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Health Needs Assessment of Children in Secure Settings in the East Midlands

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1. Executive Summary

1.1 Aim of the project

The project was commissioned by the former East Midlands CSIP Office on behalf of the relevant PCTs.

- To examine the physical and mental health status of children in secure settings using structured assessment tools
- To identify current healthcare provision
- To identify gaps when needs and provision are compared
- To provide information to help develop outcomes for children and young people
- To contribute to the development of recommendations for commissioners

1.2 Background

Children in Secure Settings

The number of children in secure accommodation has tripled since 1991 and in January, 2009, stood at 2,635 the majority of whom were in Young Offender Institutions. In the East Midlands there are four such homes: two are smaller homes (Lincolnshire and Nottinghamshire); one is in Foston Hall prison and finally there is a larger Secure Training Centre. In total these settings provide approximately 120 places in total.

The Health of Children and Young People

Adolescent health has become a key national issue over the last ten years as it has become recognised that this is the only age group where mortality rates have not fallen significantly in recent times. There are a range of key health issues which affect younger people which include: sexual health; substance misuse; obesity and diet; eating disorders and self-harm. A recent report by the Royal College of Paediatrics and Child Health noted that younger people experience a range of barriers in accessing appropriate healthcare.

Healthcare Policy for Children in Secure Settings

Healthcare policy has begun to focus seriously on the health needs of vulnerable children. Recent policy documentation emphasise equivalence for vulnerable children in terms of access to healthcare. The YJB is responsible for healthcare standards whilst children are in secure care and have published standards to this effect which are used as the basis of inspection by OFSTED (recent OFSTED inspection reports for the homes in our report are summarised in the full report). The YJB have also commissioned the development of ASSET, a structured risk

assessment tool which includes a pathway for specialist mental health assessment (SQIFA and SIFA). Harrington et al (2005) have suggested that mental health problems are under-reported by ASSET.

The Health of Children in the Secure Estate

A review of the literature suggests that children in secure settings are a vulnerable group with complex and challenging health needs. A preponderance of published studies have examined mental health and substance misuse (see for example, Mooney et al, 2007). Lader and colleagues, with ONS, examined psychiatric morbidity in a national sample of 16-20 year olds. In the year prior to custody, 11% of men had received psychiatric treatment compared to 27% of women comparable figures to mental health treatment needs in the secure setting. Kroll et al, 2002, found that boys, aged 12-17, had high levels of conduct disorder (91%); major depression (22%) and anxiety disorders (17%). Douglas and Plugge (2006) investigated health needs in 17 year old female young offenders and found that 81% were smokers; 33% had been tested for HIV and Hepatitis B; few exercised and diet was poor; 79% reported a chronic health problem; and 71% were classified as having some kind of mental health need.

1.3 Method

Sampling

Initially, it was decided that, due to the small number (n=120) of children in secure settings in the East Midlands it would be possible to assess the whole population. However, due to operational issues at Rainsbrook Secure Training Centre, it was only possible to collect data on approximately half the children held there; therefore the final sample was 80.

Data collection

Data were collected in a number of different ways depending on the unit. Questionnaires and consent forms were sent to units prior to a visit by a member of the research team when ASSET data were collected and interviews/focus groups conducted with staff. Staff in all four units co-ordinated completion of the health questionnaires by the children. ASSET data was collected as planned at the two secure children's homes, face to face interviews were held with three members of staff from Clayfields House and a focus group was held with staff at the Lincolnshire Secure Unit.

Data Collection Instruments

The Short Form Health Survey – SF-36

The SF-36 is a generic, self administered measure of health related quality of life outcomes. It comprises 36 questions across 8 health dimensions; physical function, role limitation due to physical health, energy and vitality, pain general health perception, role limitation due to mental health, social functioning and mental health,. Scores for each dimension are combined to give a metric score of 0-100 with higher scores indicating better health. A physical component summary and mental component summary are derived from the 8 dimension scores (see appendix 1).

ASSET

Data from the YJB assessment records were collected manually from each unit. This included demographic data, care history and conviction history from the core profile and section 6 (substance misuse), section 7 (physical health) and section 8 (emotional and mental health) as well as details of completion of SQIFA and SIFA (the mental health assessments) summary data.

