

# **Criminal Justice Transitions**

**Lesley McAra and Susan McVie**



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The University of Edinburgh

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## KEY FINDINGS

- A total of 355 (8.8 %) cohort members who were screened had at least one criminal conviction by age 19 (on average), of which 347 had full records of disposal.
- Around half were convicted only once, although a substantial minority had amassed a large number of convictions (3.5 on average) and had many charges proved against them (6.3 on average).
- The most common type of charge proved was motor vehicle offences (43% of those convicted). Around a third had been convicted for crimes of violence, dishonesty, other crimes and/or miscellaneous offences. It was not uncommon for offenders to be convicted for a range of different types of offending.
- Most of those convicted had received a fine (72%), 23% had received a community sentence and 12% had been sentenced to custody by age 19.
- The most common age of first conviction was 17, although a quarter were convicted at age 16 or under. Amongst those who were reconvicted after their first conviction, the majority (66%) occurred within 12 months.
- More than half of those convicted (59%) had been known to the children's hearing system at some point. And, of those who had been referred to the hearing system on offence grounds, 45% had a criminal conviction.
- Convicted youngsters with a hearings record were significantly more likely than those with no prior history of hearing involvement to: (i) have a higher number of convictions and charges proved; (ii) have convictions for violence, dishonesties and fire-raising/malicious mischief; (iii) have been sentenced to a period in detention or to a community penalty (e.g. community service or probation).
- A large proportion of those who were convicted came from backgrounds characterised by high levels of social deprivation (as measured by household socio-economic status, free school meal entitlement and neighbourhood deprivation).
- The most important predictors of criminal record status were school exclusion by third year of secondary education; leaving school at age 16; early history of police warning/charges (by age 12); ever having an offence referral to the Reporter; ever being placed on supervision by the hearing system; persistent serious offending; and being male.
- A high proportion of youngsters with a criminal record became known to the children's hearing system around age 13, but such institutional contact failed to stem their involvement in persistent serious offending (which remained high at every study sweep).
- Children who made the transition from the hearing system to the adult criminal justice system had been assessed by agencies as having a high volume of needs (relating to personal, family and school adversities) at the point of transition.
- These findings are supportive of policies which subsume youth justice within a broader social and school inclusion agenda. They also suggest that criminal convictions amongst older children could be reduced by: (i) reviewing school exclusion policies and current mechanisms for maximising the number of children retained in education beyond the minimum school leaving age; (ii) improving the quality of social work services for offenders in the early to mid teenage years; and (iii) expanding the scope of the youth court to include solemn as well as summary cases.

## **INTRODUCTION**

The purpose of this report is to explore transitions into the adult criminal justice system amongst the Edinburgh Study cohort. It includes:

- a description of patterns of criminal convictions and disposals for young people up to age 19 (on average);
- an examination of the characteristics and institutional histories of cohort members with a criminal record as compared with youngsters with no such record;
- an exploration of the profile of young people who make the transition from the children's hearings system to the adult criminal justice system as compared with youngsters with a hearings record but who have not made this transition by age 19.

### **The Edinburgh Study**

The Edinburgh Study of Youth Transitions and Crime is a longitudinal research programme exploring pathways into and out of offending for a cohort of around 4,300 young people who started secondary school in the City of Edinburgh in 1998. The key aims and methods of the study are summarised below<sup>1</sup>.

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<sup>1</sup> See also Smith et al (2001) and Smith and McVie (2003) for further details of the Study.

#### *Aims of the programme*

- To investigate the factors leading to involvement in offending and desistance from it
- To examine the striking contrast between males and females in criminal offending
- To explore the above in three contexts:
  - Individual development
  - Interactions with formal agencies of control
  - The social and physical structures of neighbourhoods
- To develop new theories explaining offending behaviour and contribute to practical policies targeting young people

#### *Overview of methods*

- Self report questionnaires (annual sweeps)
- Semi-structured interviews (with sub-samples of the cohort undertaken at sweeps 2 and 6)
- School, social work, children's hearings records (annual sweeps)
- Teacher questionnaires (1999)
- Police juvenile liaison officer and Scottish criminal records (from 2002)
- Parent survey (2001)
- Geographic information system

#### *Participating schools*

- **All 23 state secondary schools**
- 8 out of 14 independent sector schools
- 9 out of 12 special schools

#### *Response Rates*

- Sweep 1 - 96.2% (n=4300)
- Sweep 2 - 95.6% (n=4299)
- Sweep 3 - 95.2% (n=4296)
- Sweep 4 - 92.6% (n=4144)
- Sweep 5 - 89.1% (n=3856)
- Sweep 6 - 80.5% (n=3525)

#### *Research Team*

- Lesley McAra, Susan McVie, Jackie Palmer, David Smith

#### *Study Funding*

- Economic and Social Research Council (1998 - 2002)
- The Scottish Executive (2002- 2005)
- The Nuffield Foundation (2002 – 2006)

## **Criminal justice transitions: institutional, policy and research contexts**

Article 1 of the UN Convention on the Rights the Child defines a child as a human being below the age of 18 (unless, under the law applicable to the child, majority is attained earlier) (see UN 1989). In Scotland the age of majority is 18, however the normal point of transition from the juvenile to adult criminal justice system is age 16<sup>2</sup>.

