

Medium secure forensic psychiatry services

Comparison of seven English health regions

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Background Regional medium secure developments have proceeded unevenly, with wide variations in resources to deliver services.

Aims To compare patients admitted to seven (pre-reorganisation) regional services and styles of service delivery.

Method A record survey of a complete sample of 2608 patients admitted on 3403 occasions between 1 January 1988 and 31 December 1994.

Results Services differed according to location of patients before admission, their legal basis for detention, criminal and antisocial behaviour, diagnosis, security needs and length of stay. Regions with more resources and lower demand provided a wider range of services. Thames services were relatively under-provided during the study period, with North East Thames substantially reliant on admissions to private hospitals.

Conclusions Uncoordinated development led to under-provision despite high demand. Certain regions prioritised offender patients and did not support local psychiatric services. New standards are required for service specification and resource allocation to redress inequality. Traditional performance measures were of limited usefulness in comparing services.

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The development of medium secure units (MSUs) in England and Wales was largely responsible for the emergence of forensic psychiatry as an increasingly influential clinical sub-speciality and academic discipline within British psychiatry. The need for an additional level of security between local psychiatric hospitals and high-security hospitals became increasingly apparent in the 1970s, following the progressive closure of mental hospitals. The subsequent building programme owes its impetus to the recommendations of the Butler Report (Home Office & Department of Health and Social Services, 1975), which were accepted by the government of that time.

Medium secure developments

Subsequent development was slow, however, and capital development funds provided by government were initially spent on other services by the Regional Health Authorities (Parker, 1985). Nevertheless, by the late 1980s, all regions in England and Wales had varying numbers of MSU beds. The private sector had meanwhile identified mentally disordered offenders requiring medium security as a 'market niche'. In 1999, there were approximately 2000 medium secure beds in England and Wales, of which 500 were in the private sector, with plans for additional development.

The development of individual regional services did not proceed evenly because a series of factors could facilitate or block building programmes, including public opposition, powerful clinicians with vested interests and managerial inertia (Parker, 1985). The key factor was usually the presence of 'product champions' who could present the new service as an important regional development and obtain the necessary support (Stocking, 1985). The net effect was a pattern of service development based on local factors and developing

independently, rather than to a national programme. It remains unclear whether the needs of different catchment area populations, levels of service provision, alternative services within local psychiatric hospitals, or individual styles of clinical practice ultimately shaped these services.

There have been descriptions of the functioning of individual units (Higgins, 1981; Gudjonsson & MacKeith, 1983; Faulk & Taylor, 1986; Bullard & Bond, 1988; Mohan *et al*, 1997), their historical development (Snowden, 1990), and issues regarding design (Watson, 1998). Point-prevalence surveys have compared in-patients in different regional services (Murray, 1996), with the private sector (De Taranto *et al*, 1998), and have estimated additional needs (Reed, 1997). However, there are no previous data which demonstrate and compare their functioning over time.

This study therefore compares admissions to seven regional medium secure services over a 7-year period. It examines differences in the in-patient service provided to mentally disordered offenders from each regional catchment area and indicators of service provision. These are intended to compare the style of service delivery in each location. It also re-evaluates the salience of certain traditional measures of performance, such as length of stay, seriousness of offending behaviour and level of security needs of the patients admitted, in relation to the level of resources provided in each region.

METHOD

The study was designed to record retrospective admissions to forensic psychiatry in-patient services for the years 1988–1994 from a representative range of geographical areas, including large urban, small town and rural areas, and with a wide range of locations characterised by different levels of socio-economic deprivation. Admissions to medium secure services were from seven of the 14 (pre-reorganisation) regional health authorities, including North West Thames (NWT), North East Thames (NET), South Western, West Midlands, Merseyside, North Western, and East Anglian Regional Health Authority catchment areas. Admissions to special (high-security) hospitals included all of England and Wales. During the study period, certain regional services did not have sufficient

medium secure beds (most notably NET), and many patients were sent from these locations to the private sector or to other National Health Service secure units as extra-contractual referrals. Data for these admissions were included so as not to underrepresent these areas. Catchment area of origin was coded according to a patient's most recent address. Patients of no fixed abode became the responsibility of the area where their index offence was committed.

