed directly to individual clients by the type of professional who engaged in face-to-face contact, the frequency and duration of those contacts, and included the time taken for 'unsuccessful' visits. Although the costs evaluation only considered the 26 *current* MOSTT clients, these data were available for all clients using the MOSTT service over the preceding year and amounted to a total of 1,654 hours. (This approach means that the data were adjusted for the period over which people were supported by MOSTT.) The costs allocated to each person, therefore, varied in respect of the amount of service they had received. However, 1,654 hours was less than total available care staff time (5.5 full-time-equivalent staff x 1,134 hours = 6,237 hours per year). The remainder (and larger proportion) represented time spent by MOSTT staff on indirect care tasks, such as contacting other agencies, writing notes or developing contacts with new clients. For the consultant, this also included time spent undertaking management activities.

The second element in calculating the MOSTT support costs, therefore, is the allocation of the difference between total recorded hours spent on care tasks and the total number of hours per week the service was available. These hours (costs) could not be allocated to individual clients and were divided equally between all clients using MOSTT over the study period, adjusted for the time they had been in contact with MOSTT.

5.2.5 The comprehensive costs of support

The costs of community support for clients in the sample were calculated by combining the data on individual service receipt (including MOSTT support) and the unit costs of MOSTT and other services (the latter costs were calculated following the procedures described in chapter 4). Table 5.5 shows the comprehensive costs of care, ranging over *all* support elements used in the year prior to interview, including current accommodation, MOSTT involvement and the services listed in table 5.2.

Table 5.5 Weekly costs of services and support received by MOSTT study members

Service group[1]	No. of clients using service	Average cost (£) for those using services[2]	Average cost (£) for full sample
Accom. and living expenses	26	131.02	131.02
MOST	26	113.56	113.56
Hospital services	16	219.57	135.12
Primary care services	13	2.96	1.48
Community health services	7	21.52	5.79
Social services	11	9.90	4.19
Law and order	9	65.47	22.66
Employment/education	7	18.75	5.05
Department of Social Security	7	0.14	0.04
Other	5	20.58	3.96
Total cost per client week			422.87

Notes
1. Service groups are described in the text and in table 5.2.
2. Costs expressed at 1990-91 price levels.

The mean cost of community care was £423 per week. However, the most expensive care package was £1052 per week, nearly eight times greater than the least costly package (£138 per week). Each individual care package cost reflects the variation in services received and may be associated with client needs. The sample is small so generalisations from the data should be made with caution.

The costs of all hospital services represent approximately a third of the total (table 5.5, column 4). This high cost was influenced by three clients who had been resident in hospital for more than a third of the preceding year (column 3) during which time

MOSTT staff maintained contact. It also highlights the need for access to high-support facilities when client's mental health symptoms are more severe.

Accommodation and living expenses form the second largest proportion of the total costs of care. In fact, in 42 per cent of the cases (11 people), this costs group accounted for the highest proportion of total costs. The contributions of all non-accommodation services within the packages of care are important, however, as they provide a diversity of expert skills and support. On average, these services (including hospital and MOSTT services) accounted for 69 per cent of the total costs of care.

5.2.6 Summary and implications

The sample members had previously experienced difficulties in obtaining treatment from mental health services and would have found similar difficulties in securing support for other areas of their lives. MOSTT developed a model of assertive outreach work to overcome such problems, and clients appear to have gained in two basic requirements of community living - housing and income. For example, many people (19) had retained the same address over the year prior to interview, including returning to the same address after a short hospital admission. This represented an encouragingly high level of stability which had not been the case before clients were in contact with MOSTT. Only two people had multiple accommodation moves and some clients were helped to move to better or more appropriate accommodation.

Although MOSTT staff rarely enabled clients to find work they were instrumental in helping clients to maximise their incomes. Indeed, one key-worker had been legally appointed to make social security benefit claims on behalf of a client. Income levels were still low (dominated by social security benefits) but unlikely to improve as employment prospects are very poor in this area of London. Over and above clients' psychiatric status and efforts to involve them in employment services, provision of sheltered work or appropriate day activities is rarely sufficient to meet demand.

Generally, receipt of community-based services for these clients was limited. Alongside services provided by the hospital or by MOSTT, a reasonable *variety* of services was used but, on examining individual packages of care, each service type appeared to be used by only a few clients and then only sporadically. This service receipt picture suggests that in their 'service brokerage' role MOSTT staff were less than successful. On the other hand, clients were referred to the MOSTT service for repeated failures to attend other mental health services and were often considered to be unable to benefit were such services offered. There can be little doubt that regular contact with *any* mental health worker would have considerably enhanced clients' continuity of care. The MOSTT service, therefore, appears to be able to provide an on-going service to a group of people who would not usually receive psychiatric support; regular contact was established which allowed clients' mental health to be monitored and service responses to be organised. Moreover, MOSTT staff undertook a range of support activities which appeared to replace some of the more traditional ways of delivering care. It is reasonable to suggest that without contact from MOSTT staff and as non-users of other mental health services, the clients would receive only a low level of service provision and would continue to be dependent on crisis admissions to hospital with a reduced quality of life between admissions.

5.3 DOMUS CARE[2]

5.3.1 Background

One of the fundamental and sometimes controversial features of mental health care policy in the last decade has been the rundown of psychiatric hospital services. Although the policy is not fully implemented, many people have made the move from long-stay hospital residence to community-based services. One of the largest groups still in hospital is elderly people with mental health problems, whose needs for health and social care can be considerable. Among the many innovative service developments for this client group are two residential homes in Lewisham.

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[2] This research uses data collected by the Sainsbury Centre for Mental Health within their research programme on domus care. This report is in part based on a paper published as Beecham et al. (1993) The costs of Domus care, *International Journal of Geriatric Psychiatry*, 8, 10, 827-831.

The two facilities were opened in early 1990 and are managed by a local housing association, which is also responsible for maintenance and repair of the premises. Resident tenure is controlled by a housing association agreement, which ensures the residents have a *home for life*. This is a central tenet of the Domus philosophy which aims to improve the quality of care for elderly people with dementia by specifically addressing the staff anxieties and attitudes which lead to institutional maintenance and poor quality of life for residents (Murphy and Macdonald, 1994). There are three further underlying principles:

- the needs of the staff are as important as those of the residents;
- the Domus should aim to correct the avoidable consequences of dementia and accommodate those which are unavoidable; and
- the resident's individual psychological and emotional needs may take precedence over the physical aspects of their care.

Each Domus was registered under the *Registered Homes Act 1984* as a mental health nursing home and the charge made for Domus care provides residents with shelter and care, electricity, gas, water rates, food, household goods, television licence and rental, telephone rental, cleaning, garden maintenance, transport, travel and furnishings. All residents are exempt from paying the community charge (now council tax). The registration regulations and the dependency level of the residents means that 24-hour staff cover is required and there is always a registered mental health nurse on duty. Services are not provided to people who live outside either Domus.

Domus A is a purpose-built home, jointly developed by the health authority and a housing association for this client group and is situated close to good shopping facilities. The land originally belonged to the church and was bought by the health authority. Residents have single bedrooms and there are three bathrooms and four separate toilets. (These facilities are considered only just sufficient.) The laundry room, kitchen and dining room are shared by all clients and there are two living rooms and a garden for residents' use. There is one rest room available for staff.

During the data-collection period, staff cover at Domus A was provided by 18 full-time care staff, with four staff on duty during the day and two 'waking' staff on duty at night. Domestic staff worked a total of 100 hours per week (two cooks and two cleaners) and a total of 35 hours of clerical support were provided during weekdays. A volunteer worked part-time doing the sewing and mending. Staff provided direct services for residents in key areas (cleaning, buying food, preparing and serving meals, money management and laundry) and also provided support for residents in self-care tasks, buying clothes and by involving residents in regular day-time activities. By the end of May 1990 all twelve places were filled by residents from two long-stay psychiatric hospital wards. At the time of interview all but two of the residents were at least 70 years old, and two-thirds were women. All residents had a primary diagnosis of dementia and were described by staff as requiring support in both physical care (self-care and daily living) and functional aspects (behaviourial dependency and social impairment). Most residents received at least weekly (social) visits from partners or siblings.

All residents of *Domus B* moved as part of a hospital closure programme. Domus B is located on a small housing estate near a parade of shops and a railway station, and was converted from a local authority children's home by the district health authority. Residents have single bedrooms with an adjoining bathroom and toilet. There is one other bathroom, three more toilets, a laundry room, a kitchen, a dining room and a living room. A pay-phone has been installed for residents' use and there are two small offices and two gardens. At the time of data collection, one room was used as a meeting place for the Tenants Association, giving other people on the estate access to the building. Staff wanted to retain this room solely for Domus residents' use.

Domus B had 16 full-time and one part-time members of care staff during the data-collection period, with similar working arrangements to Domus A. The officer-in-charge reported that many people had lost contact with their families during their protracted hospital stays and indeed, only six residents received any visitors, mainly social visits from relatives or friends. Staff provided a similar range of services as in Domus A and organised regular day-time activities. Domestic staff arrangements were also similar although employment difficulties had meant that Domus B relied more on agency staff for domestic services. At Domus B, ten residents had a diagnosis of chronic schizophrenia and two had severe non-progressive brain damage. At the time of interview, two-thirds of the residents were over 70, most of whom required support for both physical care and for functional dependency.

The cost evaluation was conducted alongside a longitudinal outcomes study covering cognitive impairment, depression and adaptive behaviour (Dean et al., 1993). A version of the *Client Service Receipt Interview* was employed to collect retrospective information on frequency and duration of service receipt over the previous year. (The schedule used in this evaluation was more detailed than described in chapter 4 and the full descriptive results can be found in Beecham et al., 1992.) Data collection coincided with the last follow-up assessment of clients in June 1991. The costing methodology followed the approach described in the previous chapter and here only the cost calculations for the Domus facilities are detailed.

5.3.2 Service receipt

The *Client Service Receipt Interview (CSRI)* was designed to collect information on all areas of support used by individual residents and thus provide a snapshot of each service package. The schedule was modified, following amendments made for an evaluation of community alternatives to hospital care in Northern Ireland (Donnelly et al., 1995). The accommodation section was administered only once for each Domus and was extended to include questions covering the abilities of residents, gaps in service provision and barriers to service receipt, finance and funding arrangements, staff activities, and case-management practices. The officer-in-charge completed the accommodation and finance-related questions and key-workers were approached for the individual client-based information.

The Domus staff provided nursing care and, given the high dependency levels of the residents, it was not surprising to find only low levels of use of any services that were provided outside the accommodation. Most were health services, with very few provided by social services departments or the independent sector. At the time of interview, for example, no resident used a day centre (although two people had occasionally visited off-site day services during the previous year), social clubs, or education services and only two residents (both with guardianship orders) had any contact with a social worker.

Members of this study used services from two general *hospitals* over the year prior to interview. Two residents from each Domus had in-patient stays of between one and four weeks and four Domus B residents had out-patient appointments. A *psychiatrist* visited each Domus once a week for case reviews and had some contact with residents. A *psychologist* provided staff support at both units. Other community-based professionals such as the occupational therapist, chiropodist and physiotherapist made regular but infrequent visits. In addition, some services were provided through the primary health care team. A *general practitioner* visited Domus A once a week and Domus B every two weeks but both GPs would make other visits when requested. Domus residents all had regular *dental checks* and five people had visited the *optician.*

Residents also engaged in a wide range of leisure and recreational activities both within and outwith the Domus facilities. Outside activities included going to the park, shopping and day-trips. Usually these were group outings so activity patterns varied little between residents in each Domus. The average (median) numbers of outings over the year preceding interview were 21.5 for Domus A and 13 for Domus B.

In both Domus facilities key-working and case-management activities were conducted in-house and had no cost implications outside the Domus budgets except the psychiatrist. Informal consultation with some relatives was noted. Each resident was supported by a key-worker team comprising a primary care nurse, a care officer and two or three care assistants and each team supported three clients. This arrangement ensured that at least one team-member was on-duty every day, and working practices ensured residents received at least 30 minutes of social contact from them each day. It was felt that longer or more intense one-to-one contact was inappropriate for the residents.

Staff reported that all residents were appropriately placed in Domus care except one, for whom no alternative was suggested. Availability and appropriateness of services provided outside the accommodation were generally rated positively and few unmet needs for services were noted by staff.

5.3.3 Cost implications

Accommodation costs

The cost implications of all services were estimated as long-run marginal opportunity costs (see Chapter 4). In this section these principles are demonstrated by detailing the calculations undertaken to cost the residential facilities. The 1990-91 expenditure accounts (which included the costs of management and other overheads) were used as the basis for these calculations and the adjustments are explained below. Data from the revenue expenditure accounts for 1990-91 were adjusted to reflect a year at full operational capacity and are presented in table 5.6. The estimation of the cost implications of the capital employed to provide Domus care is also described.

To estimate the costs some items have been removed from the revenue accounts. For example, at Domus A some expenditure under the *maintenance* heading had been used for the original furniture and fittings when the capital account was overspent. Other expenditure items were client-specific, such as *clothing* and *personal allowances* and these were allocated to the relevant clients.

Following these downward adjustments, other items were added to the revenue costs. A *psychologist* provided an indirect service to residents by supporting Domus staff. This service was funded by the district health authority and the cost was included at £1.75 per resident week for Domus A and £0.46 for Domus B, reflecting the different levels of support provided. Domus residents were exempt from paying the community charge (council tax) so this cost to the local authority (foregone income) was also included. Finally, a local hospital provided *flat sheet laundry* for Domus B, for which the cost implications were calculated from the hospital accounts.

Table 5.6 Revenue expenditure for the Domus facilities, 1990-91

Expenditure head	**Domus A**	**Domus B**
Employee costs	313129	336798
Running costs		
Rates, heat and light	7043	7395
Food	12818	12643
Cleaning and laundry	5214	4978
Renewal and maintenance	7229	5480
Television	354	548
Medical supplies	5188	6972
Office supplies	8340	8481
Miscellaneous[1]	6539	7284
Running costs sub-total	52725	53781
Central management (overhead) costs	32000	32000
Total expenditure	397854	422579

Notes

1. Includes travel, training, insurance and gardening.

The cost implications of capital expenditure, which is expenditure on items with a life-time of more than one year, must be included in the estimate of long-run marginal opportunity costs and it is particularly important to recognise the large outlay on buildings (see chapter 4). At Domus B, for example, the social services department bears the burden of these costs as the building cannot be used for another purpose. In calculating the opportunity cost of the building the 'next best use' of the value of the building was assumed to be a long-term investment which would generate an annuity or annual income.

The final capital accounts indicated that the cost of building Domus A was £575,000, including land purchase and professional fees. To calculate the capital cost implications so that they could be set alongside revenue costs, the building was assumed to have a life-time of 60 years and the value discounted at the 6 per cent rate advised by the Treasury for the non-trading part of the public sector (see chapter 4). Furniture and fittings were assumed to have a life-time of ten years and were similarly treated and these expenditure data were obtained from district health authority personnel, the 1990-91 accounts and the adjusted 1989-90 accounts. The capital costs at Domus A were calculated at £62.88 per resident week.

Domus B is leased to the housing association from the local authority. For many years it was a children's home and was converted by the health authority to more closely meet the needs of elderly people. Health authority personnel reported that the building was in a serious state of disrepair as it had been unused for many years and much of the 'conversion' was actually re-building work. The conversion costs of £466,000 (as quoted in the capital accounts and confirmed with health authority personnel) have been taken to represent the 'new-build' cost. An estimated land value has been included and the cost of fixtures and fittings was also taken from the 1989-90 (adjusted) capital accounts. The capital costs at Domus B were calculated at £76.19 per resident week. It is interesting to note that no cash payments are made for the use of the building but the local authority retains preferation rights over the service.

Using the data and methodology described above the average cost per resident week of providing Domus care is estimated as £804 at Domus A, and £773 at Domus B. Employee costs (salaries plus national insurance and superannuation) absorb 72 per cent of the total accommodation facility costs and other running costs (power, food, household and office supplies, etc.) account for a further twelve per cent. The remainder reflect the resource implications of the capital employed and central management.

The costs of Domus care were met from a number of different sources. The district health authority funded about two-thirds of the cost of accommodation and care, including the revenue 'top-ups' (that is, the difference between income from residents' fees and the agreed cost of providing the service), the psychologist, the major part of the management charges, and some capital items. Together, the housing association and local authority funded only two per cent including £4000 of management charges which the district health authority would not reimburse for 1990-91. Residents' entitlements to social security benefits were also an important source of income, funding just under 30 per cent of the costs.

Residents had low disposable incomes. They all received income support boarding allowances for nursing homes in London and two residents in Domus A were entitled to Attendance Allowance (which did not increase their total income from social security benefits) and one resident in Domus B received the Mobility Allowance. However, the greater part of these entitlements were paid to the Domus facility for shelter and care normally leaving residents with a personal allowance of about £10 per week (see also chapter 6 and 8). In fact, one resident of Domus B and eleven Domus A residents did *not* receive this personal allowance, as the local social security office decided the facility replicated in-patient care so the amount was not payable (see chapter 8). Seven of these residents received £10 per week from their family and two received £5 per week. Although the financial contribution from relatives accounted for only a small proportion of Domus care costs (less than 0.25 per cent), it may have represented a real burden on already over-stretched family finances. All Domus residents spent approximately £2 per week on toiletries and cosmetics and the five Domus B residents who were smokers spent about £6 per week on cigarettes or tobacco.

Service costs

The average cost of services provided from outside the Domus budget was £29 per week for Domus A residents and £36 per week for Domus B residents. Table 5.7 shows the distribution of these non-accommodation costs between agencies for each Domus. For residents of Domus A, hospital services accounted for only 18 per cent of the service costs, compared to 48 per cent at Domus B. The combined inputs of the primary health care services (GP, optician and dentist) absorbed 35 per cent of service costs at Domus A and 16 per cent at Domus B. It is not surprising, given the needs of this client group, that the input from the psychiatrist is approximately one third of these service costs. Officers from the police liaison service had visited both homes.

Table 5.7: The distribution of costs by service

Service	Average contribution to non-accommodation costs (%)	
	Domus A	**Domus B**
General practitioner	32.6	13.4
Dentist	1.3	2.2
Optician	1.3	0.6
Hospital services[1]	17.9	48.0
Community psychiatrist	38.6	31.8
Occupational therapist	3.6	-
Physiotherapist	0.8	0.5
Chiropodist	0.6	0.5
Field social worker[2]	0.7	0.7
Police	2.7	2.3

Notes
1. Includes in- and out-patient services.
2. Includes court attendances.

The comprehensive costs of this style of community care can be calculated by adding the accommodation-related costs to the other service costs. The average (median) total cost per week for Domus A residents was £829 (range, £827-£885), 96 per cent of which was accounted for by the Domus facility and the remainder by external services. For Domus B residents, the average (median) total cost per week was £792 (range, £791-£904). Again, 96 per cent was absorbed by accommodation-related costs. The highest care package costs are attributable to those residents who were admitted to hospital for short periods during the year preceding interview.

5.3.4 The Domus costs in context

The Domus costs evaluation occurred alongside a longitudinal study which focused on "... the impact of domus philosophy on residents' mental state, behaviour, involvement in activities and interactions with others, and the effects of this form of care on morale and well-being of staff" (Dean et al., 1993, p808). Some descriptive data from the outcomes study can be used to set the costs results in context.

In the light of the current policy focus of replacing long-stay hospital care with community-based services one important focus is the comparison between the costs of hospital care and community care. The average cost of care were calculated for the two hospitals from which most residents came. For Domus A residents, the cost of continuing their long-stay hospital residence would have been £726 per week and for Domus B residents, the cost would have been £680 per week. (These, like the community costs, are comprehensive costs and include both revenue and capital expenditure and cost estimates for services provided to the hospital but falling outside that budget.) A simple comparison of the costs of care for the members of this study suggests that Domus-style community care is the more expensive option and therefore, for the cost-myopic planner, perhaps the option to be avoided. In addition, funding for the Domus facilities relies to a large extent on the social security residential care allowances. These are no longer available as social security entitlements for new residents as the care element is now routed through the social services department. It is useful, therefore, to refer to data from the outcomes study. Dean et al. (1993) note that the Domus residents were the most demanding and disturbed patients on the wards from which they came and therefore may have cost more to care for in hospital than the average figure quoted above. Furthermore, the transfer to Domus care of both groups of clients was associated with *improvements* in their cognitive and self-care skills and in their levels of activity and interactions with others.

In each Domus, staff costs absorbed nearly three-quarters of the total cost of care. whereas in the two hospitals from which residents came, staff costs accounted for only 56 per cent. The higher level of staffing in the Domus facilities (and therefore the associated increase in costs) appeared to have a positive effect on residents' quality of life. Many of the improvements in the quality of life for Domus residents were in areas of skills, behaviour, activities and interactions. In Domus A, for example, where residents had a primary diagnosis of dementia and which had the slightly higher staff-resident ratio, Dean et al. (1993) reported improvements in the residents' ratings for Activities of Daily Living. These were supported by the observational data which suggested that the higher level of displayed skills was due, in part, to staff having the time to allow residents to complete activities such as feeding and washing. Similarly, it was suggested that improvements in communication skills were brought about by the increased attention paid to residents and their particular needs.

Arguably, these results suggest that some benefit would be gained from further disaggregation of the costs of care *within* the Domus facilities to allow staff costs to be allocated to individual residents on the basis of the amount of staff time each received. If this level of disaggregation resulted in greater variation between the costs of care for individuals, it would increase the scope for more detailed analysis. However, two questions in the CSRI asked about staff activities and the responses showed that no resident received less than 17 hours or more than 25 hours of one-to-one support, reflecting a relatively equal level of staff input to any resident. The resulting cost differences would be minimal.

5.4 CONCLUSION

The main focus of this chapter has been to illustrate the costing methodology set out in chapter 4 as it was applied to two innovative services for people with mental health problems. When costing both the MOSTT and Domus services the approach for *facility-based services* was used and the level of detail available for the MOSTT service allowed some of the costs to be disaggregated to the individual client level in accordance with their service use patterns.

The four 'rules' of costing (as detailed in chapter 3) guided these studies. In this chapter, greater emphasis has been laid on describing the costing of the two services but both were part of a wider research study which allowed the costs to be put in the context of other relevant information. A *comprehensive* approach to costs was taken to ensure that the cost implications of all elements of support packages were included. *Variations* in the costs of supporting individuals were noted and a *comparison* made between the costs of continuing hospital care and care in the community-based facility for Domus residents.

The fourth 'rule' suggests that costs information is of most use to decision-makers if it is integrated with information on the outcomes of care. If no account had been taken of the service aims or the client characteristics, the implication of both studies is obvious: overall, the new services are *more* expensive than the old. So, why should purchasers even consider the new services? The answer lies in examining the implications of the services for *clients*.

Outcome data were not available from the clinical evaluation of the Maudsley Outreach and Support Treatment Team. The costs data suggest that there is an apparent high 'per client' expenditure involved in providing MOSTT, but the service does reach clients who hitherto would not have received adequate mental health care. Not only does the MOSTT team substitute for some other forms of mental health care which clients were unable or unwilling to use (for example, out-patient care, nursing care and social work) but through their inclusion criteria, the outreach service is targeted on a needy group of clients. Arguably, expenditure on community care for this client group should be higher as by their very referral to MOSTT, other psychiatric professionals recognised this group of people had considerable unmet needs.

From the evaluation of Domus care, the costs data suggest that this is a high cost service, but it is provided to a group of clients who would place heavy demands on community care services however they were provided. What it is not possible to tell from this evaluation is whether an even higher level of expenditure would bring about greater changes in client welfare (outcomes) or, whether a slightly lower level of expenditure would bring about the same outcomes (see chapter 3). The range of costs with which to test such hypotheses are not available. Whilst Domus care appears more costly than hospital care it does provide a model within which very dependent elderly people with mental health problems can successfully be supported in the community. The transfer to Domus care, and the associated increase in care costs, have also brought about improvements in clients' quality of life, and perhaps points a way forward for service development for this client group.

The Maudsley Outreach team and the Domus facilities are local illustrations of the implementation of national policies. The costs work illustrates both the practical application of a specific methodology and the value of considering the cost implications of a service alongside other research findings. While in neither study was the scope or the scale of the research ideal, this does not mean that the costs should *not* be calculated. It does mean, however, that particular care should be taken to set the costs results in a wider service- or practice-based context so that planners, purchasers or providers have as much information as possible on which to make decisions between care options.

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CHAPTER 6
REPROVISION AND RESEARCH IN NORTH LONDON

6.1 INTRODUCTION

The next two chapters pick up some of the national policy themes described in chapters 1 and 2 by addressing resource and cost issues in the provision of community care in North London. In line with national policy the North East Thames Regional Health Authority (NETRHA[1]) has, since the early 1980s, been committed to a policy of replacing long-stay hospital-based services with community care, and to care for people with long-term mental health problems in the community rather than in large isolated institutions. A description of the regional policy and practice guidance is given in section 6.1 and reflects four themes identified in chapter 1:

- the need to balance the commitment to running-down long-stay hospital beds with economic considerations;
- the need to reduce the risks to both clients and budgets;
- the development of financial incentives to encourage district participation; and
- the close specification of hospital closure plans versus the relative freedom to develop community-based services.

When the plans for reprovision were formulated, the regional health authority commissioned a programme of research to evaluate many aspects of the new psychiatric service. A description of the research, focusing on the economic evaluation, forms the second part of the chapter. Within the economic evaluation, and following the conceptual framework, methodology and techniques set out in chapters 3 and 4, service utilisation data were collected and the comprehensive costs of care calculated for both community and hospital locations. Summary descriptive results are presented in this chapter and further costs analyses are detailed in chapter 7.

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[1] The North East Thames Regional Health Authority (NETRHA) is now part of the North Thames Region but in this chapter, the older mnemonic is used to more clearly define the area under discussion.

6.2 THE REPROVISION STRATEGY IN NORTH EAST THAMES[2]

6.2.1 Hospital closure

In 1974, there were six psychiatric specialty hospitals in the North East Thames region, totalling 6,000 beds for a population of some 4 million people living in areas as diverse as the City of London and north east Essex. The recommendations for a district-based service contained in *Better Services for the Mentally Ill* suggested this number should be cut by one-third (Department of Health and Social Security, 1975). The level of 'over-provision' and the increased capacity of psychiatric services within district general hospitals provided the impetus for the hospital closure programme and the parallel development of community care. One review of local psychiatric services was instrumental in the formulation of the regional plans. The Mezey Report (NETRHA, 1980) suggested the initial closure of two of the six hospitals in the region, with the remaining four to become specialist services.

After much debate the region decided to close all of their large psychiatric hospitals but constraints on the capital budget limited the development of new services so that only two hospitals could be closed in the strategic planning period 1983-1993. Five criteria were agreed for choosing which hospitals would be at the vanguard of the programme: the extent to which services had already been developed in the area; the geographical location of the hospitals relative to their catchment area; staff-patient ratios within the hospital; the costs of the hospital provision (revenue expenditure, site value, backlog maintenance, and upgrading); and the services provided within the hospital. On these criteria, Friern and Claybury hospitals were believed to be the obvious candidates.

The eight health districts served by the two hospitals (Bloomsbury, Enfield, Hampstead, Haringey, Islington, Redbridge, Waltham Forest and West Essex) responded positively to the proposed development of a locally-based service.

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[2] This section is a substantially revised version of Knapp, M., Beecham, J. and Renshaw, J. (1987) *The cost-effectiveness of psychiatric reprovision services*, Discussion paper 533/2, Personal Social Services Research Unit, University of Kent at Canterbury.

Waltham Forest health authority who were responsible for Claybury Hospital also supported the closure policy but there was some dissension around the proposed closure of Friern Hospital. Hampstead health authority personnel noted the importance of the supra-district services already provided at Friern and the hospital staff responded with a lengthy critique of the policy. The result of this consultation exercise was to set up six-month feasibility studies at each of the hospitals, both of which arrived at the conclusion that reprovision of the hospital services was possible but would require extra resources. Region promised to make £50 million (1983-84 prices) available in capital funding for which districts could bid but this did not address the concerns that the total revenue resources available for mental health services would diminish as the hospitals became smaller.

Friern Hospital was completed in 1851 and was then Europe's largest mental hospital accommodating some 1250 patients. It was planned to be a largely self-supporting rural community incorporating its own farm, well, brewery and laundry. By the early 1980s, the surrounding area was residential rather than rural but the estate, surrounded by a four foot wall, still occupied approximately 113 acres. In 1985-86, when the first (research) cohort left hospital, there had been approximately 1,320 in-patient cases using the 945 beds at Friern, some 7,630 out-patient appointments and 17,410 day hospital attendances (NETRHA, 1987).

When **Claybury Hospital** was completed in 1893 it was considered "something of a showpiece" (Wallace, 1986). In keeping with the philosophy of the time it was, like Friern, designed to have a self-sufficient village atmosphere with its own theatre, church (seating 2,200 people), laundry, workshops and a 300-acre farm and orchard. By 1985-86 bed numbers had reduced to 878. In that year there had been 1,270 in-patient cases, approximately 2,790 out-patient attendances and 13,350 day hospital attendances (NETRHA, 1987).

The decision to concentrate capital and revenue resources on developing services which would allow the closure of Friern and Claybury hospitals was announced officially on 25 July 1983. The press release restated the Region's commitment to the national policy of community care and the support of the eight districts for

> the concept of district psychiatric services in preference to the existing pattern of service which is heavily dependent on the two large psychiatric hospitals (NETRHA, 1983).

Complete closure of Claybury was envisaged within ten years. The main buildings at Friern Hospital would be closed, although the Halliwick House site was to be retained and redeveloped as a 200-bed unit to serve Haringey and to provide some multi-district services. The press release reported the Regional agreements to make available capital resources and confirmed that the money currently spent on running Friern and Claybury hospitals (nearly £10 million at 1983-84 prices) would continue to be available for replacement services.

The 1983 announcement followed many years of incremental improvements to services which some commentators claimed had achieved relatively little, but the plans for closure did not meet with universal approval. Objections ran from the general (National Schizophrenia Fellowship, 1979) to the very specific (see, for example, Weller, 1985). Partly in response to such objections, procedural decisions were taken by Region which were intended to smooth the closure programme.

> Three decisions were made initially about closure procedures. Firstly, to answer the concerns of the clinicians, asylum in the true sense of the word had to be provided for those patients who needed a more sheltered environment and could be cared for in a way which did not make leaving the hospital a worse form of care. Secondly, the two large hospitals were to remain viable as institutions until the last patients left. The long-stay population would leave first although acute admissions would continue, to keep a dynamic element within the hospital. Thirdly, as people left, buildings vacated would be closed and demolished, to save running costs (Korman, 1984, p951-2).

The implementation of these aims was detailed in the hospital 'retrenchment plans' which were to provide intermediate targets to facilitate service relocation. The Friern Retrenchment Strategy (Hutchinson Locke and Monk, 1983) suggested five phases: phase 1 was intended to reduce the bed numbers to 775; phase 2 was to reduce the hospital by a further 303 beds; and 95, 77, and 300 beds respectively would be replaced in phases 3, 4 and 5. These patient-related targets were accompanied by plans to consolidate some of the hospital's hotel services (laundry, catering and the like), demolish unused wards and buildings, and sell some of the land to finance the capital programme. The plan also detailed the remedial work necessary in the short-term to bring the physical condition of the buildings up to standard. Redevelopment of the site was part of the final phase but was complicated by the Grade II listing of the main hospital building, the Lodge, and the Garden House. In 1992, the Department of Environment considered these buildings to be of special architectural or historic interest although the Planning Department at the London Borough of Barnet suggested that only the frontage of the main building was worthy of retention.

The retrenchment programme for Claybury Hospital contained many similar details but the hospital was also the focus of an architectural study which envisaged a positive future for the old psychiatric hospital grounds (Burrell, 1986). John Burrell's central idea was to transform the site into a small town by "bringing the community into the site" (p3). The plans incorporated good quality housing, public squares and new streets, banks, shops, offices and recreational facilities, as well as services for former patients. Although there was support for these ideas from national organisations such as MIND, SANE (Schizophrenia - a National Emergency) and the National Schizophrenia Fellowship, Waltham Forest health authority encountered much local opposition to the scheme and it has not been implemented.