### *Key Scottish frameworks*

Young offenders aged between 8 (the age of criminal responsibility) and 15 are generally dealt with in the children's hearing system<sup>3</sup>. Based on the Kilbrandon philosophy<sup>4</sup>, the overall aim of the hearing system is to address the *needs* of the child

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<sup>2</sup> Moreover offenders aged 16–20 are often referred to in policy documents as 'young adult offenders' (see Paterson and Tombs 1998).

<sup>3</sup> Certain categories of younger children may be dealt with in the criminal courts: those charged with very serious offences such as murder or rape; and those aged 15 charged with certain specified motor vehicle offences (see McAra 2006).

<sup>4</sup> According to this philosophy juvenile offending and other troublesome behaviours should be regarded as manifestations of deeper social and psychological malaise and/or failures in the normal upbringing process (Kilbrandon 1964). Unlike England and Wales, the same institutional apparatus continues to be

(except in a small number of cases where the child is considered to present a significant risk to others). It advocates early and minimal intervention based on a social education model of care; and is intended to avoid criminalizing and stigmatizing young people (see McAra 2002 and 2006 for a detailed overview of history and development of the system).

In recent years there has been increased concern on the part of both politicians and policy-makers about the effectiveness of the hearing system at dealing with 'persistent' offenders (currently defined as children referred to the Reporter<sup>5</sup> on 5 or more occasions within a six month period for an episode of offending, the majority of whom are around 15 years old, see SCRA 2005) (McAra 2006). As a consequence, various initiatives have come on stream aimed at reducing the numbers of these offenders, one such initiative being the pilot fast track hearings (implemented in 2003).

The fast track pilots placed strict time targets for the various stages in the referral process (police to Reporter, Reporter to hearing), with the aim of bringing persistent offenders before a hearing within a maximum of 53 working days. As part of the pilots, it was intended that resources be directed to the further expansion of specialist community programmes for these offenders. Although, the fast track hearings were exhorted to take a holistic view of the child, for the first time *deeds* rather than needs became the core driving force behind the hearings referral process. The Scottish Executive, however, decided against rolling out the fast-track model across Scotland in the wake of an unfavourable evaluation (see Hill et al. 2005).

#### *Transition from children's hearing to adult criminal courts*

In terms of transitions, it is possible for children to be retained in the hearing system up until the age of 18 through the extension of supervision requirements (the principal mode of disposal). However, as indicated above, the overwhelming majority of 16 and 17 year old offenders are dealt with in the criminal courts. The courts do have the power to remit such cases to the children's hearings system for advice and/or disposal. If the young person is currently subject to a children's hearings supervision requirement, then the court must refer the case back to children's hearings system for advice.

In practice very few cases are remitted for disposal by the courts. In 2004/05, for example, 205 cases were referred by the sheriff court to the hearing system (SCRA 2006) which represents less than one per cent (0.7%) of court disposals given to children and so-called 'young adult offenders' (aged 16–20). Research evidence suggests that Sheriffs consider the hearings system as too soft an option for the majority of 16 - 17 year olds and will only remit cases in which the welfare element far outweighs the seriousness of the offence (McAra 1998). Moreover the hearing system itself seems reluctant to retain 16 and 17 year olds, with most supervision requirements being terminated (often on the recommendation of social workers) as soon as children reach their 16<sup>th</sup> birthday (Waterhouse 1999, McAra 2005).

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used for both child offenders and those in need of care and protection (roles which were formally separated south of the border as a result of the Children Act 1989).

<sup>5</sup> The Reporter investigates all referrals to determine whether there is a prima facie case that at least one of the 12 statutory grounds for referral to a hearing has been met *and* that the child is in need of compulsory measures of care (see McAra and McVie 2007 for further details of referral processes).



There is consensus amongst many commentators that the transition between the children's hearing system and the adult courts is too abrupt and that young offenders find it difficult to adjust to the very different ethos of the latter (see Hogg 1999, Scottish Executive 2000, Hallett 2000, McAra 2002). Those in favour of raising the point of transition argue that the adult criminal justice system is not geared up to dealing with the needs of 16 - 17 year old offenders. Many of these offenders present with problems relating to substance misuse, high levels of victimisation or family relationship difficulties, and many are immature and emotionally under-developed. As such, it is considered that they would benefit from the more holistic approach offered by the children's hearing system (see Hogg 1999).

Those in favour of retaining 16 as the point of transition argue that it is an age when young persons generally do reach a sufficient degree of maturity. It is both the legal age of marriage in Scotland and also the school leaving age. Moreover, it is argued that the nature and scale of offending amongst many 16 year olds makes the criminal courts a more appropriate forum than the children's hearings system (see Hallett et al 1998, Hallett 2000).

The Scottish Executive-led *Youth Crime Review* (2000) recommended that 16 and 17 year old offenders should be dealt with by the hearings system rather than the courts and a bridging pilot was proposed as a means of facilitating this. However Ministers opted instead for a form of youth court, piloted initially in Hamilton and Airdrie (at the time of the research there was no youth court in Edinburgh).

The youth courts deal with persistent offenders (charged with summary offences), aged 16-17 who normally would be dealt with in the adult courts, as well as children aged 15 who would otherwise have been dealt with in the sheriff summary court. The definition of persistence in this context and, indeed, the criterion for referral to the youth court, is three or more police referrals to the Procurator Fiscal (prosecutor) in a six month period. Time-scales have been set for the referral process<sup>6</sup> and local authority social work departments have been charged with developing a portfolio of specialist community-based programmes for these offenders. An important element of the new court procedures is the review hearing, whereby certain offenders are required to return to court some time after the initial sentence, to discuss progress in addressing offending with the sheriff (see McIvor et al. 2004 for an overview).