Data collection was carried out in 11 MSUs, and four private hospitals. Information on admissions was obtained from medical records offices at each location. There was no centralised register, and in three medium secure services it was necessary to obtain information from records kept on wards and subsequently to cross-check in central records offices. Each service was visited by a researcher (N.K.) and an item-sheet was completed for every admission. A single patient could have multiple admissions and an item-sheet was completed for each, recording sequence number from 1988 to 1994. This included subjects transferred from one level of security to another (for example, special hospital to MSU). Although a patient might have been admitted to another specialist service prior to 1988, if they were next admitted during the 7-year study period, this was recorded as their first admission. This method of coding allowed the data to be divided according to individual admissions and individual patients.

An item-sheet recorded information on demography, location prior to admission, legal status and catchment area of origin. Diagnostic data were coded using ICD-10 (World Health Organization, 1992) criteria on the basis of information recorded in the case notes. Although personality disorder was included, sub-categories were infrequently and inaccurately specified in case notes. It was therefore necessary for the researcher to make a diagnostic decision based on information available using DSM-III-R (American Psychiatric Association, 1987) Axis II criteria. Certain diagnoses, such as alcoholism and alcohol abuse, drug dependence and drug misuse, were not always recorded on front sheets or in case summaries. The researcher recorded these, based on additional history available in case notes. Similarly, the researcher made a final decision, once again based on case-note information, regarding the primary psychopathology leading to admission; for example, major mental

illness or personality disorder. Criminal records were available for most subjects and further information was subsequently obtained from police records. Previous institutional history, and criminal behaviour or behavioural disturbance in the community or another hospital which led to admission, were also recorded.

All admissions were finally rated on the level of security they required and the burden of care imposed on the regional service according to a four-point scale (Coid & Kahtan, 2000).

RESULTS

Referral of patients

A total of 2608 patients were admitted to the seven regional medium secure services on 3403 occasions (admissions) over the study period, 1988–1994. Table 1 demonstrates that most admissions were from prisons – except Merseyside, where most were from the community. North East Thames had the highest proportion of prison admissions. Fewer admissions to the NWT service were from catchment area psychiatric hospitals but more from special hospitals. Merseyside services admitted more patients directly from the community to the medium secure service.

Most admissions were under the Mental Health Act 1983, legal category 'mental illness', ranging from 502 (86%) from NET to 165 (51%) from East Anglia and 193 (51%) from Merseyside (χ^2 , d.f.=6, $P<0.001$). Only 5% were under the legal category 'psychopathic disorder', ranging from 52 (11%) from South Western to only 4 (2%) from NWT ($P<0.001$). A low proportion of 'mental illness' admissions from Merseyside reflected a larger proportion of admissions under the 'not applicable' category (42%), primarily informal admissions from the community. In East Anglia, 27% 'other' categories represented a range of different admissions with some degree of compulsion, such as conditions of bail and prison governor's warrants, which were used less extensively by other services.

There were marked differences in the legal basis for admission under the Mental Health Act 1983 to different regional services. Admissions under section 48 (transfer of unsentenced prisoner for urgent treatment) ranged from 150 (25%) from NET to only 19 (9%) from NWT ($P<0.001$). South Western Region admitted

more patients under section 3 treatment orders (107; 22%) and NWT fewer (17; 8%) than other regions ($P<0.001$). The Thames regions generally admitted fewer patients under civil orders. More admissions to the South Western services were under a hospital order without restrictions (section 37) and to the NWT services with restrictions on discharge (section 37/41). More admissions to the North Western Region (87; 11%) than to other regional services were under emergency civil orders.