Data Analysis

SF36 survey data and ASSET data were coded and input into SPSS version 14 for statistical analysis and, where possible, matched for further analysis. Statistical methods and techniques used included descriptive statistics, t tests, ANOVA, bivariate correlation (Pearson's) and regression. The five dependent variables (Offending variables) were subjected, in turn, to multiple regression using PCS and MCS (Health variables) as independent variables. P-values less than 0.05 are evidence of a 'significant' regression model being found. R-squared and P-values were noted so as to judge the quality of the fitted models.

Ethical Approval

In consultation with CSIP commissioners, it was decided that NHS Ethical/Governance approval was not required for this health needs assessment. Nonetheless the project was submitted to the University Ethics Committee and a number of ethical safeguards were adopted.

1.4 Results

Responses by Unit

Rainsbrook Secure Training Centre achieved the greatest return rate with 95% SF36 Health Surveys and 100% ASSETs. Overall, 86% of all targeted SF36s and 87% of all ASSETs were achieved.

Sample Profile

The mean age of this sample of children in secure settings in the East Midlands was 15 years. There was a 60/40 [m:f] gender split and 76% were white (table 2). Girls in the sample were slightly older than the boys, with a mean age of 16 compared to 15 (Figure 1).

Seriousness Score and Conviction History

The 'Seriousness of Offence' Score on ASSET is determined by the type of offence and is rated on a scale of 1-8, with 8 being the most serious. The mean score for 'seriousness of offence' for the sample is 5, with a range of 2-8. The boys in the sample had committed slightly more serious offences, such as sexual offences and robbery than the girls, who had committed offences such as violence against the person, burglary and robbery. The mean age at first conviction was 13 and the mean number of previous convictions is 4 (table 3). Nearly two thirds of the sample had no previous custodial sentences, 7% had one and 10% had two or more.

Care History

Over one-third of the sample had either previously been, or were currently, accommodated by voluntary agreement with parents. Over two thirds had never been subject to a care order. Nearly 40% of the sample were currently or had been previously remanded to Local Authority Accommodation.

How representative is the sample?

The sample is broadly representative of all children in secure settings when compared to Mooney et al (2007), Baker et al (2003) and the DCSF (2008) in which the gender split was reported as around 66/34 [m:f], around half had a history of being in care and the mean age of 1st conviction in the Baker et al (2003) sample was 14.

Global Health Status

- Gender does not explain any differences in either physical or mental health status for this sample. However, for both boys and girls, physical health status is significantly worse than mental health status.
- Compared to the general population of children in Sweden (13-19), young people in secure settings in the EM, have significantly worse physical health and significantly better mental health
- Compared to the youngest group of people on probation (18-24), children in secure settings in the EM have significantly worse physical health and there is no difference in mental health.
- Compared to the general population (average age 34 yrs) in the UK, children in secure settings, both boys and girls, have significantly worse physical health and there is no difference between boys and girls for mental health.

ASSET Information

- Three-quarters of the children smoke; nearly 60% use alcohol the same proportion that smoke cannabis and one in four use cocaine.
- 12% have a physical health condition that which significantly affects life functioning, one third risk their health through drug use, unsafe sex, and prostitution.
- There is no correlation between the SF36 (self completion) and physical health as assessed by YOTs workers on ASSET
- Physical health is rated 12 out of 12 items risk of further offending issues on ASSET

ASSET and Mental Health Screening

- The only establishment where we had ASSET and SQIFA data was Rainsbrook (n=39)
- Out of 39 children at Rainsbrook, the SQIFA was completed on 67% (n=26) when ASSET score indicated that 27 children should have it. However, 41% who should have had SQIFA didn't get it (11/27) and 83% (10/12) of those that didn't need it, received it. Altogether, following SQIFA, full MH assessment indicated for 13% (5/39) but we don't know if this was received or not.
- The SQIFA data suggest that mental health problems were not a significant issue for this group with a full MH assessment indicated for 13% the most serious mental health problems were: hallucinations (4 scored 2-4); PTSD (4 scored 2-4) and substance misuse (4 scored 2-4).
- Data from the qualitative interviews highlighted the fact that a child's vulnerability, especially in relation to mental health, was often inadequately assessed prior to reception at a secure establishment.

