# Mental health provision for young offenders: service use and cost

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**Background** The full costs of accommodating and supporting young people in the criminal justice system are unknown. There is also concern about the level of mental health needs among young offenders and the provision of appropriate mental health services.

**Aims** To estimate the full cost of supporting young people in the criminal justice system in England and Wales and to examine the relationship between needs, service use and cost.

**Method** Cross-sectional survey of 301 young offenders, 151 in custody and 150 in the community, conducted in six geographically representative areas of England and Wales.

**Results** Mental health service use was low despite high levels of need, particularly in the community. Monthly costs were significantly higher among young people interviewed in secure facilities than in the community (£4645 v. £1863; P < 0.001). Younger age and a depressed mood were associated with greater costs.

**Conclusions** Young people in the criminal justice system are a significant financial burden not only on that system but also on social services, health and education. The relationship between cost and depressed mood indicates a role for mental health services in supporting young offenders, particularly those in the community.

**Declaration of interest** None.

Crime committed by young people places a substantial financial burden on society. The Audit Commission (1996) estimated that public services in England and Wales spend around £1000 million per year processing and dealing with young offenders. In addition, evidence suggests that the burden to society continues into adulthood; boys who engage in delinquent behaviour in their adolescence have significantly lower expected earnings than their law-abiding counterparts (Healey et al, 2004). Mental health problems among young offenders are an additional source of concern (Bailey, 2003; Audit Commission, 2004). Evidence suggests that need for mental health care outstrips supply among young offenders in secure facilities (Nicol et al, 2000), but nationally the extent of the problem is unknown.

The costing study presented here was part of a larger review commissioned by the Young Justice Board. Chitsabesan *et al* (2006) report the needs of the cohort; this paper examines detailed service use information and estimates the full range of costs needed to support young people in the youth justice system in England and Wales, both in secure facilities and in the community. Predictors of service use and cost are explored to determine the impact of client characteristics and needs on the total cost of accommodating and supporting young people in the youth justice system.

# **METHOD**

# **Participants**

Six geographically representative areas across England and Wales were included, each containing a youth offending team and a secure facility. The secure facilities included four young offenders institutions and two local authority secure children's homes. Young offenders aged 13–18 years were eligible for inclusion. In the

community, each youth offending team was asked to recruit 25 young people whose cases were part of the team's current workload. In secure facilities, 25 consecutive young people at each site were recruited. All young people were interviewed at baseline and half of those in the secure facilities sample were interviewed again on average 9 months after the initial assessment.

#### **Outcome measures**

The primary outcome measure was the Salford Needs Assessment for Children and Adolescents (SNASA; Kroll *et al*, 1999), a semi-structured interview for assessing mental health needs and other potential needs in the spheres of education, risky behaviour, violence and social relationships. A full explanation of the SNASA and the secondary outcome measures is given by Chitsabesan *et al* (2006).

#### Resource use and cost

We assessed service use with a questionnaire developed through previous research in young people by the authors and adapted for the purpose of this study (Byford et al. 1999; Harrington et al, 2000). The questionnaire collected information on the young person's accommodation, use of all health, social, education and voluntary sector services, psychotropic medication, contacts with the police, lawyers and courts, and time spent in secure facilities. At baseline, cost data were collected for the 6 months preceding the interview. At follow-up, cost data covered the period from baseline to final interview, which was approximately 9 months.