Behavioural disorder and index offences leading to admission

A total of 1056 admissions (31%) followed non-criminalised behavioural disorder in general psychiatric hospitals or the community. Table 2 demonstrates the behaviours leading to 'non-crime' admissions. Categories are not mutually exclusive. North East Thames admitted more following actual or threatened violence and sexual misbehaviour, but fewer following a crisis in the community or relapse of illness. Firesetting and absconding behaviour were more common prior to admission to South Western Region and deliberate self-harm in East Anglia. A total of 2341 admissions (69%) resulted from criminal behaviour. More admissions to NWT than to other regional services followed serious crimes of violence, including homicide. Robbery and firearm offences were more common from NET (Table 3).

Demography

There were no significant differences between genders in admissions to services. Mean age on first admission for the entire sample was 31.6 years, ranging from 29.8 years in the East Anglian service to 34.0 years in NWT. The only significant difference was between these two units (one-way ANOVA, mean difference 4.27, $P=0.007$). Most patients were single at the time of first admission (68–77% for the seven regional services). However, marked differences were found in ethnicity and place of birth for the subjects, with significantly more patients in the Thames regional services of African-Caribbean origin (39% in NET) and non-UK born (31% in NWT), ($P<0.01$).

Previous criminality

Patients admitted to NWT had more previous violent convictions (see also Table 3) than to other regions. Patients admitted to

Table 1 Location of patient before admission.

Location	NET (n=587)		NWT (n=218)		W. Midlands (n=588)		S. Western (n=485)		N. Western (n=802)		E. Anglia (n=324)		Mersey (n=378)	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Prison	380***	(65)	91	(42)	243	(41)	247	(51)	337	(42)	199	(61)	148	(39)
Psychiatric hospital	116	(21)	24***	(11)	108	(18)	127	(26)	211	(26)	51	(16)	57	(15)
Community/police station	23	(3)	61	(27)	168	(29)	35	(8)	185	(23)	49	(15)	150***	(40)
Special Hospital	61	(10)	41***	(19)	65	(11)	60	(12)	52	(6)	23	(7)	21	(6)
Other	7	(1)	1	(1)	4	(1)	16	(3)	17	(2)	2	(1)	2	(1)

χ^2 , d.f.=6, *** $P < 0.001$. NET, North East Thames; NWT, North West Thames.

East Anglia had more previous convictions of arson. Patients admitted to NET had more previous convictions for robbery and firearm offences (see also Table 3). Alcohol-related previous convictions were more common for patients admitted to the West Midlands Region. Drug-related previous offending was more common for patients admitted to the two Thames regions and less common in patients admitted to North Western and East Anglian services.

Diagnosis

Major psychotic illnesses were more commonly diagnosed in patients admitted to the two Thames regional services (Table 4). Depression was diagnosed more frequently in patients admitted to the services in the South Western Region. Substance abuse was not a primary diagnosis in any admission to any regional service but comorbid alcohol abuse was more

prevalent in patients admitted to East Anglian and Merseyside regions.

Personality disorder was diagnosed as the primary psychopathology in 14% of all admissions to the regional services. However, almost a third of admissions to the East Anglian service had a personality disorder, primarily patients with borderline and dependent but not antisocial personality disorders.

Indicators of service activity in regional services

Tables 5 and 6 demonstrate differences between regional services on a range of indicators of service activity. Admissions to NET were more likely to follow criminal behaviour. In contrast, over half of all admissions to Merseyside were non-crime admissions. These differences between styles of service delivery are further explained by the proportion of admissions that were readmissions during the 7-year study period, and where over a third of

Merseyside admissions were readmissions. Over a third of admissions from the NET Region were extra-contractual referrals, most to the private sector. ANOVA comparison of length of stay between each service, using Scheffé's *post hoc* test, demonstrated that mean length of admission for NWT was significantly longer compared to each regional service on an individual basis ($P < 0.001$). Patients admitted to NET services also stayed significantly longer than those in the other services (except NWT) ($P < 0.001$). Patients in West Midlands stayed significantly longer than those in the North Western Region. Otherwise there were no significant differences between South Western, North Western, East Anglia and Merseyside services.