### *Outcomes*

There has been a paucity of research undertaken on the longer term outcomes for young offenders who make the transition from the hearings to the courts. It is difficult to track offenders through the two systems not least because each has different record keeping practices and information systems are not always compatible (McAra 2002). The research which does exist, however, provides some support for the claim that 16-17 year olds in the criminal justice system are a particularly vulnerable group, who often present with a long history of involvement with the hearing system (see Whyte 2003, Kennedy and McIvor 1992).

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<sup>6</sup> Youngsters should make their first appearance in court 10 days after being charged.

Waterhouse et al. (1999), for example, followed up 113 'jointly referred' children in their cohort<sup>7</sup> for a period of two years. Around four-fifths of these children had a criminal conviction by the end of this period, with just under a third being sentenced to a period of custody by the courts. The majority of those with convictions were living on state benefit, were from lone parent families and had been living in local authority care at the time of their initial referral to the hearings system. In a small proportion of cases concerns had been expressed at the initial referral about drug (19%) and alcohol (28%) abuse and psychiatric difficulties (11%) (Waterhouse 1999, Whyte 2003).

The more recent evaluation of the pilot youth court in Hamilton found that 70% of referred cases had had a history of referral to the Reporter (Popham et al. 2005). In keeping with the Waterhouse research, youngsters appearing before the court experienced high levels of social adversity. Of those for whom information was available (n=104), 62% were reported as having major difficulties at school including behavioural problems, experience of bullying and truancy; 41% were unemployed at the time of the research and 58% were assessed as having problems related to alcohol misuse.

### **Key arguments**

As this report aims to demonstrate, the findings of the Edinburgh Study are broadly supportive of previous research in the field. Youngsters in the cohort with a criminal record by age 19 are highly vulnerable: they live in deprived neighbourhoods and generally present with a history of school exclusion, persistent truancy and victimisation. A high proportion of these youngsters become known to the children's hearing system around age 13, but such institutional contact fails to stem their involvement in persistent serious offending (which remains high at every sweep). Importantly, children who make the transition between the hearing system and the adult criminal justice system have generally been assessed by agencies as having a high volume of needs (relating to personal, family and school adversities) at the point of transition. Such youngsters are up-tariffed relatively quickly, with disproportionate numbers being placed in custody by their 19<sup>th</sup> birthdays.

Taken together the findings are supportive of policies which subsume youth justice within a broader social and school inclusion agenda. They also suggest that criminal convictions amongst older children could be reduced by: (i) reviewing school exclusion policies and current mechanisms for maximising the number of children retained in education beyond the minimum school leaving age; (ii) improving the quality of social work services for offenders in the early to mid teenage years; (iii) expanding the scope of the youth court to include solemn as well as summary cases; and (iv) greater recognition that young people aged 16-17 are older children and not young adult offenders.

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<sup>7</sup> Jointly referred children are those whom the police report to both the Procurator Fiscal and the Reporter to the children's hearing system. Joint referrals have been interpreted by some commentators as an indication of seriousness of offence (see Waterhouse et al. 1999). The cohort in the Waterhouse study comprised all referrals (on any ground) to the Reporter in the first two weeks of February 1995 (n=1155).

## **Structure of the report**

Part 1 of the report describes the pattern of convictions and disposals amongst young people up to the age of 19 in the Edinburgh Study cohort. Part 2 examines in more detail the demographic profile and institutional histories of cohort members with criminal records as compared with their non-record counterparts. Part 3 compares the characteristics of youngsters who made the transition from the children's hearing system into the adult criminal justice system with those who did not. The report concludes with a brief review of the policy implications of the findings.

## **Methodological notes**

All of the variables used in the analysis for this report are specified in detail at Annex 1. Some of the analysis involved the use of multiple imputation methods to overcome the problem of missing data and a note on imputation is provided at Annex 2. The report also draws extensively on data from the records of the Scottish Criminal Records Office (SCRO) and methodological issues relating to the use of these data, are outlined at Annex 3.

Importantly, analysis carried out for this report involved the use of inferential statistical testing to calculate differences in estimates (e.g. percentages) between different groups within the cohort. For categorical data the most common statistical test used was the chi-square test, while for continuous data t-tests were most commonly used (where appropriate assumptions were met). Significance testing was carried out to the .05 level or below i.e. differences between groups were only determined to be significantly different if there was *a 5% probability or less of the result not being true*. This probability is represented in the text and tables as the '*p value*' and is only reported where the value is less than or equal to .05.

## **PART 1: PATTERNS OF CRIMINAL CONVICTIONS AND DISPOSALS**

This section of the report presents a detailed description of the pattern of convictions and disposals amongst the Edinburgh Study cohort up to the age of 19 (on average). A total of 4040 cohort members' names were checked against the Scottish Criminal Record Office (SCRO) database<sup>8</sup>. Of these, 355 (8.8%) were found to have a criminal record; however, 8 individuals had not been formally sentenced or their cases disposed of at the time of data collection (cases were pending or the results of cases were not recorded). Since much of this section is about disposals, the analysis presented here is restricted to the 347 (8.6%) individuals for whom full case information was available. Importantly, the rate of conviction amongst the Edinburgh Study cohort is similar to national rates of conviction amongst a cross-sectional sample (i.e. criminal proceedings statistics indicate that in 2004/05 around 8.1% of those aged between 16 and 19 across Scotland received at least one criminal conviction, Scottish Executive 2006).