The retrenchment programmes formed one part of a three-pronged implementation strategy to close the two hospitals. Local agreements were the second arm and ensured that the *provider* districts (that is, Hampstead and Waltham Forest who were responsible for the hospitals) and *receiver* districts (that is, the user district in which patients would live as community services came on stream) agreed about which patients were to be transferred and which district was to accept the responsibility for them. The final part of this strategy was to tie the retrenchment plans and local agreements to the revenue and capital financing arrangements (see section 6.3). This gave both provider and receiver districts a clear picture of their future commitments and facilitated the planning and development of appropriate district-based services.

6.2.2 Local service plans

To ensure that the psychiatric services required by former hospital patients would be provided away from the large psychiatric hospitals, each district health authority was required to produce a *Mental Health Services Plan* for the region. These were to outline how the psychiatric hospital services would be replaced in the community with acute admission services at district general hospitals, rehabilitation and day activities, residential accommodation, community resource centres and community mental health teams.

The region took a 'hands-off' approach to local service development which led to much variation in the each of the districts' plans. Service profiles in each district depended on a variety of factors: the baseline of services, the ideas and enthusiasm of local managers and professional staff; the relationships between district health authorities and local authority social services and housing departments; and the contribution of the voluntary sector. The region retained only a monitoring role to ensure that no district took responsibility for only low dependency patients, and also that good standards of residential and day care would be maintained. There were no stated principles of a 'model district service' as, for example, in the North Western Region (see chapter 8), however, some aspects of district plans were rejected by the region so there appeared to be an implied model which was not acceptable (Price Waterhouse, 1989, p12). The services planned in three districts are briefly described below.

Residents in the district of Haringey were served by both Friern and Claybury hospitals. The health authority was one of the first to develop 'reprovision' plans and had agreed to provide 420 places for long-stay patients (including people over the age of 65); 165 clients from Claybury Hospital and 255 from Friern. By 1988, Haringey was providing 12 long-stay residential places, had contracted the social services department to provide 20 adult foster care places, and jointly managed (with the social services department) a short-stay hostel with 12 places. After leaving this hostel, residents would move to flats managed by a linked voluntary organisation (in fact this one of the first consortia arrangements in the region) which also provided peripatetic staff to support clients.

By the time the hospitals were to close, Haringey planned to provide a further 47 residential places and 90 places with less than 24-hour staff support. Seventy acute service beds would be developed in local general hospitals and the Halliwick site at Friern would be developed to provide a Haven Community with 60 long-stay beds, a medium secure unit, long-stay beds for elderly people with mental health problems, a day hospital, and other day activity services (Wing and Furlong, 1986). (By 1994, as it was unlikely sufficient funds would be available, the development of the Halliwick site was under review.) As in many other areas, joint working was not easy (see chapter 2) but it was intended that voluntary organisations, health and local authorities would all develop day activity services (NETRHA, 1992).

Bloomsbury and Islington health authorities both planned to provide a district psychiatric service by working with the voluntary and private sectors, housing associations and local authorities. In the Bloomsbury district, a total of 40 staff-supported residential places were planned as well as 32 community-based and 40 hospital-based places for elderly people. Day hospital, work training and drop-in places were also planned but the number of places was not specified. In Islington, 180 residential places would be provided, about half of which were to be for elderly people with mental health problems and an assessment unit was planned for people with dementia or other special needs. Eighty day care places would provide a range of rehabilitation, work, training or social environments. Two mental health resource teams, adult foster care and domiciliary respite care would complete the service (NETRHA, 1992).

6.3 FINANCING REPROVISION

6.3.1 Financing services

As described in chapter 1, a number of factors prompted the move from segregated care in hospitals to more integrated care in the community - not the least of these has been a long-standing concern about the costs of providing support for people with mental health problems. In North East Thames, there was little doubt in the minds of regional personnel that substantially up-grading the old psychiatric hospitals and maintaining them in the future was not a financially viable course of action. However, to develop a community-based service meant resolving two potentially conflicting cost issues: ensuring there would be sufficient resources to fund the service, while at the same time containing expenditure so that the costs did not escalate above the level already allocated to care in the psychiatric hospitals. Ring-fencing the savings from the run-down of the hospitals to fund community services was seen as the way to fulfil both these requirements and a financial transfer mechanism for revenue resources, based on the idea of reallocating hospital funds to community budgets was devised. Ring-fencing would also safeguard the revenue funding for former hospital residents in the longer-term. In addition, a number of funds for short-term revenue and capital financing were also made available (Beecham, 1990).

The main components of the *financial transfer mechanism* were set out in 1984, when the Region drafted their policy for dispersing the revenue funds currently spent on the two hospitals.

> A payment equal to the average cost of (hospital) services provided is transferred to the user district (that is, the district which has responsibility for patients using the hospital) but until the patient is actually transferred a payment must be made to the existing provider district for the current service (psychiatric hospital provision). A potential sum is therefore available to all districts against which they can plan. This will be made permanent at the transfer of the patient when that District will no longer pay the existing provider District for their services. User districts must also fund new admissions, acting as a further enabler in the decrease of use of the hospital facilities (NETRHA, 1984).

The financial transfer mechanism identified for each institution the per patient sum (dowry) to be transferred from the hospital to the community budget and was calculated by dividing the total revenue costs of the hospital by the number of patients or beds. Payment above the cost of hospital care could only be claimed if the receiving district could persuade the provider district that the sum was justified. Two years later, the policy came on stream. The first revenue adjustments were calculated on 1986-87 hospital revenue costs and would be uprated each year by an agreed (health services) inflation factor. Dowries were to provide the mainstay of funding for the replacement services and in fact, the arrangements in this region were some of the most generous in England (see chapter 7).

The *Care in the Community Circular* (Department of Health and Social Security, 1983) allowed 'dowries' to be paid between district health authorities and also to local authorities, housing associations and voluntary organisations. This extension was intended to encourage other agencies to develop services for former long-stay hospital patients (Wistow, 1983; Wistow and Hardy, 1986). In 1984, the Regional Treasurer set down the following procedures to cover these circumstances:

- the broad guidelines set out by the Region should be followed;
- an agreement of a statement of objectives should be made between the district in which the new provision is to be made and the appropriate local authority (or voluntary organisation);
- an approval for transfer should be obtained from the relevant consultant psychiatrist with nursing advice; and
- joint discussion should take place between health and local authority (or voluntary organisation) professionals as to the suitability of particular placements and individuals (NETRHA, 1984).

The regional policy also stated that dowries transferred to other agencies (rather than those remaining with the district health authorities) were to be reduced by the amount of social security benefit received by the client. This was to act as an incentive for health authorities to encourage plurality of provision but also left the option less attractive to other organisations. Furthermore, if the amount transferred to a local authority (or voluntary organisation) was *less* than the cost to the local authority of the services provided, the difference would

> ... be regarded as expansion of the service and have to be funded by either central initiative money, local authority resources, or district health authority resources (NETRHA, 1984).

Four further points can be made about the revenue transfer mechanism in the North East Thames region. First, the cash transfer *followed* the patient transfers. Although the revenue adjustment was made with regard to the actual date of discharge, the financial transfer was not made until the end of the financial year. Second, the revenue adjustments occurred only for *permanent and newly created places* which increased the stock of services in that district. The policy stated that place did not have to be a permanent home for any particular patient but provision had to be made for the future needs of each patient. Moreover, once discharged under these arrangements, patients could only be re-admitted to hospital if a vacancy existed for that district. Third, the allocation agreed for each year could not be altered, although the provider districts (Waltham Forest and Hampstead) could claim money back for the use of their hospital services (for example, re-admissions). Finally, if a patient died the related cash stayed with the receiving district.

North East Thames region recognised that community care may cost more than long-stay hospital care and that transitional or double-running costs would be incurred while services in both locations were operational. Additional revenue funds were made available to health authorities. A *reserve fund* provided some on-going revenue resources for community reprovision services where support costs were shown to be exceptionally high. Haringey health authority, for example, would receive £750,000 from this source. A limited amount of *bridging finance* was also made available by region as non-recurrent grants to cover the double-funding period; they had to be fully accounted for and any unused monies returned to the central fund. The provider districts could not delay transfer of funds to receiving districts on the grounds that the average costs of hospital care had not been saved but the region could be approached for an extra 15 per cent of funding. The *priority care growth pool* had been 'top-sliced' from the region's revenue allocation and could be used to maintain care standards within the hospitals.

The final source of money for the reprovision programme was a separate fund of £50 million in *capital resources* to be bid for by districts to facilitate building or conversion of properties. By 1987, the following transfers for residential facilities had been approved: £2,750,000 for Haringey (including development of the Halliwick site); £3,636,000 for Islington; £650,000 for Hampstead; and £705,000 for Bloomsbury. Where these funds were used NETRHA stipulated that the region's interests in the property should be registered against the permanent transfer of finances from central sources. The original provider districts (Hampstead and Waltham Forest) would retain a fixed sum of £200,000 on hospital closure from the dispersal of capital assets.

6.3.2 Financing care at the district level

At the district level, health care managers operated as recipients of the dowry finance with which to develop their community services. The revenue transfer mechanism allowed cross-charging between provider and receiver districts in relation to the number of patients with notional residence in the district and the number for whom the transfer of responsibility had been agreed. These resources could then be passed on to other providers. As the system identified a firm cash figure this meant there would be greater certainty in planning and developing local services. At the beginning of each year a sum of money was transferred from the provider districts' budget to the budget of each receiver district which was equal to the 'dowry' multiplied by the number of people still in hospital for whom they had agreed to provide services. At the end of the financial year, this sum was transferred back to the hospital budget *less* the amount payable for people who had moved into the district within that year. Money could not be clawed-back by the hospitals - the provider district just stopped 'billing' the receiver district once responsibility for the patient had been transferred.

Slightly different arrangements had evolved for each hospital. At Claybury, the amount kept by the receiver district was reduced on a monthly basis, dependent on how late in the year responsibility for the client was transferred. In Friern, however, if responsibility for a client was transferred before 30 September, the whole sum was retained by the receiver district. If the transfer occurred after this date no revenue was forthcoming until the next financial year. In theory, the districts receiving clients from

Friern could maximise their income by ensuring more people moved in the first half of the financial year but the realities of service development meant they could seldom take advantage of this opportunity.

Although an amount of money equal to the uprated revenue cost of hospital care was transferred with each patient it was not attached to any particular individual. Each district would have responsibility for a range of patients with varying degrees of dependency which would mean differential spending even though the dowries were transferred at the same rate for all former patients. The revenue transfer (set at £14,000 for Friern in 1989) was made as a new place was opened, but the 'bed' might be in a 24-hour staffed nursing home or in an independent flat supported by peripatetic staff. Each would have very different cost implications, so the financial transfer of average costs made it important that local decisions were made about the allocation of services (different levels of resource inputs) between individuals. In addition, the local service plans developed at the beginning of the reprovision programme usually outlined the level of provision for a range of different accommodation types but were less specific about other support services.

The combination of the financial transfer mechanism and the local plans gave district health managers control over the forthcoming resources to provide, or contract, the services outlined in the local plans. However, although the revenue transfer gave a clear financial incentive to provide a local-based service, the main drawback of this system was its bed-for-bed foundation. The policy statements about "a place in the community" were usually interpreted to mean residential accommodation. This created no incentives to provide services other than accommodation - or for districts to discover what other services might be necessary. As the results from the economic evaluation show, although accommodation comprised a major part of former hospital patients' care packages, a number of other support service types were also required, each with concomitant cost implications, and rarely had these been allowed for within the plans for spending the reallocated hospital budgets.

6.4 THE ECONOMIC EVALUATION OF REPROVISION[3]

At the time the region was planning the closure of Friern and Claybury hospitals an evaluation strategy was also developed to inform the reprovision of Friern and Claybury services and the closure programmes for the other long-stay hospitals in the region. The research was funded by NETRHA until May 1985 after which it was part-funded by the Department of Health and Social Services (now the Department of Health). Initially, the research had three linked strands: an examination of the policy and process of reprovision; an evaluation of the impact of the relocation of the services on long-stay patients twelve months after discharge; and an exploration of the cost implications of the reprovision programme undertaken at the Personal Social Services Research Unit, University of Kent at Canterbury. By 1993, the Team for Assessment in Psychiatric Services (TAPS) was also examining public attitudes to the relocation policy, how the transfer from hospital affected elderly people with mental health problems, the transfer acute psychiatric services into local general hospitals, and undertaking an outcome evaluation for the former long-stay patients at five years after discharge.

The full economic evaluation programme has addressed cost and cost-effectiveness issues for a similar range of topics, but the focus of this chapter is the former long-stay population of the two hospitals who have been living in the community for a year. The link with the outcome research was maintained by ensuring investigation of the same study population, thus, the criteria for entry to both the outcome and the cost studies were

> all Friern and Claybury patients who have been in continuous residence for 12 months or more and who, if over 65 years old, do not have a diagnosis of dementia (Leff, 1993).

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[3] The economic evaluation started in September 1986 and is currently funded to 1998. This section and chapter 7 report some early findings from this on-going research programme which were undertaken when the author collected, processed and analysed the data with support from Professor Martin Knapp.

In this section four broad questions are addressed, again linked to information gaps identified in chapters 1 and 2.

- What are the service utilisation patterns associated with community living?
- What are the care package costs associated with community living?
- Is community living a lower cost option than long-term hospital residence?
- Is community care more cost-effective than hospital care?

Clients entering the study were interviewed by TAPS one year after discharge using a range of mental health, behavioral and environmental schedules (see chapter 7). Clients, or their carers, were also interviewed using the *Client Service Receipt Interview* (CSRI; see chapter 4) to collect service utilisation and costs-related data pertaining to their new life in the community. Data collection focused on the twelfth month after discharge to obtain an indication of the 'steady state' costs which would avoid the distortion of high cost periods during a transition phase or low cost 'honeymoon' periods. (The data collected five years after discharge has given further insights into the longer-term use of resources and the effects of services on clients.)

People entering the study are considered in annual groups or 'cohorts' that run from September 1st to August 31st. This chapter focuses on clients who left hospital within the first three research cohorts. The first annual cohort (people who left hospital between September 1985 and August 1986) comprised 44 clients, and comprehensive costs were calculated for 40 members, including two clients who were back in hospital at the time of interview but who would later return to their previous place of residence. Costs were not calculated for one client who had died, two clients who refused to be interviewed and one client whose could not be traced. In cohort 2, 117 people who met the study entry criteria had left hospital. Cost-related information was collected on 92 clients, including seven who were resident in hospital at time of interview. The costed sample was smaller than the full group of clients leaving hospital as data for two people in hospital could not be collected, four clients had died, eleven people refused to be interviewed for the outcomes study and six people could not be traced. Two clients were living independently but were considered too dangerous to interview and were soon re-admitted to hospital.

Eighty-three people of the 'costed' sample (including the clients who were in hospital at interview) came from Friern hospital: 30 in cohort 1 and 53 in cohort 2. Fifty-one clients came from Claybury from where ten people moved in cohort 1 and 41 in cohort 2. Thirteen members of cohort 3 (all from Claybury Hospital) have been included in the descriptive results reported below.

The average age of the 145 sample members for whom comprehensive costs were calculated (the 'costs sample') was 60 years, and 60 per cent of the sample were aged between 46 and 75 years. Fifty-three percent were male and 75 per cent had never been married. The most common primary diagnosis was schizophrenia (78 per cent), nearly a quarter were incontinent and nearly a fifth suffered from dyskinesia. The maximum length of stay previous to the index discharge was 59 years with a minimum stay of just 14 months around a mean of 19 years (Beecham and Verbraak, 1991).

The costs research on reprovision services for these clients was guided by the four rules set out in chapter 3. In this chapter, the first rule (ensuring comprehensive costing) is illustrated as service receipt patterns and costs are described. Although the funding mechanisms encouraged a focus on providing shelter and care (see above), it is particularly important to collect a full account of the comprehensive service package for discharged patients as the costs of community care are not simply the costs of running the place of residence. At the very least, clients need to be provided with similar services to those available in hospital ('hotel' services, medical and allied professional care, staff support, day and social activities) and which are usually provided on-site and from the same budget. In the community, services may be provided in a number of different locations and often funded from different budgets. Since one of the aims of the evaluation was to compare the costs of care options (between hospital and community locations and between different community settings) the scope of the costs data for each setting and for each client had to be the same. Employing a comprehensive approach ensured that elements included in one setting would also be included in the others (even if the value was zero) and helped overcome the research problems posed by the fragmented delivery of community services (see chapter 3).

At the time this study commenced, the cost implications of the transfer of care from hospital to community were still largely unknown, both in North East Thames and other regions, although there was some recognition that care in the community would not be a cheap option (see chapter 1). As in North East Thames, most policy planners and providers also recognised that the transfer of services could not be achieved without some extra money, at the very least 'upfront' funds with which to develop the community services into which former hospital residents would move. The questions of 'how much extra' and 'on what services should money be spent' still remained unanswered but the results reported below begin to fill some of these information gaps. Taken with the work reported in chapter 7, these results also demonstrate the usefulness and flexibility of the *production of welfare* approach and its implications for cost-effectiveness analyses outlined in chapter 3, and illustrate how the cost implications of a community care policy can be drawn out.

6.5 RESEARCH RESULTS: SERVICE USE AND THE COSTS OF CARE

6.5.1 Accommodation

Accommodation arrangements form an important part of clients' care packages and usually account for a large proportion of the total community costs. Furthermore, the level of care provided in the accommodation placement affects the range of other support services required (see chapter 4). Accommodation facilities, therefore, received particularly close attention during the data collection and costing phases of the research (see chapter 5).

One question on the CSRI asked in what type of accommodation facility the client was living and respondents provided a whole range of titles, often for very similar units; community psychiatric units, residential or nursing homes, hostels, group homes, sheltered housing, warden assisted housing, foster or adult care and so on. For research purposes these different accommodation labels need to be standardised and box 6.1 shows the categorisation used to distinguish accommodation types by their level of staffing and the number of places (Knapp et al., 1992). Raafat (1986), for example, described a group home for former psychiatric hospital residents but using this typology, the size of the unit (14 places) and the level of staff cover, would mean the establishment was categorised as a residential or nursing home.

Box 6.1 Accommodation facility typology

Residential or nursing homes are defined as those units which have continuous staff cover by day and waking night-staff and provide six or more resident places. ***Hostels*** have continuous or regular staff cover by day, sleeping-in or on-call cover at night and have six or more places. ***Sheltered housing*** has continuous or regular staff cover by day and waking, sleeping or on-call staff cover at night but contains a number of individual accommodation units (houses, flats or bed-sits) which are part of a larger complex. ***Staffed group homes*** also have continuous or regular staff cover during the day and waking, sleeping or on-call staff cover at night and provide more than one but less than six places. By contrast, ***unstaffed group homes*** have *ad hoc* or no day staff and on-call or no night staff, again providing more than one but less than six places. ***Adult foster placements*** can be differentiated as care is provided in an established households with regular but not continuous foster family support by day and on-call foster family support at night. Finally, ***independent accommodation*** is usually a domestic property, rented or owner/occupied where there is *ad hoc* or no formal care support during the day, and on-call or no staff cover at night.

Source: Knapp et al. (1992) *Care in the Community: Challenge and Demonstration*, p113.

The range of different accommodation styles cannot easily be condensed into a single spectrum so a further identifier was employed - the type of agency which managed the accommodation. This dimension has become increasingly important as health and social care markets develop (see chapter 2). Moreover, the managing agency is often associated with different characteristics within the accommodation facility. Jones at al. (1986) found that patients' own homes scored well on choice and autonomy, but not on health care, personal care, activities and companionship. By contrast, local authority homes provided personal care but scored poorly on health care, privacy and activities, and private sector homes (usually run by psychiatric nurses) provided good personal care, health care and activities, but were often cramped and lacking facilities (p539). Perkins et al. (1989) suggested that the physical amenities and safety features in private sector facilities were similar to those in the local authority but there were fewer prosthetic and orientational aids or on-site recreational amenities.

Traditionally, the health sector has been the main source of formal support for people with serious and long-term mental health problems giving the services a strong medical or nursing orientation. However, using finance from the psychiatric hospitals, other public and independent sector organisations have become involved as care providers and have tended to move away from this model. Thus, social services departments, voluntary organisations (including housing associations and consortia arrangements), private businesses or individual proprietors, and local authority housing departments can also be identified along this second dimension. (Towards the end of this research period a few NHS Trust units were in their formative stages.)

The two-fold categorisation allows any accommodation unit to be classified according to the level of in-house support and the 'managing agency'. Thus in theory, a residential home could be managed by any one of the agencies, and every managing agency could provide each type of accommodation. However, in reality managing agencies are likely to provide only certain types of accommodation due to the funding arrangements which accompany them (see below and chapter 8) and the philosophy of care the agency espouses. Table 6.1 shows how useful such a matrix can be by illustrating the range of different accommodation types in which clients in the NETRHA costs sample lived. The table includes hospital care as nine people were in-patients at the time of interview.

About 50 different community-based residential units were used by sample members and the range of accommodation types was not accidental. It reflects the need for a variety of settings to be provided for the very different clients within the long-stay hospital population. However, even among these early leavers from the hospitals, more than half the sample lived in the accommodation types with higher levels of staff support and only ten per cent lived in fully independent accommodation, a result reflected in the York discharge survey (Jones et al., 1986). The picture can be very different for other groups of people with mental health problems and in locations where the supply of services is very different: Mulkern and Manderscheid (1989) found more than half of their sample of 1000 people enroled in U.S Community Support Programmes were living in private homes or apartments.

Table 6.1 No. of clients by type of accommodation and managing agency

Type of accommodation[1]	Managing agency for accommodation[2]						
	DHA	SSD	VOL	PRIV	LAHo	IND	Total
Residential/nursing home	35	3	-	5	-	-	43
Hostel	14	5	7	2	2	-	30
Staffed group home	-	-	8	10	-	-	18
Unstaffed group home	9	-	10	-	-	-	19
Fostering	-	7	-	1	-	-	8
Sheltered housing	-	1	2	-	-	-	3
Independent	1	-	-	-	12	2	15
Hospital	9	-	-	-	-	-	9
Total	68	16	27	18	14	2	145

Notes
1. Accommodation categories defined in Box 6.1
2. DHA=District health authority; SSD=Local authority social services department; VOL=Voluntary organisation; PRIV=Private organisation or individual proprietor; LAHo=Local authority housing department; IND=Owner/occupied or privately rented accommodation.

Sixty-three per cent of the NETRHA sample lived in congregate settings with full-time staff employed solely in those facilities, three-quarters of whom lived in the larger facilities. Most of these accommodation units had more than six places. Homes run by the district health authorities commonly housed twelve residents and the three people in residential homes run by the social services departments were in homes for elderly people which had 50 or more places. Foster care was infrequently used but only three local authorities in the region were providing these placements and they were felt to be suitable only for less severely ill clients. These placements were all funded through social security entitlements but required a high level of support from the social services department for which a revenue transfer was made through the receiving districts. Fewer people moved to foster care placements in the later years of the reprovision programme (Hallam et al., 1994).

Accommodation facilities for almost half the sample were managed by one of the district health authorities (table 6.1), a lower proportion than found following the closure of Powick Hospital (72 per cent; Khoosal and Jones, 1991). Only seven voluntary organisations provided accommodation, which had a tendency to provide smaller, less intensively staffed facilities than the public sector organisations. Nine residential homes in the private sector were used by sample members, all but two of which were run by nurses from Friern who had converted their own homes to provide homes for patients they had cared for in hospital. Each home was registered with the local authority under the *Registered Homes Act 1984* and funded through the residents' entitlements to social security care allowances. Regulations controlling access to these entitlements (prior to the 1993 transfer of responsibility to social services departments) allowed proprietors to retain their jobs at the hospital as well as providing care in the home. This gave residents easier access to the hospital facilities and many residents continued attending the workshops or day services at Friern or Claybury as well as out-patient clinics.

It should not be thought that these private sector homes were opened for solely financial or altruistic motives. In interviews, proprietors expressed their genuine concern about community services and the future of 'their' patients. In particular, they felt patients still required psychiatric nursing care and that this would not be provided in many community-based accommodation facilities. However, without access to the residential care allowances they would have been unable to provide these care settings. Some interviewees were opposed to this form of residential care and argued that only the location of patients' shelter was different, not the care provided, but most proprietors interviewed felt that patients' lives had changed and that they were "living more normally". They also expressed concerns about the eventual hospital closure as day-attendance at the hospital represented continuity in residents' lives during a period when so many other major life changes were occurring and ensured patients' social networks were maintained. The greatest single concern of proprietors was that under the social security regulations, clients' disposable income was only about £10 per week. This effectively *dis*abled them from taking part in normal community life. Often such a sum could not finance residents' smoking habits, let alone cover toiletries, clothing or leisure pursuits. Similar concerns were expressed in a survey of registered residential homes in Nottingham (Davis, 1990).

6.5.2 Service utilisation

Although accommodation was an important part of clients' care packages, other services brought a diversity of skills to clients' care packages. Table 6.2 lists the services used by the 136 sample members who were living in the community at the time of interview and the percentage of the sample who used the service at least once over the preceding 12 months. The table also lists the contribution of that service to the total cost of community care (see section 6.5.3).

Table 6.2 Community services used by sample members

Service	% using the service	Average weekly cost[1]		% contrib. total cost
		Services users	Full sample	
Accom. and living expenses	100	209	209	77.4
Hospital in-patient	20	61	12	4.4
Hospital out-patient	21	9	2	0.7
Day services (DHA)	32	48	15	5.4
Day care (SSD/VOL)	38	33	12	4.5
Classes (LEA/VOL)	10	33	3	1.2
General practitioner	72	2	1	0.5
Injections	14	6	1	0.3
Nursing care (DHA/FPC)	30	4	1	0.5
Community psychiatrist	54	2	1	0.5
Social worker (SSD/VOL)	42	23	10	3.6
Misc. professionals[2]	58	3	2	0.6
Police	4	5	0	0.1
Travel/bus pass	32	2	0	0.2
Volunteer inputs	4	17	1	0.3

Notes

1. Expressed in 1986-87 prices
2. Chiropodist, optician, dentist, pharmacist, occupational therapist, physiotherapist, psychologist.

Even though clients were no longer resident in hospital, they still required the skilled clinical input often only accessible through *hospital-based services*. Ten different hospitals were used, but Friern and Claybury were still providing a full range of services to sample members. One fifth of the sample had returned to hospital for short in-patient stays; seven of whom received psychiatric care at Friern and thirteen of whom received psychiatric or general health care at other hospitals within the region. These in-patient episodes can be seen as part of a community care programme and in the majority of cases re-admission for the NETRHA sample members was short and clients returned to the same community address. Short hospital stays can be used to treat people in acute crises but also to reassess individual management programmes to ensure realistic goals are set (Lamb, 1988) but some staff in homes run by the social services departments or voluntary sector organisations reported that it was often difficult to get clients re-admitted to hospital for psychiatric care. (Their links with *community-based psychiatrists,* who saw over half the sample, were also weaker than for health authority accommodation.) Future community provision plans should take into account these (relatively) rare but expensive support needs. Almost all out-patient appointments were for psychiatric care and about a half of the clients who used this service returned to Friern or Claybury hospitals.

Eighteen sample members returned to Friern Hospital to attend the Industrial Therapy Unit which provided day activities for 150 people, both the remaining in-patients and people who lived off-site. Workers attended either on a full- or part-time basis, earning up to the £7 per week limit allowed by the social security regulations of the period. (Only three sample members could earn more money under their entitlement to the therapeutic earnings allowance.) The Claybury facilities offered a similar payment and nine sample members worked there. Although the health authorities had begun to provide community-based day activity facilities (often attached to newly-built accommodation facilities), nearly a fifth of clients were using day services at the hospital from which they had been discharged, usually attending each weekday. Again, the link between these hospital services and community living was not only service or finance related; many clients visited the hospital to see friends and said they enjoyed returning to a familiar environment.

Only three clients used a day hospital for treatment but approximately seven out of ten NETRHA clients used some form of *day care* based outside the hospital (see chapter 1). Teasdale (1987) suggests that the principles behind day care, as far as they can be deduced

> ... derive from a basic belief that mentally disabled people ought not to be segregated from the rest of the community, but have a right to lead lives which

> are as normal as their disability permits. ... but given the fact of their disability, whatever its cause, they have particular needs. Day services have come to be seen as the most appropriate means of providing for these needs while allowing the person to live in the community (p213).

Seven social services day care centres were used by 23 clients, with less than half using the service more than three days per week. Twelve clients used five centres provided by the voluntary sector, again most commonly on a part-time basis, and only five sample members used more than one centre concurrently. The interviews showed these services were considered satisfactory in terms of their availability and quality. It was often the lack of provision, or lack of appropriate provision, that prevented more people using day care services but some clients chose not to attend day activity centres and this finding is supported by other research. McCreadie et al. (1988) found that in their three year follow-up of day patients with long-term mental health problems, half of those who had stopped attending had discharged themselves. In an evaluation of one social services day care centre in Kent, the 25 users were asked about their attitudes to the centre (Beecham and Fitzpatrick, 1991). Twenty-four sample members said they liked coming to the centre, half of whom felt attendance helped them. Holloway (1988) also found a high proportion of users (65 per cent) were satisfied with their day care or had no criticism. At the Kent centre the opportunity to talk to other people was the most valued factor but a third of respondents said "not much to do" was the aspect they liked least. Staff reported that 20 people had stopped using the centre over the twelve months it had been open. When interviewed, none of this group wanted to attend the centre again and the least liked aspect was "other users".

Schneider (1990) suggested that day care can be evaluated along four dimensions; appropriateness, availability, accessibility, and acceptability. The range of day care services for NETRHA sample members appear to meet only some of these, and both care staff and clients identified the need for more long-term services which address social rehabilitation within a stimulating environment (see also Tatum and McGrath, 1989). The development of more day activity facilities, spanning a wider range of functions is vital to the implementation of community care policies. In North East Thames the continued dependence on the services at Friern and Claybury gave hospital staff cause for concern as it implied that insufficient community-based facilities were available.

Greater provision of *employment opportunities* is also required. Only one client was in open employment at the time of interview and only six people used work-orientated day services provided away from the hospitals. Less than two per cent of the sample used job-finding services, such as a job centre, and only ten per cent of the sample attended some form of education classes. These results are perhaps not surprising given the long-term nature of clients' mental health problems and the many years they have spent in psychiatric hospital but, as for the MOSTT sample described in chapter 5, employment was mentioned frequently as a 'service' from which clients would benefit. Unfortunately, even where attempts had been made to encourage employment, major difficulties arose in finding appropriate work and in overcoming the financial disincentives inherent in the social security system.

General practitioners monitored mental health fluctuations and medication as well as physical health. "Primary health care services, including dental, ophthalmic and pharmaceutical services, make an important contribution to community care both in preventing the need for such care by health promotion, care and treatment, and by contributing when health care is one component of an individuals' total needs" (Griffiths, 1988, p9).

Every client in the NETRHA sample was registered with a general practitioner (GP) and nearly three quarters of the sample had seen a doctor at least once since discharge from Friern or Claybury. Many saw their GP once or even twice in a month, far more often than the average consultation rate for the general population which, in 1986, was between four and five visits per year (OPCS, 1987). The most frequent users attended the surgery to have their medication monitored or prescribed. Across the whole sample, few domiciliary visits were recorded. At the time these data were collected GP services were organised through the Family Practitioner Committee (FPC), now the Family Health Services Authority, and pre-dated the introduction of fundholding (see chapter 2).

One survey of 369 GPs in the South West Thames region found that 61 per cent (225) had ten or fewer long-term mentally ill patients, 0.5 per cent of their list. However, 21 per cent (79) had noticed an effect on their practices of the discharge of long-term patients. A higher number of long-term mentally ill patients on their caseload was associated with the practice being located within three miles of a large psychiatric hospital (Kendrick et al., 1991). A more detailed study of GPs in Thanet found that 29 per cent of the 55 respondents felt mental health comprised between 10 and 14 per cent of their workload, and reported that the *National Study of Morbidity Statistics from General Practice* suggested ICD classified mental disorders comprised six to eight per cent of all consultations (Le Touze and Pahl, 1988). The burden on GPs of providing mental health care can be considerable, particularly when people are grouped together in an area that is served by a small number of practices. Alternatively, the argument goes, this concentration of people will enable a small number of GPs to build up the specialist skills required to provide appropriate care for discharged patients. Bennett (1989), for example, found that only 47 out of the 141 GPs surveyed had any training in psychiatry. In the NETRHA study, no formal carers reported any difficulty in finding a GP willing to treat clients and on the whole, they felt the service was satisfactory.