There were marked differences between regional services in mean bed numbers on an annual basis, per million population, and annual admission rates. Overall, admission rates correlated with number of beds per million population ($r=0.77$,

Table 2 Behavioural disorder leading to non-crime admissions.

Behavioural disorder	NET (n=89)		NWT (n=66)		W. Midlands (n=196)		S. Western (n=116)		N. Western (n=308)		E. Anglia (n=72)		Mersey (n=191)	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Violence, threatened violence	72***	(81)	11	(17)	100	(51)	82	(71)	188	(61)	46	(64)	64	(34)
Firesetting	8	(9)	2	(3)	4	(2)	13*	(11)	22	(7)	3	(4)	9	(5)
Sexual behaviour	12***	(13)	0	–	14	(7)	14	(12)	23	(7)	0	–	2	(1)
Absconding	14	(16)	2	(3)	15	(8)	22**	(19)	43	(14)	13	(18)	17	(9)
Deliberate self-harm	7	(8)	3	(5)	22	(11)	17	(15)	26	(8)	21***	(29)	13	(7)
Diagnostic assessment	1	(1)	0	–	3	(2)	2	(2)	8	(3)	6*	(8)	6	(3)
Crisis, relapse	30***	(34)	54	(83)	118	(61)	48	(42)	172	(56)	30	(42)	156	(82)

χ^2 , d.f.=6, * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

NET, North East Thames; NWT, North West Thames.

Table 3 Criminal behaviour leading to admission

Criminal disorder	NET (n=499)		NWT (n=150)		W. Midlands (n=392)		S. Western (n=370)		N. Western (n=490)		E. Anglia (n=252)		Mersey (n=187)	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Homicide	70	(14)	35***	(23)	49	(13)	33	(10)	54	(11)	19	(8)	19	(10)
Attempted murder, GBH	146	(29)	44	(29)	103	(26)	71**	(19)	107	(22)	54	(21)	42	(22)
ABH, weapons, threats	115	(23)	30	(20)	84	(21)	95	(26)	101	(21)	73	(29)	41	(22)
Rape, buggery	29	(6)	9	(6)	22	(6)	12	(3)	25	(5)	10	(4)	7	(4)
Indecent assault	26	(5)	6	(4)	20	(5)	19	(5)	28	(6)	12	(5)	10	(5)
Other sex	1	(1)	2	(1)	3	(1)	5	(1)	10	(2)	8	(3)	3	(2)
Robbery	69**	(14)	6	(4)	33	(8)	28	(8)	55	(11)	24	(10)	16	(9)
Firearms	33***	(7)	1	(1)	7	(2)	16	(4)	12	(2)	3	(1)	4	(2)
Arson	41	(8)	16	(11)	53	(14)	50	(14)	64	(13)	38	(15)	22	(12)
Criminal damage	33	(7)	5	(3)	49	(13)	56	(15)	56	(11)	47***	(19)	19	(10)
Burglary/theft	75	(15)	17	(11)	52	(13)	90	(24)	103	(21)	56	(22)	55***	(29)
Fraud/deception	7	(1)	1	(1)	2	(1)	10	(3)	9	(2)	6	(2)	5	(3)
Alcohol-related	4	(1)	0	–	0	–	2	(1)	2	(1)	3	(1)	1	(1)
Drug-related	10	(2)	6	(4)	11	(3)	9	(2)	19	(4)	9	(4)	6	(3)
Public order	26	(5)	7	(5)	36	(9)	27	(7)	41	(8)	20	(8)	9	(5)
Kidnapping, false imprisonment	11	(2)	2	(1)	12	(3)	9	(2)	16	(3)	7	(3)	8	(4)
Other	44	(9)	19	(13)	47	(12)	89	(24)	89	(18)	50	(20)	44	(24)

χ^2 , d.f.=6, ** $P < 0.01$, *** $P < 0.001$.

NET, North East Thames; NWT, North West Thames; GBH, grievous bodily harm; ABH, actual bodily harm.