### **Pattern and nature of convictions**

By age 19, the 347 convicted young people had amassed between them a total of 1213 convictions in their records. The majority had been convicted on only one (44%) or two (18%) occasions, although the average number of cases recorded with a conviction was 3.5. This was due to a substantial minority of individuals who had received numerous convictions by the age of 19. Almost a quarter (23%) had been convicted on four or more occasions, with the highest number of convictions for this group being 44.

At each period of conviction, it was possible for the individual to have had several charges proved against them. The total number of charges recorded against the 347 convicted individuals was 2186. Again, a large proportion of those convicted had had only one (30%) or two (19%) charges proved against them. However, a small but substantial minority had been prosecuted on many more charges. The average number of charges proved was 6.3, but more than one in ten (12%) had been convicted of ten or more charges, with the largest number of charges proved against any one individual being 117.

The nature of the charges led against those who were convicted is summarised, using the Scottish Executive crime categories, in table 1. The most common was motor vehicle offences, for which 43% of those convicted had charges proved. This was particularly high as many cohort members were convicted on more than one count. The average number of motor vehicle offences proved was 3.5 and the maximum number against any one person was 37. Almost two in five of those convicted had crimes of violence proved against them, although only 11 individuals were recorded as having been in possession of a weapon. The frequency of conviction for violent crimes was lower than for motor vehicle offences, however, with an average of 1.7 charges proved and a maximum of 9 against any individual.

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<sup>8</sup> Permission to screen names for criminal conviction data was requested on an opt out basis, via a letter from the study team. Only 17 young people opted out of this element of the research. However cohort attrition means that there currently around 353 individuals with whom we have lost contact. In all cases where the current address was unknown or letters were returned undelivered, names were *not* sent for screening.

A lower proportion of convicted individuals had crimes of dishonesty proved against them, although those that had tended to be fairly frequent offenders. On average, these offenders had 6.6 offences proved and at least one person was convicted on 67 counts of dishonesty. The least common type of crime for which individuals were convicted was fire-raising or malicious mischief. The average number of charges proved was fairly low, similar to violence, and the maximum number of charges proved was only 6. A substantial proportion of cohort members were convicted for other crimes or miscellaneous offences. In addition, 61 of those convicted (18%) had charges with aggravating factors (which included offending while on bail, against a child, involving domestic abuse, sexual, racial or some other factor).

**Table 1: Nature and number of charges amongst those convicted (n=347)**

<b>Nature of charges</b>	<b>Number of cohort</b>	<b>% of all those with a conviction</b>	<b>Average number of charges proved</b>	<b>Maximum number of charges proved</b>
Crimes of violence	132	38	1.7	9
Crimes of dishonesty	116	33	6.6	67
Fire-raising/malicious mischief	61	18	1.6	6
Other crimes	135	39	2.6	17
Motor vehicle offences	150	43	3.5	37
Miscellaneous offences	120	35	1.9	11

Note: Other crimes include crimes of indecency which was too small to report separately. Percentages do not total 100 as individuals could have received more than one type of charge.

About half (48%) of those convicted had charges proved against them within only one of these broad crime or offence categories. However, the average number of categories in which offenders had been convicted was two and, in fact, 29% of those convicted had charges proved against them that fell within three or more of these six broad categories. In other words, it was not uncommon for offenders to be convicted of a wide range of different types of offending behaviour.

### **Disposals used**

A wide range of disposals were used in dealing with the cohort members in this analysis, as shown in table 2. The most common type of disposal used was the fine, which seven out of ten of those convicted had received at least once. Few offenders were repeatedly fined, however, since the average number of convictions involving a fine was 1.6 and the maximum number of cases in which a person was fined was 6. Not surprisingly, given the high prevalence of motor vehicle offences, the second most common disposal used was some form of road traffic penalty, which included licence endorsement and disqualification from driving. Two out of five convicted persons had received driving disposals at least once, although this also was not used frequently. The average number of convictions for which a driving disposal was received was 1.5, although at least one person received such a disposal on 10 occasions.

Table 2 indicates that a much lower proportion of those convicted by age 19 experienced other forms of disposal by the criminal justice system. Interestingly, however, the prevalence of less serious or intrusive forms of disposal (such as use of

Procurator Fiscal fixed penalties or remit to the Reporter) is not dramatically different to the prevalence of far more serious disposals (including alternatives to custody and custody itself). Around a quarter of those convicted were admonished (a judicial warning which counts as a conviction) while 14% were given a PF fixed penalty, although neither of these types of disposal were repeatedly given to the same offender (the average number of times used was only just over one). Sixteen percent of offenders were remitted to the Reporter for disposal and this tended to be a frequent form of sentencing, since the average number of times remitted was 5 and at least one person was remitted on 23 occasions.

A reasonable proportion of those convicted had received a direct alternative to custody, either in the form of a community service order (17%) or a probation order (14%), of which about a third had subsequently had their order either revoked or amended by the court. A period of detention was used as a disposal for just over one in ten (12%) of those convicted by age 18. Perhaps most significantly, these more serious forms of sentencing tended to be used more frequently amongst the recipients than all of the other forms of disposal used (with the exception of remit to the Reporter). Amongst those who received it, custody was repeatedly used, with those being sentenced to detention experiencing an average of 3.8 such sentences and at least one person being sentenced to 12 separate periods of incarceration.