Total costs were calculated by multiplying the number of contacts with each service by an appropriate unit cost. All unit costs were for the financial year 2001-2002. For time spent in secure facilities, the cost per day of the young offenders institutions was obtained from the Prison Service Annual Report and Accounts (HM Prison Service, 2001). The costs of local authority secure children's homes were obtained directly from the Youth Justice Board. Some young people spent time in secure training centres, which are centres for young offenders up to the age of 17 years, and relevant unit costs were obtained from the Youth Justice Board. Costs of health and education services in secure facilities are included in the overall facility costs, rather than itemised separately. For time spent in the community, total costs were calculated as the sum of all service use. As far as possible local unit costs were used (Chartered Institute of Public Finance and Accountancy, 2002; Statistics for Wales, 2003), otherwise national unit costs were applied (Harries, 1999; Metropolitan Police, 2000; British Medical Association & Royal Pharmaceutical Society of Great Britain, 2002; Netten & Curtis, 2002). The costs per day of education for those under 16 years old were taken from the relevant Office for Standards in Education reports for each establishment. Costs of accommodation provided by social services were taken from a number of sources (Finn et al, 2000; Netten & Curtis, 2002). We included the cost of domestic accommodation (living at home with families or living alone) and living expenses to avoid biasing costs in favour of the community sample. National estimates of the cost of housing and family expenditure were used to estimate the cost of domestic accommodation (Building Cost Information Service, 2002; National Statistics, 2003).

Self-reported information on the number of crimes committed by the young people in the cohort was also collected in interview. The financial impact of their crimes was not included in the main analysis because emphasis was on the cost of supporting young people in the youth justice system, not the cost of their offences. However, we included the societal cost of crime in an additional analysis. The unit costs applied included the cost of property stolen or damaged, emotional and physical impact on victims, lost output, victim services and victim health services (Brand & Price, 2000).

# Statistical analysis

All analyses were performed using the Statistical Package for the Social Sciences version 11 for Windows. Average total costs per month are reported. Total costs at baseline were compared between offenders interviewed in secure facilities and in the community using the standard *t*-test. Despite the cost data being skewed, analyses compared differences in mean costs using parametric tests, with the results confirmed using non-parametric bootstrap techniques (Barber & Thompson, 2000). The advantage of this approach, as opposed to logarithmic transformation or non-parametric tests, is the ability to make

inferences about the mean cost (Thompson & Barber, 2000).

Using data from the subsample of young people interviewed in secure facilities and followed up an average of 9 months later, a cost-function analysis was undertaken to explore and quantify the impact of individual baseline characteristics and needs on total costs at follow-up. The literature on factors that influence resource use and cost in young people was reviewed in order to identify potential predictors of total cost (Byford et al, 2002). To explore the relationship between cost and needs, one variable from each section of the SNASA (mental health, education, risky behaviour, violence and social relationships) was included. Univariate associations between each of the specified predictors and total monthly costs were explored in linear regression. For continuous variables, although analyses were carried out on continuous data, results are presented in two groups split at the median. Multiple regression was used to reduce the variable set to those factors independently associated with costs, using a process outlined by Byford et al (2002). The multiple regression initially included all variables that had important univariate associations with cost, discarding from the model all variables that were no longer found to be important. Variables that did not have a univariate association with cost were added and retained if they added significantly to the model, or were otherwise discarded. The model finally arrived at was checked to ensure that no variable excluded would add significantly to it. A significance level of around 10% was used although not strictly applied.

## **RESULTS**

# Study sample

In total, 301 young offenders were interviewed at baseline, 151 in secure facilities and 150 in the community. More than three-quarters (77%, n=232) were male and 83% were White British. Their mean age was 15.7 years. There was no significant difference between those interviewed in secure facilities and those interviewed in the community for a number of variables including age, gender, history of social care placements and school exclusion. Seventy-two young people were interviewed at follow-up from the secure facilities sample.

#### Mental health need

Almost a third (31%) of young people interviewed at baseline had a mental health need and within that, almost one in five had significant depressive symptoms One in ten reported anxiety or post-traumatic stress symptoms, and hyperactivity and psychotic symptoms were found in 7% and 5% of the cohort respectively. There was no significant difference in the number of mental health needs between the community and secure facilities samples.

#### Service use and cost at baseline

Economic data were available for 299 offenders at baseline. Service use over 6 months is detailed in Table 1 and reflects interview location. Young people in the secure facilities sample spent more days in young offenders institutions, local authority secure children's homes and secure training centres over the previous 6 months compared with the community sample. There remained, however, substantial movement between secure facilities and the community in both samples, which reflects sentence length, and perhaps a tendency for repeat offenders to be given a custodial sentence. Considering the sample as a whole, contact with general medical services was high: 88% of the secure facilities sample had contact with a general practitioner, although contacts among those interviewed in the community were lower (48%). Differences may reflect more easily accessible medical services in secure facilities. In total, around 40% of the sample had some contact with mental health services, including community services, hospital services and drug and alcohol services, either in secure facilities or in the community. However, there was considerable variation between the secure facilities and community samples: mental health services were accessed by 60% of the secure facilities sample but by only 20% of the community sample.