$P < 0.05$). Beds per million population correlated with admission rates of patients requiring lower security levels 1 and 2 ($r=0.83$, $P < 0.05$), but not rates of those requiring levels 3 and 4 ($r=0.35$, NS).

There was a threefold variation between admission rates to high-security special hospitals from the seven regions during the study period, but there was no statistical correlation with admission rates to MSUs.

DISCUSSION

The seven regional services operated different styles of service delivery over the 7-year study period. These differences

Table 4 Lifetime Axis I diagnoses of subjects during first admission

Axis I diagnosis	NET (n=526)		NWT (n=161)		W. Midlands (n=418)		S. Western (n=387)		N. Western (n=595)		E. Anglia (n=267)		Mersey (n=239)	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Schizophrenia	328	(62)	122***	(76)	274	(66)	203	(52)	355	(59)	113	(42)	163	(68)
Schizoaffective disorder	44***	(8)	9	(6)	21	(5)	17	(4)	26	(4)	7	(3)	3	(1)
Delusional disorder	66***	(13)	14	(9)	49	(12)	37	(10)	26	(4)	19	(7)	16	(7)
Unspecified psychosis	21*	(4)	3	(2)	8	(2)	3	(1)	14	(2)	3	(1)	2	(1)
Mania, hypomania	51	(10)	13**	(8)	42	(10)	58	(15)	89	(15)	23	(9)	23	(10)
Depressions	96	(18)	31	(19)	62	(15)	103**	(27)	103	(17)	57	(21)	49	(21)
Alcohol abuse	177	(34)	61	(38)	146	(35)	166	(43)	219	(36)	126**	(47)	97	(41)
Drug abuse	273	(52)	86	(54)	226	(54)	197	(51)	263*	(44)	136	(51)	129	(54)
Neurosis	22	(4)	7	(4)	17	(4)	16	(4)	28	(5)	22	(8)	12	(5)
Epilepsy	13	(2)	4	(3)	15	(4)	18	(5)	14	(2)	10	(4)	6	(3)
Organic brain syndrome	26	(5)	20	(13)	37	(9)	78***	(20)	80	(13)	48	(18)	33	(14)
Personality disorder (primary)	61	(12)	14	(9)	42	(10)	59	(15)	74	(12)	85***	(32)	31	(13)
No diagnosis	6	(1)	1	(1)	3	(1)	3	(1)	7	(1)	16***	(6)	6	(3)

χ^2 , d.f.=6, * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

NET, North East Thames; NWT, North West Thames.

Table 5 Indicators of service provision for seven regions

	NET		NWT		W. Midlands		S. Western		N. Western		E. Anglia		Mersey	
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
Crime admission	500***	(85)	150	(69)	392	(67)	370	(76)	490	(60)	252	(78)	198	(49)
Non-crime admission	89	(15)	68	(31)	197	(33)	117	(24)	322	(40)	72	(22)	191***	(51)
Readmissions	61	(10)	58	(27)	172	(29)	99	(20)	211	(26)	57	(18)	139***	(37)
Extra-contractual referral	215***	(37)	20	(9)	1	(1)	14	(3)	4	(1)	4	(1)	0	–
(χ^2 , d.f.=6, *** $P < 0.001$)														
Mean length of stay (weeks)	42.6		59.1		31.5		29.7		22.1		27.4		25.0	

NET, North East Thames; NWT, North West Thames.

reflected, first, demography and levels of criminal behaviour among mentally disordered persons within their catchment area populations; second, differences in levels of resources to deliver a service in the first place; third, levels of additional service provision in adult general psychiatry (including facilities such as low secure beds in local hospitals); and fourth, the philosophy of clinical staff within each MSU. It is unlikely that these factors operated independently of one another. But this study can only make descriptive comparisons and cannot examine interactions.