Mental Health

- The SF36 mental health component score has a reported cut-off score of 42, for 81% specificity in the detection of depressive disorder. In this sample, 36% of our sample scored under 42, thus approximately 25-30 young offenders are suffering from depression.
- Three children in this sample have been given a formal psychiatric diagnosis
- 55% have been referred to, or had contact with, formal mental health services – this group have significantly higher total dynamic 'future risk of offending' scores
- One in five have previously attempted suicide and 41% have deliberately self-harmed.

Relationship between SF36 (health status) and ASSET (offending and risk of offending)

We can find no direct relationship between health status and offending:

1.5 Discussion

The physical health of children in secure settings is significantly worse than for general population comparison groups. A range of health needs are clearly apparent ranging from dentistry to sexual health. It is reassuring that, by and large, universal health care is provided for these children although not necessarily commissioned through PCTs. The managers of the two smaller homes experience problems in providing escorts for children who need healthcare outside the homes. We do not under-estimate how challenging this must be in an emergency.

Physical health is ranked 12th out of 12 future offending risk items in ASSET in this sample, clearly, youth offending team workers do not believe that physical health status contributes much to the likelihood of future offending. Certainly we find little objective relationship between offending history, risk of future offending and overall physical health status.

The mental health of children perhaps gives greater cause for concern. Although serious mental illness is not a major feature of the group (only 3 cases in the whole sample) assessment and intervention across the pathway is far from systematic or well-resourced. This is especially true for depression where close links with local IAPT initiatives would be beneficial.

From the joint health/YJB perspective there are questions about the extent of involvement of PCTs with the performance management of health-related standards in secure children's homes in the context of both ASSET assessments and substance misuse.

Recommendations

1. PCT commissioners, discuss with the YJB, the ways in which health-related standards are jointly addressed and performance-managed.
2. PCT commissioners ensure that regular mental health assessment takes place not just at reception but regularly, such assessment should focus on depression/suicidal ideation and self-harm.
3. PCT commissioners link to the development of local IAPT programmes with a view to expanding the range of relevant interventions that children receive.

2. Background

East Midlands CSIP Office has commissioned a series of health needs assessments from the CJMH group at the University of Lincoln. A previously reported study examined the health needs of offenders on probation (Brooker et al, 2009) and an assessment of the health needs of short-sentenced prisoners will begin in May 2009. This evaluation focuses on the health needs of children in secure settings within the East Midlands SHA patch, i.e. HMP Foston Hall (Derbyshire), Clayfields House (Nottinghamshire), Lincolnshire Secure Unit and Rainsbrook Secure Training Centre (Northamptonshire). There are strong links with this health needs assessment and the evaluation, also commissioned by the DH from the CJMH group, which is examining the impact of the Framework for Commissioning Secure Children's Services across England (Department of Health 2007). This health needs assessment examines the physical and mental health of the children in these four settings named above and looks at staffs' views about the current healthcare provision.

Children in Secure Settings

The number of children in secure settings has tripled since 1991 (Prison Reform Trust, 2008). On the 9th January 2009, there were 2635 children under 18 in custody, that is, 2465 boys and 170 girls. Of these, 277 were held in Secure Children's Homes (SCH), 225 in Secure Training Centres (STC) and 2233 in Young Offender Institutions (YOI). In the East Midlands there are two Secure Children Homes, Clayfields House and Lincolnshire Secure Unit, a Young Offenders Institution, HMP & YOI Foston Hall, and a Secure Training Centre, Rainsbrook. There are approximately 120 children held across the four secure units in the East Midlands (October 2008, data provided by the individual units).

Table 1

Number of children in secure accommodation in the East Midlands by Establishment

Unit	No of Children	Age range
Clayfields House (SCH)	18	13-17
Lincolnshire Secure Unit (SCH)	9	13-16
Toscana Unit (Foston Hall) (YOI)	11	17
Rainsbrook Secure Training Centre (STC)	80	13-17
TOTAL	118	

Around 16% of children in custody are on remand and nearly 2% are serving indeterminate sentences (Prison Reform Trust, 2008). Nearly a third of this population have poor literacy and numeracy skills and nearly a third have been in care (Prison Reform Trust, 2008). There have been reports of high levels of mental health need among children in secure settings and high levels of substance misuse (Mooney et al 2007). Reconviction rates for children in custody are high, 68.6% were reconvicted within a year of release in 2004 (Prison Reform Trust, 2007)