**Table 2: Types of disposal received by those convicted (n=347)**

<b>Types of disposal received</b>	<b>Number of cohort</b>	<b>% of all those with a conviction</b>	<b>Average number of times received</b>	<b>Maximum number of times received</b>
Detention	40	12	3.8	12
Community Service Order	59	17	1.8	12
Probation Order	50	14	2.3	12
Amended/revoked CSO or PO	22	6	1.7	5
Fine	249	72	1.6	6
Compensation Order	63	18	1.2	3
Road Traffic disposal	140	40	1.5	10
Admonished	80	23	1.4	5
Remit to Reporter	54	16	5.0	23
Procurator Fiscal fixed penalty	49	14	1.1	4
Other disposal	23	7	1.3	6

Note: Detention includes some who also received supervised release orders. Other disposal includes exclusion orders, DTTOs, absolute discharges and restriction of liberty which were too small to report separately. Percentages do not total 100 as each charge might have resulted in more than one type of disposal.

Given the repeated nature of convictions, it was not uncommon for a convicted person to have experienced more than one disposal. In fact, those who were convicted had most commonly experienced two different types of disposal (40%) with considerably fewer experiencing only one form of disposal (30%). However, a significant minority (17%) of the convicted group had received more than four different types of disposal from the courts.

Table 3 presents a summary of the most severe type of disposal received by each individual. For the majority of cohort members convicted, disposals did not stretch beyond a monetary penalty. However, a quarter was sentenced to either detention or a community sentence, which may have been imposed as an alternative to custody. Not surprisingly, the severity of the disposal was linked to the persistence of the offending. Those who received monetary penalties or less severe forms of disposal had the lowest number of convictions and the fewest charges proved against them (there was no significant difference between these two groups).

By contrast, those young people who had received some form of community sentence had a higher average number of convictions and charges proved than either monetary penalties or other disposals, although the mean number of charges proved was only just outwith the bounds of statistical significance from the ‘other’ category. Those who were sentenced to detention were, however, far more persistent offenders as measured in terms of their average number of convictions and charges proved. Such youngsters were convicted, on average, almost four times more often than those who received alternatives to custody, and had over four times more charges proved against them.

**Table 3: Most severe type of disposal received by those convicted (n=347)**

<b>Types of disposal received</b>	<b>Number of cohort</b>	<b>% of all those convicted</b>	<b>Average number of convictions</b>	<b>Average number of charges proved</b>
Detention	40	12	12.4	26.6
Community sentence	51	15	4.2	6.3
Monetary penalty	201	58	1.8	2.9
Other	55	16	2.5	3.9

Note: ‘Community sentence’ includes probation, community service, DTTOs or restriction of liberty orders. ‘Monetary penalty’ includes fines or compensation orders. ‘Other’ includes admonished, absolute discharge, remit to Reporter, PF fixed penalty and road traffic disposals. Percentages may not total 100 due to rounding.

### **Age at first conviction**

Although this was a single age cohort, there was an age span between the oldest and youngest cohort members of approximately three years. At the point of data collection the youngest cohort member was 17 years and 9 months while the eldest was 20 years and 11 months. The average age at the point of data collection was 19 years and 10 months. Using date of birth and date of first criminal conviction, it was possible to calculate the age at first conviction amongst the cohort members. The most common age at first conviction was 17 (32% of those convicted), although a quarter (25%) of these youngsters incurred their first criminal conviction at age 16 or under. A further 28% were first convicted at age 18 and a smaller proportion (15%) was not convicted until after their 19<sup>th</sup> birthday.

### **Period to first reconviction**

Since a large proportion of the cohort had received more than one conviction, analysis was carried out to measure the period between first and second conviction. A total of 150 cases were identified as having two or more convictions (this excluded those who had not been formally convicted and disposals involving a remit to the Reporter). Table 4 presents the results of this analysis. The most common period of reconviction for this age group was within three months of first conviction, which was the case for a quarter of all those reconvicted. In all, two thirds of these cohort members were reconvicted within a year of their first conviction, with a further 27% being reconvicted within two years.

**Table 4: Time between first and second conviction (n=150)**

<b>Time from first to second conviction</b>	<b>Number of cohort</b>	<b>% of all those reconvicted</b>
0 to 3 months	39	26
4 to 6 months	26	17
7 to 9 months	17	11
10 to 12 months	18	12
13 to 18 months	25	17
19 to 24 months	15	10
Over 2 years	10	7

### **Patterns of conviction amongst children known and not known to the children's hearing system**

Of the young people who were convicted by age 19, more than half of them (n=204, 59%) had been referred to the children's Reporter at some stage during their lives. This compares with only a 14% referral rate amongst the cohort who had no criminal convictions. Looking at their pattern of convictions, the youngsters who had a children's hearing record had a significantly higher average number of convictions (4.9) and average number of charges proved (9.2) than those with no hearing history (1.5 and 2.2, respectively).

Table 5 shows the nature of the crimes and offences for which charges were found proved according to whether the youngster was known to the hearing system or not. As can be seen, those who were known to the system were more likely to have had charges proved for crimes or offences within all but one of the broad categories shown here. The exception to this was motor vehicle offences, for which a greater (although not significantly so) proportion of children not known to the system had charges proved against them. Within each of the other categories of crimes or offences, those who were known to the system were at least twice as likely to have had charges proved against them.