The most dramatic differences between regional services were in readmissions, non-crime admissions, patients requiring high levels of security and length of stay. This reflected delivery by services such as Merseyside, North Western and West Midlands of 'parallel' service (Gunn, 1977), whereby they maintained community follow-up and supervision of a substantial proportion of previous in-patients. This was demonstrated by higher proportions of compulsory civil and informal

admissions from the community, with consequently shorter mean lengths of stay. In contrast, services admitting more following the most serious crimes, with previous serious criminal convictions, and on restriction orders preventing discretionary discharge by clinicians, inevitably had longer mean lengths of stay. These patients require higher levels of security and observation while they are in medium security, and this style of service delivery was most apparent within the Thames regions. But closer examination revealed that other services, especially North Western and West Midlands, admitted substantial numbers of these patients, indicating a wider range of service delivery, which was reflected in their in-patient mix.

The important question for future service development in medium security is the extent to which these observed differences reflected adequate or inadequate service provision in the face of varying levels of demand. Services could only admit patients if they had sufficient beds to serve their catchment area populations. But

additional bed capacity was used to admit more patients requiring less security. Admissions of serious offenders from prison therefore represented the core service provided by each region.

Catchment area populations

Admission rates to both high- and medium-security services demonstrate a linear correlation with measures of socio-economic deprivation in patients' catchment areas of origin (Coid, 1998; Coid *et al*, 2000b). Levels of serious violent crime and suicide (Kennedy *et al*, 1999), and admission rates to ordinary psychiatric hospitals, also correlate with these measures (Royal College of Psychiatrists, 1988; Thornicroft, 1991; Jarman *et al*, 1992; Glover *et al*, 1998). Differences in demography and criminal behaviours partly reflected differing characteristics of catchment area populations, as well as resources available to cope with demand. Geographical areas characterised by the highest levels of socio-economic deprivation are unevenly distributed and largely concentrated in certain inner-city areas. For some services, notably NET and the North Western Region, a few urban district health authority areas, covering relatively small but densely populated geographical areas, accounted for disproportionate numbers of admissions.

Other characteristics of regional catchment area populations – most notably ethnicity – contributed to admission rates independently of socio-economic factors. Whereas both ethnic groups tend to reside in socio-economically deprived urban areas, persons originating from the Indian subcontinent are underrepresented among admissions to these services, while persons

Table 6 Indicators of service provision and activity, 1988–1994 (adjusted for population)

Mean annual/million population	NET	NWT	W. Midlands	S. Western	N. Western	E. Anglia	Mersey
Medium secure beds ¹	15.1	12.6	14.2	21.2	20.9	16.3	17.4
Medium secure admissions	22.2	8.7	16.0	21.0	29.0	22.2	22.3
Medium secure admissions ²							
Security levels 1 & 2	8.3	4.7	8.7	11.7	17.5	12.2	14.0
Security levels 3 & 4	13.4	3.6	6.6	7.9	10.4	9.5	7.6
Special hospitals admissions	5.8	3.9	2.0	3.2	3.7	1.9	2.3

1. Does not include occupied beds in private hospitals.

2. Total rates for individual security levels do not equal all admissions because of missing data.

NET, North East Thames; NWT, North West Thames.

of African–Caribbean origin are greatly overrepresented (Coid *et al*, 2000a). This would suggest that greater demand for secure beds can be anticipated from populations with higher numbers of African–Caribbeans.

Regional resources and service prioritisation

Medium secure units delivered services primarily to male patients with severe mental illness, admitted from prisons, following charges or convictions of serious violent crimes. The degree to which additions to this core service varied between regions depended on interactions between overall demand for beds from catchment area populations, numbers of beds in medium security and policies of prioritisation. For example, the NWT service, which was relatively under-provided, prioritised transfers on trial leave from special hospitals but admitted very few from its local psychiatric hospitals. Admissions from special hospitals appeared a low priority for most MSUs, which operated clinically and managerially independent of the High Security Services.

Although socio-economic deprivation was strongly related to admission rates, the number of low-security beds in local psychiatric hospitals has a major impact (Coid *et al*, 2000b). It is probable that additional provision in some regions had reduced demand for transfers into medium security from the local hospitals, thereby allowing other patient subgroups to be prioritised.