Social workers saw 40 per cent of clients in the sample, but rarely people living in establishments run by district health authorities. This figure also includes the support provided by social services departments for people in adult foster care placements and the monitoring visits made by the hospital social worker teams which were required during the first six months after discharge from Friern. *Community psychiatric nurses* were seen by more than a third of clients, half of whom received long-term depot injections. Goldie (1990), in his study of 26 former Claybury patients, found that the interval between injections often dictated the frequency of CPN contact and each visit was likely to last for only 10 minutes or so (p14). Moreover, only six people said they would contact a social worker or CPN in an emergency yet the professionals felt clients depended on them (p15).

One study compared the roles of community psychiatric nurses (CPNs) and mental health social workers (Manning, 1988). No significant differences were found in terms of the psychiatric symptoms of their respective clients (cf. Huxley and Kerfoot, 1993, as cited in chapter 1) but there was considerable variation between the professionals in terms of their working practices and attitudes. Mental health social workers (MHSWs) had maintained stable caseloads over an eight year period (a mean of 53 clients) and received close supportive supervision. By contrast, CPNs tended to work on their own, and over the same period their caseload rose from a mean of 30 clients to 78. CPNs saw more clients each week but spent less time with them: 7 minutes compared to 16 minutes for social workers. CPNs tended to cite 'maintenance' as their overall objective, whilst MHSWs were more likely to cite 'change'. However, Manning found that neither CPNs or MHSWs were fully aware of the full range of severity of some clients' symptoms.

The small number of people seeing *miscellaneous professionals* belies their importance to recipients. This category includes personnel who have specialist skills which are rarely provided by staff working within the residential setting but which can make a huge difference to clients' quality of life: chiropody or physiotherapy can improve mobility; occupational therapy can increase daily living and social skills; and ensuring appropriate medication is prescribed can help maintain an individual's mental health state enabling them to cope with everyday activities.

The service receipt data presented above can be used to inform service planning. Table 6.1, for example, shows the number of places in different types of accommodation that will be required within the first two years of a reprovision programme. In addition, in the first year after discharge these former long-stay hospital residents used about 1,500 hospital in-patient bed days, they generated about 30 'new' out-patient attendances and required a minimum of 100 day activity places. Table 6.2 shows that about a third of the sample used community psychiatric nursing services and 60 people had seen a social worker. Using the most recent data on case-load sizes (see chapter 1), between one and two full-time-equivalent members of each profession were required. Given the geographical spread of former patients' new homes, it is likely that these early leavers were supported by existing professionals but as more people leave hospital, more professionals will have to be employed. Indeed, as people with higher levels of need still remain in hospital, the later leavers are likely to require proportionately higher levels of support.

As found for the MOSTT and Domus samples, clients used a range of services based outside the accommodation facility, involving many agencies and organisations (chapter 5). Moreover, when compared to the MOSTT and Domus data, more people in this sample used each service type and if individuals used the service, tended to use it more intensively. These attributes and the geographical spread of the sample members made the task of costing community care more difficult as the 'delivery system' was even more fragmented and the financing of any package of care more complex. However, by using the approach described and illustrated in the two previous chapters, service costs were estimated and combined with the individual service receipt data to calculate the total costs of community care. The results are summarised in the next section.

6.5.3 The costs of community reprovision

Table 6.3 shows the average cost of care in the community for the 145 people in the costs sample, expressed in 1986-87 prices and based on the interview one year after discharge from hospital. Costs appear to be rising over time and indeed, this trend continued as later research 'cohorts' left hospital (Knapp et al., 1993; Beecham et al., 1996). Only a small number of leavers in the third year cohort are included in the results present here, and as members were living in only three different establishments the costs are not fully representative of the whole cohort.

The average cost of community care was £273 per week (1986-87 prices), disguising a range of £47 to £568. Service costs for this group of clients were calculated at 1986-87 prices although costs have been uprated to more recent prices as the research programme has continued (Beecham et al., 1996). Using the NHS Hospital and Community Health Service Index the 1993-94 cost equivalents would be £456, within a range of £78 to £949.

Table 6.3 The costs of community reprovision

Groups of leavers	Average cost per week, 1986-87 prices		
	Mean £	Std.D	Sample Size
First year cohort	203	82	40
Second year cohort	288	121	92
Third year cohort[1]	386	63	13
All leavers to date	273	119	145

Notes
1. Thirteen sample members only.

Given that care packages are put together in response to client needs, so also should care costs bear a relationship to client needs (see chapter 3 and chapter 7). In this section, cost variations are illustrated and are explored in terms of the differential use of, and input from different services and agencies.

The least expensive care package was received by a client who lived in a one-bedroom flat with a friend (independent accommodation). He received little in the way of support services; a social worker visited once a week, he had GP and out-patient appointments once a month and attended a social services day centre three times a week. By contrast, the most costly care package was received by a woman living in a staffed group home managed by the district health authority. She saw a social worker twice a week, a GP once a week, a psychiatrist once a fortnight and had visited the dentist twice in the year since her discharge under the reprovision programme. This latter client also attended the psychiatric hospital day services once a week and spent a total of three months as an in-patient, returning to the same place of residence after each admission. These two care packages, at each end of the costs spectrum, indicate the heterogeneity of the service needs of this client group. Table 6.2 clearly indicates the impact of differential service use on costs where the disparity in the figures between the average weekly cost for users and for all sample members highlights the importance of some services to some users - and their concomitant cost implications (column 3).

Accommodation and living costs absorbed the largest proportion of community care costs for this group of clients and in aggregate, the non-accommodation services amounted to only a quarter of the total costs of community care (table 6.2). The services which absorbed the major part of these costs were day care and hospital services. Not only were these services provided outside the accommodation budget but they were usually provided at a different location, often through a different agency. (This had implications for clients, who would have had to travel to use many services, and for staff who often had to support clients in using these services. Accompanying clients to services, for example, put greater demands on the on-site staff than envisaged at the planning stage and often required provision of a vehicle for the residential unit.) From a financing perspective, the reprovision arrangements often did not allow for the costs of many of the non-accommodation services, and accordingly agencies will not be recompensed in full for providing support to an expanding population coming from the long-stay hospitals.

Part of the work of the economic evaluation is to compare care costs and here a simple comparison is made between the costs of hospital and community care. The *average* comprehensive cost of care at Friern and Claybury hospitals was £407 per week (1986-87 prices, see chapter 7). The long-stay wards, however, tended to have lower levels of staff than other wards so this figure was adjusted downward in recognition of staffing arrangements. For the study population (that is, excluding the cost implications of the acute care wards and those that care predominantly for people over 65 years old with dementia), £330 per week is a more appropriate figure to cite (Knapp et al., 1987). The mean cost of community care (£273 per week) is some way below the hospital average, but progression towards it was envisaged as there was evidence of *creaming* of the hospital population, where clients with fewer needs moved into community facilities first (Jones, 1993). This process would also increase the average level of dependency (therefore cost) within the hospital. More discussion of this issue can be found in chapter 7.

Although the findings of the outcome evaluation are not detailed here, Anderson et al (1993; see also chapter 7) reported that, for the first 161 leavers, all moving from hospital in the first two years of the reprovision policy, no adverse effects of relocation on clinical and social outcomes were found. None of the aggregate or sub-scale scores on the clinical, behavioural or social network schedules showed statistically significant differences over time (comparing assessments in hospital and community) or between leavers and those people remaining in hospital who were matched with them. (Although randomisation was not possible, people who were discharged from hospital were individually 'matched' with someone who remained in hospital using the data on age, gender, diagnosis and length of stay in hospital). However, statistically significant differences between leavers and their 'matches' over time were revealed in terms of a reduction in the 'restrictiveness' of the environment and positive attitudes to their present accommodation. The leavers considered medication of less help than did the matched stayers.

Thus, using the decision rules cited in chapter 3, community care has been shown to be a cost-effective option for this group of former long-stay hospital patients; a similar level of outcome was produced for less resources.

6.6 SUMMARY

The decision made by the North East Thames Regional Health Authority to close long-stay psychiatric hospitals was a clear re-statement of their commitment to national policy. The slow implementation of this policy found by Tomlinson (1991) was by no means unusual (Milner and Hassall, 1990; Knapp et al., 1992). The complex financing arrangements made to facilitate closure of Friern and Claybury hospitals also re-stated regional commitment to local provider agencies. At the same time regional personnel retained a regulation function to monitor progress and quality; to act as arbitrators; and to develop and oversee the complex financial aspects. The close links between administrative, financial and clinical aspects of the plans, however, provided all parties with both incentives and controls to implement the reprovision plans successfully. Tomlinson (1990) summarised the advantages and disadvantages of the strategy and these are reproduced in table 6.4.

Table 6.4 Advantages and disadvantages of reprovision arrangements in North East Thames

Advantages	**Disadvantages**	**Further work**
Top level management retained day-to-day responsibility RHA put political weight behind reprovision and resisted pressure from general medicine Generous funding of reprovision by top-slicing Responsiveness in policy making to local professional concerns Regular formal contact with district level coordinators Revenue transfer from provider to receiver districts agreed early	Reprovision and dowry images inhibited progress Dearth of 'product' champions Slowness of implementation Fixation on large scale developments Lack of devolution of action responsibility to experienced non-NHS agencies 'Stand alone' reprovision distinction impeded progress with ordinary services	Funding incentives for non-residential projects Targeting agencies which include the most dependent clients and deliver quickly Devolving responsibility to inter-agency bodies Redefining the reprovision/ non-reprovision boundary to allow change to existing services

Source
Tomlinson, D. (1990) Stick to the agenda, *Health Service Journal*, March 15, p393

Many of the reprovision arrangements anticipated the recommendations contained in the *NHS and Community Care Act* (see chapter 2). First, some elements of the revenue transfer mechanism simulated the purchasing arrangements of the post-1990 care world. Second, explicit monitoring arrangements were set in place to ensure services would reach an agreed standard. Third, the NETRHA guidelines, although not as comprehensive as, say, the care programme approach, ensured that provider districts could not transfer patients without the receiver districts' full knowledge; the decision to transfer responsibility for a patient was made by a clinician but both the relevant consultant *and* the district unit general manager for mental health services had to agree to the discharge and community placement in writing. Finally, this clear statement of responsibility for patients was tied to the financing mechanism which ensured health authority costs would, in the longer-term, be contained to the size of the hospital budget.

Early results from the costs research on reprovision have been described in this chapter and they highlight three challenges for future hospital closure programmes. First, the development of alternatives to long-term residence in psychiatric hospital requires service inputs, both specialist and generic, from a range of agencies. In North East Thames, decisions about the volume and mix of services required was left to the local service planners who had little information on which to base their decisions. The data presented in the final section, therefore, can inform service planning for people moving from long-stay hospitals.

The second challenge is to change the funding balance: money must be moved from hospital to community budgets without an overall reduction in the resources available for mental health care. Community care services, however, need funds *before* hospitals can release them - to finance capital investment, to recruit and train staff, and to build services up to their full or most economical operating level. The procedures developed in North East Thames provided some support and again, costs research such as that presented in this chapter can provide a firmer base from which to predict resource requirements. The data show that these early leavers required support which cost less that the average cost of hospital care (the 'dowry' level) and this should, therefore, have left 'extra' resources in the receiving districts budgets to fund care for later leavers who are likely to require higher levels of resource inputs.

Arising from the second challenge, the third is to reallocate funds between all agencies and organisations which provide support for former long-stay patients, including the provision of non-residential services. Day care and social work services provided by the social services departments and voluntary organisations are least likely to receive funds transferred from the hospital budget. District health authorities still bear the greater part of the costs but care must be taken to distribute finances appropriately to ensure services continue to provide support for this client group.

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CHAPTER 7

ANALYSING COSTS DATA

7.1 INTRODUCTION

This chapter continues to examine the resource implications of psychiatric reprovision in the North East Thames region, and as described in chapter 6. The potential of the costs rules to guide economic evaluations (chapter 3) is further illustrated as the community costs data are combined with information on clients' characteristics, needs and outcomes. The next section uses data on the needs and characteristics of sample members, measured while they were resident in hospital, to try and 'explain' the variation in the total costs of community care by estimating a cost function. The resulting equation is then used to predict the community care costs for the remaining long-stay residents in the two hospitals. In section 7.3, outcome data are included in the analyses to allow an examination of the relative cost-effectiveness of different community care arrangements for former residents of Friern and Claybury hospitals.

7.2 PREDICTING COMMUNITY CARE COSTS[1]

7.2.1 Making predictions

The rundown and closure of an old psychiatric hospital should release both revenue and capital resources, but a key question is whether these 'savings' will be large enough to meet the full costs of replacement community provision. Supporters of hospital closure policies have, in part, assumed that they will (see chapter 1) yet there has been little supportive evidence for such a view. This is because the costs of community care can only be measured directly for those people who have *already* moved from hospital but predicting the total resource requirements based just on the community costs calculated for the first patients to leave hospital can cause problems: it is often the patients with fewer or less severe needs who are the first to leave hospital. It is likely, therefore, that their care will cost less than the care of the more

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[1] This section is based on Knapp, M., Beecham, J. et al. (1990) Predicting the community costs of closing psychiatric hospitals, *British Journal of Psychiatry*, 157, 661-670

dependent patients left behind. Costs data on early leavers are useful (see chapter 6) but must be manipulated with care. To generalise from the experiences of early movers to full hospital populations, the two groups of patients (those who have left hospital and those who remain) should be identical in every relevant respect - which is unlikely - or the differences between the groups should be recognised when estimating the future cost implications of the programme.

In this section, the costs of community reprovision are predicted for the full long-stay populations of Friern and Claybury. Comprehensive costings for a sample of former residents were available (see chapter 6) and within the full research programme detailed clinical, demographic and personal data on the relevant hospital populations were collected by the Team for the Assessment of Psychiatric Services (TAPS). The statistical relationships between community costs and the characteristics of the leavers when they were in hospital could, therefore, be examined. In itself this exercise is useful, for it shows whether resources are targeted on needs. In addition, the observed relationships allow the differences between those who have left hospital and those who remain to be incorporated in the cost predictions for the latter group.

Extrapolations of this kind are full of difficulties and they are dependent on both the quality of the data and the robustness of the statistical analyses. On one hand, the data used here are based on reliable costs estimates (see chapters 4 and 6) and well validated clinical schedules (O'Driscoll, 1993; O'Driscoll and Leff, 1993; and see box 7.1). On the other hand, the study design is not ideal and although the statistical analyses are better than most people have used to date, they may not be the most sophisticated. The results are encouraging, however. Even making the most cautious assumptions, the estimates of future expenditure requirements are less pessimistic than most of the critical rhetoric that surrounds this area of policy.

The psychiatric reprovision research in North East Thames has been gathering data since before the first reprovision patients moved to the community in 1985. By 1990, the data on the long-stay population included: detailed assessments of 964 people while they were in-patients of either Friern or Claybury hospitals; follow-up assessments one year after patients were discharged (leavers); equivalent follow-up assessments for a sample of those who were still in hospital (stayers) matched on age, sex, hospital, duration of hospitalisation, casenote diagnosis and social behaviour; and costing of both hospital and community services. A randomised design for the research, whether between hospitals and community location or between different types of community settings, was out of the question for ethical and political reasons and, more prosaically, because of the difficulty of ensuring the required models of care were available. As chapter 6 described, each district was given a high level of autonomy in service development and it was clinicians, not researchers who made the decisions about who should move from hospital, when they should move, and to which setting. Moreover, once the decision had been taken to close the hospitals, the care provided within them began to change as rehabilitation programmes were instigated, staff and money moved, and as wards closed.

Box 7.1 Outcome data used in the analyses

The ***Personal Data and Psychiatric History Schedule*** (PDPH) developed by TAPS, records basic demographic data (gender, age, ethnic group, marital status) and psychiatric history (in-patient stays and diagnosis) using information from patients' case notes. From the ***Present State Examination*** (PSE, 9th edition; Wing et al., 1974) sub-scores were created for a number of symptoms: general anxiety, specific anxiety syndrome, specific neurotic syndrome, non-specific neurotic syndrome, delusions and hallucinations, blunting of affect, and behaviour, speech and other problems, and negative symptoms score. Three measures are included from the ***Social Behaviour Schedule*** (SBS; Sturt and Wykes, 1986): total score, the positive symptoms sub-score, and the anxiety sub-score. The ***Basic Everyday Living Skills Schedule*** (BELS) was again developed by TAPS and gives four constituent measures for self care, community skills, activity and social relationships, and domestic skills. (The BELS was not completed at baseline for the early leavers from the two hospitals.) The ***Social Network Schedule*** (SNS; Dunn et al., 1990; Leff, 1990) provides information on the quantity and quality of social contacts named and seen by patients during the month prior to their interview, including acquaintances, relatives, other patients/clients, non-professionals and staff. The ***Physical Health Index*** (PHI) was developed by TAPS to provide data on health problems (area and degree of disability) and daily nursing care requirements. The five disabilities were considered to be of critical importance in the move to community-based services (incontinence, impaired mobility, dyskinesia, and impairment of vision or hearing) score '1' if any level of disability is present. The ***Patient Attitude Questionnaire*** (PAQ; Thornicroft et al., 1993), gives a record of patients' attitudes about living in hospital and in the community, building on earlier work by Freeman et al. (1970) and Abrahamson and Brenner (1982). The ***Environmental Index*** was developed from the work of Wing and Brown (1970) and looks at the degree of autonomy available to the individual within the accommodation facility and is supplemented by the researcher's subjective description of each unit.

The present chapter again focuses on patients who had been in continuous residence in Friern or Claybury hospitals for at least a year, and who, if over 65 years old, do not have a current diagnosis of dementia. Both the cost prediction work described in this section and the cost-effectiveness analyses recounted later draw upon data collected within the evaluation of the impact of psychiatric reprovision (see box 7.1). Chapter 6 briefly recounted the outcome findings from the first two cohorts of leavers from Friern and Claybury hospitals (Anderson et al., 1993). For the first 161 leavers, no adverse effects of relocation on clinical and social outcomes were found, either over time or between leavers and their matched stayers. It is important to keep these encouraging results in mind as the costs data are explored in more detail.

7.2.2 Explaining community cost differences

The *Client Service Receipt Interview* and its role in calculating the comprehensive costs of care packages have been described in earlier chapters, and the total component costs for 136 leavers in the first three cohorts (excluding the nine people in hospital at time of interview) were presented in table 6.2. Summarised considerably, the results showed that the lion's share of the total cost was accounted for by accommodation and day-to-day living expenses (more than three-quarters of the total). In- and out-patient services were both used by about a fifth of the sample, and day activity services were used by nearly two thirds; together these services absorbed about 15 per cent of the total costs of community care. Mean cost per week for people living in the community was £270 (1986-87 prices; standard deviation £121) although varying by a factor of twelve between the lowest and highest cost clients.

What accounts for these cost variations? They can be attributed to differences in the use of services, particularly the expensive but rarely used services such as hospital care. The conceptual framework laid out in chapter 3 suggests a more appropriate measure: in producing welfare, the model identifies a causal link between the resource inputs (summarised by costs) and client characteristics. The data available from the set of schedules described above, therefore, were used to begin to explain the community cost variation. Only information collected *before* each patient left hospital (baseline data) was included as a potential explanatory variable at this stage; mental and physical health states, for example, are likely to be relevant through their effects on service needs, although local policies and service availability will also have some influence. In this section, the focus is on the ability of the *baseline* characteristics of leavers to explain the observed variations in community costs.

Taking cost per week as the dependent variable and the full range of patient data collected in the TAPS interviews as the set of potential explanatory factors, ordinary least squares multiple regression analysis was used to tease out their associations. (Community care costs were found to be normally distributed around the mean, making this approach appropriate.) Clinical and other characteristics of patients were introduced into the regression equations both singly and in additive and multiplicative combinations (including higher powers) in an attempt to maximise the percentage of variance explained, though the statistical significance of individual regression coefficients and the interpretability of results were not ignored. Some of the explanatory variables were inter-correlated. This multi-collinearity does not affect the predictive power of the equation or the validity of the extrapolations reported later, but can make it difficult to disentangle the relative importance of the individual variables. During these exploratory analyses, a fairly generous cut-off level of significance was used ($p<0.125$) but in fact seven of the nine final predictor variables were significant at the five per cent level and the remaining two at ten per cent (see table 7.1).

The 'best' prediction equation by the conventional criteria of statistical significance, parsimony and interpretability is detailed in table 7.1. In fact, the 'next best' regression equations were little different from this one. One or two variables dropped out to be replaced by similar indicators of patient well-being and background, with the overall explanatory power of the equation slightly reduced and the extrapolations to the whole hospital populations reported below unchanged. The mnemonics used in the table are explained in table 7.2, alongside the basic statistical properties for these variables for both the sample of leavers for whom costs were calculated and for all patients in the two hospitals who met the study criteria. Overall, the equation explains 38 per cent of the observed cost variation. This is a high level of statistical explanation given that only baseline information has been used. It implies that comprehensive hospital assessments of patients' needs can predict more than a third of the subsequent variation in community costs.

The equation in table 7.1 offers some interesting perspectives on those characteristics of hospital residents which were correlated with the subsequent needs for support in the community and the consequent costs of psychiatric reprovision. Males were more costly than females, on average a difference of some £20 per week, even after standardising for mental health state, other factors in the equation and those which proved not to be significant. This, perhaps, implies that in the placement of long-stay patients in the community and in the planning and delivery of support services it is *assumed* that males are less capable of completing basic self-care tasks unassisted, and are either directed towards more highly staffed accommodation or offered more closely supportive (more costly) care packages. No significant gender differences could be found, however, when the BELS sub-scores (as measured in the community) were examined. As with many of the modelled effects on cost, the influence of gender was not simply linear, nor was it independent of other factors. In this case, gender and the size of a patient's social network in hospital were interrelated.

The effect of patient age was mediated through two other variables, continuous length of stay in hospital prior to reprovision discharge date and the negative symptoms score on the PSE (see below), although they do not alter the general conclusion that the care of older patients is less costly. These older patients are probably perceived as being less demanding in so far as they are not expected to need or do not request, say, employment programmes or further education. Indeed, the receipt of any day activity services was lower for people aged 70 or more ($p<0.1$). Moreover, among those patients whose original diagnosis was schizophrenia (who form the greatest proportion of the sample), it is likely that older people and those with longer periods of psychiatric hospital residence will have reached a stage where negative symptoms are more predominant than positive symptoms. Although they are less likely to have moved from hospital in the first two cohorts (Jones, 1993), the older patients from Friern and Claybury it appears, can be accommodated in the community at less cost.

Table 7.1 The estimated reprovision cost prediction equation

Explanatory variables[1]	Coefficient	Significance[2]
Constant/intercept term	138.51	0.000
MALE	45.68	0.066
MALE x TOTNAM	-3.28	0.007
LIFE	597.10	0.019
LIFE squared	-968.54	0.024
STAY squared	0.00	0.016
STAY x AGE	-0.01	0.067
STAY x TTMH	0.04	0.007
SBSTOT	11.56	0.003
PSENEG x AGE	0.75	0.006
PSENEG x TOTTIM	-0.09	0.090
Dependent variable: cost per week at 1986-87 prices. $R^2 = 0.383$; adjusted $R^2 = 0.326$; F = 6.705 (sig. 0.000) N = 119.		

Notes

1. The mnemonics are explained in table 7.2.
2. Significance of t-test of individual coefficients.

Table 7.2 The hospital characteristics associated with reprovision cost

Mnemonic	Variable	Costs sample[1]		Full hospital populations		
		Mean	Std.D	Mean	Std.D	N
MALE	Indicator variable (1 if male)	0.52	0.50	0.57	0.50	964
AGE	Age at hospital assessment	54.96	14.22	58.24	15.98	963
STAY[2]	Current length of hospital stay	154.78	171.04	222.09	211.90	964
TTMH[2]	Total previous time in hospital	52.99	89.10	42.64	78.44	964
TOTTIM[2]	Total time ever in hospital	207.83	178.24	265.09	209.39	964
LIFE[2]	Proportion of life in hospital	0.30	0.22	0.35	0.24	963
TOTNAM	Total no. of named contacts	11.61	9.33	8.68	6.94	604
SBSTOT	Total score from SBS	3.44	2.90	5.50	3.44	963
PSENEG	Negative symptoms score (PSE)	1.02	1.08	1.25	1.27	951

Notes

1. Sample six is 136 except for TOTNAM (n=120) and PSENEG (n=133)
2. Time in psychiatric hospital, measured in months.

A person's history of in-patient care exerted an influence on the later costs of community reprovision in a number of ways. The current length of stay, the total time spent in hospital and the percentage of their life spent as an in-patient all had statistically significant influences. In some cases the influence was modest, as with the total time in hospital (all in-patient stays added together), or the total previous time in hospital. Length of stay before discharge under the rundown programme had no real influence on cost until it exceeded about ten years when the curvilinear relationship (mediated through some other factors) suggested a longer stay pushes up costs. The effect is quite marked and will be influential in the subsequent extrapolations since mean length of stay is 19 years for the long-stay population under study in the two hospitals (table 7.2). This result suggests that the institutionalisation effects of prolonged in-patient residence, as measured by the receipt of more costly reprovision packages, are noticeably greater only after some years but are then quite marked.

The final measure of in-patient experience to influence costs was the percentage of each person's life spent in psychiatric hospitals. This ranges from 1 per cent to 99 per cent around a population median of 34 per cent. Community costs were generally higher for those people who had spent higher proportions of their lives in hospital, another empirical association that can be interpreted as the 'deskilling' effect of long hospital residence. In fact, 53 per cent of the whole hospital population (508 people) had spent more than 30 per cent of their lives in hospital. Comparison of the variables in the cost function showed this group to have, on average, a slightly smaller social network (a mean difference of 1.1) and slightly higher ratings for PSE negative symptoms (0.22) and the total SBS score (0.48).

The other significant influences on the costs of reprovision all related to sample members' well-being, including mental health, at the time of the hospital-based assessment. The assessment identified general symptoms over a period; one month for the PSE, SBS and SNS, and one year for the PHI. Three separate indicators appeared in the final analysis - the PSE negative symptoms score, the total score on the SBS and one of the measures of social contacts from the SNS. The negative symptoms score (from 0 to 5) indicates poverty of content of speech, blunting of affect, inattention, apathy, asociability. By repute, people with these symptoms are the hardest to place in the community and the analysis shows they were likely to be receiving more costly service packages in the community. This effect of the PSE score was attenuated for older patients and those with longer spans of in-patient residence, but still with a positive association with cost. Higher scores on the SBS indicate greater staff-reported ratings of abnormal behaviours (Wykes et al., 1982). The effect of SBS on cost was as expected: patients with more social behaviour problems were supported in the community at greater cost than those with fewer such problems, other things being equal. Finally, sample members with a larger number of named social contacts when assessed in hospital, that is those who have wider social networks, were less expensive terms of reprovision than their more withdrawn peers. There was an association with general psychiatric status but it is also likely that, being more communicative and gregarious, they make fewer demands on care staff and support workers. In fact, this result is confined only to males, and a female leaver's social network exerted no influence on cost. Disaggregated scores on the SNS (for example, the percentage of contacts listed as close friends) were not significantly related to costs.

A number of baseline characteristics proved to have no effect on community cost when analysed within this multivariate context. These include marital status, ethnic origins, patient attitudes, physical health, original psychiatric diagnosis, reasons for in-patient admission, number of medications, and the hospital in which patients lived. Many of the associations that were found were far from straightforward but encouraged by the reasonable degree of (multiple) correlation between baseline data and community costs, the costs of reprovision can be extrapolated to all long-stay patients.

7.2.3 Predicting community care costs for Friern and Claybury residents

Transfers of funds from hospital to community budgets were intended to be the mainstay of the new replacement psychiatric services, bolstered by as many and as generous social security benefits as the system could be persuaded to provide (see chapters 6 and 8). The post-1990 arrangements have changed the service funding mechanisms but local authority and health service planners and purchasers still need information on the costs of today's leavers, and accurate indications of the costs of supporting the full hospital population. Only with such data can they begin to formulate long-term plans for accommodation, day support and peripatetic professional staff, and enter into informed discussions with other agencies and providers to coordinate policies and services.

It is likely that future hospital leavers will cost a lot more than long-stay patients who have recently been discharged and there are perhaps three reasons for expecting higher future costs. First, as mentioned above, the early movers in most hospital rundown programmes are intrinsically less dependent and exhibit fewer symptoms of mental illness than those who remain behind to move later (see, for example, table 7.2).

Second, it is commonly the case that new capital projects are not needed for the first leavers because existing day and residential facilities may not be operating at full capacity. (In the NETRHA sample, forty per cent of the first two cohorts to leave hospitals went to existing residential facilities, and a further 15 per cent were living in non-specialised, domestic accommodation. No new day activity facilities had been created for this group.)

Third, though often overlooked, it is possible that the supply price of certain types or grades of staff may rise with the growth of demand for them in the community. For example, a nationwide policy of psychiatric reprovision is likely to generate a much greater demand for community psychiatric nurses, social workers and volunteer staff, and will place greater burdens on general practitioner services. The burden on informal care networks is likely to be low for this group of people as many will have lost contact with their families during long hospital residences, but increased amounts of carer support will be necessary. The rundown of hospitals will release a number of medical and nursing staff for employment elsewhere (North East Thames region, for example, has a full staff redeployment policy), but it is by no means clear, nor necessarily desirable, that the two effects should cancel each other.

The third of these reasons for expecting later cohorts to be more expensive may have only a limited inflationary effect, and anyway is virtually impossible to build into a cost prediction exercise without a study of professional labour markets that goes much further than the information presented in either chapters 1 or 6. A modest attempt is made to recognise the likely deviation between current and future input price levels by placing a non-zero price on the services of volunteer staff on the assumption that there is not an unlimited supply of such people.

The second reason for greater future costs - the need for major capital spending for later cohorts - is, in research terms, a specification error: it relates to flows of expenditure but not cost. If long-run marginal opportunity costs are estimated from the outset, as in this study, the argument is not valid as capital costs are already included and are set at their long-term replacement values (see chapters 4 and 5).

The differential characteristics of those who leave hospital (leavers) and those who remain (stayers), therefore, is the principal source of future cost inflation. The estimated cost equation for the 119 leavers for whom complete data were available takes into account such client-based differences. When combined with the baseline descriptions for the study populations of 450 Claybury and 514 Friern residents, the cost of community living and support could be predicted for every patient who fulfilled the study criteria and who was targeted to move within the rundown plans for the two hospitals. (A full description of the hospital populations can be found in TAPS, 1988 and O'Driscoll et al., 1993.)

The validity of these predictions depends on a number of things. First, the prediction equation must be robust. From this perspective a cost equation with a higher multiple correlation coefficient would be preferable, but the results are still highly significant. In fact, a much higher correlation could have the depressing interpretation that community care service packages were shaped predominantly by historical hospital characteristics and responded less to potential changes in characteristics or needs thereafter.[2] For the purposes of prediction and comparison with hospital it is also worth noting that the confidence intervals around the regression equation are fairly tight. For example, median predicted average cost for those who had left hospital was £296. The 95 per cent confidence intervals around this median, taking each of the predictors in turn (and setting all other variables to their median values) were within £20 either side. Thus, with 95 per cent confidence, median predicted cost can be expected to be within the fairly narrow range of £276 to £316. Slightly different ranges apply at different aggregate costs.

Second, there must be no correlation between the cost function *residuals* and any variables (within or outwith the function itself) which predict the hospital in-patients to move to the community. A check of all available baseline information collected in hospital (139 variables) revealed no such sample selection bias.

Third, even though the early cohorts of leavers are likely to be less dependent and display fewer symptoms of mental illness than those who were still in hospital, the validity of the extrapolations depends on the differences being not too great. In particular, the observed span of values on each of the cost-influencing variables listed in table 7.1 for the sample of 119 people covered by the cost analyses needs to be not greatly dissimilar to the corresponding span for the full population, even though the mean values are different for some variables. Looking at tables 7.2 and 7.3 the cost-influencing variables give clear evidence of 'creaming': the selective rehabilitation of leavers who, on average, are less dependent than those patients who remain behind. However, table 7.3 shows that the ranges of the scores on the influential variables for leavers and stayers do not overlap completely, but are not so far apart as to cause difficulties in the extrapolation.

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[2] The baseline survey was undertaken between August 1985 and August 1987 and added to as more patients who met the study criteria accumulated in the hospitals. As people in this sample moved to community-based services between 1985 and 1987 there could be a differential time-lag effect where symptoms changed between baseline assessment and discharge. This effect is likely to be small at this stage of the reprovision programme (see the data on 'matched stayers' from Anderson et al., 1990) but may increase as people leave the hospital over the next few years and a measure will be incorporated into future analyses.