**Table 5: Nature of charges by children’s hearing system history (%)**

<b>Nature of charges</b>	<b>Known to the hearing system (n=204)</b>	<b>P value</b>	<b>Never known to hearing system (n=143)</b>
Crime of violence	47	.000	26
Crime of dishonesty	46	.000	16
Fire-raising/malicious mischief	22	.009	11
Other crimes	52	.000	21
Motor vehicle offences	40	NS	48
Miscellaneous offences	46	.000	18

Note: Other crimes include crimes of indecency which was too small to report separately. Percentages do not total 100 as individuals could have received more than one type of charge.

Correspondingly, those with a hearing record were far more likely to have been prosecuted for a range of different types of crimes and offences. Only one in three (33%) of those with a hearing history had had charges proved within one of the broad categories shown in table 4, compared with 69% of those with no hearing history. Furthermore, a quarter (24%) of those with a hearing history had had charges from four or more of these categories proved against them compared with only one per cent of the non-hearing history cohort members. There was also a significant difference between the groups in terms of whether they had had aggravating factors attached to any of their charges, which was the case for 26% of children with a hearing history but only 6% of those without a hearing record.

Not surprisingly given the quite extreme differences between the groups in terms of pattern and nature of convictions, there was some variance in terms of the types of disposal received. Table 6 reveals that those who were never known to the hearing system were as likely as those with a hearing record to receive a monetary penalty (either a fine or a compensation order). They were also only slightly less likely to receive a low tariff form of disposal (there was no difference in terms of road traffic disposals, PF fixed penalty notices and absolute charges). However, those who were known to the children’s Reporter were almost three times more likely to have received a community sentence and they were six times more likely to have had a custodial sentence imposed.

**Table 6: Types of disposal received by children’s hearing system history (%)**

<b>Types of disposal received</b>	<b>Known to the hearing system (n=204)</b>	<b>P value</b>	<b>Never known to hearing system (n=143)</b>
Detention	18	.000	3
Community sentence	30	.000	11
Monetary penalty	74	NS	79
Other	79	.014	67

Note: ‘Community sentence’ includes probation, community service, DTTOs and restriction of liberty orders. ‘Monetary penalty’ includes fines or compensation orders. ‘Other’ includes admonished, absolute discharge, PF fixed penalty and road traffic disposals. Percentages may not total 100 due to rounding.

Taking account of only the most severe disposal offered, the picture is similar to that presented in table 6. For the majority of those with no hearing history, the most severe sanction was either a monetary penalty (73%) or some other low tariff disposal (15%), with few receiving a community (10%) or custodial (3%) sentence. A far larger proportion of those who had been referred at some stage to the children's Reporter later received a community sentence (18%) or a period of imprisonment (18%).

Age at first conviction was significantly different for those with a history of children's hearing involvement compared to those who avoided contact with the system. A total of 38% of those who had hearing system contact were first convicted by age 16, compared with only 11% of those with no system contact. Consequently, a far smaller proportion of hearing cases gained their first criminal conviction at age 18 (18%) or 19 (11%) compared with the youngsters who had no system contact (40% and 20%, respectively). Interestingly, however, there was no significant difference between these two groups in terms of the period from first to second conviction. Amongst those who had two or more convictions, 69% of youngsters with children's hearing system referrals were reconvicted within a period of one year compared with 61% of those who had no prior system contact.

## PART 2: PROFILING CRIMINAL RECORD AND NON-RECORD CHILDREN IN THE EDINBURGH COHORT

This section of the report explores in more detail the demographic profile, institutional history and levels of self-reported serious offending amongst those in the cohort with criminal records (the record group n=355) as compared with non-record children (the non-record group n=3685). As well as criminal record information, it draws on self-report questionnaire data from six study sweeps and official data collected from the records of the children's Reporter and secondary schools.

### Key demographics

As indicated in table 7, a significantly higher proportion ( $p < .000$ ) of children with criminal records were male as compared with non-record children. Record children were also significantly more likely to have experienced some form of family separation by age 15 than their non-record counterparts, with a high proportion of record children living in single parent households at this age.

In keeping with the findings of other research on youth justice transitions (see Waterhouse et al. 1999), the children with a criminal record by age 19 also experienced disproportionately high levels of social adversity (on all relevant study measures). As shown in table 7, 70% were from households in which parents/main carers were either in manual employment or unemployed as compared with 41% in the non-record group, and around two fifths of those with criminal records were entitled to free school meals as compared with just under a fifth of non record children. Moreover record children were significantly more likely to live in deprived neighbourhoods than their non-record counterparts.

**Table 7: Key demographics**

Domain	Variable	Criminal record	P value	No Criminal record
Gender	% male	81	.000	47
Family background	% experience family separation by age 15	55	.000	33
Social deprivation	% manual/unemployed	70	.000	41
	Neighbourhood deprivation score (mean)	5.0	.000	3.3
	% free school meal entitlement	42	.000	18

Note: Significance tests between groups using Pearson chi-square test (categorical variables) and t-test (for neighbourhood deprivation score).

### School experience and institutional history

The children in the cohort with a criminal record generally presented with a long and complex history of both school exclusion and institutional (police and children's hearing) involvement.