Average total cost per month was £3260, or almost £40000 per year. Costs were significantly higher among the secure facilities sample compared with the community sample (£4645 v. £1863; P < 0.001). This was primarily the result of the high costs of secure facilities. Table 2 breaks down the cost by service-providing sector and demonstrates that costs were not confined to the criminal justice sector. Costs to social services were also high, constituting 43% of total costs in the

Table I Service use at baseline assessment

Service use	Community group (n=149)  Proportion of group using service			Custody group (n=150)  Proportion of group using service			
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Accommodation							
Living with family (nights)	136	(70)	85	64	(62)	61	
Living alone (nights)	7	(30)	6	1	(8)	- 1	
Sleeping rough (nights)	1	(10)	3	1	(10)	3	
Social services-provided (nights)	24	(57)	89	П	(30)	62	
Mental health service contacts							
Hospital	0	<b>(I)</b>	4	0	(3)	5	
Primary care	1	(4)	12	5	(18)	58	
Other health service contacts							
Hospital	1	(2)	34	1	<b>(</b> 1)	32	
General practitioner	2	(3)	48	3	(3)	88	
Other primary care services	2	(II)	54	7	(20)	85	
Medication			6			П	
Social services (contacts)	4	(16)	37	1	(4)	24	
Education (pre-16) (months)	2	(3)	38	3	(2)	13	
Voluntary sector services (contacts)	7	(17)	18	6	(16)	20	
Criminal Justice							
YOI, LASCH or STCH (nights)	12	(35)	16	102	(62)	100	
Youth offending team (contacts)	19	(20)	97	9	(17)	91	
Solicitor (contacts)	1	(I)	54	1	<b>(I)</b>	74	
Police (contacts)	35 (	(115)	38	65	(254)	35	
Police custody (nights)	36 (	(163)	45	53	(123)	45	
Court (days)	3	(5)	57	5	(9)	63	
Crimes committed (number)	12	(53)	66	П	(50)	60	

LASCH, local authority secure children's home; STC, secure training centre; YOI, young offenders institution.

Table 2 Average cost per month at baseline assessment

	Cost, £/month <sup>l</sup>				
	Community group (n=149)	Custody group (n=150)	Difference Mean (95% CI)	P	
	Mean (s.d.)	Mean (s.d.)			
Domestic accommodation	418 (272)	177 (172)	241 (189 to 292)	< 0.001	
(with family/alone)					
Health	42 (151)	41 (190)	I (-38 to 40)	0.967	
Social services	816 (2391)	285 (926)	531 (119 to 943)	0.012	
Education	105 (188)	36 (176)	69 (27 to 110)	0.001	
Voluntary services	34 (148)	8 (53)	26 (I to 5I)	0.042	
Criminal justice	448 (958)	4098 (4575)	-3650 ( $-4403$ to $-2897$ )	< 0.001	
Total	1863 (2472)	4645 (4558)	-2782  (-3618  to  -1947)	< 0.001	

I. Costs are in UK£, 2001/2.

community sample. In general, the cost burden was greatest on the sector providing accommodation and residential care. Thus, for the secure facilities sample the criminal justice system bore the greatest burden owing to the high cost of secure placements, and for the community sample, after domestic accommodation, social services bore the greatest burden owing to foster placements, residential care and placements in hostels. Costs to health services were relatively low because they tended to be contacts with professionals rather than in-patient stays.

## Service use and cost at follow-up

Service-use data were available for 72 young people at follow-up. Service use and costs for the subsample of young people initially interviewed in secure facilities display a broadly similar pattern to that shown at baseline. Total cost per month was £2729 or just under £33 000 per year. The greatest financial burden fell on the criminal justice sector, which bore 86% of total costs as a result of the large number of young people in the cohort who had not been released or who had returned to secure facilities.