Table 7.3 Ranges of variable values for sample of costed leavers and hospital populations

Mnemonic	Variable	Sample of costed leavers		Full hospital population	
		Min.	Max.	Min.	Max.
AGE	Age at time of hospital assessment	23	85	19	101
STAY[1]	Current length of hospital stay	12	711	4	863
TTMH[1]	Total previous time in hospital	0	533	0	622
TOTTIM[1]	Total time ever in hospital	13	711	12	936
LIFE[1]	Proportion of life spent in hospital	.01	.80	.01	.99
TOTNAM	Total no. named contacts	0	47	0	47
SBSTOT	Total score from SBS	0	12	0	16
PSENEG	Negative symptoms score from PSE	0	4	0	6

Notes
1. Time in psychiatric hospital, measured in months

Fourth, the validity of the predictions will be in doubt if unrepresentative groups of patients are dropped because of missing values. Only one of the variables in the equation generates this kind of problem - the total number of named social contacts recorded on the SNS (variable TOTNAM). Social network information was obtained in interview with patients, and those who could or would not communicate were credited with 'missing information'. Table 7.2 showed SNS data were not available for a third of the full hospital populations.

Problematically, these 'non-communicators' were much less likely to have left hospital in the early cohorts and are typical of neither the sample of leavers for whom costs could be measured nor the full hospital populations. Their scores on some of the key variables in the cost predictions (and hence the extrapolations) are significantly different from the scores registered by people who were able or willing to provide information on their social networks. ('Non-communicators' have, for example, spent longer in hospital since their most recent admissions, lived more of their lives in psychiatric hospitals and had higher ratings for both PSE negative symptoms and the total SBS score.) It would therefore be inadvisable to drop this group from the extrapolations, and a number of alternative scores were substituted for the missing values of the variable TOTNAM.

Table 7.1 showed that lower scores on TOTNAM produce higher community costs for males but had no effect for females. Given the nature of the variable TOTNAM, it is reasonable to conjecture that, on average, 'non-communicators' have smaller social networks than other in-patients. If TOTNAM is set to its smallest possible value (zero), costs would be £56 higher per week (on average) than if set to its maximum observed value. Set at the more appropriate estimate, the population mean for males (8.658 contacts) costs would be merely £6 per week greater. In the extrapolations shown in table 7.4 TOTNAM is set to its (male) population mean for those with missing SNS data.

Table 7.4 Reprovision cost predictions and extrapolations for full hospital populations

	Average cost per week (1986-87 prices)				
Sample or population	Mean £	Std.D	Min. £	Max. £	N
Costs sample					
actual cost	270.35	121.06	46.92	568.48	136
predicted cost[1]	268.77	76.50	38.70	504.94	133
All leavers[2]					
predicted cost[3]	267.55	73.39	38.70	504.94	161
Stayers (to date)					
predicted cost[3]	331.54	87.60	119.43	881.69	789
Full population					
predicted cost[3]	320.69	88.64	38.70	881.69	950

Notes

1. Predicted cost differs from actual cost at the mean because the equation is based on 119 leavers.
2. All 161 sample members to leave the hospitals in cohorts 1 and 2.
3. Predictions based on assumption that TOTNAM set equal to male population mean value of 8.658 for those males for whom this information is missing.

Table 7.4 shows the predicted reprovision costs for those in-patients who had not moved from hospital in time to be included in the cost equation analyses are approximately £61 more per week than the current mean of £268 for all leavers to date. The observed range of predicted costs for later movers (stayers; £119 to £882) when compared with the range for the costed sample (£47 to £568) clearly demonstrates from a costs perspective how the 'dependency' characteristics of those people remaining in hospital will not only require more support *on average* in the community, but there will also be a need for a more varied response from community reprovision services.

7.2.4 Comparisons with hospital costs

The average community cost per person per week at 1986-87 prices is £321 for the full hospital populations defined by the study criteria. This is 19 per cent above the reprovision costs measured for the sample of leavers to date. How does it compare with the costs of running the two hospitals? Will planners and purchasers have to find major new funding sources for the care of former hospital residents?

The revenue costs, estimated capital costs and indirect costs for the two hospitals are given in table 7.5 for 1984-85 to 1987-88, revalued to 1986-87 prices for the purposes of comparison. In fact, the 1986-87 revenue costs for in-patient care per day at Friern and Claybury hospitals (£56 and £42 respectively) compared reasonably well with the average cost per in-patient day for all psychiatric hospitals in England (£44; Knapp and Beecham, 1990). The table also gives average numbers of in-patient cases and beds for these years. The impact of the reprovision policy introduced in 1985 can be seen from the changes in the 'available bed' numbers - a decline of 17 per cent in Claybury and 3 per cent in Friern. The effect on the inflation-adjusted costs is also evident; as hospitals run down towards closure, resettling the less dependent patients first, so the 'average dependency' of those remaining behind increases, with a predictable impact on costs. Overall cuts in hospital maintenance expenditure over the last few years in anticipation of eventual closure, and possibly the difficulties of retaining and recruiting staff, may have dampened the cost inflation, as well as possibly reducing the quality of the environment, but the increases are still marked. Similar levels of inflation have been experienced in virtually all England's psychiatric hospitals (Knapp and Beecham, 1990). The most appropriate year for the costs of Friern and Claybury hospitals for comparison with the community cost predictions is 1986-87, since this was the year in which the number of long-stay beds in the two hospitals began to decline under the Regional policy of community reprovision.

Table 7.5 Claybury and Friern hospital costs[1] and in-patient numbers

	1984-85	1985-86	1986-87	1987-88
Claybury Hospital				
Revenue cost, £ per week[2]	265.82	276.20	294.84	316.81
Capital cost, £ per week[3]	48.43	52.19	54.81	55.98
Indirect cost, £ per week[4]	11.89	12.04	12.32	11.02
TOTAL COST, £ PER WEEK	326.14	340.43	361.97	383.81
Av. no. in-patient cases[2]	1425	1272	1265	-
Av. no. beds available[2]	1036	945	907	865
Friern Hospital				
Revenue cost, £ per week[2]	312.58	304.30	394.44	376.12
Capital cost, £ per week[3]	40.91	41.07	44.45	46.47
Indirect cost, £ per week[4]	12.59	12.46	13.14	11.45
TOTAL COST, £ PER WEEK	366.08	357.83	452.03	434.04
Av. no. in-patient cases[2]	1373	1324	1447	-
Av. no. beds available[2]	890	878	848	867

Notes:

1. All costs reflated to 1986-87 prices.
2. Data from annual accounts for each hospital.
3. See Knapp, Beecham and Renshaw (1987) for estimations and see McGuire (1991) for a discussion of the impact of capital cost implications.
4. £7.90 social security receipt plus 1.5 per cent of revenue costs (Knapp, Beecham and Allen, 1989).

Comparing tables 7.4 and 7.5 it can be seen that the direct revenue costs (on which the 'dowry' transfers were based) for Claybury are insufficient in themselves to wholly finance the community services which the prediction equation suggests will be needed by the full hospital populations. The difference is 9 per cent larger than what the hospitals would have been costing had the closure programmes not been embarked upon. In Friern, direct revenue costs are actually *larger* than the expected community costs. However, the calculated reprovision costs include all services and all appropriate capital expenditures, and it is more relevant to make a cost comparison which also includes the capital and indirect elements of hospital costs ('total cost' in table 7.5). Against this bench-mark the predicted future community costs are lower than both hospitals' totals. This hospital total cost is not a notional figure. It is the *real* saving from moving the two hospitals to their respective closure targets, for it includes: the direct revenue costs of running both hospitals, which will all be saved once the rundown programmes have been completed; the capital valuations of both sites which will be realised once they have been sold (under a number of different assumptions as to site values, without altering the conclusions with regard to hospital-community cost differences); and the indirect costs, such as the social security payments to in-patients which allow the purchase of cigarettes and confectionery, and the costs of field social work and volunteer inputs, which will be saved or redeployed to provide equivalent services organised within, say, community settings. Even if the hospital costs are adjusted to take account of the fact that present (and future) reprovision patients generally live on wards which cost less than the hospital average (because acute and psychogeriatric wards are more highly staffed, see chapter 6), projected community care costs are still much lower (Friern) or marginally lower (Claybury) than hospital.

With this small difference between the costs of hospital in-patient services and the reprovision services a commonly posited hypothesis about community care can be rejected. The replacement of hospital with community services does *not* require the injection of substantial additional sums of money if the quality of life of former long-stay in-patients is to be at least maintained (as it was for the first two cohorts to leave Friern and Claybury) and, preferably, improved. All of the projected costs of community reprovision can be met from hospital savings for this group once the hospitals have closed. Moreover, when these analyses were undertaken, social security benefits could provide extra revenue for some types of accommodation facilities (see chapter 8).

In these circumstances, the replacement of long-stay hospital residence with community reprovision of at least equivalent quality does not present any particular *long-term* funding problems, either in terms of expenditure or opportunity costs. The full savings from running down hospitals will not be reaped until full closure has been achieved, but hospital revenue cost savings need not lag too far behind patient moves at the rate of rundown across England in the late 1980s. A study of psychiatric hospital costs in ten of the 14 English health regions suggested that perhaps as much as 81 per cent of average revenue cost could be saved within a year of each patient's move to a community placement which results in a permanent bed closure in hospital (Knapp and Beecham, 1990). This rate of cost decline is faster than claimed by many hospitals, and requires the relocation of patients within hospitals to allow ward closures which may not desirable on clinical or social grounds. It must also be remembered that there is a danger that transfers of dowry payments can leave hospital in-patient services with insufficient resources to function at an acceptable level while new services are being established. Extra funding for hospital and community services during the transition period is important and financial arrangements in this region have moved a long way towards meeting these requirements (see chapter 6).

7.3 COST-EFFECTIVENESS IN THE COMMUNITY[3]

7.3.1 Background

By August 1988, the costs sample for the economic evaluation of NETRHA psychiatric reprovision had increased to 216 people, incorporating more members from the third cohort. In total, 120 people came from Friern Hospital and 96 from Claybury. Sixty-two more people had met the study criteria and left hospital during this period but were not included in the costs sample for the following reasons: 15 had returned to hospital for too long to collect reliable community information; 13 refused to be interviewed; six people had died; 12 had moved from the area or could not be traced; four people were considered too dangerous to interview and later returned to hospital; and data collection was delayed for 12 people.

Each member of the sample had a long-term mental health problem but as the data in table 7.6 and 7.7 show, inter-client variation in costs was still apparent. The analyses described in this section continue to explore the costs variations, this time focusing on the associations between community costs and *improvements* in clients' mental health and welfare.

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[3] This section is based on Beecham. J., Knapp, M. and Fenyo, A. (1991) Costs, needs and outcomes, *Schizophrenia Bulletin*, 17, 3, 427-439.

Table 7.6 The distribution of service costs

Service used in the community	Percentage of clients using each service	Average % contribution of service to total cost	
		over clients using services	over all clients
Accommodation	100.0	81.2	81.2
Hospital in-patient services	14.4	16.5	2.4
Hospital out-patient services	23.0	3.6	0.8
Hospital day-patient services	25.8	18.7	4.8
LA social services day care[1]	26.8	10.5	2.8
Voluntary organisation day care	18.7	8.8	1.6
Social club services	5.3	1.3	0.1
Education classes	7.7	9.6	0.7
Community psychiatry services	59.3	0.7	0.4
Chiropody	34.9	0.1	-[2]
Nursing services	27.8	1.9	0.5
Psychology services	14.8	1.6	0.2
Occupational therapy	13.4	3.5	0.5
Injections	12.0	3.2	0.4
Miscellaneous services[3]	9.1	1.1	0.1
Physiotherapy	2.4	0.3	-
General practitioner	80.4	0.7	0.5
Dentist	23.9	0.1	-
Optician	15.3	0.2	-
Pharmacy	5.7	0.6	-
Field social work	35.4	6.3	2.2
Police	2.9	2.4	0.1
Clients' travel	29.7	0.6	0.2
Volunteer inputs	3.8	4.3	0.2

Notes
1. Sample comprises 209 clients, that is excluding the nine people in the costs sample who were in hospital at the time of interview (see chapter 6).
2. Indicates contribution is less than 0.05%.
3. Includes speech therapist, music therapist, home help and continence advisor.

The comprehensive costs now range from £47 per week to £708 (in 1986-87 prices), a 15-fold difference. Table 7.7 shows that former in-patients who left one of the hospitals in the first year of the psychiatric reprovision programme were receiving packages of community care costing on average £200 per week, compared to an average of £372 for the third year cohort. For people living in facilities run by the district health authorities, comprehensive costs were averaging £388 per week, in comparison to costs of £299 for local authority social services facilities and £261 for residential settings provided by the voluntary (non-profit) organisations.

Table 7.7 Cost per week for psychiatric reprovision[1]

	Costs sample			Regression sub-sample		
	Mean, £	Std.D, £	N	Mean, £	Std.D, £	N
Total sample	304	133	216	303	130	132
Minimum	47			75		
1st Quartile	201			202		
Median	293			289		
3rd Quartile	411			413		
Maximum	708			708		
Gender						
Male	298	128	119	286	129	67
Female	312	139	97	319	130	65
Hospital of residence						
Friern	302	145	120	291	143	60
Claybury	307	116	96	313	118	72
Cohort year[2]						
First 1985-86	200	80	40	196	57	15
Second 1986-87	290	127	94	278	127	71
Third 1987-88	372	122	82	375	114	46
Managing agency[3]						
District health authority	388	130	88	372	132	55
LA social services dept.	299	102	39	307	104	25
Voluntary organisation	261	87	43	253	96	28
Private sector	204	63	31	195	59	17
Other (mainly LA rents)	139	82	14	165	97	6
Accommodation type[4]						
Residential or nursing home	402	112	93	405	111	52
Hostel	280	88	40	284	89	26
Sheltered housing	116	22	4	116	22	4
Staffed group home	239	68	24	229	56	17
Unstaffed group home	217	99	24	224	105	15
Foster care	231	50	12	247	52	8
Independent living	142	75	18	158	82	9

Notes

1. All costs are expressed as weekly averages, pounds sterling, 1986-87 price levels.
2. Dates refer to discharge from hospital.
3. Managing agency for accommodation, see chapter 6.
4. See box 6.1 for definitions.

As the extent of, reasons for, and consequences flowing from the community cost variations are examined, the *production of welfare* is used as a framework to develop and interpret appropriate cost functions (see chapter 3). This approach can highlight opportunities to improve the efficiency and equity (fairness) with which services are provided. Both criteria traditionally have high profiles, with equity stressed more in clinical practice, and efficiency getting more attention from national policy makers.

Were those patients leaving hospital in the first cohort less dependent than those in the third cohort, or were they simply dumped in cheap, low-quality placements? Are public-voluntary differences to be interpreted as evidence of the oft-hypothesised bureaucratic inefficiency of public authorities? These baldly posed questions raise issues which have been rarely addressed in previous costs studies of psychiatric services (see chapter 3). To address policy-related questions such as these, data on the costs of community support for the leavers in the first three years of the reprovision programme are combined with data on their characteristics in hospital *and* in the community. The slightly larger sample than used in the predictions work was necessary to ensure sufficient members would remain in the analysis sub-sample; in fact, missing data caused the sample size to drop to 132 people.

As well as providing data on the costs sample for the first three cohorts to leave Friern and Claybury hospitals, table 7.7 provides a similar range of data for the sub-sample of people who were included in the regression analyses for this exploration of cost variations. Half (49 per cent) of this sub-sample were female, and 22 per cent were of non-white ethnic origin, 69 per cent had never married, and 23 per cent were divorced, separated or widowed. The mean age of sample members was 56 years. Mean length of stay in hospital since the most recent admission (at the time of the hospital assessments, not at the time of discharge) was 13 years, and sample members had spent another 5 years on average in previous hospital in-patient stays (mean number of previous in-patient admissions was 4.4). The most common primary diagnoses at first presentation to psychiatric services (coded as per the ICD-9; WHO, 1978) were schizophrenia (72 per cent of the people included in the cost analyses), affective disorder (11 per cent), neurosis and personality disorder (11 per cent) and organic disorder (7 per cent).

7.3.2 Estimated cost functions

A number of differently specified cost functions (see chapter 3) were fitted to the data on comprehensive weekly community costs, and altogether over 200 variables were examined. Again, ordinary least squares multiple regression was used, but as this technique implies a linear-in-parameters equation, some variables were also introduced in squared and reciprocal form to test for the presence of non-linearities. Tests were conducted on several distinct blocks of variables to investigate the separate effects of outcomes (changes in welfare), needs, psychiatric history, sector of ownership and residential facility location. At the first stage only demographic variables and measures of final outcomes were included. A quarter of the variation in costs (measured by the adjusted R^2 statistic) could be explained by five variables representing outcomes and three demographic indicators. The next stage was to add measures of need, and this increased the explanatory power to 34 per cent. Multicollinearity between variables meant that the pattern of statistical significance altered as new blocks of variables were tried.

The penultimate step was to add in the quasi-exogenous variables reflecting clients' psychiatric history, extending the proportion of cost variation explained to 50 per cent (see equation A, table 7.8). Finally, the residual variations were tested for attribution to *either* sector of management *or* community residential placement type by conducting analyses of variance and by attempting to add to the cost function sets of 'dummy' ('zero-one' or 'indicator') variables. These factors raise the explanatory power to 58 per cent or more (equation B, table 7.8), but also introduce problems of interpretation and attribution which are discussed below.

7.3.3 Evidence and implications

Cost function examinations of variation offer potentially interesting insights into mental health practice and policy. The evidence is used to draw out some of these implications by examining four composite questions:

- Is there an association between the cost of mental health care and client outcomes? In particular, do more costly care packages result in better outcomes?
- Are client needs related to cost? Do people with greater needs get more support, therefore more costly packages of care?
- Are public sector services less efficient than non-public? Does the high cost of care in health authority facilities reflect the creation of environments which encourage client dependency or is it the logical corollary of a tendency to accommodate residents with greater needs?
- Are the higher costs observed for residents of the more highly staffed establishments entirely explained by differences in resident needs or outcomes, or is there a residual cost which should interest policy-makers whose concern is efficiency?

Costs and outcomes. A thoroughly reasonable expectation about mental health services is that the costs of community care service packages respond to, or are associated with, differences in levels of need and changes in need, the latter being the principal final outcomes of the system. With the accumulation of experience on the needs and preferences of people with long-term mental health problems living outside hospital, the growing emphasis on efficiency in the utilisation of public resources, and the growing tendency to coordinate services through care management and care programme procedures, there are good reasons for expecting strong associations between costs, client characteristics and outcomes (*ceteris paribus*). A greater intensity of service use (therefore higher costs) might be promoting better outcomes. Alternatively, improvements in outcomes (say a reduction in negative symptoms or greater sociability) could be increasing requirements for resource inputs, perhaps more day activities or greater participation in therapeutic programmes. Whilst the analyses set out below can identify the associations between these factors, the direction of causality is more difficult to identify.

Client outcomes were measured along a variety of dimensions, based on the information gathered by TAPS in hospital (usually before a patient's participation in a hospital-based rehabilitation programme, and certainly before discharge) and in the community approximately 12 months after discharge under the reprovision programme. The main instruments relevant to need and outcome are described in box 7.1 (p7.3). For each scale and sub-scale, the difference between hospital and community assessment scores was taken as the final outcome measure, either as the absolute difference or relative to the hospital score. For ordinal scales, differences were measured by the direction of movement - improvement, no change, deterioration - and dealt with in the regression analyses by creating corresponding sets of dummy variables. Scores at the time of the second (community) assessment were assumed to measure (absence of) need.

Concentrating on the first regression equation in table 7.8, there is evidence that better outcomes for former patients are associated with higher costs. A higher score on the various component scales of the PSE indicates worse symptoms of mental illness, so that a negative difference (absolute or relative) between the community and hospital assessments (time 2 scores minus time 1 scores) indicates an improvement in health. The influences of the variables measuring changes in negative symptoms and delusions and hallucinations show that improvements were associated with higher costs. On the other hand, a third significant effect shows that higher costs were associated with greater anxiety levels. A general broadening of social networks was also associated with greater cost. A reduction in the need for nursing care, assessed through the Physical Health Index, and clients' own perceptions of the helpfulness of their medications supported the general positive link between cost and outcomes.

When variables for the managing agencies were added to the series of regression equations, one of these outcome variables (from the Social Network Schedule) dropped out but the effects of all others remain little altered.

Table 7.8 Estimated cost functions (sample size=132).

Mnemonic	Schedule	Description	Equation A		Equation B	
			Coeff.	Sig.^{1}	Coeff.	Sig.^{1}
		Constant term	37.0		131.2	***
SINGLE	PDPH	Client never married^2	54.3	***	53.4	***
LSTAY	PDPH	Length of stay in hospital (months)	0.211	***	0.118	**
COMUN	BELS	Community skills	19.0	**		
COMUNSQ	BELS	Square of COMUN	-1.36	***	-0.385	***
SOCIAL	BELS	Activity and social relationships	8.59	***	7.82	***
BLUNT	PSE	Blunting of affect	59.1	***	53.40	***
INCONT	PHI	Incontinent^2	72.7	***	71.80	***
IMPMOB	PHI	Impaired mobility^2	83.7	**	74.10	**
SPATSQ	SNS	Social network (patients), squared	1.37	***	1.16	***
WGO	PAQ	Expressed desire to move	54.6	**	44.80	**
PSENEGD	PSE	Absolute difference in negative symptoms	-22.3	***	-14.30	**
GADSQ	PSE	Relative difference in general anxiety, squared	14.0	***	12.30	***
DAHR	PSE	Relative difference in delusions, hallucinations	-0.123	***	-0.08	*
IMPCARE	PHI	Reduced need for care^2	150.0	***	117.0	**
SNPROD	SNS	Absolute difference in non-professionals network	3.55	**	3.34	***
SRELR	SNS	Relative difference in relatives network	-0.360	***	-0.278	**
SPATR	SNS	Relative difference in patients network	-0.207	**		
NOWHELP	PAQ	Improved helpfulness of medication	72.7	**	70.20	**
MANAG1	CSRI	Health authority accommodation	ni^3		58.80	***
MANAG34	CSRI	Voluntary or private sector accommodation	ni^3		-44.80	**
R^2			0.568	***	0.642	***
Adjusted R^2			0.499		0.585	

Notes

1. Significance levels from t-tests on individual coefficients are F test on goodness of fit (R^2): *** indicates $p \leq 0.01$; ** indicates $0.01, < p \leq 0.05$; * indicates $0.05 < p \leq 0.10$.
2. Dummy variable taking the value 1 if the condition is satisfied, 0 otherwise.
3. ni indicates variable not included in the set of possible regressors.

The overall conclusion that higher community care costs were linked with better outcomes is encouraging, and consistent with the results from the evaluation of the Care in the Community demonstration programme (Knapp et al., 1992). Although not all of the outcome measures available in this study exerted an influence on cost, the results suggest that spending more on community care is associated with desirable improvements in clients' health and welfare. Among the regional health authorities of England, North East Thames has been one of the more generous funders of community care for former long-stay hospital residents so the positive findings may stem from the protection of the funds transferred from hospital to community budgets (dowries) which helped to ensure that a reasonably high level of resources were available, and that they were spent where intended.

Cost and needs. The term 'need' describes those psychosocial characteristics of individuals that psychiatric and associated services are expected to affect. If costs summarise the resources expended or services delivered to clients, albeit not perfectly, how well are the services tailored to needs?

The estimated cost functions show that community care costs are clearly sensitive to a variety of client characteristics. Costs were higher for people displaying greater needs in relation to incontinence, mobility, blunted affect, and community living skills (level of dependence in the use of public transport, amenities and budgeting). The effect of the last of these is interesting but perhaps not surprising. Costs were lower for people at either end of the community living skills range: the most dependent and most independent received less support in the community than others. People who had spent more years in hospital before discharge and those who were single require more support services in the community. Low scores on the variables measuring non-participation or withdrawal implied a reduced demand for resource inputs and hence lower cost. Clients who did not live in congregate care settings tended to have few contacts with other clients or patients, and the costs of the community services received by these people were lower. A desire to move from their current community-based accommodation also increased cost.

Another positive finding from this examination of cost variations, therefore, is that community care services appear to be responding to greater needs of clients along some dimensions. By no means is every facet of need represented in the equation, suggesting that some characteristics do not work through to higher costs. This could be because they were not recognised as needs, were not within the purview of any agency working with these clients, could be met at no noticeable extra cost, or were highly correlated with one or more of the need variables already in the equation. Which of these various conditions applies cannot be adduced with the present cost function.

Costs and inter-sectoral differences. One of the central thrusts of the health and social care changes in Britain is the promotion of a mixed economy of care causing the comparative merits of the different sectors to be examined more carefully than before (Wistow et al., 1992). Nagy et al. (1988), for example, found that not-for-profit homes with less than 15 places and good staffing ratios were most successful in promoting client participation in every day activities. Among the key questions in England is whether voluntary and private agencies are more efficient than public agencies. From previous research, if not from political rhetoric, there are reasons for hypothesising a cost advantage accruing to the non-public sectors: lower management overheads, a greater supply of volunteer staff, subsidisation of fees from charitable income, and the ethos of the small business enterprise (see chapter 2).

The services used by people with long-term mental health problems are supplied by many different agencies and sectors, making it difficult to say just where in the mixed economy a client is located. However, many of the people in the present psychiatric reprovision sample live in some form of specialist accommodation. Accommodation accounted for about 80 per cent of total cost so the impact on costs of the sector of management for accommodation (see chapter 6) can be examined as a test of the inter-sectoral cost difference. In addition, the type of accommodation (see chapter 6) can be examined as a limited test of the effect of placement. Goldstein et al., (1990), for example, found older, more psychotic clients with the highest number of previous hospital readmissions tended to live in more highly supported accommodation.

Table 7.7 showed that the observed costs for the different sectors support the hypothesis of an inter-sectoral difference, but these simple cost measures do not take into account the likelihood that clients are not identical across sectors (see Netten, 1994). It is likely - and confirmed by evidence from this study - that people with more severe symptoms of mental ill-health or greater dependencies in activities of daily living will be accommodated in facilities run by district health authorities. One approach to 'standardising' costs for differences in client characteristics and the like would be to estimate a separate cost function for each sector or residential type, but the sample sizes were not sufficiently large at this stage of the research. Instead, the estimated cost function (equation A in table 7.8) has been used to standardise for these effects and dummy (or indicator) variables then included. The *residual cost* - the cost not explained statistically by the estimated function - was calculated for each client, and analyses of variance (ANOVA) were conducted. The results of the ANOVA are given in table 7.9 showing some positive associations with costs. In turn, these results led to the inclusion of sectoral and residential type variables in a re-estimated series of cost functions; equation B in table 7.8 is the final one of these.

Inter-sectoral cost differences. Clearly, this approach has shown there were cost differences among the sectors. In fact, the cost function also standardised for the outcomes achieved, so that the ANOVA indicates something approaching an inter-sectoral efficiency difference. The findings suggest that voluntary and private sector facilities were delivering services more cost-effectively than local authority social services departments, which in turn were delivering services more cost-effectively than district health authorities. There was no significant difference between the voluntary and private sectors. Of course, some part of these differences may reflect the influences of client characteristics (needs or outcomes) that have not been adequately measured in the research, despite the number of indicators employed, and which were systematically associated with sector.

Table 7.9 Analysis of residuals from cost function by sector and accommodation type

Sector and Accommodation	**Total Cost (£)**		**Residual Cost (£)**	**N**
	Mean	Difference	Difference	
Managing agency for accommodation				
District health authority	372	+70	+36	55
Local authority social services department	307	+5	+9	25
Voluntary (non-profit) organisation	253	-50	-37	28
Private (for-profit) organisation	195	-108	-66	17
Other (mainly LA rents)	165	-137	-9	6
Accommodation type				
Residential or nursing home	405	+103	+47	52
Hostel	284	-19	+18	26
Sheltered housing	116	-187	-97	4
Staffed group home	229	-74	-62	17
Unstaffed group home	224	-79	-63	15
Foster care	247	-55	-41	8
Independent living	158	-145	-20	9
Overall or total	303	0	0	131

Analysis of variance

Difference between managing agencies (sector) F = 7.57***
Difference between accommodation types F = 9.64***
Difference between cohort of discharge F = 3.94**

Two-way analysis of variance:
Difference between managing agencies and accommodation types

Main effect - managing agencies F = 3.67***
Main effect - accommodation types F = 6.87***
Two-way interactions F = 2.58**

Significance levels: *** indicates p≤0.01; ** indicates <p≤0.05; * indicates <p≤ 0.10.

Costs and type of community residence. As well as indicating inter-sectoral differences in residual cost, the ANOVA points to significant differences between accommodation types and yearly cohorts of leavers. These differences are inter-related because each sector has tended to provide only certain accommodation types, and later cohorts of leavers were more likely to move into newly built or converted placements, most of which were commissioned by district health authorities. Aside from these interactions, table 7.9 shows that, relative to client needs and outcomes, residential and nursing homes and hostels (all highly staffed) are more costly than predicted by the cost function, and other facility types less costly.

7.4 CONCLUSION

By 1990 about a fifth of the long-stay populations of Friern and Claybury hospitals had moved to community-based care under the reprovision programme. The considerable variation in the costs of community care could, in part, be explained by differences between the clients in terms of their needs and characteristics as measured in hospital[4]. These early leavers were likely to be less costly to care for than those who were to move later so a prediction of the community care costs for those yet to leave hospital would considerably aid planners in their resource allocation activities. Using a cost function approach to account for differences between 'leavers' and 'stayers', the results presented in section 7.2 suggested that community care for the whole long-stay population meeting the study criteria could, in the long-term, be funded by the savings from hospital closure. Moreover, as client welfare was at least as good in the community as in hospital for those people who had moved (Anderson et al., 1993), the costs results could be interpreted as indicating the cost of providing *at worst* acceptable quality services and equivalent quality of life to that experienced in hospital.

The abilities of people with mental health problems, or any other long-term needs, to adjust to life 'in the community' after ten or twenty years in hospital may be limited, and, no matter how good the hospital-based rehabilitation processes, the development of self-care skills and social competencies could take months or even years. The second set of results (section 7.3; the findings from the analyses of cost-outcome links), related only to the first twelve months after discharge but the general message to draw from these analyses is that there are encouragingly strong positive associations among costs, needs and outcomes. Resources in the community appear to be targeted on increased levels of needs and are associated with improved outcomes.

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[4] Subsequent explorations of community cost variations with larger samples of former Friern and Claybury residents showed smaller percentages of the cost variation explained: 53 per cent for cohorts 1-5 (217 people included in the analyses); and 21 per cent for cohorts 1-8 (570 people included). However, the clients' age, measures of the time they had spent in hospital, their negative symptoms score from the Present State Examination, and subscores from the Social Behaviour Schedule were strong cost-predictors in each of the analyses (Knapp et al., 1995; Beecham et al., 1995).

These analyses also point to the limitations of the cost function approach, for it cannot be adduced whether higher cost support packages promoted improved outcomes, or whether better outcomes meant clients made more intensive use of resources which in turn resulted in higher costs. In later work on the NETRHA data, significant positive correlations were found between costs and eight outcome measures derived from the Present State Examination but none for the Social Behaviour Schedule subscores (Pearson correlations, $p \leq 0.01$; Beecham et al., 1995). These cost-outcome associations are different from those presented above and are, in part, the result of the different technique employed and the larger, more heterogenous sample. They are certainly indicative of the need to explore such links more fully. Creating a series of production functions to explore the variations in outcomes (that is whether a particular outcome is produced by the resource inputs and other factors) will help clarify the direction of causality (for example, see Donnelly et al., 1995, p78-85).

It may be that the financial transfer arrangements in North East Thames (reallocating up to the average revenue cost of hospital to receiving districts with the reprovision patients) actually encourage a *more* costly community response than is the case where smaller amounts are transferred; significant cost-effectiveness differences between the public and non-public sectors and among community accommodation types were uncovered. However, these results (section 7.3) should only be the *start* of any discussion of inter-sectoral and placement effects. As used here, the cost function is an insufficiently sensitive tool to explain such fully differences. It is an excellent tool for sifting through a mass of evidence and for testing a wide variety of hypotheses about community care provision, but has not explained *why* such differences were revealed. Is it possible to describe more clearly why care provided within each sector produces the differences revealed by the analyses? Can such factors be identified? Will these potential explanatory factors disappear over time (or even show greater divergence) as, for example, the influence of commissioning practices (usually health sector dominated) grows.