Just under half of those with criminal records had been excluded from school on at least one occasion by the end of their third year of secondary education (around age 14) as

compared with only 8% of non-record children. Truancy rates were also far higher amongst the record group. As indicated in table 8, around one in 3 children with a criminal record were persistent truants at age 15 as compared with just over 1 in 10 of their non-record counterparts. Moreover a high proportion of those with criminal records left school at age 16 (74%) compared with non record children (24%).

As might be expected, the youngsters in the cohort with a criminal record had a long history of adversarial contact with the police. Around a third reported that they had been warned or charged by the police by age 12 (contrasted with only 6% of the non record group). Experience of police warnings and charges, however, rises dramatically in the early teenage years, with 76% of record children reporting that they had been charged by age 15 (as compared with 23% of the non record group: a difference which remains highly significant).

As noted in table 8, around three fifths (59%) of the record children had been referred on at least one occasion to the Reporter to the children’s hearing system, the majority of such referrals being on offence grounds (see also Part 3 below). Although referrals were fairly common amongst the record group as a whole, only around a fifth of these children had ever been made subject to a supervision requirement by the hearings. However the proportion of non record children with a history of supervision is just over ten times smaller (at 2%).

**Table 8: School and institutional history**

Domain	Variable	Criminal record	P value	No Criminal record
School experience	% school exclusion (by end of third year)	47	.000	8
	% persistent truant (age 15)	35	.000	13
	% left school at age 16	74	.000	24
Police history	% warned/charged by age 12	32	.000	6
	% warned/charged by age 13	51	.000	11
	% warned/charged by age 14	68	.000	17
	% warned/charged by age 15	76	.000	23
Hearing history	% ever had hearings record	59	.000	14
	% ever had offence referral	51	.000	6
	% ever on supervision (any referral grounds)	21	.000	2
	% hearings record by age 12	25	.000	6
	% hearings record by age 13	33	.000	8
	% hearings record by age 14	44	.000	9
	% hearings record by age 15	53	.000	12

Note: Significance tests between groups using Pearson chi-square test.

## Offending and victimisation

As might be expected youngsters in the cohort with a criminal record by age 19 were significantly more likely to be involved in persistent serious offending than their non record counterparts; with the mean volume of serious offending being far higher at every study sweep (see table 9). (Our measure of serious offending comprises seven self-reported items: theft from a motor vehicle, riding in a stolen motor vehicle, carrying an offensive weapon, housebreaking and attempted housebreaking, fire raising, robbery, and involvement in six or more incidents of violence).

Importantly, however, those with criminal records were also more highly victimised than children without criminal records as measured by volume of crime victimisation and extent of harassment by adults at age 15.

**Table 9: Offending and victimisation**

Domain	Variable	Criminal record	P value	No Criminal record
Serious offending (volume)	Age 12 (ever) (mean)	5.1	.000	1.9
	Age 13 (mean)	7.1	.000	2.3
	Age 14 (mean)	9.3	.000	3.0
	Age 15 (mean)	10.0	.000	2.9
	Age 16 (mean)	8.3	.000	2.4
	Age 17 (mean)	5.7	.000	1.8
Victimisation	Victimisation at age 15(mean)	3.6	.000	1.7
	Adult harassment at age 15 (mean)	2.6	.004	2.0

Note: Significance tests between groups using t-tests.

## Predicting record status amongst the cohort

While the above findings suggest that there are a number of significant differences between record and non record children, the analysis presented thus far cannot show the relative predictive power of these variables when simultaneously controlling for each of the others. For this regression analysis is required.

The method chosen for predicting record status was binary logistic regression. This method is used when the dependent variable is a simple binary variable, in this case 'having a criminal record by age 19' with a response set of 1 for 'yes' and 0 for 'no'. The analysis controlled for gender, social deprivation, school experience, early history of police and hearings involvement (by age 12), as well as truancy, victimisation and serious offending all at age 15 (the year immediately preceding the normal point of transition from the children's hearing to adult criminal justice system).

The appropriate independent variables were entered into the model using a forward stepwise procedure, thereby allowing the statistical package to exclude those variables which did not meet the significance criteria (all continuous variables were standardized). A maximum likelihood paradigm with a p value for entry into the model of .05 (i.e. there is less than 5 in 100 chance that the variables entered might not be predictive of the dependent variable) and for exclusion from the model of 0.1 was used.

The results of the analysis are presented in table 10 below. The left hand column sets out all of the variables included in the analysis; the other columns in the table show the variables that emerged as significant within the final model, including the odds ratio and p values for the categorical and continuous variables. The odds ratio is the standardised coefficient which indicates the strength of effect of each independent variable in the model on the dependent variable. Odds ratios for the categorical variables can be directly compared, and indicate the ratio of the odds of having a criminal record amongst one group (e.g. males) relative to the odds of another group (e.g. females). Odds ratios for each of the continuous variables can also be compared directly, since they were standardized before insertion into the models. The odds ratio for a continuous variable shows how the odds of having a criminal record are increased by a difference of one standard deviation on the scale of the variable.