# **Cost-function analysis**

Variables examined in the cost-function analysis are given in Table 3. Univariate analysis revealed that higher monthly total costs at follow-up were significantly associated with younger age, a history of social services care, and needs related to depressive symptoms, violence to people and problems with family relationships. Costs did not vary with gender or ethnicity.

Factors significantly and independently related to cost in multiple regression analysis (Table 4) included age and needs related to depressive symptoms. The results demonstrate that for every yearly reduction in age, total cost per month increased by £627, and individuals with depressed mood cost £5444 more per month than those without depression. The regression model was able to account for around a quarter of the variation in total costs (adjusted  $R^2$ =0.24).

# Societal costs of crime

The average cost per month of the cohort including the cost of criminal activity was £4777, or around £57000 per year. The difference in cost between the secure

**Table 3** Univariate associations with monthly follow-up cost (n=72)

Baseline variable	n	Mean cost £/month	P
Age, years		· · · · · · · · · · · · · · · · · · ·	
<   6	25	3081	0.124
≥16	47	2541	•
Gender		<b></b>	
Male	58	2690	0.877
Female	14	2890	
Ethnicity			
White British	50	2835	0.754
Black and minority	22	2487	
Ever in care			
Yes	30	2074	0.127
No	42	3646	
Cardinal need: depressed mood			
Yes	12	7257	< 0.001
No	60	1823	
Cardinal need: education performance			
Yes	14	4233	0.145
No	58	2366	
Cardinal need: substance use			
Yes	7	1829	0.563
No	65	2826	
Cardinal need: violence to people			
Yes	18	4531	0.039
No	54	2128	
Cardinal need: family relationships			
Yes	16	4194	0.123
No	56	2310	

facilities and community samples was no longer statistically significant (£5927  $\nu$ . £3519; P=0.11), perhaps reflecting the greater opportunity for criminal activity in the community sample.

# **DISCUSSION**

#### Cost

Youth crime is a significant financial burden on many public services, not just the criminal justice sector. In particular social service department costs were high, mainly owing to the provision of accommodation. Social services-provided accommodation was a similarly important cost driver in a study of young people with complex mental health needs (Clark *et al*, 2005).

The average annual cost of a young person in the youth justice system was around £40000, excluding the wider societal costs of crime. The costs incurred

by young offenders interviewed in secure facilities were significantly higher than those of the young offenders interviewed in the community. However, these differences should not lead to conclusions that community sentences are somehow better or more cost-effective than custodial sentences because they are less expensive. This can only be determined by comparison of two groups similar in all respects apart from location of interview, and assessment of both the costs and outcomes of the two groups in an economic evaluation. Indeed, the finding that young offenders' needs are perhaps better met in secure facilities may have a greater positive influence on outcomes and thus on cost-effectiveness.

### Use of mental health services

Mental health service use was substantially lower in the community sample (20%  $\nu$ . 60% in secure facilities), even though

**Table 4** Multivariate associations with monthly follow-up cost (adjusted  $R^2$ =0.24)

Baseline variable	Coefficient (95% CI)	Р
Age at initial	<b>-627</b>	0.078
interview	$(-1327 \text{ to } 73)^{1}$	
Depressed mood	5444	< 0.001
(yes v. no)	$(3080 \text{ to } 7808)^2$	

I. Decrease in monthly cost per unit increase in the

mental health needs were similar to those found in the secure facilities sample. In secure facilities it is likely that mental health services are more readily available on site and that routine assessment is able to identify those likely to benefit from mental health care. Conversely, the results raise concerns that young offenders in the community sample do not appear to be accessing mental health services in the community. With a greater emphasis on community sentences (Audit Commission, 2004), improving access to and provision of mental health services for young offenders in the community is a particularly pertinent concern. The National Service Framework for children and young people emphasises the importance of child and adolescent mental health services in young offenders institutions but pays less attention to the role of such services for young offenders in the community, aside from a recommendation that youth offending teams should include a mental health professional (Department of Health, 2004).