The secure estate in the East Midlands comprises:

- Clayfields House in Nottinghamshire which is a mixed gender unit that holds up to 18 children aged 10-17 in the criminal justice system and those held on welfare grounds.
- The Lincolnshire Secure Unit which is also mixed gender with 9 beds for those held on both criminal justice and welfare grounds.
- The Toscana Unit at HMP and YOI Foston Hall which holds up to 16 girls aged 17-18 on remand and serving a sentence.
- Finally, Rainsbrook which is one of four privately run Secure Training Centres, which holds up to 87 boys and girls aged 12-17 on remand or serving a sentence. Many of the children held in these units are from other counties.

The health of children and young people

Adolescent health, which is broadly those aged 10 to 20, has received increasing attention in the last decade, for two main reasons. First, adolescence is an important period of growth and transition and, second, because this group make up 13-15% of total UK population (RCPCH 2003). This age group is the only age group whose mortality rates did not fall significantly in the latter half of the 20th century. Death in this group is mainly caused by accidents and self harm. Adolescents also have greater health needs than young children/young adults and have very specific needs particularly around mental health problems and chronic illness.

Sexual health is of particular concern due to an increasing prevalence of sexually transmitted infections found among this age group (BMA 2003). On the whole, adolescents do not have the best diets, nor do they exercise enough. They are also drinking more alcohol than their counterparts in Europe and over 20% report using drugs in the previous month. The British Medical Association (2003) state that psychological problems, such as behavioural disorders, eating disorders and self harm may affect around 20% of adolescents. Another study has reported that 1 in 10 children and young people will have a mental disorder (ONS 2000).

A report by the Royal College of Paediatrics and Child Health (2003) identified that young people faced barriers in their use of health services particularly in relation lack of information, confidentiality, privacy and the expertise and continuity of professionals.

The health of children in the secure estate

Children in secure settings are a vulnerable group with complex and specific health needs. A review of the literature shows that there have been a number of well-conducted studies looking at the prevalence of mental health problems of this group of children, but very little focusing on physical health or on their needs.

A systematic review of the policy and research in relation to the health needs of prisoners (Harris et al 2006) highlighted the social exclusion and risky behaviours of young prisoners. It also noted how there was little literature about the physical health needs of young prisoners. MacDonald (2006) has reviewed the health needs of adolescents and young offenders. Screening was identified as a key issue, particularly to improve the recognition of health needs and the subsequent production of care plans. MacDonald recommended that further research was needed in order to develop and implement appropriate services. Mooney et al (2007) also undertook a review of the health of children in secure settings. They noted that there are high levels of mental health need and substance abuse among this group.

One of the key studies that has examined psychiatric morbidity in young offenders was undertaken by Lader et al (2003) for the Office of National Statistics – a sample that aged from 16 to 20 years old. They found that over 80% of the sample smoked, nearly 90% had drunk alcohol in the 12 months prior to custody and over 60% had used drugs in the month prior to custody. Male sentenced young prisoners rated their general health better than their female counterparts and 21% of males sentenced young prisoners reported a long standing illness, disability or infirmity compared to 41% among the females. Differences in mental health treatment were great between male and female young offenders. In the 12 months prior to custody, 11% of male sentenced young prisoners had received mental health treatment compared to 27% of female young offenders which increased to 14% for males and decreased to 22% for females who had received mental health treatment in prison. Prevalence rates for personality disorder among the male sample was 88% and 10% for psychosis (male sentenced young prisoners), which is vastly increased in comparison to the general population. Self harm rates were similar between the male and female samples, 7-11%, but suicidal thoughts and attempts were higher among the females.

Chitsabesan et al (2006) examined the mental health needs of young offenders (age 13-18) in custody and in the community. They found that young offenders have high mental health need, particularly in the community where needs were often unmet. They suggest that needs reduce temporarily whilst in custody and can increase again on release back to the community. 31% of the sample had a mental health need; nearly 20% had had significant depressive symptoms, 10% reported anxiety or post traumatic stress symptom and around 10% reported self harming within the previous month. The children in secure care were followed up 9 months later (Harrington and Bailey 2005) and were found to have an increase in the number of needs, particularly around drugs and alcohol. Mental health need was not significantly different at follow up, 27% showing symptoms of depression, 13% anxiety and 7% self harm.