Similar questions could be asked with regard to the differences by accommodation type. Even though the accommodation types were standardised, this may not account fully for the differences (or similarities) in, say, staff training or experience. Focused data-collections and more detailed analyses would be required to identify the impact of these factors. Undertaking a series of linked analyses, one for each sector or accommodation type will help, but to fully tease out the reasons for cost or outcome variation may require the inclusion in the analyses of a different set of factors - that is, the development of improved measures for *non-resource inputs*.

The empirical findings reported in this chapter have been set within the theoretical framework outlined in chapter 3, and both validate the cost function approach and point to the need to supplement them by other methods. The advantage of the approach is that it helps to move the examination of costs and cost-effectiveness away from sole reliance on averages generated by simple experimental and quasi-experimental designs (Yates, 1994; and see chapter 3). For many purposes there is nothing wrong with either those averages or the designs behind them, but they waste a great deal of information: they tell us little about the differences in the circumstances, needs, outcomes and costs of individuals and say nothing about the way these are inter-connected. Information such as this is fundamental to the delivery of good quality mental health services and the practice of psychiatry.

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CHAPTER 8
FUNDING SOURCES FOR COMMUNITY CARE

8.1 INTRODUCTION

In examining the resource and cost implications of providing community mental health care, the focus so far has been on services - what services are available, which are used and by whom, and their associated costs. Earlier chapters have also examined whether expenditure on community care for former long-stay psychiatric patients is sufficient, whether resources are targeted on needs and how these expenditure patterns impact on clients' welfare.

In this chapter, a broader view is taken, as the link is made between *provision* of services during the late 1980s and their *funding*. During this period, funding could come directly to services from a number of sources, each governed by a different (and sometimes conflicting) set of regulations. The following section illustrates the community care funding implications for health and local authorities, voluntary and private organisations, and for clients themselves using the comprehensive costs data calculated for four research projects in the manner described in chapters 4 and 5.

This brief exposé of cost burdens highlights the large, but often hidden, financial contribution clients make to their own care, usually funded through their social security benefit entitlements. These are transfers of resources to individuals which, during the period of data-collection, were largely coordinated and regulated by one central government department. As regulations governing these transfers were nationally applicable, the amounts payable for many benefits tended to be fairly consistent throughout the country. What varied was the way this system was used in different localities to shape community-based services; the model of care could be modified according to the type of benefit chosen to be claimed by clients. The advantages and disadvantages of using social security benefits to fund care are illustrated in section 8.3 using data from five of the 28 Care in the Community demonstration schemes.

Section 8.2 also shows that despite the reduction of services based in the specialist psychiatric hospitals, health authorities still fund a considerable proportion of care for people with mental health problems. In particular, dowries play a vital part in funding health authorities' community care responsibilities (see also chapter 6). In contrast to social security benefits, there are no individual entitlements to dowries and the policy guidance on reallocating hospital budgets is permissive rather than mandatory. Section 8.4 looks at some of the variations in the way the dowry policy guidelines were implemented at the local level during the late 1980s, and the incentives and disincentives these arrangements engendered.

To some extent, events have overtaken this description of the two major funding sources for community care. Social security benefits were subject to a wide-ranging review in 1988 and further changes were introduced in April 1993. Dowry regulations have undergone fewer fundamental changes in the intervening period as the relevant guidelines (NHSME, 1992) make only minor amendments to health authorities' statutory powers to make payments for care provided by other agencies under Section 28a of the *National Health Service Act 1977.* In the final section, therefore, four themes are drawn from this work to illustrate the implications for the current care environment.

8.2 FUNDING CARE[1]

To illustrate the funding share of the various sectors in the community care 'system' for people with long-term mental health problems, data from four studies are used.

- *Psychiatric reprovision (NETRHA).* From this wide ranging research project data were available for 216 people interviewed one year after discharge from hospital (see chapters 6 and 7). Each person was formerly a long-stay hospital in-patient, and no one aged over 65 had a diagnosis of dementia.

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[1] This section is based on Beecham, J. (1993) Funding mental health services, *PSSRU Bulletin*, 9, July 1993, 6-7.

- *The Maudsley Outreach Support Team (MOSTT).* This service aimed to provide an acceptable and accessible service for people who were only able to use the existing service configuration in times of crisis, despite the need for regular support (see chapter 5).
- *Domus care (DOMUS).* Developed through a joint district health authority and housing association initiative, residential care within the Domus philosophy provides a home-for-life for 24 elderly people with mental health problems (see chapter 5).
- *The Care in the Community demonstration programme (CinC).* Twenty-eight pilot projects were selected to receive central government grants to help provide community support services for people moving from long-stay hospitals (Renshaw et al., 1988; Knapp et al., 1992). The programme included schemes which would develop services for 800 people with needs relating to mental health, learning difficulties, age and physical disabilities. The sub-sample selected for these analyses comprised 115 people with mental health problems who were living in five local authority areas in England[2].

In each study, the long-run marginal opportunity costs of supporting clients in the community were estimated using the methodology set out in chapter 4 and included both the accommodation-based and off-site services used by sample members. Previous chapters have shown how the total costs of care are dominated by accommodation costs, ranging from 77 per cent for the reprovision services down to just over a third for people supported by MOSTT staff. Off-site services (such as out-patient appointments, day activity services, social work and other peripatetic professionals) were important elements of individual care packages which absorbed smaller but varying proportions of the total care costs.

Table 8.1 presents these costs data in a different format to that used in previous chapters. The costs associated with providing different services have been amalgamated to show the distribution of costs between the agencies which were

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[2] The name of the local authority is also used to identify the schemes.

involved in supporting sample members - the funding pattern. Current policy-inspired analyses would aggregate these categories to highlight health and social care (public sector) costs and those accruing to the private, voluntary and informal care sectors. Where services were jointly funded (as, for example, in the provision of care within the Domus facilities) costs have been allocated across each agency involved. For each project the first three funding sources listed (client or family members, special project grants and district health authority) fund over 70 per cent of total care costs.

Table 8.1 Proportion of total costs of community care funded by each agency

	Research Project			
Agency	NETRHA %	MOSTT %	DOMUS %	CinC %
Client or family members	26.8	12.4	28.4	33.2
Special project grants	0.0	26.8	0.0	18.4
District health authority	49.8	33.4	67.9	26.6
Family health services authority	0.6	0.1	1.0	0.6
LA social services department	13.2	2.0	2.3	17.3
LA other departments[1]	2.8	16.8	0.0[2]	1.5
Voluntary organisations	6.6	3.2	0.4[3]	2.3
Criminal justice services	0.1	5.3	0.2	-[4]
Sample size	209	26	24	115
Av. weekly cost per client[5]	£493	£486	£930	£403

Notes

1. Includes education and housing departments.
2. Included with LA social services department.
3. Housing association only.
4. Less than 0.05 contribution to total cost.
5. Uprated to 1992-93 prices using HCHS pay and prices index.

Researchers pay relatively little attention to the part played by *clients and their families* in funding their own care. As mentioned in previous chapters, few members of the research samples received much support from informal carers so here, only out-of-pocket expenses for clients and other family members are included. Almost all living expenses were funded by social security entitlements, and the amount clients' received varied according to the situations in which they lived and the personal resources they had available. Thus, the costs accruing to clients and carers in the MOSTT study absorbed 12 per cent of total costs and the proportion reached nearly a third in the research projects where more sample members lived in specialist accommodation such as the CinC demonstration schemes.

The *special project grants* include two sources of money from the Department of Health. MOSTT was financed directly by the Department under research and development funding for innovative services. MOSTT staff undertook a range of activities and were often the major source of clients' support, thus this category of funding covered more than a quarter of total care package costs. It is innovative services such as this which can point the way forward for mental health care provision, and the injection of dedicated resources can aid their development. For the full CinC demonstration programme, a total of £25 million (1992-93 prices) was 'top-sliced' from the Department of Health's budget to provide pump-priming grants to the 28 individual schemes in England, two-thirds of which was used for revenue expenditure. These special project grants funded about a fifth of the clients' total care costs. Both the MOSTT service and the CinC schemes were to be funded from local resources after the grant period had ended.

The high contribution from *district health authority* coffers can also be seen from this table. While people were resident in long-stay hospitals, the health authorities funded more than 95 per cent of the care for NETRHA, CinC and Domus sample members (Knapp and Beecham, 1990a; and see chapters 5 and 7). The creation of community-based services altered the funding pattern but even though total community costs were generally similar to hospital costs for the NETRHA and CinC samples, district health authorities still funded between a quarter and a third of the care costs. This category includes resources available through the local dowry arrangements. For Domus residents, total costs were higher than had been the case in hospital but, again, the health authority funded a lower proportion (68 per cent).

In direct contrast to these large contributions from the district health authority, the *family health services authority* funded less than 1 per cent of support in each of the studies, yet general practitioners and other practice-based services play an important role in the care of people with mental health problems (see chapters 1 and 6). More than half of each sample had visited their general practitioner surgery at least once in the period before interview, often for psychiatric as well as general health care. The costs of dentists and opticians are included here but fewer sample members used these services.

At the outset, one of the stipulations of receiving grant under the CinC initiative was that each of the schemes should work jointly with other service providing agencies. In 20 schemes, including Brent, social services departments emerged as taking the lead role, sometimes jointly with other agencies (as in the Buckinghamshire scheme). At that time such arrangements were less common than today (when social services departments more clearly take the lead responsibility for social care provision) but meant that social services departments had a greater share in the funding of care than found for the other research projects: about 17 per cent of the total costs of care packages. Social services departments provided accommodation for 22 clients in the five CinC schemes included in these analyses and made significant contributions to the care of other clients through provision of day activity services. No accommodation facilities or day activity services were provided by this agency to the MOSTT clients but as almost all sample members lived in local authority rented accommodation, a much larger proportion of costs accrued to the housing department.

The lack of clarity in distinguishing *funders* and *providers* of services is particularly obvious when looking at the contribution of the voluntary sector. For example, table 8.1 shows that the voluntary sector funds a higher proportion of support in the NETRHA services than in any of the other research projects. This was still only 7 per cent of the total, yet some 20 per cent of clients lived in accommodation facilities provided by these organisations and a similar proportion used voluntary sector day activity services (see chapter 7). In two of the CinC schemes for people with mental health problems, voluntary organisations were the main providers of care, but the total voluntary sector funding contribution was only 2 per cent. Clients' contributions to accommodation-related services (through social security benefit entitlements) were a major source of income to these organisations (see below) and day activity services were most commonly funded through grants from the local social services department.

Funding from the private sector is conspicuous by its absence for similar reasons. Thirty-one clients in the NETRHA study, for example, lived in accommodation facilities provided by 'for-profit' organisations or individual proprietors, but these placements were mainly *funded* by clients' social security entitlements.

Overall, the *criminal justice system* contributed only low levels of funding to sample members' care packages as these services were rarely used. However, on the comparatively rare occasions where such funds were called upon, their contribution to total costs was considerable. Higher levels of staff support through the use of specialist accommodation facilities by NETRHA and CinC sample members may have reduced potential involvement from law and order services, and the costs included for the Domus research were those accruing to the police liaison services. Criminal justice services for users of the MOSTT services, who previously had received low levels of mental health support, absorbed the greatest proportion of costs across the research projects. Indeed, these services were used by just over a third of the clients, three of whom had spent short periods of time in prison over the past year. MOSTT staff also took over many of the duties of the probation officer for one of the two clients on probation orders.

The policy initiatives which heralded the separation of public sector purchasing and providing functions, should make information such as this easier to access (setting aside the problems of commercial confidentiality), moreover, they would change the balance of funding shown in table 8.1. One of the more specific objectives of the reforms was to improve equity in the receipt of residential or nursing home care by ensuring the social security entitlements for all (new) publicly supported residents would be similar, regardless of who provided the service. From April 1993, funds were to be transferred to social services departments, equal to the future expected need for the care element of the social security allowances. All new applicants would have a needs assessment to ascertain how care should be delivered (for example, residential or domiciliary care) and a financial assessment to ascertain how the care costs would be met. In the format used in table 8.1, these arrangements would change the funding balance between the client and the social services department as social security allowances for independent sector residential and nursing homes have been included in the client costs. This 'budget re-allocation' may allow social services departments to argue that their financial contribution to mental health care has increased without substantially altering their levels of activity.

8.3 SOCIAL SECURITY BENEFITS AS A FUNDING SOURCE[3]

8.3.1 Background

Mental health resources are scarce, and with every possibility of further reductions, the advantages of fully or part-funding a community care scheme from outside the budget of the agency directly responsible are obvious: the costs to that agency can be reduced or higher levels of support can be provided without spending more of their resources. Regulations governing clients' entitlements to social security benefits allowed all or part of the care costs to be defrayed to another budget, and by selecting different combinations of social security entitlements, services could be shaped to fit a desired model. Yet alongside this pecuniary advantage came two major disadvantages. First, benefit levels do not provide recipients with a reasonable standard of living and there is a well-established relationship between disability and poverty. In 1985, for example, 63 per cent of people with disabilities were living in, or on the margins of poverty (calculated as 140 per cent of the supplementary benefit level) compared with only 28 per cent of those without a disability (House of Commons, 1985). Drawing on five studies which analysed caseloads of mental health social work agencies, Stewart (1988) estimated that two-thirds of mental health service users relied mainly on means-tested benefits, about a half of whom said they had financial problems. (See also Townsend, 1979; CPAG, 1985; Oppenheim, 1990)

The second major disadvantage is that the social security benefits system can be an unstable means of funding community care services. Since the *National Assistance Act 1948*, income maintenance legislation and its accompanying regulations have

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[3] This section is based on a paper written with C. Thomason (1988) *Supporting people with long-term care needs in the community; social security and the financing of care*, Discussion Paper 577/2, Personal Social Services Research Unit, University of Kent at Canterbury.

developed in a piecemeal and incremental fashion and have been subject to the conflicting objectives of meeting individual need and of exerting labour discipline or maintaining work incentives. Furthermore, decisions about the share of national resources to be devoted to this area of public expenditure, and which groups should receive it, are made by politicians, influenced by the philosophies and politics of the time. These diverse pressures can lead to changes in the regulations governing entitlement to benefits (and the levels payable) which may have unforeseen implications for those community care services which rely on clients' entitlements for revenue funding.

In the following sections the levels of clients' income and their contributions to care packages are examined using data from the Care in the Community demonstration programme. The information reflects the system when the data were collected, that is, prior to the major changes of 1988 and 1993.

8.3.2 Benefits received by Care in the Community (CinC) sample members

Table 8.2 shows the sources of income for people with mental health problems who moved from hospital under the auspices of the Care in the Community programme. The data are taken from 115 *Client Service Receipt Interviews* completed between January 1987 and August 1988. The questions on income asked for information about income from paid employment, from social security benefits and from other sources such as private pensions or savings (see chapter 4).

Only 16 per cent of clients received any income from employment, and wages tended to be low. Indeed, across the whole programme one person earned £40 per week, one earned £15 per week (under the therapeutic earnings regulations) and a third person earned £7.80 per week. The remaining clients earned between £0.50 and £4 from sheltered employment, industrial therapy units, or work-related activities in day centres where, had earnings been any higher, their value would be deducted from clients' benefit receipt. People claiming residential care allowances would have forfeited their entitlement. Only ten people had any personal resources, usually small amounts saved while resident in hospital.

Table 8.2 Benefits received by clients of the five CinC schemes

Type of benefit received	No. clients	% clients
Retirement pension[1]	17	14.7
War/widow's pension[2]	3	2.6
Supplementary benefit	84	73.0
Housing benefit	11	9.6
Additional requirements	3	2.6
Single payments	9	7.8
Severe disability allowance[3]	49	42.6
Attendance allowance	1	0.9
Mobility allowance	1	0.9
Wages	18	15.6
Personal resources	10	8.7
All	115	100

Notes
1. Includes supplementary pension.
2. Includes industrial injuries benefit.
3. Includes invalidity benefit.

Their long hospital residence meant that few CinC clients had built up sufficient contributions to be entitled to National Insurance benefits, so most were dependent on the needs-related benefits, many of which were means-tested. Over 70 per cent of the sample members received *supplementary benefit* (now income support) which was intended to provide a basic income for people whose 'other income does not reach the level which Parliament has laid down as necessary to live on' (Disability Rights Alliance, 1987). The amount of benefit received depended on the level of claimants' resources relative to their 'requirements' as calculated using the centrally-determined basic scale rates. While a few sample members received a 'top-up' of supplementary benefit on their income from other benefits, for most people supplementary benefit was their main (often sole) source of income.

Additional requirements were available during this period for people who received supplementary benefit to compensate for some of the special expenses which were a result of their disability (higher heating, special diets, laundry and clothing, for example). In some cases *single payments* were made for accommodation set-up costs, clothing, footwear and in recognition of extra heating required during cold weather.

(Since 1988, these allowances have largely been replaced by the cash-limited Social Fund.) Ten per cent of the sample (all of whom were living in domestic housing) received *housing benefit* to cover part of their rent and general rates.

Enhanced rates of supplementary benefit were available to people classified as *boarders* and the amount received related directly to the type of service provided. These regulations have undergone several changes since the data were collected, but between 1983 and 1988, they had remained relatively stable. Regulation 9(13) of the *Supplementary Benefits (Requirements) Regulations 1983 (Amended)* defined a boarder as

> a person who pays a charge which includes the cost of accommodation and at least some cooked or prepared meals which are both prepared and consumed in the accommodation or in associated premises (Disability Rights Alliance, 1987).

Clients claimed benefits under both the main categories of boarders; people living in *nursing or residential homes* and residents of *board and lodging establishments.* To receive the allowances, the facilities had to be registered under the *Registered Homes Act 1984*. For people in nursing care homes the upper national limit payable in 1986-87 was between £180 and £230 per week, depending on the client group and for residential care homes it was between £130 and £180 per week. An additional £17.50 was payable for homes in the Greater London area which included the Domus homes, and some facilities in the NETRHA study and the Brent and Waltham Forest CinC schemes. Residents retained approximately £10 per week as their personal allowance (often called pocket money) to cover toiletries, cigarettes and the like, and the remainder was paid to the home to cover shelter and care charges. Indeed, the national limits often *set* the fees payable for each home.

Board and lodgings allowances were also paid to people living in *ordinary board and lodging* and people living in *registered hostels.* A maximum of £70 per week was payable for accommodation and care provided therein, plus the personal allowance of approximately £10. A meals allowance of £29.50 was included which clients could retain if they ate their meals off-site. A further £17.50 could be paid for residence in hostels registered as accommodating some 'special needs' groups such as people with physical or mental disabilities or people living in establishments providing rehabilitation for drug or alcohol problems.

Severe disability allowance, attendance and *mobility allowances* were non means-tested benefits targeted on people with disabilities. *Severe disability allowance* was claimed by 43 per cent of the CinC sample members and about two-thirds of the NETRHA sample, many of whom also received a supplementary benefit 'top-up'. During 1986-87, there were approximately 260,000 recipients of this benefit in England at any one time, costing approximately £285 million (Social Security Advisory Committee, 1988). *Attendance allowance* 'can be claimed where there is a need for attention or supervision' and *mobility allowance* was payable to people who had difficulty walking caused (mainly) by a physical condition. Together, these payments amounted to approximately £1,286 million in England during 1986-87. Although there were some outstanding claims, only two people with mental health problems in the CinC schemes (and no-one in the NETRHA sample) received attendance or mobility allowances but they made a larger contribution to the income of people with learning disabilities moving under this programme. (The interaction of any of these benefits with supplementary benefit was complex and full details can be found in Thomason and Beecham, 1988.)

8.3.3 The role of social security

Social security benefits not only ensured clients had an income but also provided a source of revenue for some services. Social security receipt for 111 people with mental health problems was analysed with respect to the total costs of their care package (a summary measure of all care received), and the costs of accommodation and on-site staff support. The sample was taken from the same five CinC schemes but excluded people whose receipt of housing benefit (paid through the local authority) could not be separated from the income received from other social security benefits.

On average, people with mental health problems moving under this programme received £83 per week in social security benefits (Std.D 36.6) so despite the efforts of the schemes' personnel to understand the benefit system and to maximise entitlements, clients' income was still low. Indeed, many staff had contacted the local social security office *before* clients moved from hospital to ensure that claims were appropriate and would be dealt with quickly[4]. Within this low level of income, almost all CinC clients contributed towards the costs of their care, mainly though accommodation-related charges, although other payments (such as for meals at the day centre or for chiropody) were occasionally reported. The contributions to shelter and care funded just over a third (34.2 per cent) of the total care package costs, a slightly higher level than found for clients with learning difficulties who moved from Darenth Park Hospital (Korman and Glennerster, 1989). Using a similar costs methodology, the social security budget had funded 27 per cent of the costs of maintaining former Darenth Hospital residents in the community. People with learning difficulties moving under the CinC programme funded 35.4 per cent of their care through benefit entitlements.

Accommodation, on-site care and living expenses absorbed over two-thirds of the total community costs for this sample of people from five CinC schemes and social security accounted for 62.6 per cent of these costs. (The figures for the NETRHA sample were 77 and 49 per cent respectively.) Accommodation-related charges in the five CinC schemes were between £6 per week for renting flats or houses owned by the local authority and £130 per week for residential care provided by independent sector organisations. The relationship between social security and accommodation was more complex than in the post-April 1993 world, as differential benefits could be claimed for different types of accommodation and with regard to agency which managed the facility.

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[4] These activities stand in stark contrast to the finding of another study of 100 people leaving hospital in London where 91 of those interviewed were unemployed after leaving hospital and relied on social security benefits. Nearly two-thirds of this sample said that no-one had checked their benefit entitlement or had asked whether they were clear about how to claim the benefits to which they were entitled (Kay and Legg, 1986).

Placing clients in residential or nursing homes managed by private or voluntary sector organisations could maximise residents' income by accessing the supplementary benefit boarders' allowances. By contrast, living in a district health authority managed facility often reduced benefit entitlement as residents were considered to be in the same situation as long-stay hospital residents so would receive only the personal allowance of £8-10 per week. In 1993, a test case was won at appeal by the Department of Social Security which extended this restriction on income from social security benefits to some independent sector nursing home patients (Millar, 1993; and see also *The Guardian*, 22 July, 1993). Some of the Domus residents were affected by this decision (see chapter 5). These regulations limiting health authority access to the social security budget could be bypassed (allowing access to the higher rate payments) if consortia were developed in which voluntary organisations led the joint management arrangements with district health authorities.

Charges for accommodation facilities provided by the local authority social services department were subject to yet another set of regulations. Social services departments could charge 'Part III' residents (in elderly persons homes or psychiatric hostels) on a sliding scale according to the residents' income, up to the full cost as calculated by the local authority. However, if social security benefits were the resident's only source of income then the charge was usually equivalent to a single person's retirement pension and residents retained a personal allowance of £7.90 per week.

In fact, in each of the above scenarios, residents end up with only a small amount of resources at their disposal but by carefully selecting the model and the managing agency for an accommodation facility, different levels of costs could be defrayed to the social security budget. Table 8.3 shows the levels of benefits received by CinC sample members using the standardised accommodation categorisation detailed in chapter 6. This typology does not entirely accord with the social security regulations of the period which, for example, allowed residential care allowances to be paid to people living in independent sector (registered) homes for four people and hostel allowances to be paid, under certain conditions, to people living in ordinary lodgings.

Table 8.3 **Average social security receipt by accommodation type**

Accommodation[1]	Brent	Bucks	Chi'ster[2]	W'ton[2]	W. F.[2]	All clients
Residential home	39.20		124.88	136.56		116.31
Hostel	76.27	45.50	58.58			81.86
Staffed group home	88.55					88.55
Unstaffed group home	79.11	38.64	63.55		92.52	75.89
Foster care	91.85					91.85
Supported lodgings		82.02				82.02
Independent living	52.63					52.63
Sample size	40	26	18	15	12	111
All	77.42	48.39	93.11	136.56	92.52	82.79

Notes
1. See chapter 6 for definitions of accommodation types.
2. Chichester, Warrington and Waltham Forest.

Table 8.3 shows that each of the schemes had a different benefit 'profile' and used clients' entitlements to social security benefits to create the service model which most closely matched their philosophy of care. In the Warrington and Waltham Forest schemes, only one accommodation model was developed: both schemes were managed by voluntary organisations but each used the benefits system differently. The organisation providing the service in Warrington already provided other services in the area, including a day activity centre used by many of the CinC sample members. The central government grant funded the conversion of a nurses' home to a 16-place facility with 24-hour staff cover for which the residential care allowances would provide revenue funding (see Appendix D). In contrast, the Waltham Forest scheme was guided by normalisation principles and four small unstaffed group homes in ordinary housing were developed. Clients claimed the standard range of benefits (invalidity, supplementary and housing benefits) and peripatetic support staff were employed on the money available for the transfer of long-stay patients from Claybury hospital (see also chapter 6). The grant from central government was used to develop a day activity centre and café.

In the Brent scheme, the aim was to develop several types of accommodation services that would best suit a range of client needs, rather than select clients who might suit the facilities. Table 8.3 clearly shows the different implications for the social security budget of each of these choices. The central grant was used to develop and maintain a resource centre which acted as a focal meeting point and therapy centre for all clients. The Buckinghamshire project provided a 'core and cluster' care model. The 'core' unit was a twelve-place hostel, funded mainly by the health authority but *managed* by the social services department, so residents paid 'Part III' charges (about £32 per week in 1987). Staff attached to the hostel also provided support for a further 14 clients who lived in the 'cluster' units; unstaffed group homes or supported lodgings nearby.

Notably, in developing the CinC schemes, many people chose *not* to take advantage of the 'perverse incentive' that the nursing and residential care allowances offered (Audit Commission, 1986) even though more generally these have made a larger contribution to the development of community care services. (For example, it was estimated that these allowances funded care for half of all the elderly people in private sector nursing or residential homes; Bradshaw, 1988.) In the Care in the Community demonstration programme the philosophy of care had an important effect on how individual schemes used the social security benefits system to develop their services. The Brent scheme, for example, chose to register some accommodation facilities as hostels rather than residential care homes. This allowed the organisation to maximise their income from the social security budget while at the same time ensuring clients retained control over a larger proportion of their income.

Although using social security benefits meant a larger pool of resources was available for service provision, reliance on this lateral funding source also built instability into the services. For example, in the Warrington scheme revenue funding for the home came entirely from residents' social security benefits. A dilemma arose when one resident had to return to hospital for more than six weeks, resulting in a reduction in their social security benefit receipt. A choice had to be made by the home's manager: to discontinue the policy of offering clients a permanent home or to incur a financial deficit. (Eventually, a health authority grant and a transfer from the organisation's fund-rasing account off-set the deficit.) Moreover, over the previous three years the amount payable under the boarder allowances had been virtually unchanged, so it became increasingly difficult to fund rises in costs (staff salaries, food bills and the like) without reducing the service. Byrne (1988) suggested that there should have been a nine per cent increase in the 1988-89 allowances for nursing and residential homes to cover the cost of inflation over the previous two years; nursing home allowances should have been increased by a further eleven per cent to cover the nurses' pay awards in that financial year. Byrne also found that small homes were only viable if staff, including the owner, were paid less than they could get elsewhere, if capital costs were already paid, if no reserves were kept for future expenditure, and if the family contributed towards the costs of provision. With remarkable foresight, the author concluded that

> individual home owners with a large proportion of income support-funded patients will ultimately face closure if levels of benefit continue to fail to meet the costs of care (Byrne, 1988).

8.3.4 Overview

Social security benefits made a major contribution to the lives of people moving from long-stay hospitals under the CinC programme. Entitlements gave clients a right to some personal income (although often only £10-£15 per week) and arguably, as many clients lived in establishments where most daily living needs were met, they would not need much more. Interviewees in all the studies considered here, however, remarked on the low level of money clients had available, particularly as it was difficult to increase this through paid employment. Personnel from the CinC schemes also commented that it was difficult to develop services which would give clients greater control over their own lives when they received so little over which they could exercise choice.

Social security also contributed significantly to the funding of the services required to support people in the community, mainly for accommodation-related services. The regulations were complex and indeed, some care arrangements were threatened by unintended consequences of new rules. Changing the regulations for payments to residents of smaller unregistered homes in April 1988 adversely affected the availability of funding for adult foster care placements and the increased staffing requirements incorporated into the 1992 regulations governing boarders' allowances put an extra strain on the finances of independent sector nursing and residential homes. The transfer of funds to social services departments from 1993, while not affecting existing claimants, may put the continued existence of independent sector homes in jeopardy as the level of fees payable tend to be linked to the old social security rates (Laing, 1994).

There is no doubt that social security benefits were an additional source of revenue for the Care in the Community schemes. Indeed, although several studies have identified low levels of benefit uptake amongst people with mental health problems (for example, see Linney and Boswell, 1987; Allen and West, 1989; Kay and Legg, 1986), working practices in the CinC schemes meant personnel were more likely to exploit the system to the advantage of clients. The natural inclination of organisations to take advantage of the 'perverse incentive' and fully defray costs to the social security budget was balanced two factors; a drive to provide innovative and responsive services and the extra resources available from the Department of Health pump-priming grants. Even so, many schemes used the social security system creatively and flexibly to find a balance between maximising income and adhering to philosophies of care which were felt to enhance peoples' quality of life.

8.4 DOWRY POLICIES: A REVIEW[5]

8.4.1 Background

Section 8.2 showed that the second major source of finance for community-based mental health care was the health authorities. Until recently almost all of these resources were tied up in specialist psychiatric services, often provided within the hospital walls. However, the policy imperative to reduce long-stay psychiatric hospital services has encouraged health authorities to diversify both in terms of the location of services and the models of care. Dowry arrangements, which transferred resources from hospital to community budgets were crucial to this development and were a welcome addition to the incentive mechanisms. Dowries could be paid in respect of hospital patients with needs for support stemming from mental health problems, learning difficulties, age-related physical frailty, dementia, and physical disabilities. By 1983, health authorities could transfer money to local authorities or voluntary organisations in respect of long-stay patients discharged from hospital. This required greater inter-agency planning than for the joint administrative and financing processes introduced in the late 1970s, however, few regions had a dowry system as well-formulated as that which operated in North East Thames (see chapter 6).

In this section some of the elements of dowry programmes that operated across England in the late 1980s are reviewed and their benefits and limitations outlined. Numerous district and regional health authority documents were consulted which described the local implementation of these budget re-allocation arrangements and the main elements, focusing on mental health care, are described below. However, dowries were - and indeed still are - part of a complex set of arrangements to finance community care which vary throughout the country, making precision difficult. The absorbtion of dowry payments into the current purchasing and providing arrangements is considered in the final section of this chapter.

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[5] This section draws on a report made to the Department of Health Cross Financing Review Group in 1990(b), written with Martin Knapp and lodged as Discussion Paper 711, Personal Social Services Research Unit, University of Kent at Canterbury.

In the summary of the results from the Regional Health Authority Survey sponsored by the Cross Financing Review Group the following definition of a dowry payment was specified:

> dowries are lump sum payments or continuing grants which health authorities make to local authorities or voluntary organisations in respect of people to be cared for in the community instead of in hospital.

Four refinements need to be made to this definition. First, dowry payments were initiated by practices to encourage the *run-down of specialist hospitals* and were usually only paid on the permanent closure of a hospital bed. Second, dowries were usually tied to *long-stay* hospital residents, although the specification of 'long-stay' varied between regions. Third, as the term was used across the country, a dowry was not limited to the transfers of funds from district or regional health authorities to local authorities or voluntary organisations, but could also be made *between* districts in respect of people repatriated to their 'home' district. Finally, dowries were usually seen as *revenue* transfers, although often worked in parallel with separate capital funding arrangements.

Whether these refinements were intended when dowries were introduced in the *National Health Service Act 1977* and extended in 1983 (Department of Health and Social Security, 1983) is not clear. In 1992, when regulations surrounding dowries were set in the context of *Caring For People* (Department of Health, 1990), none were contradicted and mention was made of the need to ensure acute services were adequately provided. The regulations placed primary responsibility for organising and monitoring the social care of former long-stay patients with the local authority, but financing care remained the province of the health authorities through dowries or other Section 28A payments (NHSME, 1992; Lawson, 1993). The 1992 guidelines explicitly stated that dowries should be set at a realistic level to meet the total continuing costs of community care but also that they should take account of clients' personal resources, including social security benefits, and local authority contributions.