Low-level service provision in the face of high demand was most apparent in NET, and where there was higher demand for special hospital beds over the study period. The larger proportions of admissions with the highest security ratings, admissions for emergency treatment from prisons while on remand, and with severe mental illness in the North East Thames Region would at first suggest a highly effective service targeting those in greatest need. But these data obscure what was the most limited of the seven regional services included in the study. A large proportion of medium secure beds supporting NET were in the private sector, a considerable distance from patients' homes and families, NET had fewer locked low-security beds than certain other regions, and there was little service planning over the 7-year period to develop the additional capacity essential to cope with an obviously high

level of demand from the remand prisons. Consequently, NET could provide little after-care for its patients, admitted fewer disturbed patients from its catchment area psychiatric hospitals and transferred the majority of its patients for after-care to these already under-provided general psychiatric services following discharge from medium security.

Performance measures

The study is not intended to compare the effectiveness or efficiency of one regional service with that of another. There is little purpose in doing so when such marked differences existed between styles of service delivery and levels of service provision. Factors leading to these discrepancies are of considerable importance and have major implications for future management and organisation of forensic psychiatry in the UK. Although this study was not designed to elucidate factors that led to different styles of service delivery, the data confirm that these had developed independently in each region, according to local factors, but that service provision – primarily the number of beds provided by regional health authorities before transfer of managerial responsibility to local National Health Service trusts – had been the primary factor. Major questions remain unanswered as to why the two Thames regions continued to receive inadequate resources despite a high level of demand and serious problems encountered by local psychiatric services in inner London (MILMIS Project Group, 1995; Guite & Field, 1997). Although there have been increases in numbers of beds in all London MSUs since this study, considerable reliance on the private sector across London continues relative to other regions.

The finding that certain services can readily provide a parallel, or part-parallel, service while others cannot is one of the most important of the study. Policy on whether a 'parallel' or 'integrated' service is the ideal for forensic psychiatry has still not been officially declared. However, to provide a parallel service similar to that in operation in the Merseyside Region would have required a considerable increase in resources elsewhere, and additional costings for supportive community-based services would have to be included. At the same time, using MSU beds for readmissions in a crisis or recall from the community may not have been the most cost-effective use of what is a highly expensive

resource. This would indicate that if MSUs are to run 'parallel' services, they should be provided with adequate numbers of low-security or open-ward beds for admissions to more appropriate levels of security.

The study finally casts doubt on the salience of certain measures traditionally employed by managers to evaluate the effectiveness and efficiency of their regional services. It is highly misleading to compare length of stay when there is little similarity in the type of patients admitted, wide variations in numbers of beds available to meet what may be contrasting demands, and where some services briefly readmit a significant proportion of their patients, which inevitably reduces mean length of stay. Similarly, levels of security required by different groups of patients partly determine costs of service delivery. It is highly unlikely that a service which admits a large proportion of patients requiring higher security would be able to reduce its costs when forced to prioritise only the most demanding and difficult patients as a result of inadequate service provision in the first place.

The major differences we have observed between regional services pose several major questions over the direction of forensic psychiatry services in the UK in the future. There is still no official policy on what should be the minimum components of a regional forensic medium secure service, whether a parallel service is preferable to an integrated one, and whether a revised formula is required for funding to reflect accurately the needs of catchment area populations. Recent policy has been to leave such decisions to local commissioning bodies whose priority may not be that of the specialist forensic psychiatry services. But to continue this policy will perpetuate similar patterns of uncoordinated service development and the inequity in service provision revealed in this study.

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CLINICAL IMPLICATIONS

- Medium secure units have evolved differently and have delivered different styles of service in different locations.
- Better standards are required for service specification and resource allocation in order to redress inequity between services.
- Traditional measures to compare services are of limited usefulness.

LIMITATIONS

- The study does not identify factors leading to differences observed between regional services.
- Patterns of service delivery continue to evolve in medium security, and the findings apply only to the period of the present study.
- More information is needed on the interactions between admissions to forensic secure and local psychiatric services.

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