Another study has examined the mental health needs of boys (age 12-17) in secure care (Kroll et al 2002) and how need changed over time also found high rates of psychiatric morbidity. Prior to admission over 50% misused drugs or alcohol and over 33% were found to be depressed, however there were improvements to substance misuse unsurprisingly after admission. However, for mental health, particularly depression and anxiety, levels remained high and even developed after admission. The most prevalent psychiatric disorders were found to be conduct disorder (91%); major depression (22%) and generalised anxiety disorder (17%), although conduct disorder had completely disappeared after 3 months.

The Douglas and Plugge (2006) health needs assessment of young women in YOIs looked at physical and mental health status of 17 year old female prisoners. This study helped inform health need projections for the development of the Toscana Unit at Foston hall, Derbyshire. As with the Brooker et al (2008) study of offenders on probation, female offenders have even worse mental and physical health status than women in social class V of the general population. 81% of the young women were smokers, 61% were drinking more alcohol than is recommended prior to custody and 82% used drugs. In terms of sexual health, nearly a quarter of the sample had had an STI. A third of the sample had been tested for HIV and hepatitis B, none had tested positive and half had been vaccinated against hepatitis B. Very few exercised and their diet was poor. 79% reported having a longstanding illness or disability, a much higher figure than that reported by Lader et al (2003), which included 47% with depression and 18% with anxiety/panic attacks. 36% of young women had self harmed in the last month and 71% were classified as having some level of psychiatric disturbance.

The wealth of literature that looks at mental health suggests that prevalence of mental health disorder among this group of children is high and often remains unmet. But there is little corresponding research around the physical health of this group. The literature also suggests that the majority are smokers and alcohol consumers and regularly practice in risky behaviours.

Healthcare Policy for Children in Secure Settings

Policy is now focusing more and more, not just on vulnerable children, but specific groups of vulnerable children, including those who offend and those in secure settings. The Every Child Matters outcomes include 'be healthy' both physically and mentally (Department for Education and Skills, 2005). Much of this highlights the importance of ensuring all children regardless of their circumstances have the same access to healthcare as the general population (Healthcare Commission [2008]; Department of Health, [2004], YJB [unknown]). Safeguarding Children (2008) makes reference to 29% of children and young people in custody have identified physical health needs

The Youth Justice Board are responsible for the prevention of offending by children under 18. They also have the responsibility for ensuring their health needs are addressed whilst they are in the youth justice system. The YJB National Standards include standards for healthcare in secure establishments:

10.48 All young people should receive health care of a similar standard as they would receive in the community.

10.49 All secure establishments must have in place procedures to identify and manage those at risk of self harm and suicide; these should regularly be monitored, reviewed and updated. (YJB, 2004)

National Standard 11, which relates to sentenced young offenders, also highlights the central role of ASSET, a structured assessment tool used by youth offending teams. ASSET is a structured framework to assess issues associated with a young person's offending completed by the Youth Offending Team. The tool is broken down into a number of sections relating to various potential risk factors common among young offenders which help develop a profile. This includes physical health and emotional and mental health (which are the two sections looked at in this study).

In an evaluation of ASSET (Baker et al 2003), 8% of the sample were found to have been assessed as having a physical health condition that significantly affects everyday functioning, a much lower figure than reported in other studies. They also found that 11% put their health at risk through their own behaviour, particularly among female offenders and 4% lacked access to appropriate healthcare. Approximately a third of this sample were assessed as having significant problems with daily function due to coming to terms with past events, their current circumstances and their concerns about the future. However, only 2% were assessed as having a formal mental illness diagnosis and 11% had contact with mental health services.

Female offenders were more likely to be assessed as having emotional and mental health difficulties. A report on the further development of ASSET (Baker et al 2005) notes that emotional and mental health ranked 8th out of 13 as a risk of reoffending. Physical health was least likely to be associated with reoffending. A YJB corporate brochure about health argues that there is a link between health and offending however little research to date has clearly identified the nature of this relationship.