8.4.2 Elements of dowry policies

Other examinations of dowry policies have all uncovered marked inter-regional differences (see, for example, Normand, 1986; Wistow and Hardy, 1986; Audit Commission, 1987; House of Commons, 1990) and data collected for the Department of Health in 1990 revealed that although all health authorities expressed a commitment to transferring resources to fund community care, there was a great deal of variation in the way this commitment was discharged.

Five basic elements of dowry policies were distinguished from the regional and district plans and reports, and are illustrated below. (The data were not sufficient to make a complete characterisation of regions.)

- regional controls;
- hospital baselines for dowry calculations;
- add-ons for capital and double-running funds;
- community-end adjustments to the baseline; and
- protections.

Regional controls

Regional health authorities intervened to a greater or lesser extent in developing and implementing dowry policies. For example, North Western region developed a strong philosophical statement for people with learning difficulties to which service provision had to adhere in order to qualify for dowry transfers. In contrast, North East Thames region had a deliberate 'hands off' policy regarding mental health service models, resulting in a wide variety of arrangements across the districts, although the policy to calculate the dowries was developed at regional level (see chapter 6). In the Northern region, financial transfers were more likely to be agreed between districts and, as in North East Thames, transfers were made directly between districts, and from there to other agencies as appropriate. Financial transfers in both regions were linked to targeted contraction and closure plans for hospitals.

An alternative to this model was where the region operated a pool of resources, with refunds made through a claw-back arrangement over a number of years as resources were released from hospitals. South West Thames was one of several authorities in which an administrative alteration to the RAWP (Resource Allocation Working Party) allocations was made for planning and resource purposes. South East Thames saw its role as a broker for replacement services and developed a Regional Mental Handicap Funding Policy for reprovision. Its mental health dowry policy was slightly different, but the region still took the lead role and required a commitment from districts to a programme of coordinated action which included the submission of costed plans.

Hospital Baselines

The size of the dowries was related, sometimes rather loosely, to hospital revenue costs where the most disaggregated dowry formula was based on the actual costs of the hospital in which the patient lived in the year of discharge. Less disaggregated formulae inflated dowry levels up from the costs of a base year (perhaps the year the reprovision policy was implemented, as in North East Thames) or, like Mersey, pooled average costs across a number of hospitals. In 1987, one region was setting the dowry equal to the average revenue cost in all its psychiatric hospitals bar one, the exception being a very low cost hospital. Despite this omission, the low cost hospital had to transfer funds at the average calculated and found itself in danger of being seriously denuded of funds.

When a long-stay in-patient died, some hospitals kept the bed open for a new patient, but some regions operated a policy whereby the bed was closed and the 'dowry' clawed back to supplement a regional 'bridging' fund (see below). Another arrangement was evident in hospitals which had been sectorised (organised so that patients from the same district were accommodated on the same ward). This allowed the district that would have been responsible for that patient to choose a course of action; either closing the bed and using the money to develop community services or using the bed for a new long-stay patient.

Although the average hospital revenue cost was usually the upper limit on dowries, often only a proportion of this amount was transferred to the new service - partly because fixed cost elements could not be saved until whole wards or hospitals closed, and partly because of different community arrangements (see below).

Add-ons for capital or double-running funds

It was intended that the transfer of care through dowries would be as near to self-financing as possible. However, two forms of extra finance were made available in almost all regions: *start-up capital funds* and *double-running revenue finance.* These funds allowed community services to be developed before the full savings from closing the hospital were released (which would eventually include resources from the sale of the hospital site) and ensured community facilities could be adequately financed without jeopardising standards of hospital care. Again, different practices proliferated between the regions.

Where dowry transfers were tied to the creation of a *new* place in the community (new-build or conversion), the need for a parallel *capital programme* was pressing and in some regions cross-site funding was encouraged. For example, North East Thames hoped that the release of funds from the sale of the Friern and Claybury hospital sites would fund the development of community services to allow other hospitals to close. However, in 1989 the total planned capital expenditure to allow closure of Friern and Claybury hospitals was £128 million and income was estimated at £185 million (Price Waterhouse, 1989). Using these figures, and even though income was projected at a period of high land values, there would have been few resources left to be carried over to other hospital closure programmes. North West Thames considered the use of mortgages, thereby transferring capital costs onto a revenue budget but recognised there would be problems in servicing the private sector loans over many years. In this region and in West Midlands, capital was available through the regional health authority but providers were encouraged to use contributions from local authority capital allocation programmes and from non-public sector agencies (such as the Housing Corporation). York district health authority borrowed from region an amount which was less than the sale value of the hospital site which, although a less attractive option in the long term, made resources available up-front.

Many plans to develop hospital sites (thereby increasing their value), met determined objections from local residents causing a further short-fall between plans and actual allocation of capital resources (Dopson, 1986). Chippindale and Horrie (1988) provided some examples of the difficulties encountered when trying to realise capital from hospital sites. North West Thames region could, in theory, have raised some £20 million for the sale of the 114-acre Banstead Hospital site if planning permission for housing development had not been refused. In May 1988, the site was sold to the Home Office for £12.5 million. The 86-acre Darenth Park site met with similar 'green belt' restrictions: the sale to the Blue Circle Cement Company was blocked, as were plans to raise £50 million by selling the site for housing development (see also, Korman and Glennerster, 1990). Selling the site as agricultural land seemed the only option but in 1988 this would have raised only about £1 million. In 1994 the site still remained unoccupied and unsold. Failure to sell the Herbert Hone site meant a further set-back for the capital expenditure programme in the South East Thames region. At the point of obtaining final planning permission, the Department of Environment 'listed' the site, "the RHA now finds itself with a statutory obligation to secure and maintain the buildings, at an estimated cost of £24,000 a year" (p16).

In many regions the delays in developing community services, the longer than anticipated hospital rundown periods, rising revenue costs, and violent fluctuations in hospital site values meant the capital finance originally set aside proved insufficient to meet the early plans. By 1990, more than 100 capital projects, including 30 mental health schemes, had been postponed for up to two years in North West Thames region due to a £19 million overspend on their capital programme (Sheldon, 1990).

Double-running revenue finance encourages service development because hospitals cannot immediately save the full average revenue cost the moment someone leaves, however, community care services need an amount equal to, or perhaps larger than the average hospital cost early on in their development phase. In the documents studied, finely-tuned tapers were described to get round this timing problem and regional practices varied from a sliding-scale of nine months to four years. The Regional Operational Research Department at North East Thames, for example, estimated that

60 per cent of total ward costs could be saved on ward closure, and a further 30 per cent could be saved one or two years later but the remaining ten per cent saving could only be achieved after the hospital finally closed. Extensive use of private and voluntary residential and nursing homes shifted some of the revenue burden to the social security budget through benefit entitlements, and some districts claimed that the relocation of care could not continue without access to these funds. One study found that many people with learning difficulties (often of a lower relative dependency) were resettled directly to private sector residential care, 90 per cent of whom were wholly financed by social security allowances (SAUS, 1987).

Equity issues had arisen in spending both capital and revenue budgets. In some regions, districts with well-advanced plans had been allocated funds early in the reprovision programme but fewer resources were available for districts which developed their plans later. Moreover, client group specific plans often had proceeded at different speeds with policies for people with learning difficulties generally more advanced than those for people with mental health problems. This could cause particular problems where reprovision resources were pooled.

Resources to fund double-running costs can get community care off to a good start and ensure that standards of hospital care do not suffer. But the more gradual the decline in long-stay in-patient numbers and the slower the staffing adjustment to the decline in patient numbers, the greater the need for both capital and revenue 'bridging' funds. Hospital closure programmes were often set for ten years, but by the late 1980s many plans showed signs of slippage which resulted in longer than expected periods over which double funding would be required which in turn gave rise to a larger drain on revenue resources over time. To allow the closure of all long-stay hospitals in North East Thames, these costs were estimated to level out in 1992 at approximately £12 million per year, rising again after the year 2001 (Price Waterhouse, 1989). In some regions the money released from the natural decline in hospital populations (mainly through deaths) provided 'extra' resources to maintain or improve standards of hospital care (either retained in the hospital budget, or routed through region), or to support capital or double-funding reserves but rarely would these meet the shortfall between the anticipated and actual release of resources following hospital closure.

Community-end adjustments to the baseline

The policy documents and reports studied showed that the hospital baseline calculation was adjusted at the community end in response to a variety of factors.

- The passage of time, with dowries tapered in recognition of the difficulties of saving fixed hospital costs and the availability of community services for early leavers.
- Patient characteristics, especially the perceived dependency of patients as predicted from a hospital assessment.
- Recipient agencies, with local authorities or voluntary organisations often receiving lower dowries than health authorities. For example, non-health service providers in Trent received only half the amount transferred to health authorities.
- Service plans or service costs could effect the level of resources received. For example, a staffed hostel or group home might attract a different dowry than more independent living arrangements.
- Clients' personal resources, with the higher rate of social security boarder allowances seen as a crucial source of additional revenue. Usually, dowries were adjusted downwards if social security benefits could be obtained, although they remained unaffected in the North Western region.
- Finally, the location of the services where in general, the practice was not to transfer money in perpetuity outside the region, with dowries withdrawn on a client's death. North West Thames would only accept people back from other regions if dowries were paid. North East Thames would have an estimated 'net inflow' of 400 former patients, mainly people with learning difficulties (Price Waterhouse, 1989).

Typically, with less dependent people moving out of hospital first, often into independent living settings or into established local authority or voluntary facilities, hospitals could avoid transferring large sums in the early years of a rundown programme. One reason why the hospital closure programme appeared to slow down in the late 1980s was because there were no more spare places in extant facilities (which had not needed capital investment, and in which the marginal revenue costs were small). Where only a relatively small amount of money was released in the early years there was little incentive for hospitals to adjust staffing levels and other resources to falling patient numbers. This pushed up in-patient costs beyond the level actually necessary to maintain standards of care - even after taking into account the higher average dependency level among those who remained in hospital. In turn, this could force a temporary halt to the rundown programme as resources were not seen to be available for transfer to community budgets.

Conversely, the movement of the less dependent patients first could send the wrong messages to some managers of community programmes. Dowries which were *not* adjusted for dependency may have been spent in full on fairly independent clients who were inappropriately accommodated in highly staffed facilities (see chapter 7). This would leave no subsequent reserves of money for other, perhaps more dependent, people to move from hospital.

Protections

Dowries were usually protected over time as most intra-regional transfers were made in perpetuity. They represented a permanent source of income for many receiving districts, allowing the creation of permanent places in the community, although not necessarily funding other support services (see below). Districts could plan against the promise of these funds and aim to provide a service that would also benefit future clients who would have used the long-stay hospital service.

'Ring-fencing' of resources - within the client group or other context - was considered essential by some districts to prevent poaching by higher-profile, overstretched acute services. This 'syphoning off' was a major problem in South West Thames where budgets to facilitate the run-down of the Epsom Cluster hospitals were drastically reduced. Ring-fencing also ensured that dowries were seen as *additional* service development money and not as a replacement for previous expenditure commitments.

Thus, protecting these resources could speed up the hospital rundown programme, more quickly reducing the double-funding revenue requirement. Of course, if the services were over-funded (that is, if the sum of dowries plus other income was greater than the cost of providing community care), ring-fencing could prevent resources benefiting clients who were not former long-stay patients. The policy in North West Thames was to retain the released dowry money in district-based client group budgets, and the money released from the natural decline in the hospital populations was used to form a Development Pool to support other services.

8.4.3 The benefits and limitations of dowries

There is no doubt that dowries considerably enhanced the development of community care services; one of the lessons of the 1970s was that joint planning was toothless without finance. As Korman and Glennerster (1990) concluded, dowries provided the *trigger* for action following ten years of delay and frustration in transferring the Darenth Park hospital services. One senior planner in the North East Thames region commented that without dowries, there would have been *no* developments in community-based mental health services.

During the late 1980s there were few other resources for community care so dowries also helped ensure good quality community care, but sometimes they led to a two-tier system of care where services for people who were *not* blessed with dowries fared rather less well than those which were. Research on people with mental health problems living in the community but *not* covered by dowry transfers revealed dire standards of living, limited service intervention despite long-standing health problems, periodic homelessness, low incomes and high unemployment, regular contact with the police, and frequent readmissions for in-patient treatment (see, for example, Allen et al., 1990; Beecham et al., 1995). By virtue of the financial transfers and the commonly attached quality of life criteria or monitoring arrangements, former long-stay hospital residents were less likely to drift without support or supervision.

Dowries have allowed the contraction of hospitals, many of which were in a serious state of decay, offered unacceptably poor physical environments, and absorbed large amounts of money just to maintain them without improvement. Both York and Torbay districts reported that the release of hospital funds allowed a greater proportion of resources to be spent on direct care and less on overheads, since the ratio of the two is higher in the community. When developed, vacated hospital sites can also provide numerous community benefits (such as extra housing, job or leisure opportunities, and specialist health care) which have tended to get overlooked when critics catalogue the community 'burden' of hospital closure.

The predictability of dowry transfers created financial security for receiving districts to plan against and helped channel funds to local authorities and voluntary agencies encouraging plurality and innovation in the development of community-based services. Pluralism may be valued in its own right, but just the fact that 'new' money arrived may have stimulated new ways of working. Notwithstanding regionally-imposed conditions on service plans and philosophies, this appears to have benefited clients, relatives, and carers.

Dowries can contribute significantly to the closure of hospitals and the parallel development of community care, but what are their limitations?

Resource transfers from hospital to community budgets increased the number and range of services available, but there were difficulties when dowries were pitched too low. Some districts reported that dowries were set only to cover accommodation-based care, without financial provision for day and other support services. This reduced the incentive to develop a comprehensive service. Often, smaller dowries were offered to non-health agencies under the assumption that they would care for the less dependent clients or that the deficit could be made up through social security benefit entitlements. Many smaller voluntary organisations were faced with cash-flow problems as they did not have a 'cushion' of finances to carry them through until the retrospective payments were made.

A further difficulty emerged with inadequate provision for personal social services inflation. North Western region reported that these costs were running ahead of the allowable health service inflation adjustment to dowries and this threatened service provision and the quality of care offered. Moreover, in the longer-term, as clients who have moved from hospital get older, their increasing dependency will require more intensive levels of service provision (therefore increased costs) creating further revenue difficulties. The 1992 health service guidelines have gone some way towards clarifying responsibilities in these circumstances but state that it was not expected that agreements made on the patient's discharge should be changed.

Dowries also caused 'planning blight' in some receiving districts where community care development plans were delayed until the new money was confirmed or, in some cases, until the money had arrived. However, if plans were not in evidence when the money arrived, it could more easily be transferred to other budgets, often acute services. Dowries were also intended to help meet the future needs of the district population and tightly specified plans could constrain future service and client options. The associated problem for hospitals was in actually closing beds as the dowry money left the hospital; 'new' long-stay patients continued to accumulate in many hospitals where appropriate community support facilities to prevent admission (or to prevent continued hospital residence) had not been developed.

Finally, administering dowry transfers also carried a cost. In North East Thames, for example, special posts were created at regional and district level to oversee the finance policies and service development. These posts had been funded by money 'top-sliced' from the region's budget but such resources were not always made available in other regions.

Each of the English regional health authorities had in place some form of dowry mechanism in the late 1980s. These arrangements regulated the transfer of hospital resources to community budgets: if insufficient money were to leave the hospitals, community care would suffer and if too much money went out too quickly, hospital care would suffer. Despite the considerable variation in implementation, there was no evidence to suggest the development of community care would have been better served without dowry policies. However, making extra funds available during a rundown programme was essential to ensure care standards in hospital were maintained and to ensure community services could be developed *before* people were discharged.

8.5 SUMMARY

This chapter has examined the relative funding burdens of community care in the late 1980s, emphasising the major roles of the social security benefit and dowry systems. Although not that far distant in years, the underlying care environment has changed considerably and financing arrangements have been made far more explicit with the introduction of the health and social care markets. Given these two factors what can be learnt from this exploration of earlier funding policies and practice?

Both the social security and dowry systems concentrated their resources on funding accommodation and associated on-site services rather than all the elements of a comprehensive care package required by people with long-term mental health problems. This is perhaps less surprising in the case of social security benefits which are not designed solely for community care clients but intended to support all members of the population who do not have sufficient income from other sources. However, the intervening years have seen little achieved to alter the relationship between disability and poverty, to improve work incentives for people reliant on social security benefits, or to encourage a real increase in the level of benefit payments. Similarly, many dowry operational statements tied the transfer of resources to accommodation placements with little recognition of the need to fund, at the organisational or individual level, the myriad of other services used by former psychiatric hospital in-patients.

There have been some moves forward in recognising clients' full service needs. With the introduction of the internal market, the principles underlying dowry mechanism have not disappeared. Health service guidelines (HSG(92)43) state that prior agreements on dowry payments should remain unchanged and be honoured by both district and local authorities emphasising that dowry payments should be set at a realistic level to meet the *total* costs of community care taking account of

> ex-patients' own resources, including available social security benefits, and the contribution that local authorities may be expected to make, bearing in mind the new arrangements and the transfer of funds from the Department of Social Security in April 1993 (para. 9)

The transfer to social services departments from April 1993 of a sum equivalent to the likely future demand for the care element of social security funded residential care carried with it an explicit requirement to assess clients' needs. As the preference is to maintain people in their own homes, the assessment should cover the full range of service needs but as they are often undertaken by social services representatives there is less interest in including say, short in-patient admissions or GP care. Where admission to residential care is deemed to be the most appropriate course of action, this is often seen as a full and complete response, ignoring requirements for the types of off-site services found to be used by the research sample members (see section 8.2). However, some residential care providers are being charged for their residents' use of off-site services (or themselves purchase a certain level of input from say, psychiatrists) and therefore explicitly include these costs in their pricing structure. The first lesson, therefore, is that the assessment and care management arrangements for people with mental health problems should be linked closely to the care programming arrangements (which are more likely to be health services based, see chapter 2) to encourage a comprehensive service response for individuals which makes the best use of the funding sources available.

The second lesson focuses on the need for stability in community care funding as a prerequisite of maintaining quality of care. Examples of the effects of shifts in social security benefit regulations were given in section 8.3 where heavy reliance on this system meant incremental reductions in the service's income over time. For dowries, Annex A of the 1992 guidelines clearly places the responsibility to fund long-stay patients' transfer into the community with the health authority and states that new dowry agreements between districts and local authorities (or voluntary organisations) must clarify current *and* future responsibilities for providing and meeting the care costs (para. 8). Although recognising the possibility of increasing costs in the future this statement still leaves scope for considerable variation in implementation and few assurances for non-health sector organisations. Factors to reduce instability may be found in market mechanisms where the contracting process ensures clear specification of what can be provided and what is purchased. However, as described in chapter 2, even with accompanying monitoring and review procedures, contracts will not resolve all problems raised. Service and price agreements lasting for more than one year may enhance provider accountability to purchasers (Ham, 1995).

Third, it is also important that financial incentives run in parallel with each other and with policy intentions. For example, if health authorities reduce the value of a dowry by the maximum amount social security benefit that could be claimed this will create (or perpetuate) incentives to provide only particular models of care, reducing the diversity of services available to meet the multiplicity of clients' needs. Ring-fencing budgets means there are identifiable resources to meet specified community care responsibilities and if these budgets are pooled across health and social care purchasing bodies it will reduce the incentives for shifting costs to another agency's budget. In addition, pooled budgets will encourage identification of the full cost implications of care models highlighting those which are more expensive overall despite 'costing' little to just one agency.

The final lesson is that without dowries or social security benefits, development of community-based services for former long-stay psychiatric hospital patients would have been much slower. The considerable variation in funding and provision of community care across the country makes generalisations difficult; the local philosophy of service provision, resource constraints, user preferences and numerous other factors exert an influence on the shape of community care. However, both social security entitlements and dowries should still be seen as important sources of 'new' money and continue to provide financial incentives to reduce dependence on long-stay psychiatric hospital services.

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PART IV CONCLUSION

CHAPTER 9

CONCLUSIONS AND OUTSTANDING TASKS

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CONCLUSIONS AND OUTSTANDING TASKS

9.1 BACKGROUND

Central to this thesis has been an exploration of community-based services for people with mental health problems, particularly people who have been long-stay hospital in-patients.

The early chapters traced the development of mental health policy and service provision in the last 150 years and the more recent demand for, and supply of, cost data. Until the introduction of the National Health Service in 1947, cost and care issues were closely tied through fee-for-service payments or Poor Law strictures. Thereafter, the relationship became more tenuous as the country's economy grew and the new NHS ensured that most treatment was provided free at the point of use. More services provided by social services departments could be charged for, but in general, money for all public sector services became an issue for finance personnel, removed from clinicians and other professionals providing care.

The last 10 years or so has seen the return of closer links between costs and service provision. Since the 1970s, the government's desire to limit public expenditure has played a large role in UK politics and, guided by successive Conservative governments, a market economy has been introduced in the public sector which is linked to a number of aims, including the pursuit of greater efficiency. Questions about how health and social care money is spent, and what it buys, have led to increasing demands for cost information which the extant financial processes have found difficult to meet. The last two decades have also seen the ascent of health economics in the UK, starting with the application of economics to somatic health care issues. By the late 1980s, UK research into *mental* health economics was gaining momentum. Although many people saw the discipline as being synonymous with cost-cutting exercises, the central tenet of economic evaluation - the study of resource allocation under conditions of scarcity - makes the timing less surprising.

Six broad evaluative questions were posed in chapter 2 and have been addressed throughout this thesis by evaluation of available cost and resource information, consideration of the role of research in filling some of the information gaps, and examination of the ways in which research results and findings can inform mental health policy and practice.

This final chapter summarises some of the findings presented in this thesis and their usefulness to decision-makers, and also points to some unresolved research problems.

9.2 WHAT DO CARE SERVICES COST?

Calculating costs is an activity that has long been associated with health economics, and still tends to dominate the thinking of clinicians when they consider an economic component for their research. Chapter 4 provided a detailed model for costing services, based on economic principles, and outlined a standardised approach to costing services which advocates comprehensiveness in terms of both the resources to be costed and the elements to be included when valuing those resource inputs. Service costs can be explored at a number of levels. For example, the information on national levels of specialist mental health service provision (chapter 1) could be translated into cost information using this standardised methodology, and such data are often used in building up pictures of the cost of mental illness.

Chapter 5 demonstrates the techniques at the programme- or service-level by detailing the calculations undertaken to cost the Domus residential care facilities and the care provided by the innovative Maudsley Outreach Support and Treatment team. Such data are vital to purchasers and providers alike. One assistant director of social services stated:

> there were two reasons for wanting to bring our costs more sharply into focus. The first was to ensure that purchasers (care managers, their team and senior managers) began to make serious comparisons between the costs they were paying for in-house services and those paid to the independent sector providers. The second was to begin to create a much greater appreciation,

> indeed a passion, about costs in the various levels of provider management ... (which is) ... vital for survival (Claridge, 1993, p49).

Producing a 'price list' each time that service costing data are required is expensive in terms of researcher time, and there are many research projects where the economic component is such that broader service costs are sufficient or even desirable. Moreover, in the world of policy and practice, there are many situations where local purchasers and providers want to compare their costs against a national standard, or decision-makers want to examine the national cost implications of a particular policy. The recent improvements to routinely compiled data-sets go some way to meeting these needs (see chapter 2). One research-based development undertaken by staff at the Personal Social Services Research Unit at Kent and the Centre for Health Economics at York has been to develop the costs work presented in Chapter 4 and Appendix B to compile nationally applicable unit costs lists for some 40 health and social care services (see, for example, Netten and Dennett, 1995).

9.3 CARE PACKAGES: THEIR COMPONENTS AND COSTS

The demand for client-level costs data is also increasing as the implementation of care management and care programming becomes more widespread in the coordination of care for people with mental health problems (chapter 2). These processes require the identification and valuation of the components of individual clients' care packages. Chapter 3 introduced an instrument with which the components of care packages can be recorded. The *Client Service Receipt Interview* (CSRI) is primarily a research tool, designed to collect information on the wide range of services used by people with mental health and other problems (see chapters 5 and 6).

The CSRI, however, is not a static instrument. Not only does the emphasis of the questions change according to the demands of any specific research context, but it has been refined and developed over time. For example, more recent versions have been called the *Client Service Receipt Inventory*, to highlight the fact that the required data may have to be garnered from a number of different sources. One version currently in use is based on a 'reduced list' of services identified as contributing more than 90 per cent to the total costs of care in retrospective analyses of a number of costs-related data sets (Knapp and Beecham, 1993). This approach may prove particularly useful in cross-national studies. Similarly, it may be possible to reduce the number of service domains if, in a randomised trial design, the equivalence of some service utilisation can be guaranteed (Burns et al., 1993). A further development has been to include a series of questions to identify informal care inputs and out-of-pocket expenses or income to household members which stem from another's mental illness (Beecham, 1995).

An instrument such as the *Client Service Receipt Interview* should have only a limited shelf-life: care managers, care programmers and keyworkers should routinely record these data to ensure clients' care is appropriately provided and managed. Ideally, care plans would record receipt of *all* services, even where traditional agency boundaries are crossed, as knowledge about the full service configurations which comprise care packages is vital if peoples' many and diverse needs are to be met and their welfare improved. The *Client Service Receipt Interview* stands as a blue-print for the development of such records. It has the virtue of identifying receipt of formal services as well as items relating to income, housing, employment and informal care. Records based on the design of the CSRI would not only make costs research easier, but also would allow responses to these more fundamental needs to be monitored.

Of course, the costs of setting-up systems to record routinely comprehensive service receipt data may be perceived to outweigh the likely benefits, and many extant systems focus on just one particular sector, or taker a broader approach to recording receipt of particular service types than is ideal (Kovess, 1996; Amaddeo et al., 1996). Designed for a fully computerised recording system and with clinicians' needs in mind, the new Mental Health Data Set for the UK, concentrates on health sector resource use for the purchaser and Department of Health data returns but takes a more comprehensive approach for the case review data set (Glover, 1996).

The data presented in this thesis show use of community care services and the associated costs from a number of research studies. Detailed information on the service components of care packages can aid commissioning of mental health care. Community-based mental health care comprises a wide range of activities and services, many of which are the responsibility of the health sector, but social services departments and voluntary and private organisations all play an important provider role. Community-based care is not a cheap way of providing support: the average community care cost for people leaving Friern and Claybury hospitals, for example, was calculated at £26,200 per year (1992-93 prices). Data such as these, based on care packages that are known to be effective, can inform care management budget estimates for individuals. Moreover, when combined with the number of people requiring certain services they can inform macro-level commissioning budgets for mental health services and help ensure contracting arrangements extend across all services required.

9.4 COSTS AND THE BROADER EVALUATION OF MENTAL HEALTH CARE

Although costs and service receipt data are interesting in their own right, they also provide the basis for gaining deeper insights into mental health care: What level of resources do people with mental health problems require? What does expenditure on services produce? Psychiatric research has long explored the effectiveness of interventions, often using a randomised controlled trial (RCT; the 'gold standard' in clinical research). Properly carried out with a large enough sample, the RCT design aims to distribute any confounding factors evenly between the groups of study members, allowing the effects of the 'experimental' intervention to be isolated. But, as discussed in chapter 3 and illustrated in chapters 5, 6 and 7, useful policy- and practice-relevant information can, with care, be obtained from less-than-ideal designs.

Economic theory can provide methodologies within which the relative effects and costs of interventions can be measured, and economists have analytic techniques to offer which aid interrogation of the data. The modes of economic analysis are well-established; cost-effectiveness and cost-benefit analyses have long-standing pedigrees and cost-utility analysis, although still requiring a considerable amount of developmental work, provides an exciting way forward (see chapter 3). However, the application of these modes of analysis to mental health care is relatively recent and some methodological and technical issues are not fully resolved. Mental health economists need to develop techniques with which to estimate the sample size required to capture significant or meaningful cost differences (Drummond and O'Brien, 1993) and incorporating information on the *clinical*, rather than *statistical* effectiveness (Deyo and Patrick, 1995) will be an important component of cost analyses in the future.

If research design provides an evaluative model, and economics provides the techniques for analysis, the *production of welfare* supports these by providing an overarching framework within which to locate the multi-disciplinary arguments that may be evoked in any evaluation of mental health care; including psychiatry, psychology, social policy, social work and sociology. Moreover, it allows a number of different perspectives to be incorporated: practitioners, managers, purchasers and service users all have relevant but different viewpoints. The production of welfare model provides a means of structuring the research, can help explain, justify and clarify the reasons why certain data are collected, and why particular analyses are undertaken. It can also help interpret the results sensibly (p3.7).

It is rare that the inclusion of an economic component in mental health research will radically alter the design of a project, although ideally, economists should be involved right from the design stage of any research project. Indeed, many techniques developed by health economists not only provide improved measures of cost but may enhance outcome measurement. Furthermore, by exploring both costs and benefits, and the associations between them, an economic evaluation can intensify the usefulness of research results to policy-makers and practitioners alike.

9.5 PREDICTING RESOURCE REQUIREMENTS

Data that allow resource requirements to be predicted would be of considerable benefit to mental health care purchasers and commissioners. To generalise from research studies means that sufficient sample sizes should have been included and that the analyses are robust. Moreover, costs results should only be translated to similar groups of people, or contexts (like-with-like comparisons). Accurate estimates of future resource requirements can best be made from research data which relates to examples of the effective implementation of particular policies.

Chapters 6 and 7 explored the data from the economic evaluation of psychiatric reprovision in the (then) North East Thames region (NETRHA). The service receipt data for people who have already moved can help plan likely service requirements as other long-stay hospitals close. By using information on the number of former patients who required support from particular service types the necessary number of, say, accommodation placements or community psychiatric nurses can be planned in advance (chapter 6).

Clients' clinical and other characteristics certainly play a part in helping clinicians and other professionals decide what level of services is required. It is reasonable to expect, therefore, that such characteristics will be associated with the costs of support. In the NETRHA study, multivariate analysis was used to examine what could account for the 12-fold variation in the costs of supporting people in the community using data on the sample members' needs and characteristics as measured *before* they left hospital. Costs were found to be sensitive to an number of clinical, behavioral and socio-demographic measures. The results of such analyses tell us why *individual* costs vary - helping to isolate the factors which raise or lower costs. The explanatory factors were used as *cost predictors* to estimate the resources required to provide community care for all long-stay residents of Friern and Claybury hospitals.

This client-level, multivariate modelling can also inform decision-making at a broader level. Extrapolation of the results from the Friern and Claybury study to less comprehensive, routinely collected data-sets allowed estimates to be made of the costs of providing community-based care for all long-stay psychiatric hospital residents in the North East Thames region, and similar estimates to be made for the whole of England (Beecham et al., 1994; Knapp et al., 1992).

A number of researchers in the US and the UK have explored the potential of diagnostic-related or health-care resource groups but found them to be poor predictors of either cost or service utilisation (see McCrone and Strathdee, 1994, for a summary). Explorations of cost variations at the individual level appear to be more successful. Moreover, with sufficient data (in terms of sample sizes, conditions considered and level of detail collected) they can be used to create case- (or characteristic-) mix groups which will have much stronger cost-predictive powers than other categorisations and can help target resources on needs-related groups.

Findings from such analyses, therefore, can help estimate the likely size of the budget required to meet specific policy initiatives; information which is crucial to the medium- and long-term planning of mental health care. Such findings also provide a better information base for resource allocation *within* client group budgets, data which has particular relevance for purchasers.

9.6 INTEGRATING COSTS AND OUTCOMES DATA

The design of many psychiatric evaluations allows a comparison of the effects of alternative treatment or delivery modes. Inclusion of an economic component allows the costs *and* benefits of alternative courses of action to be compared. In Chapter 5, two small cost studies were described in some detail. Set within a cost-effectiveness framework, each ran in parallel with a broader outcomes study (although no at the time of writing, little data were available concerning the client-level outcomes for users of the Maudsley Outreach Support and Treatment Team). The Domus service was found to be more costly than hospital care. If only the cost data were available, purchasers would be unlikely to contract the new service. By setting the costs data in the context of the wider study it was, however, possible to show that the increase in resource inputs was accompanied by improvements in the welfare of the 24 residents. This research evidence was used to inform policy and practice; three more Domus homes were opened by the end of 1994 and two more were to be opened in 1995 (Murphy and McDonald, 1994).

A simple comparison of costs and outcomes was also presented for the NETRHA study. Community care was found to be less expensive than hospital care. The parallel outcome analysis showed that the 'leaver' group had fared no worse, and along some dimensions slightly better, than those people who had remained in hospital. Community care, therefore, was the more cost-effective option as similar outcomes were produced at less cost.