# Comparisons with previous studies

Costs estimated here are greater than estimates made in similar research as a result of the broader cost perspective taken, with this study including costs to all service-providing sectors. For example, Liddle (1998) estimated the lifetime costs of services used by young people in custody to be only £7000, but this figure excluded health service and voluntary sector costs as well as many additional costs borne by social services and the education sector. Such differences in estimates of total costs highlight the importance of collecting and measuring costs broadly. In particular, in comparative analyses, narrow cost perspectives may make one intervention or one group of young people appear less costly than

Difference in monthly cost between the specified group and the comparison group.

another simply because relevant costs have been excluded.

#### **Associations with cost**

Characteristics that were found to be associated with higher costs included younger age and depressed mood. Costs were perhaps greater in younger age groups because younger people require more intensive support if in the community (a foster placement rather than supported accommodation, for example) or are more likely to serve their custodial sentence in a secure training centre or local authority secure children's home, which have significantly higher unit costs than young offenders institutions. The findings add credence to the arguments that support and crime prevention should be aimed at younger age groups and that such schemes may lead to cost savings (Audit Commission, 2004). The highly significant relationship between depressed mood and high cost is less obvious, but it is unlikely to be a direct one since the cost of health services for depression makes only a small contribution to the total costs reported here. Instead, depression may be a marker for people who have experienced significant life events (Rutter et al, 1981). For example, depression is common in young people who have had difficult lives as a result of abuse, multiple local authority accommodation placements or time spent in institutions (Harrington, 1995). Thus, depression may be an indicator of other problems that will lead to high use of health, social and youth justice services and perhaps to an increased likelihood of these young people being in supported accommodation rather than living with their family, or of being given a custodial rather than a community sentence.

Despite findings in this sample of relatively large needs in the areas of peer and family relationships (48% of the sample; Chitsabesan *et al*, 2006), needs in areas other than mental health were not found to be significant predictors of cost in multivariate regression, perhaps reflecting the lack of tangible services to meet these needs. This finding highlights the need for investment into support for young people with relationship difficulties.

# Limitations and strengths

Our study was limited by the lack of a comparison group of young people with no history of offending. Thus, no real inference

#### **CLINICAL IMPLICATIONS**

- The costs of caring for young offenders both in custody and in the community are high.
- Despite high levels of mental health needs, mental health service use among young offenders in the community appears to be relatively low.
- Depressed mood and younger age are key predictors of high costs among young offenders.

#### LIMITATIONS

- The study was limited by the lack of a comparison group of young people with no history of offending.
- Owing to a lack of information on sentencing, it was not possible to distinguish definitively between the cost of custodial and community sentences.
- The costs presented may be an underestimate of the true societal cost of supporting young offenders, owing to the exclusion of private costs to families.

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can be made about the additional cost of services for young people in the youth justice system beyond comparisons with previous research. In addition, the total cost of care packages may be an underestimate of the true societal cost of supporting young offenders, as a result of the exclusion of private costs to families in terms of outof-pocket expenses and employment losses. However, the relative difference in cost between those interviewed in secure facilities and those interviewed in the community is significant and unlikely to be greatly influenced by the inclusion of such costs. Finally, we did not have information on the original sentence for which the young person was in either a secure facility or the community. Therefore, the cost estimates should not be considered estimates of different sentences. Rather, by interviewing in both the community and secure facilities, a good estimate of the range of costs of dealing with young people in the youth justice system has been achieved.

The study cohort was taken from a wide geographical area and included people in the youth justice system with custodial

and community sentences, so the results are generalisable to young people in England and Wales in the youth justice system as a whole. These results demonstrate the significant financial burden of young people in the youth justice system not only to the criminal justice sector but also to social services departments, the National Health Service and the education sector. Of particular concern is the finding that young offenders in the community are less likely to access mental health services than those in secure facilities, despite relatively high levels of mental health need in the cohort. The significant relationship between cost and depressed mood also indicates a role for mental health services in the support of young people in the youth justice system.

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