Secure settings rely on ASSET for providing a profile of the young person but often they are incomplete or missing, particularly when it comes to mental health assessments. It has also been established that ASSET under-reports mental health problems (Harrington et al 2005). The mental health screening tool was developed as an addition to ASSET. If a young person scores 2 or more in ASSET section 8, Emotional and Mental Health, then the health professional attached to the YOTs team should also complete the SQIFA, the Screening Questionnaire Interview

for Adolescents. However, if the young person scores 3 or 4 on the SQIFA, a full interview, SIFA, should be completed by a trained professional (YJB 2003). This should all be complete prior to a child entering secure care.

Inspection reports

HM Inspector of Prisons has the responsibility for inspecting all prison establishments including Young Offender Institutions. They inspect every establishment at least once every five years and these inspections can be announced or unannounced. They conduct surveys with a sample of the prison population, hold individual interviews and focus groups collect evidence such as documentation and make observations. They also talk to prison staff, visitors and anyone else with an interest in the establishment.

OFSTED are responsible for the inspection of other children's secure units, such as STCs and SCHs, inheriting this responsibility from the Commission for Social Care in April 2007. The inspections are based around the 5 Every Child Matters Outcomes; be healthy, stay safe, enjoy and achieve, make a positive contribution, achieve economic well-being.

The Toscana Unit at Foston Hall was last inspected in April 2008 (HM Chief Inspector of Prisons, 2008) and overall it was a 'very good' report. The provision of healthcare is 'very good' and there is thorough healthcare screening on arrival. A wide range of health services are available and they are able to deliver 'good' primary care and a full range of clinics. There is a female GP, good mental health support and adequate dental services. Healthy food was provided, including healthy snacks. There is good analysis of self harm data – incidents were well monitored and cross referenced with the child protection coordinator. There is also a range of specialist staff to support the young women who self harm, however there was no peer support available. No needs assessment had been conducted by the substance misuse service but there was a range of appropriate interventions. There is no detoxification facility, for which the main recommendation of the whole report was that:

The Youth Justice Board and the Primary Care Trust should work in partnership to ensure that the unit is able to accept, safely accommodate and treat substance dependant young women requiring stabilisation or detoxification, to avoid the necessity to place young women long distances from their home area to access an appropriate service. (HP43)

Rainsbrook Secure Training Centre was fully inspected in December 2007 (OFSTED, 2007) and a follow-up inspection was undertaken in July 2008 (OFSTED 2008a). Health provision was reported as "good" in both inspections. Meals are varied and healthy eating is promoted but not always implemented; salad and vegetables are not always available. A recommendation was made to review the quality and quantity of meal provision. Arrangements for on-site health services are child-centred, embedded in practice and well organised. The healthcare team are experienced in learning disability, mental health and general nursing. Holistic

healthcare needs are addressed through visiting health professionals who provide a support service. There is also a visiting GP, optician and dentist plus a sessional psychologist and psychiatrist. Health needs are assessed at admission which includes an initial mental health assessment. A young person's survey was carried out to evaluate health services and there is development around the provision of immunisations.

Clayfields House Secure Unit was last inspected by OFSTED in November 2008 (OFSTED, 2008b). The overall quality rating was good. However this was an unannounced inspection to evaluate progress of previous recommendations and health was not inspected this time. The last time health was inspected was 2004, although there is currently a inspection imminent.

The November 2008 inspection of the Lincolnshire Secure Unit rated the overall quality as good (OFSTED, 2008c). Health provision was also rated as good. A healthy diet is provided and all dietary requirements are met. Health plans are clear and up to date, as well as provide historical information. There are also clear plans for those with specific health and mental health issues. There is access to health professionals and advice is available for alcohol and substance misuse, smoking, relationships, education, bullying and abuse issues. There are "positive links" with the local GP, for three afternoons per week a nurse is available and there is also out of hours provision. No recommendations were made in relation to health.

3. Method

Aims of the Health Needs Assessment

- To examine the physical and mental health status of children in secure settings using structured assessment tools
- To identify current healthcare provision
- To identify gaps when needs and provision are compared
- To provide information to help develop outcomes for children and young people
- To contribute to the development of recommendations for commissioners

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Initially, it was decided that, due to the small number (n=120) of children in secure settings in the East Midlands it would be possible to assess the whole population. However, due to operational issues at Rainsbrook Secure Training Centre, it was only possible to collect data on approximately half the children held there; therefore the final sample was 80.