Multivariate analysis was also used to examine the links between costs and outcomes at the individual and programme levels. The analyses revealed associations between the costs and outcomes as calculated for each study member along a number of clinical, behavioral and social dimensions. Using the resulting equation to standardise for client characteristics and outcomes, it was possible to explore *which* arrangements were more cost-effective and to address another policy-relevant question: where, within the mixed economy, should care services be located?

The empirical results presented in chapter 7 leave a number of questions unanswered. What, for example, was the direction of causality of the associations revealed between care package costs and changes in clients' welfare? What were the specific elements within accommodation types, or within the managing agency, which promoted the cost-effectiveness differences? Developing measures to describe the care system, the components of the 'black box' of a mental health service, and to specify the interventions used is one challenge (Burns and Priebe, 1996; de Jong, 1993). Incorporating these data into costs analyses is another.

9.7 DO FINANCING MECHANISMS PROVIDE INCENTIVES?

Chapter 8 examined the relationships within the mixed economy of care between the provision of services in the late 1980s and their funding. The chapter focused on two important income sources - social security benefit entitlements and dowries.

The social security budget was found to be an important income source for community-based mental health care, particularly for accommodation-related services. For example, health authorities saw social security benefits as an extra source of finance, accessible by developing consortia arrangements with voluntary sector organisations. Thus, one spin-off from the 'perverse incentive' presented by the availability of the boarders' allowances, was to promote greater diversity in service provision; the voluntary sector is characterised by numerous organisations, often with different care philosophies, and frequently providing quite different models of care. Consortia arrangements also allowed health authorities to retain a modicum of control over the services which gave them an incentive to supply extra finance, perhaps for building work or to cover the extra revenue costs where higher levels of care were required than could be funded through clients' social security entitlements.

Social security entitlements also gave clients some personal resources but the disjunction between allowable earnings and the regulations governing payment for accommodation and care effectively prevented people from taking up any paid work to support themselves. Moreover, although the benefit system guaranteed people an income, the personal allowance levels were (and still are) low, thus putting further barriers in place to clients' full participation in community life.

In line with the successive governments policy to discourage the use of long-stay hospital services, dowries also fulfilled two conflicting functions. On the one hand they funded the development of community-based services; on the other, they provided a clearly defined cash-limit for that expenditure. Some 'receiving' district health authorities wanted to retain control of these resources and provided services themselves. Others districts used the dowry money as an incentive for non-health sector organisations to provide care, perhaps, 'purchasing' places in psychiatric hostels managed by the social services department. For service providers a different set of incentives came into play. For example, constraining the dowry to accommodation placements was a disincentive to providing any off-site services that residents might have required. On the positive side, in placements such as adult foster care, carers could be given 'top-up' payments for providing particular forms of support.

During the late 1980s, the availability of social security and dowry money provided an incentive to develop community-based services. However, differential agency access to these resources influenced the way in which services developed. Since the work reported in chapter 8 was undertaken, the community care reforms have changed the way these resources are disbursed. First, resources equivalent to the care element of the social security boarders' allowances have been re-routed through social services departments. Second, the development of joint commissioning strategies and pooled health and social care budgets will probably remove the 'ring-fencing' from the resources released from long-stay hospitals, but will also reduce incentives to shunt costs to other agencies. However, as yet there are insufficient monitoring devices in place to be sure that the new set of funding arrangements will create financial incentives that work in harmony and to the benefit of people with mental health problems.

9.8 FINALE

In its exploration of community-based mental health care, this thesis has illustrated 'achievement to date' rather than the attainment of some final goal. This chapter has pointed to some unresolved research problems but there are a considerable number of areas in which more research is required.

- More information is required about how market conditions and the related financial incentives influence service development, what the 'mixed economy of mental health care' looks like in any given locale, and what the impact is on clients of different 'mixed economy' profiles.

- There is insufficient information on what services are available, what interventions or support they provide, and who uses which services. Without these data, the future development of community mental health services cannot be monitored.
- What types of information are used by purchasers and providers in negotiating contracts for mental health care? What other data do they require?
- Given the changes occurring to routine national or local data-collections, how best can researchers use these data to improve the information base on the cost implications of mental health care. Ideally, the development of such systems should involve researchers at an early date, but access should be negotiated carefully.
- In costing services, considerable work still needs to be done - particularly in the multi-faceted area of day treatment and day care (including work-related schemes), and in valuing informal care.
- More needs to be known more about the relationships between costs, prices and charges in both the public and independent sectors.
- And finally, more economic evaluations are required to improve the evidence-base for mental health care provision. Decision-makers need to know which services are cost-effective options for which groups of people with which mental health needs.

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APPENDICES

APPENDIX A

THE CLIENT SERVICE RECEIPT INTERVIEW

APPENDIX B

UNIT COSTS OF HEALTH AND SOCIAL CARE SERVICES

APPENDIX C

THE SERVICE ENTRY AND NUMERATION FORM

APPENDIX D

INDICATIVE CARE PACKAGES AND COSTS

APPENDIX A
THE CSRI

The *Client Service Receipt Interview* provides a format in which retrospective information on service utilisation can be collected in a way that will allow the total costs of care package to be calculated. The questions are largely structured and the design specifically includes blank spaces on which additional comments can be noted. A series of 'prompt cards' is attached, containing indicative lists of accommodation facilities, service types and social security benefits.

This version was developed for the study of psychiatric reprovision in the North East Thames region.

NORTH EAST THAMES REGIONAL HEALTH AUTHORITY

Client Service Receipt Interview (3)

To be completed by the research team

BACKGROUND INFORMATION

1.1 Name of Client... Client No...

1.2 Date form completed...

1.3 Name of Informant...

1.4 Title of Job...

1.5 Do you have a professional qualification?

IF YES: Specify.

CLIENT INFORMATION (Source: TAPS PDPH Schedule)

2.1 Date of birth...

2.2 Male / Female. (CIRCLE ANSWER) M F

2.3 Is s/he part of the Reprovision Scheme? (CIRCLE ANSWER) Yes No

2.4 Date of admission to hospital prior to reprovision...

2.5 Date of discharge from hospital for reprovision...

2.6 Number of admissions since discharge for reprovision...

2.7 Time spent in hospital since discharge for reprovision

Hospital	Length of Stay (days)

2.8 Is s/he registered with a GP Yes No

IF YES: Describe role of GP

2.9 Describe client's medication (NB note also if injections are given)

ACCOMMODATION STATUS

3.1 Client's present address
Name of establishment...
No. and road or street...
Borough and District...

3.2 Approximate date s/he moved here...

3.3 a) What type of establishment is this?
(SEE CARD 3.3)

b) What agency is the establishment managed by?
(CIRCLE NUMBER OF RESPONSE)

<u>Agency</u>	<u>Name</u> (eg Redbridge)	
District Health Authority		1
Social Services Department		2
Voluntary Organization		3
Private Organisation		4
Other (specify)		5

c) How many clients live in this establishment? ________________

3.4 a) In total how many care staff work in this establishment?

Full-Time____________Part-Time__________Volunteer___________

b) How many care staff are usually on duty at one time?
(including Volunteers)

Night-Time____________Day Time__________

c) Are the night staff -
(CIRCLE NUMBER OF RESPONSE)

Waking	1
Sleeping-In	2
On Call	3
Other	4
Not Provided	5

d) During the day (6am to midnight), how many hours are covered by care staff?
(0 - 18 hours)

Weekdays_____________ Weekends__________

e) How many domestic staff work in this establishment? (hours, no. wte)

____

3.5 Tenure of Client - (CIRCLE NUMBER OF RESPONSE)

Council Rent	1
Privately Rented	2
Board and Lodging	3
Housing Association	4
Owner/Occupied	5
Residential/Nursing Home	6
Adult Fostering	7
Not Applicable	8

3.6 a) Amount s/he pays for accommodation (and care) per week____________

b) What services does this payment cover?

c) Source of payment:

Own resources	1
DSS	2
Both	3

d) Does client receive housing benefit or rate reduction?

Yes
No

3.7 Is the accommodation:
(CIRCLE NUMBER OF RESPONSE)

Furnished	1
Unfurnished	2

3.8 What facilities are available to the client?

FACILITY	WHETHER AVAILABLE	NUMBER THAT SHARE (incl client)
Bedroom/Bedsit		
Living-room		
Bathroom		
Separate toilet		
Laundry		
Kitchen		
Dining room		
Other (specify)		
Other (specify)		

3.9 Has s/he lived anywhere else over the last twelve months, <u>excluding</u> short-term hospital stays?
(CIRCLE ANSWER)

Yes
No

<u>IF YES</u>: Describe briefly.

FINANCES

4.1 Is s/he employed (excluding industrial therapy) (CIRCLE ANSWER) Yes No

If YES

a) What type of job is s/he doing...

b) When did s/he start this job...

c) Approximately how much does s/he earn per week...

4.2 a) Does s/he receive any Social Security Benefits (SEE CARD 4.2) (CIRCLE ANSWER) Yes No

Benefit	Amount per Week	Benefit	Amount per Week

Total Benefit per week =

b) Has s/he received any social fund loans/grants or community care grants in the last twelve months. Yes No

IF YES: Describe briefly.

4.3 Do you (carer, staff, facility) receive any income/benefits on the clients behalf or in respect of his/her care (eg "top up payment", attendance allowance) (CIRCLE ANSWER) Yes No

Source of Income	Amount per Week	Source of Income	Amount per Week

4.4 Has s/he any other sources of income? (CIRCLE ANSWER) Yes No

IF YES: Approximately how much in total per week
Describe source:

4.5 Has s/he have any regular outgoings (excluding housing cost) eg HP, repayment of fines or debts, community charge (poll tax). (CIRCLE ANSWER) Yes No

IF YES: Approximately how much in total per week
Describe outgoing:

5.1 Has s/he used any of these services over the last month? (SEE CARD 5.1) (CIRCLE ANSWER)

Yes
No

Name of Establishment	Type and Providing Agency (1)	Professional Involvement	Frequency of Attendance	Duration of Attendance	Average Time per Week	Actual hours Attended	Travel Mode/ Time Spent (2)	Amount of Charge Made

1. Agency - Name of DHA, SSD, Voluntary, Private organisation or Other - specify
2. Mode of Travel - Transport provided, Public Transport, Taxi, Other - specify

5.2 Has s/he used any of these services over the last twelve months, not including those already mentioned? (SEE CARD 5.1) (CIRCLE ANSWER)

Yes
No

Name of Establishment	Type and Providing Agency (1)	Professional Involvement	Period of Use (weeks)	Frequency of Attendance	Duration of Attendance	Average Time per Week	Actual Hours Attended	Travel - Mode/ Time Spent (2)	Amount of Charge Made

1. Agency - Name of DHA, SSD, Voluntary, Private Organization or Other - specify
2. Mode of Travel - Transport provided, Public Transport, Taxi, Other - specify

6.1	Has s/he received any domiciliary services during the last month? (SEE CARD 6.1) (CIRCLE ANSWER)	Yes No

Service	Who Service is Provided by (1)	Frequency of Visit	Duration of Visit	Average Time per Week	Total Number Sharing Service	Amount of Charge Made

1. Service Provided by - Name of DHA, SSD, Voluntary, Private Organization, or Other - specify

6.2 Has s/he received any of these services during the last twelve months, not including those already mentioned? (SEE CARD 6.1) (CIRCLE ANSWER)

Yes

No

Service	Who Service is Provided by (1)	Period of Use (weeks)	Frequency of Visit	Duration of Visit	Average Time per Week	Total Number Sharing Service	Amount of Charge Made

1. Service Provided by - Name of DHA, SSD, Voluntary, Private or Other - specify

6.3 Has s/he any aids or adaptations for his/her own use? (SEE Card 6.3) (CIRCLE ANSWER)

Yes
No

Description	Supplier	Paid for by	Cost

6.4 Do any friends/neighbours/relatives visit the clients, or are visited by the client on a regular basis. (CIRCLE ANSWER)

Yes
No

If <u>YES</u>:

Relationship to client	Frequency of Visits	Duration of Visits	Average Time per Week	Activity (see below)

(Activities such as shopping, housework, providing transport, personal care etc.).

6.5 How many hours have you, as the principal carer, spent with the client (inclusive of travelling time):

a) Over the last month...

b) Over the last twelve months...

6.6 How many hours have you spent on other activities related to him/her: (eg meetings, finding accommodation, telephone calls, administration, record keeping, visiting relatives, or arranging services).

a) Over the last month...

b) Over the last twelve months...

<u>NB</u>: Please ensure information collected at questions 6.5 and 6.6 is <u>not</u> also recorded on the service receipt matrix.

6.7 In working with this client has there been any above average administrative or managerial involvement: (CIRCLE ANSWER)

Yes
No

If YES:

a) At what level...

b) Approximately how much time...

6.8 Having described the services that your client receives how satisfied are you with the availability and quality of these provisions?
(SEE CARD 6.8) (CIRCLE APPROPRIATE RESPONSE)

a) Psychiatrist...					
	Availability	1	2	3	4
	Quality of Contact	1	2	3	4
b) Community Psychiatric Nurse...					
	Availability	1	2	3	4
	Quality of Contact	1	2	3	4
c) Field Social Worker...					
	Availability	1	2	3	4
	Quality of Contact	1	2	3	4
d) General Practitioner...					
	Availability	1	2	3	4
	Quality of Contact	1	2	3	4
e) Day Activities...					
	Availability	1	2	3	4
	Quality of Contact	1	2	3	4
f) Other - Specify...					
	Availability	1	2	3	4
	Quality of Contact	1	2	3	4
g) Other - Specify...					
	Availability	1	2	3	4
	Quality of Contact	1	2	3	4

6.9 Are there any services which s/he is not receiving that you think are needed? (CIRCLE ANSWER)

Yes
No

If YES: Specify

THANK YOU

CARD 3.3

General Hospital - Medical or Psychiatric Unit
Psychiatric Hospital
Nursing Home
Residential Home
Hostel
Staffed Group Home
Sheltered Housing Scheme
Specialised Sheltered Housing
Unstaffed Group Home
Special Board and Lodging
Ordinary Board and Lodging
Adult Fostering
Family Home - Parents / Spouse
Independent Accommodation (eg council flat)
Other - Specify

CARD 4.2

Unemployment benefit
Sickness benefit
Invalidity benefit
Retirement pension
Resettlement allowance
Industrial injuries scheme
War disablement allowance
Income support
Mobility allowance
Severe disablement allowance
Attendance allowance (Invalid care allowance)
Housing benefit / Rent or rate rebate
Community charge benefit
Social fund: grants / loans
Community care grants
Financial Aid for telephone, television, laundry, heating, clothing, furniture, travel etc.
Free prescriptions, glasses, dental care, hearing aids.

CARD 5.1

General Hospital - out patients, day patient

Psychiatric Hospital - out patients, day hospital

Day Centre

Training Centre / Sheltered work

Workshop / Industrial Therapy

Drop-In facility

Social Club

Lunch Club

General Practitioner - psychiatric / general medical care

Chiropodist

Policy / Courts / Probation Service

Dental / Optical / Audiology Services

Employment Agency - including Job Centre

Educational facilities - further or adult education

Holidays/outings

Other - including leisure activities

CARD 6.1

Psychiatrist / psychologist

Health visitor

District nurse / nursing assistance

Visits by general practitioner - psychiatric or general medical care

Community psychiatric nurse

Field social worker

Adult fostering officer

Chiropodist

Home help service

Private domestic help

Meals on wheels

Homeworker scheme

Private nursing care

Social security officer

Care attendant

Visiting or befriender schemes

Other - Specify

CARD 6.3

For kitchen - eg tap extension

For bathroom - eg hand rails, special seat, hoist

For bedroom/sitting-room - eg hoist, bedrails, chair

For outside of house - eg ramp for wheelchair

For personal mobility - eg zimmer frame, wheelchair

For personal care - eg extension arm, aids for partially sighted, incontinence supplies

CARD 6.8

	AVAILABILITY OF SERVICE		QUALITY OF CONTACT
1.	Usually sufficient	1.	Usually helpful
2.	Sometimes insufficient	2.	Sometimes unhelpful
3.	Usually inadequate	3.	Generally unhelpful
4.	Service not required	4.	Not applicable

APPENDIX B

UNIT COSTS OF HEALTH AND SOCIAL CARE SERVICES, 1989-90[1]

B.1 INTRODUCTION

The methodology and unit costs described in this paper build on work undertaken to cost services used by clients in the evaluation of the Care in the Community initiative and in the early North East Thames Regional Health Authority research (see chapter 6). These data were based on 1986-87 prices and although general inflators can be used to adjust the unit costs, the changing world of community care may well have effected the relative costs of individual services. This list, therefore, reflects any such changes and also allows a more appropriate inflation factor to be calculated for each service type, which can then be applied to the earlier costs work. A list of 'default' capital cost estimates for domestic and specialised accommodation, and for day care facilities, has also been included. Chapter 4 sets out the methodology for this work and a brief discussion of the 'pricing' activities can be found below. More detailed information can be found in

> Knapp, M., Beecham, J. and Allen, C. (1989) *The methodology for costing community and hospital services used by clients in the care in the community demonstration programme*, Discussion Paper 647, Personal Social Services Research Unit, University of Kent at Canterbury.

To maintain consistency with the previous work the same methodology has been employed for many service (unit) costs, and for other services it has been adapted to fit the data currently available. However, even though the basic methodology is sound there are still areas where improvements in the unit costs should be sought. The data used for these unit cost calculations, for example, do not allow accurate estimation of allocations of office space and their valuation. Similarly, more work is needed to examine how best to use the Körner (health) statistics on hospitals, staffing and other service activity data. There are few resources to undertake costs work of this nature

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[1] This paper was originally filed as Beecham, J. (1992) *Costing Services: an up-date*, Discussion Paper 844, Personal Social Services Research Unit, University of Kent at Canterbury.

and the inaccessibility of many data makes a demanding task even more difficult. However, making clear what activities have, and have not, been undertaken to estimate a particular service cost allows replication thus increasing the scope and validity of the exercise.

B.2 NATIONAL HEALTH SERVICE

B.2.1 Hospital services

Hospital costs should be individually calculated from the hospital or regional expenditure accounts and, where necessary, disaggregated to ward level (Knapp et al., 1989). To calculate the costs of hospital services, expenditure on the *direct treatment* elements, such as nursing, diagnostic departments and catering, were allocated according to their input into different services. (The level of nursing on wards, for example, is higher than in the out-patients departments and catering services are not provided at out-patient services.) *General services*, such as the unit manager, maintenance or power and light, were allocated according to the proportion of in-patient-day equivalents. Capital costs and those accruing to other agencies have been included in the total cost.

Some research studies will require nationally applicable hospital costs data and estimates have been included in the table below. These data should be used with caution as there is a considerable cost variation between hospitals, as evidenced by the local data presented in the table. Data from the Summary Specialty Costs for 1989-90 were used but as they only included expenditure on direct treatment services, additional data were necessary. A percentage of the direct treatment costs was added for each hospital type to reflect the costs of general (non-direct) treatment services: 30.7 per cent for acute hospitals; 47.0 per cent for psychiatric hospitals; and 49.4 per cent for mental handicap hospitals. These figures were calculated as the average proportion of direct and non-direct services over the annual (hospital) accounts for five Regional Health Authorities where the data were easily obtainable. The revenue costs were multiplied by 1.15 to include the capital cost implications (Knapp and Beecham, 1990). Note that these adjustments mean the costs reported here are higher than those presented to the House of Commons Health Committee (DH, 1991).

Table B.1 Hospital costs, 1989-90

Hospital	In-patient Day (£)	Day patient Attend' (£)	Out-patient Attend' (£)	A & E[1] Attend' (£)
General				
Lewisham	298.15	-	30.98	33.46
Greenwich District	129.43	38.75	28.30	17.15
Hither Green	107.28	43.35	53.93	-
NATIONAL	173.08	86.54	43.33	43.33
Psychiatric				
Greenwich Memorial	91.80	-	17.49	-
Rampton Special	116.80	-	-	-
NATIONAL	76.55	38.27	59.51	-
Mental Handicap				
NATIONAL	66.23	33.12	63.31	-

Notes
1. Accident and emergency department

The Summary Speciality Costs data were not compiled in such a way as to allow accurate estimation of department costs. For example, table B.1 shows that the difference between in-patient day and out-patient attendance costs is less than might be expected for the psychiatric and mental handicap (learning difficulty) hospitals. This may be due to the greater intensity of staff available at a short out-patient appointment than during a day spent in a ward but service definitions tend to get blurred at this level of aggregation. Other problems with using the Summary Specialty Costs data of the period are that no information is given on day care and that accident and emergency appointments are listed as a cost per patient day. For the national cost calculations in table B.1, and in the absence of better data, day-attendance costs have been estimated as 50 per cent of in-patient costs and A & E attendances (acute hospital services only) costed as out-patient attendances.

(Subsequent *Unit Costs of Community Care* volumes have given improved estimates: Netten and Smart, 1993; Netten, 1994; Netten and Dennett, 1995.) The work on elderly people with severe cognitive impairment weighted the specialty-plus-general-services costs by the proportion of residents in different hospital types (see Kavanagh et al., 1993; and Schneider et al., 1993).

B.2.2 Peripatetic NHS staff

As described in chapter 4, the costs of peripatetic staff in the health services comprise several elements; pay, regional weighting, employer's national insurance and superannuation contributions, travel, and revenue and capital overheads. The calculations covered the professional groups whose working conditions were laid down in the Whitley Council Professional and Technical Staff (A) category; physiotherapists, occupational therapists, art and music therapists, speech therapists, dieticians, psychologists, and chiropodists.

Pay was calculated at a weighted average salary for the relevant professional or the mid-point of the scale for the grade most likely to have seen the client. The rates of pay for the financial year 1989-90 have been calculated from information provided in the relevant Whitley Council handbook. COHSE also proved to be an invaluable source of information on salary scales and working conditions. London weighting has been added where appropriate using the 1989-90 Whitley Council rates for Inner London, Outer London and Other Zones. As this is a regional allowance a different rate of pay has been calculated for each of the zones (see table B.2).

A percentage was added to the salary information for the employer's national insurance and superannuation contributions. In 1988-89, the percentage contribution was reduced to 10.45 per cent for the national insurance non-contracted-out rate. Although some changes had occurred during the financial year under consideration, the employer's contribution rate remained constant for the salary levels at which these staff members were paid. (The national insurance rates were reduced yet again in 1990-91.) Superannuation contributions were paid at 7.5 per cent giving a total of 17.95 per cent to be added to the salary information.

For travel costs, the methodology described by Knapp et al., (1989) was used, inserting the 1989-90 Whitley Council rates where changes have occurred. It was assumed that the main method of transport was a car and that half the staff were 'regular' or 'essential' users and half were 'standard' or 'casual' users. The mileage figure was multiplied by the mileage allowances and this figure (£1599) was added to the salaries and on-costs. Subsistence allowances were not included, as they are only paid to peripatetic staff who take meals with clients as part of a therapeutic programme. It was assumed this would not apply unless otherwise stated on the *Client Service Receipt Interview* (CSRI; Beecham and Knapp, 1992; and chapter 4).

Most members of staff work from an office base and have clerical or supervisory support. To cover the latter (revenue) overheads a percentage was added based on the ratio of clerical services, personnel, maintenance and general services to the total revenue costs of community health services less the cost of general services (Knapp et al., 1989). For the costs presented below, figures from the four London regions have been used as most of the costing work this list was to be used for was in the London area; 21.12 per cent has been added to the above calculations. As these London-relevant data were only used for the overheads, the over-estimate for the 'other zones' costs will be small.

For capital overheads (offices or clinics), no information was available for 1989-90 so the 1986-87 data were uprated. (In the future, the capital charging mechanism for district health authorities may mean more accurate data is held at the regional level.) The figure was based on the annuitised capital value of hospital buildings (over revenue costs) as valuations for community-based clinics and office space were not available; 16.72 per cent was added to the above calculations (Knapp et al., 1989).

Nurses come under the Nurses and Midwives Functional Council (Whitley Council) and costs for health visitors, district nurses and community psychiatric nurses have been calculated using the methodology set out above. Travel was calculated using the PT(A) assumptions. The 'psychiatric lead' was added to the community psychiatric nurse (CPN) salary before other calculations. This is an annual salary addition paid in recognition of nurses' special skills and 'leads' are also paid for other staff such as specialist geriatric nurses. Working conditions for psychiatrists are covered by the *Review Body Report on Doctors and Dentists Remuneration* (see below).

Table B.2 Costs per minute for NHS professionals

Professional[1]	**Cost per minute**[3]		
	Inner London	**Outer London**	**Other Zones**
Art therapist	26p	25p	23p
Chiropodist	23p	22p	20p
Community psychiatric nurse	29p	28p	26p
Dietician	28p	27p	25p
District nurse	26p	26p	24p
Health visitor	28p	28p	26p
Music therapist	26p	25p	23p
Occupational therapist	24p	23p	21p
Pharmacist	40p	39p	37p
Physiotherapist	24p	23p	21p
Psychiatrist/consultant[2]	61p	60p	58p
Psychologist	30p	29p	28p
Speech therapist	23p	22p	20p

Notes

1. If *not* a hospital out-patient appointment.
2. If domiciliary visit add £39.10, to be allocated between all clients seen.
3. For a domiciliary visit where the time spent travelling is not recorded on the CSRI assume 20 minutes and add this to duration of visit. If a group visit is made, travel time (costs) should be included only once but distributed between all those who received the service.

Inner London allowances are paid to those who work in: Riverside; the part of Parkside that was (prior to 1st April 1988) Paddington and North Kensington; Hampstead; Bloomsbury; Islington; City and Hackney; Tower Hamlets; Lewisham and North Southwark; Camberwell; West Lambeth; the part of Richmond, Twickenham and Roehampton within the LB of Wandsworth; and the part of Merton and Sutton which was (prior to 1st April 1988) part of Wandsworth and East Merton Health District. **Outer London** allowances are paid to those who work in: Hounslow and Spelthorne; Ealing; Newnham; the remaining part of Merton and Sutton; Barnet; the remaining part of Parkside; Harrow; Hillingdon; the part of Barking, Havering and Brentwood within the former GLC boundary; Enfield; Haringey; Redbridge; Waltham Forest; Greenwich; Bexley; Bromley; Croyden; the part of Richmond, Twickenham and Roehampton within the LB of Richmond; and Kingston and Esher. **Other zones** figures should be used where staff work outside these areas.

B.2.3 Other health services

Depot Injections

The *British National Formulary* gives retail prices for all drugs currently available. The prices excluded professional fees and overheads which should be included for drugs bought through a local pharmacy (see above). The average dose over six long-acting tranquilliser drugs has been calculated assuming a twice-monthly injection, at the maximum maintenance dose. This cost includes the cost of the syringe and drugs per week. It is important to ensure that the cost of the medication is *not* included in other services and, if necessary, the cost of professional time (eg. CPN) is added as described above. Note that Crammer and Heine (1991) showed the difference between the prices charged hospitals for drugs and the retail prices.

Long-acting tranquilliser	£3.81 per week.

Aids and Adaptations

The costs of the numerous aids and appliances which clients may use can be calculated from the suppliers' price lists. These costs should be annuitised over their expected life-time and expressed as a weekly cost.

B.3 FAMILY HEALTH SERVICES AUTHORITY

Doctors (including GPs), dentists and some opticians also have their own pay negotiating body and recommendations are printed annually in the *Review Body Report on Doctors and Dentists Remuneration.* These recommendations are usually taken on board when pay is agreed for the professionals which the Report covers.

B.3.1 Dental Services

Parkin and Yule (1985) suggested that most dentists earn more than the target figure as they are paid on a 'fee for service' basis, so although the earlier methodology was followed for costing dental services, the national figure for payments to dentists was used rather than the annual target net income suggested in the *Review Body Report.* The 1988-89 gross cost of dental services was taken from the *Health and Personal Social Services Statistics*, inflated to 1989-90 prices (using the Health Services Earnings Index at 9 per cent), and divided by the number of principals in September 1989 to reach an annual income per dentist of £58,361. Knapp et al. (1989) reported that dentists work 37.5 hours per week for 45 weeks a year and that a surgery appointment lasts 10 minutes and a domiciliary appointment takes 30 minutes. It has been assumed that half the time for a domiciliary appointment is spent travelling.

Charging for dental services is common, but most study members will have very low incomes and any charges will have very often been paid through public funds. However, information on dental care charges given on the CSRI should be used.

An alternative method for costing dental services would be to take the average cost of a course of treatment (£29.21 during 1989-90) and allocate this to anyone who had used the dentist. (The figures in the *Health and Personal Social Services Statistics* refer to treatment cost in any financial year.) However, given that the time periods between interviews for some research projects is less than one year, and that many visits are just for a check-up, the former method is likely to be more accurate.

B.3.2 General Practitioners

Here the essentials of the earlier methodology were used, however, the starting point was not the total gross remuneration of GPs for England but the annual remuneration recommended by the *Review Body Report.* Net average gross remuneration (net remuneration plus practice expenses) for 1989-90 was targeted at £45,671 per annum (19th Report). To this were added the costs of employer's superannuation, ancillary staff, premises, improvements, drugs, and dispensing, by using the values from Knapp et al. (1989) as a percentage of gross remuneration (44.43 per cent). Based on a 37.5 hour working week over 45 weeks each year, a cost per minute of 65.27p was calculated. However, the workload survey in the 21st Report suggested 41 hours per week were spent on General Medical Services work giving a cost of 59.70p per minute. This new figure (based on evidence from GPs) has been used in calculating the per-appointment cost for this unit cost list. The more recent report also suggested that neither time spent with patients nor list size had changed so the earlier data were used (Allen, 1988).

B.3.3 Optician services

Three components have been used to calculate these costs; the cost of a sight-test, the cost of spectacles and the domiciliary visit allowance. Fees payable for a sight-test were quoted in the *Review Body Report* for 1989-90. For instances where the cost of spectacles was *not* entered on the CSRI an estimate has been made as follows. As most clients are on low incomes, the cost of spectacles is likely to have been financed by vouchers available through the Department of Social Security; in 1989-90 these were payable at six rates from £15.50 to £85.00. The mid-point cost (£50.25) should be added to the cost of a sight-test. Approximately 75 percent of sight-tests result in a prescription for spectacles so where it is not known whether spectacles were prescribed the estimated cost should be: .75 x £50.25 = £37.68. The *Review Body Report* suggests that the fee for a domiciliary visit should be £20.00. This amount should be divided by the number of people seen and the costs of the sight test and spectacles added as necessary.

Table B.3 FHSA service costs

Service	Cost
Dentist	
Surgery appointment	£5.76
Domiciliary visit (1 person)	£17.29
Domiciliary visit (more than 1 person)	
Allocate travel between clients seen	£8.65
Allocate service to *each* client seen	£8.64
General Practitioner	
Surgery appointment[1]	£5.55
Domiciliary visit (1 person, 27.1 mins)	£16.17
Domiciliary visit (more than 1 person)	
Allocate travel between clients seen	£8.09
Allocate service to *each* client seen	£8.08
Optician	
Sight test	£8.69
plus actual cost of spectacles from CSRI	
If client bought spectacles but no cost information add	£50.25
If you don't know whether client had spectacles add	£37.68
Domiciliary visit, allocate travel between clients seen	£20.00

Notes

1. Surgery appointment time calculated at 9.3 minutes, including administration and preparation time. If the CSRI records a very different "duration" and this does *not* include waiting time, a more accurate cost based on 59.70 pence per minute should be calculated.

B.4 SOCIAL SERVICES DEPARTMENTS

B.4.1 Social Workers

The methodology followed that for health service professionals. Average salaries were calculated, to which was added London Weighting (also paid in Fringe areas around London). Employer's national insurance contributions (10.45 per cent), superannuation (7.5 per cent plus 4 per cent from public funds), and travel costs were also included. In the absence of more recent information, the overheads were calculated using figures from Knapp et al. (1984); 15 per cent for revenue overheads and 9.76 per cent for the capital cost implications. For hospital-based social workers, the revenue and capital overheads for the health service have been used.

B.4.2 Home Helps

Few clients with mental health problems use the home help service and these costs are likely to contribute little to the total care costs, so only broad cost estimates were calculated. Data from the *CIPFA Personal Social Services (Actuals) 1988-89* are presented in the table below, uprated to 1989-90 prices. Cost per hour was calculated from the average number of hours the service was provided in different areas and the gross expenditure on the service. No capital costs have been added as home helps rarely have an office base. However, the costs of this service can be calculated using a similar methodology to that used for social workers and where many clients are likely to use this service, such as in costing services for elderly people, this more accurate approach should be taken (Netten and Smart, 1993).

Table B.4 Costs per minute for social services staff

Service	**Cost per minute**[1]			
	Inner	**Outer**	**Fringe**[2]	**Other Zones**
Field Social Worker	23p	22p	21p	20p
Hospital Social Worker	21p	19p	19p	18p
Home Help	14p	12p	9p	9p

Notes

1. The costs refer to the areas defined by London Weighting payments.
2. Fringe areas: parts of Berks, Bucks, Essex, Herts, Kent, Surrey and W. Sussex.

B.5 LOCAL EDUCATION AUTHORITY

The *CIPFA Handbook of Education Unit Costs* gives unit costs for different types of educational establishments, including adult education. As with the data on home helps, care should be taken when using these costs as they tend to be aggregated from large amounts of data and therefore are not very accurate (see chapter 2). Again, experience has shown that few clients use education services so this level of accuracy will be appropriate for many studies. Local or facility-specific data should be sought where education services are the focus of the research (see, for example, Beecham and Knapp, 1996).

Capital costs were added using data from the *DES Education Building Project Performance Data Guidelines.* This is a quarterly publication, but it is difficult to obtain back-copies. The document gives cost information on the basic building costs for a variety of projects. Primary school capital costs were calculated from the cost of new buildings, data which were unavailable for other categories of educational establishments. However, for 1989-90 the data showed there was little difference between the costs for new buildings and extensions so these latter costs were used for other establishments. A 6 per cent discount rate was employed over 60 years (see chapter 4). All education establishments are assumed to be open 194 days per year. The unit costs for mainstream schools have been included as some studies focus on care for children or must include the costs of supporting study members' children.

Table B.5 Nationally applicable costs for education establishments

Type of facility	Cost per pupil hour
Nursery/Primary School	£1.11
Secondary School	£1.73
Special Education	£5.23
Adult Education Centres	£1.23
Further Education	£2.68
Higher Education	£3.11

B.6 LAW AND ORDER

B.6.1 Prisons

These data were taken from *Annual Report of the Work of the Prison Service,* which provided a table of net operating costs for all prisons. Capital costs were added, based on the cost of building a prison, suitable annuitised. The figures in the table below may underestimate the costs as it was not clear from the *Annual Report* whether all overheads have been included. More importantly, the type of prison exerts a large influence on costs; prisons which serve the local, rather than national population, tend to be more expensive per inmate. See also Scottish Home and Health Department (1990) for more information.

Table B.6 Examples of the prison costs

Prison	Cost per inmate week
Brixton	£555.12
Pentonville	£412.12
Wandsworth	£332.12
Wormwood Scrubs	£460.12
Holloway	£555.12

B.6.2 Police Cells

Data in the *CIPFA Police Statistics* are not presented in a manner that is useful for this costing exercise so the 1988 revenue costs for an overnight stay were up-rated (Milne, 1988). Capital costs were based on the cost of building a prison in 1989-90, suitably annuitised. Dividing this figure by nine (the number of hours estimated for the length of an overnight stay) allowed the costs of shorter periods in a police cell to be estimated.

Overnight stay	£201.65
Estimated cost per hour	£22.40 (assuming nine hours for an overnight stay)

B.6.3 Police Officer

The *CIPFA Police Statistics 1989-90 (Estimates)* provided information on the net (average) expenditure per operational police officer which includes supervision, administration and all overheads.

City	£0.42p per minute
Metropolitan	£0.35p per minute
Ex-London	£0.29p per minute

B.6.4 Court Appearances

The Economics of Community Service Orders (Knapp et al., 1990) gave a cost per appearance at a Magistrate's Court which included the costs of lawyers, legal aid and police time. This cost has been up-rated from the 1988-89 price base. The evaluation of the Scottish reparation systems has a more detailed methodology (Knapp and Netten, 1992) and see also Crown Prosecution Service (1988).

Cost per appearance	£71.06

B.6.5 Probation Officers

The National Association of Probation Officers provided information on salary scales, London Weighting, and national insurance and superannuation contributions. Other cost elements have been calculated as for local authority employees.

Inner London	£0.25p per minute
Outer London	£0.24p per minute
Fringe*	£0.23p per minute
Other zones	£0.22p per minute

* Fringe areas: parts of Berks, Bucks, Essex, Herts, Kent, Surrey and W. Sussex.

B.7 EMPLOYMENT SERVICES

B.7.1 Job Centres

The *Public Expenditure White Paper* (Cm 1006) gave the total costs of running the Job Centre service and this has been applied to figures for attendance and staff contacts presented in Knapp et al. (1989). The cost of a visit has been calculated on the assumption that clients will use the self-service facility rather than see a member of staff. Capital costs were added at the local authority rate.

Per visit	£1.52

B.7.2 Job Clubs

The *Public Expenditure White Paper* (Cm 1506) gave the cost per job entry. In the absence of data on the drop-out rate, this was assumed to equate to the cost per client on the programme. Capital costs have been added at the local authority rate.

Per client	£424.77 for programme

B.7.3 Disablement Resettlement / Careers Officers

To the average salary has been added employer's national insurance, superannuation, and overheads, as supplied by the Department of Employment in 1988.

DR Officer	£0.18p per minute
Careers Officer	£0.18p per minute

B.7.4 Sheltered Employment

Cm 1006 gave the average cost per worker (client) in different types of facilities, excluding capital and contributions from voluntary bodies. Capital cost levels for special schools have been added. It was assumed that facilities were open for 250 days per annum. Again, facility-specific data should be used where possible.

Remploy	£27.94 per client day
LA Workshops	£29.39 per client day
LA sheltered placement	£16.86 per client day
Vol. run workshops	£22.78 per client day
Vol. sheltered placement	£15.87 per client day

B.8 MISCELLANEOUS SERVICES

B.8.1 Travel

Two rates for private cars have been calculated using information from the Automobile Association (April 1990) on the total cost of running a car. For domestic use, the mid-point capacity of 1401-2001cc at 10,000 miles has been used. For cars used in a group context (for example, where they are owned by a residential home) the higher mileage rate has been assumed to be more appropriate. The rate for travel by taxi is calculated at twice the rate for a private car.

"Individual" car	£0.37p per mile
"Group" car	£0.31p per mile
Taxi	£0.74p per mile

Where a minibus or group car is used it is likely to be driven by a member of residential staff. These staff costs should not be added as they will be included in the residential budget. For travel time, ten minutes per mile is allowed which includes time spent loading and unloading passengers and also allows for the pressure of traffic. To cost ambulance trip, the total costs of the journey can found in the regional health services financial returns.

B.8.2 Bus Passes

£1.77 per week (London zones only)

B.8.3 Social security officers

The methodology for local authority staff has been applied to the relevant salary information. Information on LO1 and LO2 salary scales was obtained from the Department of Social Security. Where visit duration and travel time are not entered on the CSRI use cost per visit, as this includes travel costs.

London	£0.19 per minute; £30.32 per visit
All other areas	£0.17 per minute; £27.13 per visit

B.9 CAPITAL COST ESTIMATES, 1989-90. Compiled October 1991.

There are occasions when it is almost impossible (or not cost-effective) to track down the capital costs of specific accommodation and day care facilities used by study members. For these situations a 'default' figure has been calculated from more easily available data. The costs quoted here represent the cost of new build facilities in 1989-90, inclusive of land value and professional fees but exclusive of VAT. An index for conversion to 1989-90 prices has been included.

The domestic housing information (local authority and housing association) was based on central government regulations in force during 1989-90 for buildings financed out of public funds. The figures are costs targets, taken from *The Architects and Builders Handbook 1989-90*. Under the 'Costs Limits and Allowances' section, cost data for a wide variety of public sector facilities are given. The information on health authority buildings also comes from this publication. The costs for elderly peoples' homes, hostels and day care centres comes from data provided by *The Building Cost Information Service*.

B.9.1 Local Authority housing

The figures in the table below are (mean) Department of Environment admissible cost limits (ACL). "An ACL figure should represent a reasonable average cost for dwellings of a specified size in a specified area: for 1989-90 the same figure will apply to both new build and renovation schemes ... It is the intention that an ACL will cover (for new build) the current market value of the land, construction costs and fees ..." (p863). ACLs are based on floor area rather than indicating probable occupancy so the housing association floor space and occupancy figures have been used to adjust the ACLs.

Local authority housing is subsidised, that is the rent charged does not cover the full cost of purchase, maintenance, rent collection and the like. The *Housing Revenue Account Statistics*, compiled by CIPFA provide data on these costs. Subsidies calculated for the Care in the Community schemes varied between £400 and £800 per annum (Knapp et al., 1989).

Table B.7 Capital costs for local authority housing

Floor Area	Probable occupancy	£ per dwelling
up to 40 m^2	1	63,625
30 to 60 m^2	2	78,433
40 to 80 m^2	3	92,975
60 to 90 m^2	4	107,350
70 to 100 m^2	5	116,450
90 to 110 m^2	6	125,450
100 to 120 m^2	7+	138,625

Regional Multiplier*	
Group A	1.00
Group B	.781
Group C	.653
Group D	.547
Group E	.455
Group F	.381
Group G	.318

Table B.8 Additions for specialist facilities

Group	Cost in £,000s*						
	A	B	C	D	E	F	G
Elderly/Disabled Wheelchair	13.7	10.7	9.0	7.5	6.2	5.2	4.4
Warden Supv/frail elderly	29.5	23.0	19.2	16.0	13.4	11.2	9.3

* Health and local authority areas in each group, more detailed information is given in the *Architects Handbook* referred to above.

GROUP A: Barnet, Islington, Brent, Kensington & Chelsea, Camden, Kingston-upon-Thames, Ealing, Lambeth, Enfield, Richmond-upon-Thames, Hackney, Southwark, Hammersmith & Fulham, Tower Hamlets, Haringey, Wandsworth, Hounslow, City of Westminster, City of London, and parts of Kent, Surrey. **GROUP B**: Bexley, Lewisham, Bromley, Merton, Croydon, Newnham, Harrow, Redbridge, Hillingdon, Sutton, Greenwich, Waltham Forest, and parts of Berkshire, Buckinghamshire, Hertfordshire, Surrey. **GROUP C**: Barking & Dagenham, Havering, and parts of Bedfordshire, Hampshire, Berkshire, Hertfordshire, Buckinghamshire, Isles of Scilly, Kent, Cambridgeshire, East Sussex, Oxfordshire, Essex, Surrey, West Sussex. **GROUP D**: parts of Avon, Kent, Bedfordshire, Berkshire, Buckinghamshire, Oxfordshire, Cambridgeshire, Dorset, West Sussex, East Sussex, Wiltshire, Essex, Hampshire. **GROUP E**: parts of Avon, Kent, Buckinghamshire, Norfolk, Cambridgeshire, Northamptonshire, Devon, Oxfordshire, Somerset, Suffolk, Dorset, Warwickshire, Gloucestershire, Wiltshire, Hereford & Worcester, Isle of Wight. **GROUP F**: parts of Cambridgeshire, Hereford & Worcester, Cheshire, Humberside, Lancashire, Cleveland, Cornwall, Cumbria, Derbyshire, Leicestershire, Devon, Lincolnshire, Durham, Merseyside, South Yorkshire, Gloucestershire, Tyne & Wear, Greater Manchester, West Midlands, West Yorkshire, Northamptonshire, Nottinghamshire, Northumberland, Shropshire, North Yorkshire, Staffordshire, Warwickshire. **GROUP G**: parts of Cheshire, Lincolnshire, Cleveland, Northumberland, Derbyshire, North Yorkshire, Durham, Nottinghamshire, Greater Manchester, South Yorkshire, Humberside, Shropshire, Lancashire, Staffordshire, Tyne & Wear, West Yorkshire.

B.9.2 Housing Association properties

The figures in the table below are (mean) Housing Corporation total cost indicators (TCIs) for self-contained and shared accommodation, designed to meet general and wheelchair needs, in use from April 1st 1989. The introduction of TCIs means housing association procedures are now slightly different from local authority ACL calculations. TCIs represent "estimates of final costs at practical completion including professional fees, interest charges, etc." (p863). The figures quoted below are new build costs for both acquisition and works.

Table B.9 Capital costs for housing association properties

Total Dwelling Costs 1989-90	
Occupancy	**£ per dwelling**
1	64,500
2	80,700
3	96,175
4	110,900
5	120,000
6	132,700
7+	140,900

Regional Multipliers*	
Group A	1.00
Group B	.864
Group C	.747
Group D	.646
Group E	.558
Group F	.483
Group G	.417

* See previous page

To adjust for special accommodation, the following multipliers are used on the cost per dwelling (for number of people in that living unit rather than number of people in whole complex).

Sheltered accommodation	1.25
Wheelchair design	1.20

Housing association properties are also subsidised, the following data come from the *Circular HC07/89* on administrative allowances (Housing Corporation, 1989).

Category	Subsidy per bed space
Maintenance	£354 (£219 for shared accommodation)
Management	£341
Repairs	£533
Total	£1228 (£1093)

B.9.3 Staffed accommodation facilities

For DHA facilities, the land value has been estimated at one third of total cost. The costs can be used for people with learning difficulties or mental health problems.

DHA Residential Units - normally handicapped, community location

Occupancy	Cost of Unit
8 places	£239,193
12 places	£318,392
16 places	£397,583
20 places	£462,869
24 places	£528,152

DHA Residential Units - heavily handicapped

Occupancy	Cost of Unit
8 places	£251,232
12 places	£334,712
16 places	£418,190
20 places	£486,683
24 places	£555,176

LA Residential Units - community location

Elderly peoples homes: £50,000 per bed space

Hostels (learning difficulty or mental health): £34,000 per bed space

These data can be used for voluntary sector facilities where necessary.

Durables: furniture, fittings and equipment (all facilities above)

Cost per resident week	£5.21

Regional multipliers - staffed accommodation and day activity units

London	1.12
South	1.10
Midlands	0.92
Yorkshire	0.90
North/N.West	0.84
N. Ireland	0.61

B.9.4 Day activity facilities (community location)

Land values have been estimated as for accommodation facilities. It is assumed all units are open 250 days per year and for 7 hours each day.

DHA Day Hospital - elderly

No. places	Cost per facility	Cost per place per day
25	£740,990	£7.34
40	£858,174	£5.31
mean		£6.33

DHA Day Hospital - elderly mentally ill

No. places	Cost per facility	Cost per place per day
10	£250,496	£6.20
20	£353,411	£4.37
30	£534,590	£4.41
40	£661,665	£4.09
mean		£4.77

DHA Day Hospital - learning difficulty and mental health

No. places	Cost per facility	Cost per place per day
10	£209,747	£5.19
20	£316,500	£3.92
30	£447,461	£3.69
40	£522,167	£3.23
mean		£4.01

LA Day Care Centres - learning difficulty and mental health

Facility cost per place	£34,545
Cost per place per day	£8.55

Durables: furniture, fittings and equipment (all facilities above)

Cost per place per day	£0.52

B.10 PRICE INDICES

B.10.1 Building Purchase, conversion or repairs

1985 = 100

Year	Price Index	Conversion to 1989-90 Prices
1980	84	1.59
1981	91	1.47
1982	90	1.48
1983	93	1.44
1984	97	1.38
1985	100	1.34
1986	103	1.30
1987	107	1.25
1988	118	1.13
1989	130	1.03
1990	137	.97

1989-90 index = 133.5
For conversion to 1989-90 prices the formula is:

$$\frac{133.5}{\textit{index for year}}$$

Source for price index: Department of Environment *Housing and Construction Statistics, 1989-90*, HMSO. Table A, output price index for new public housing.

B.10.2 Retail Price Index

Year	Price Index	Conversion to 1989-90 prices
1989	115.2	1.02
1990	126.2	.93
1991	133.5	.88
1992	138.9	.85

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APPENDIX C

THE SEAN FORM

The Service Entry and Numeration (SEAN) form was developed as a means of recording the components of clients' care packages in a consistent way which allowed costs to be easily attached. The version described in this appendix was developed for the Northern Ireland Care in the Community research in October 1991. This version allows data to be recorded on the frequency of service receipt and the location of services as well as the weekly-equivalent receipt data.

Instructions for completing the SEAN form

General comments on service receipt coding

The SEAN form attached codes all the data from the service receipt matrices including the "gaps and barriers", satisfaction questions and the case review table. The SEAN form processes data on service receipt while the client has been resident in the community. Service receipt data should therefore be checked against the date of discharge from hospital or date of last interview to ensure "double counting" does not occur.

Data can be entered directly from the completed SEAN form and each column is explained below.

Service description

This should be a list of services commonly used by clients in the research project. It may need some changes to make it more appropriate for service provision in Northern Ireland (such as including the providing agency name or adding/subtracting services from the list). As many services as possible (which the clients use) should be included on the form although a few "other" categories are useful for services which are rarely used. Contact with residential establishment staff should not be entered on this section.

Variable

I have suggested some variable names but others should be included on this form for all service descriptions. It may be most sensible to use those already defined in the data-entry programme written earlier at the research centre.

Frequency of contact SLI

The number of times the client has had contact with a service since the last interview (or since discharge) should be recorded in this column. For example, out-and day-patient hospital attendances, GPs, dentists, opticians and other individual professionals would be recorded as number of appointments or visits. Day centre contact as number of days, social club attendance as number of sessions.

Space to enter four numbers should be allowed on the data-entry programme.

Location of contact and service needs.

Two related pieces of information are entered in this column. First, whether the service is domiciliary based or not. Two dummy variables (HOME and AWAY) are used to code this as one service (eg. GPs) may be used both in the clients' home and at the surgery. These will also identify if the service is "received". The dummy variable NEEDED can be used to record where the service is not received but is required.

Examples:

Domiciliary service received should be coded	100
Service not received but needed should be coded	001
Service not received nor needed should be coded	000

Space to enter 3 numbers should be allowed on the data entry programme.

Receipt per week

This column is a means of representing receipt of services (since discharge or since last interview) as an amount per week. The calculations are based on the "frequency" and "duration" cells in the service matrix. I have suggested relevant time units in which service receipt per week can be measured, please ensure these are appropriate for your data. Time SLI is 6 months or 26.072 weeks.

Examples:

i) One appointment since discharge is equal to .038 appointment per week (1 ÷ 26.072 = 0.038).

ii) Two social worker contacts since discharge, each of 20 minutes, is calculated thus: (2 x 20) ÷ 26.072 = 1.53 minutes per week.

iii) Where the contact is based in the client's own home the professionals time spent travelling must be included. Where more exact data is not given in the CSRI 20 minutes travel time should be added to the face to face contact time.

The calculation for the previous example would be as follows:

Two social worker contacts in the clients home since discharge:

20 minutes (travel)
20 minutes (contact)
----
40 minutes x 2 = 80 ÷ 26.072 = 3.07 minutes per week

iv) A professional visiting a residential establishment may visit several clients at once. In this case the professional's time must be divided between all clients. If, in the above example, the social worker was visiting 2 clients each would be allocated 1.53 minutes.

v) Similar problems arise with the GP. Each surgery appointment is equal to 9.3 minutes but each domiciliary visit is equal to 27.1 minutes. However, GPs are often contracted to make regular visits to clients who live in staffed establishments. Here, each client seen on one GP visit should be allocated 13.55 minutes and GP travel time (13.55 minutes) should be allocated between all clients seen.

Allow space for 5 numbers and decimal point on the data-entry programme.

Handy tips, hints or wheezes: keep a calculator at hand; make a list of calculations used frequently; if several clients live in the same residential unit complete these SEAN forms together.

Columns A, B and C

Data from the CSRI questions on service availability, service appropriateness and barriers to service use can be entered directly into each column using the codes entered on the service matrices.

Space for one number in each column should be allowed in the data entry programme.

Comments/identifier

This is a very useful column for descriptive information. For example, if local services are used the address should be entered here, or the agency that run the service.

General Comments on the entry on case review data

Information on case review meetings should be entered in the appropriate columns as described above.

Jennifer Beecham, October 1991

NORTHERN IRELAND CARE IN THE COMMUNITY
SERVICE ENTRY AND NUMERATION FORM
Service Receipt/Needs

Project/location ....
Client Code ....
Time ....

Service description	Variable	Frequency of contact SLI[1]	Location of contact/ service needs[2]	Receipt per week	A	B	C	Comments/Identifier
Living expenses & accommodation	SUBACOM							
MH/LD hospital in-patient	SHOSPIP			day				
MH/LD hospital day patient	SHOSPDP			day				
MH/LD hospital industrial therapy	SHOSPIT			day				
MH/LD hospital out-patient	SHOSPOP			attn				
General hospital in-patient	GHOSPIP			day				
General hospital day patient	GHOSPDP			day				
General hospital out-patient	GHOSPOP			attn				
Gen. hosp. accident & emergency	GHOSPAE			attn				
Day centre				day				
Day centre				day				
Club				hr				
Club				hr				
Social worker				min				
Workshop				min				
Counselling				min				
GP								
CPN				min				
CMHN				min				
Chiropodist				min				
Consultant (not hospital-based)				min				
Dentist				appt				
Optician				appt				
Employment services								
Education				hr				
Education				hr				
Speech therapy				min				
Police				min				
Probation officer				min				
Prison/police cell				day				
Solicitor				min				

1. SLI = since last interview.
2. Information entered as three dummy variables: 1 = yes, 0 = no in the order HOME AWAY NEEDED.
3. See question 7.1 and 7.2 for codes.

Continued overleaf

NORTHERN IRELAND CARE IN THE COMMUNITY

Project/Location ....

Client Code ....

Time ....

Continuation Sheet

Service description	Variable	Frequency of contact SLI[1]	Location of contact/ service needs[2]	Receipt per week	A	B	C	Comments/Identifier
Psychologist				min				
Physiotherapist				min				
District nurse				min				
Social security officer				min				
Volunteer				min				
Occupational therapist				min				
Holidays				day				
Day trips				day				
Other								
Other								
Other								
Other								
Other								

Case Review Meetings

Attenders	Variable	Frequency of contact SLI[1]	Duration of contact SLI	Receipt per week	A	B	C	Comments/Identifier
Client	CLIENT							
Relatives	RELAT1							
Relatives	RELAT2							

Notes:

1. SLI = since last interview.
2 Information entered as three dummy variables: 1 = yes, 0 = no in the order HOME AWAY NEEDED.
3. See question 7.1 and 7.2 for codes.

APPENDIX D

CARE PACKAGES AND COSTS

The care packages and associated costs for residents of three types of community-based accommodation facilities are presented here. The data for the hostel and the sheltered housing unit were taken from the evaluation of the Care in the Community demonstration programme (see chapter 8). The private sector staffed group home accommodates former residents of Friern Hospital (chapter 6).

The costings reported here are based on the standardised approach outlined in chapter 4 and all costs data are expressed in local 1986-87 prices.

Abbreviations used in this appendix:

LA	Local authority
SSD	Social services department
DHA	District health authority
VOL	Voluntary organisation
HA	Housing association
OiC	Officer in charge
Res	Resident
IP	Hospital in-patient stay for either psychiatric or general health care
OP	Hospital out-patient appointment(s)
IT	Industrial therapy (hospital-based)
GP	General practitioner
FSW	Field social worker
CPN	Community psychiatric nurse
OT	Occupational therapist

HOSTEL (16 places)

Location: North West England, new town.

Accommodation: Early Victorian property near centre of large conurbation and converted from a nurses' home. Each resident has their own room and there are separate living rooms for each group of four residents. 24-hour staff cover includes an OiC, 3 deputy OiCs, 2 part-time cooks and 2 part-time general assistants. Residents receive £9.05 weekly 'pocket money', £160 p.a. clothing assistance, £150 p.a. holiday allowance. Regular activities and outings with hostel minibus.

Ownership: Owned by HA and managed by local voluntary organisation which is supported by regional and national parent organisations, and is particularly active in NW England. The management committee includes representatives from the SSD and DHA. The organisation also manages 12 self-contained flats (with caretaker support).

Context: There is a large local hospital which serves a wide catchment area and from which long-stay residents are to be moved to community-based services. Acute psychiatry services are to remain on the hospital site, as will beds for patients who cannot move to community services. The DHA has comprehensive local strategy which emphasises links with LA and voluntary sectors. This organisation has led service developments in the area, though some smaller group homes run by other voluntary organisations and the LA have opened. Second hostel due to open in 1990.

Residents: The first 16 residents had stayed an average of 25 years in hospital, and 14 continue to work part-time at the hospital. Residents look after their own rooms and help with general housework. Staff handle medication. One resident returned to hospital (long stay) and one died within the first year of moving. Clear improvements in functioning, sociability, interests and activities. Friendships were developing.

Development: Plans began February 1983 and DHSS central funding was approved early 1984. Planning permission obtained April 1984, tenders received December 1984 and building work started January 1985. Target opening date of August 1985 was delayed by builders and this generated revenue deficits as staff were already in post. DHA made a bridging grant. Residents moved into the hostel in November 1985. Conversion cost, £425,000.

Accommodation Capital Costs:

Annual annuitised building capital cost	£34072
Annual annuitised other durable asset cost	£2595

Capital and durable asset costs based on actual conversion expenditures plus imputed value of building at outset. 1986-87 prices.

Accommodation Revenue Costs:

Annual revenue cost	£87258
Annual individual living expenses	£7926

HOSTEL (cont.)

Revenue costs include management overheads paid to regional organisation and to housing association, plus registration fees. Revenue costs are met from residents' entitlements to board and lodgings allowance and retirement pension (£139 per week), charges for use of guest room, and fund-raising. The small annual surplus earned since 1985-86 has been ploughed back into hostel to improve facilities and extend activities for residents. Hostel pays out personal allowances each week.

Annual Costs by Service Type (16 residents): Care coordinator (£12381), hospital OP (£857), hospital IT (£7032), day care (£1552), education (£9517), GP (£723), psychiatrist (£191), psychologist (£475), CPN (£2241), chiropodist (£227), dentist (£733), optician (£248), volunteer inputs (£1035 equivalent), dietician (£270), hospital IP (£482), aids and appliances (£624), minor miscellaneous costs. **Total, £170434.**

Resident	Services	Cost
Res. 1	OP, day care, social club, GP, CPN, chiropodist, dentist, optician, volunteer input.	£48.76
Res. 2	Classes, GP, psychiatrist, psychologist, CPN, optician, volunteer, police, dietician.	£33.47
Res. 3	IT, classes, GP, psychiatrist, optician, volunteer input.	£50.81
Res. 4	IT, GP, psychiatrist, psychologist, CPN, dentist, optician.	£39.49
Res. 5	IT, day care, tutor, GP, psychiatrist, CPN, dentist, IP.	£86.51
Res. 6	Day care, classes, GP, psychiatrist, chiropodist, dentist, volunteer.	£31.01
Res. 7	Day care, classes, GP, psychiatrist, optician.	£31.50
Res. 8	Day care, tutor, GP, psychiatrist, chiropodist, dentist.	£53.88
Res. 9	Day care, IT, classes, GP, psychiatrist, psychologist, CPN, health visitor, chiropodist, gynaecologist, dietician.	£56.35
Res. 10	Day care, GP, psychiatrist, CPN.	£31.31
Res. 11	IT, GP, CPN, optician, OP.	£29.26
Res. 12	IT, day care, tutor, CPN, chiropodist, dentist, neurologist.	£69.64
Res. 13	IT, CPN, optician, OP.	£28.83
Res. 14	IT, day care, tutor, CPN, dentist, optician, OP.	£39.10
Res. 15	IT, day care, GP, CPN, OP.	£39.10
Res. 16	IT, GP, psychiatrist.	£28.38

Average Weekly Cost:

Accommodation capital costs, £43.95; accommodation revenue costs £114.09; other service costs, £45.50. **Total costs, £203.54 per resident week.**

VERY SHELTERED HOUSING (40 places)

Location: South East England

Accommodation: A "very sheltered housing" development in medium sized town. The 37 flats house 40 residents, five flats are occupied by former hospital patients. On-call 24-hour warden cover and part-time staff are employed by the housing association as domiciliary assistants. The former hospital residents get four hours of DHA care attendant time (nursing auxiliary) every day, plus other services.

Ownership: Owned and managed by local housing association. Care services received by residents are coordinated by the community health division of DHA.

Context: Among very first in-patients to move from local geriatric hospital. Ward closures, however, were not implemented until some months after these people moved in 1986. RHA estimated hospital costs at £9500 in 1984.

Residents: Frail elderly people without significant confusion who can live outside hospital if a full-time care network is provided. All residents have numerous aids and appliances.

Development: Housing facility was available at time of planned move from hospital and there were no major problems in obtaining places. No information on the development of the facility.

Accommodation Capital Costs:

Annual annuitised building capital cost	£1590
Annual annuitised other durable asset cost	£70

Building cost is the weighted average of three one-bedroom flats (£29.54) and one two-bedroom flat occupied by one person (£33.39). Capital costs are <u>per resident</u>.

Accommodation Revenue Costs:

Annual revenue cost per resident	£1341
Annual individual living expenses per resident	£1441

Residents' income comes mainly from retirement pensions and housing benefit. Revenue costs are met from rents (£35.80 for a one-bedroom flat and £41.65 for a two-bedroom flat) and housing corporation allowances. The costs of the extra care provided on-site are met through dowry payments.

Annual Costs by Service Type (4 residents): Project overheads (care attendant plus management) (£32525), hospital day-patient (£174), LA day care (£1737), GP (£639), district nurse (£2206), chiropodist (£145), optician (£130), hospital in-patient (£1579), home help (£1802), meals on wheels (£1001), OT (£15), aids and appliances (£993 annuitised), solicitor (£40). **Total, £42990.**

VERY SHELTERED HOUSING (cont.)

Resident	Service	Cost
Res. 1	Hospital day patient, 4 hours daily care attendant, day centre, GP, district nurse, chiropodist, optician, home help, meals on wheels, OT, physiotherapist.	£203.61
Res. 2	LA day centre, GP, chiropodist, optician, care attendant, district nurse, home help, OT, meals on wheels, hospital in-patient.	£242.40
Res. 3	LA day centre, GP, district nurse, chiropodist, optician, care attendant daily, home help, meals on wheels, solicitor.	£184.88
Res. 4	LA day centre, GP, district nurse, chiropodist, care attendant, home help, solicitor.	£193.57

Average Weekly Cost:

Accommodation capital costs, £31.84; accommodation revenue costs, £53.35; other service costs, £206.12. **Total costs, £291.31 per resident week.**

STAFFED GROUP HOME (8 places)

Location: Outer London Borough

Accommodation: Large three-storey terraced house with four double bedrooms and one single, a living room, bathroom, two toilets, kitchen, dining room, rear garden and staff office. The house stands just off a busy main road in a slightly run-down area. It is 10 minutes walk to the shopping centre with no obvious recreational facilities close by.

Ownership: A registered private sector residential home run by a nurse from the residents' hospital of origin. Close links are, therefore, maintained with the hospital, and all residents use the hospital-based day care services. These services are in short supply away from the hospital site.

Context: Concern about long-stay in-patients' quality of life once the hospital closes has prompted many nurses to develop residential homes for former patients. However, this facility would not exist if DHSS residential care allowances were not available.

Residents: Service information on three residents is given, all of whom are over 60 years old. The home provides a full residential service with meals cooked and laundry done for the residents. Staff handle medication. The hospital has a high proportion of very dependent elderly people so these clients are probably less dependent than most remaining in-patients. Residents receive about £10 per week personal allowance.

Development: Limited information on this property. It was recently purchased and there has been some conversion work.

Accommodation Capital Costs:

Annual annuitised building capital cost =
Annual annuitised other durable asset cost =

It is assumed that capital costs are covered by fees paid.

Accommodation Revenue Costs:

Annual revenue cost	=	£61979
Annual individual living expenses	=	£3963

Revenue cost includes forgone rates to LA of £1.58 per resident week. DHSS board and lodging allowances provides the revenue funding for the facility.

Annual Costs by Service Type (3 residents): Hospital (£12422), SSD day care (£245), psychiatrist (£14), FSW (£69), LA other services (£232). **Total, £12982.**

STAFFED GROUP HOME (cont.)

Resident	Services	Cost
Res. 1	OP appointment, day hospital, lunch club, GP, FSW, chiropodist, dentist, LA bus pass, social security officer.	£102.16
Res. 2	Day hospital, OP appointment, FSW, chiropodist, dentist, optician, social security officer, bus pass.	£55.75
Res. 3	OP appointment, day hospital, GP, FSW.	£92.31

Average Weekly Cost:

Accommodation capital and revenue costs, £158.05; other service costs, £83.41. **Total costs, £241.46 per resident week.**