Data collection

Data were collected in a number of different ways depending on the unit. Questionnaires and consent forms were sent to units prior to a visit by a member of the research team when ASSET data were collected and interviews/focus groups conducted with staff. Staff in all four units co-ordinated completion of the health questionnaires by the children. ASSET data was collected as planned at the two secure children's homes, face to face interviews were held with three members of staff from Clayfields House and a focus group was held with staff at the Lincolnshire Secure Unit.

Due to difficulties in arranging a visit to the Toscana Unit at Foston Hall, a telephone interview was held with the head of health care and ASSET data was collected directly from the Youth Justice Board Headquarters. Data collection at Rainsbrook once negotiated was straightforward and involved two days where data were made available and transcribed. Staff interviews were also conducted.

Unfortunately the completion of SQIFA and SIFA is relatively new and was not available for all children.

Data Collection Instruments

The Short Form Health Survey – SF-36

The SF-36 is a generic, self administered measure of health related quality of life outcomes. It comprises 36 questions across 8 health dimensions; physical

function, role limitation due to physical health, energy and vitality, pain general health perception, role limitation due to mental health, social functioning and mental health and can be used with anyone aged over 14. Scores for each dimension are combined to give a metric score of 0-100 with higher scores indicating better health. A physical component summary and mental component summary are derived from the 8 dimension scores (see appendix 1).

The SF-36 is a well validated, reliable tool (Brazier et al, 1992) used world wide in many different languages. Comparable UK general population data (normative data) is taken from the Third Oxford Healthy Lifestyle Survey (Jenkinson et al, 1999). All children aged 14 years and over in the sample were asked to complete and SF36.

Scoring procedures for the SF36 survey were followed as per the developers user's manual (Ware et al 2008). Estimates of missing data were made according to the manual and input where possible. This resulted in 91% achieved domain scores and 70% achieved component summary scores due to missing gender data.

ASSET

Data from the YJB assessment records were collected manually from each unit. This included demographic data, care history and conviction history from the core profile and section 6 (substance misuse), section 7 (physical health) and section 8 (emotional and mental health) as well as details of completion of SQIFA and SIFA (the mental health assessments) summary data (see appendix 2).

Data Analysis

SF36 survey data and ASSET data were coded and input into SPSS version 14 for statistical analysis and, where possible, matched for further analysis. Statistical methods and techniques used included descriptive statistics, t tests, ANOVA, bivariate correlation (Pearson's) and regression. The five dependent variables (offending variables) were subjected, in turn, to multiple regression using PCS and MCS (Health variables) as independent variables. P-values less than 0.05 are evidence of a 'significant' regression model being found. R-squared and P-values were noted so as to judge the quality of the fitted models.

Interviews and focus groups were conducted with a number of healthcare and unit staff. Interviews, both face to face and by telephone took approximately 30 minutes and focus groups with between two and five staff took between one and two hours. Detailed notes were made during the interviews and focus groups. These qualitative data were analysed thematically across all four establishments using the framework of the interview schedule (see appendix 4).

Ethical Approval

In consultation with CSIP commissioners, it was decided that NHS Ethical/ Governance approval was not required for this health needs assessment. Nonetheless the project was submitted to the University Ethics Committee and a number of ethical safeguards were adopted:

- each manager in each of the care settings gave consent for the data collection in their establishment
- each child completing an anonymous SF36 questionnaire signed a separate information and consent form (readability rate 85.1 using Flesch Reading Ease so suitable for this age group) (see appendix 3).

All participants were assured that their details would be anonymous and that no individual would be identified by name. When SF-36 questionnaires were matched with ASSET data, numbers were used instead of names. As care managers and/or healthcare staff administered the questionnaires, there were no ethical concerns regarding contact between the children/young people and the research team.

As normative SF-36 data is only available for children aged 14 years and above, the research team requested that only those 14 or over completed the questionnaire. They were provided with a comprehensive information sheet prior to completion of the questionnaire and were informed that they had the choice of participating and could withdraw at any time. As the aim was to collect data from all children in secure settings in the East Midlands, there were no issues with sampling.