**Table 10: Predicting criminal record status amongst cohort**

Variables entered into first model	Final model n=3133	Odds ratio	P value	Lower confidence interval	Upper confidence interval
Gender	Male	4.1	.000	2.8	5.9
Family separation by age 15	-	-	-	-	-
Household socio-economic status	-	-	-	-	-
Neighbourhood deprivation	-	-	-	-	-
Free school meal entitlement	-	-	-	-	-
School exclusion by third year secondary education	Excluded	2.4	.000	1.7	3.4
Persistent truant age 15	-	-	-	-	-
School leaver at age 16	School leaver	3.5	.000	2.6	4.9
Warned or charged by police by age 12	Warned or charged by police by age 12	1.7	.008	1.1	2.4
Hearings record by age 12	-	-	-	-	-
Ever referred on offence grounds	Ever referred on offence grounds	3.1	.000	2.2	4.5
Ever on supervision	Ever on supervision	3.5	.000	1.9	6.2
Volume serious offending at age 15	Volume of serious offending at age 15	1.2	.000	1.1	1.4
Volume victimisation at age 15	-	-	-	-	-
Volume adult harassment at age 15	-	-	-	-	-

Note: Criminal record n=273, no criminal record=2860.

The first point to note is that *none* of the indicators of social deprivation used in the analysis (i.e. household economic status, neighbourhood deprivation or free school meal entitlement) remain significant in the final model. Moreover vulnerability in the form of family separation and the two forms of victimisation included in the analysis are also non-significant when other factors are held constant.

As might be expected, heavy involvement in serious offending in the mid teenage years is strongly predictive of criminal record status by around age 19<sup>9</sup>. However even when controlling for serious offending, males are still just over *four* times more likely to have a criminal record than females. Early history of police contact is also an important predictor, with the youngsters who have experience of warnings or charges by age 12 being almost twice as likely to have a criminal record by around age 19 as those with no such experience. A history of contact with the children's hearing system also features in the final model. However it is not early hearings contact that is significant but rather the nature of referral (whether referred at any point on offence grounds) and whether the child has ever been placed on supervision. Children who have been referred on offence grounds at any point are just over *three* times as likely to have a criminal record as youngsters with no such referrals and those placed on supervision are *three and a half* times more likely to have a criminal record than those who have never been subject to compulsory measures of care.

Importantly school history is also a key predictor of future criminal record status. Those with experience of exclusion by the end of third year of secondary education are almost two and half times more likely to have a criminal record by around age 19 than those who have not been excluded. Moreover children who leave school at age 16 are three and a half times more likely to have criminal records than those who remain in education beyond the minimum school leaving age.

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<sup>9</sup> Preliminary analysis, not reported here, shows that serious offending at earlier sweeps of the study (i.e. at a younger age) is *not* predictive of criminal record status once other factors are held constant.

### PART 3: TRANSITIONS FROM CHILDREN’S HEARINGS TO THE ADULT SYSTEM

Of the children in the Edinburgh Study cohort with a children’s hearing record (whose names were screened, n=729), 211 (29%) had a record on the SCRO database by age 19. The overwhelming majority of these cases had been referred on at least one occasion to the Reporter on offence grounds. Indeed amongst those with a history of offence referral, 45% had a criminal record by age 19. The following section of the report relates *only* to those referred on offence grounds to the Reporter (n=405)<sup>10</sup> and compares the transition group (those referred to Reporter on offence grounds who go on to have a criminal record by age 19, n=182) with the non-transition group (those referred to the Reporter on offence grounds but who do not go on to have a criminal record, n=223). It draws on self-report questionnaire data over six study sweeps and information from Reporter and school records.

#### Key demographics

As indicated in table 11, a significantly higher proportion of the transition group were male as compared with those who had a similar history of hearings involvement but did not go on to have an adult criminal record. Similarly, although experience of family separation was common amongst all children with offence referrals to the Reporter (and much higher than amongst the cohort as a whole see McAra 2005), those who went on to have an adult criminal record were significantly more likely to have had such experience than their counterparts who did not make the transition into the adult system.

**Table 11: Offence referrals key demographics**

Domain	Variable	Transition group	P value	Non-transition group
Gender	% male	81	.000	63
Family	% experience family separation by age 15	70	.005	56
Social deprivation	% manual/unemployed	76	NS	81
	Mean neighbourhood deprivation score	5.3	NS	5.8
	% free school meal entitlement	57	NS	55

Note: Significance tests between groups using Pearson chi-square test (categorical variables) and t-test (for neighbourhood deprivation score).

Earlier analysis (McAra 2005, McAra and McVie 2007) has shown that children referred to the Reporter on offence grounds are drawn disproportionately from deprived neighbourhoods, are more likely to have a free school meal entitlement and to come from low socio-economic status households than other cohort members. Importantly, however, extreme level of social deprivation does *not* feature as a discriminator between the transition and non-transition group. As shown in the table, the differences between these groups, on all our measures of social deprivation, are non-significant.

<sup>10</sup> This part of the report, therefore, excludes those children who were only ever referred to the Reporter on non-offence grounds.



## School experience and institutional history: offence referrals

As with the findings reported in Part 2, above, children in the transition group were significantly more likely to have been excluded from school by the end of their third year of secondary education than their counterparts in the non-transition group (see table 12). Similarly a far higher proportion (87%) of the transition group left school at age 16 than the non-transition group (73%). However, there were no significant differences between the groups in terms of persistent truancy (which was high in both groups when compared with non-hearings record children see McAra 2004).

Table 12 also shows that an *early* and continued history of adversarial contact with the police is a discriminator between offence referral children who do and do not go on to have an adult criminal record. Just under half (48%) of the transition group had received a warning or been charged by age 12 as compared with just under a third (32%) of the non-transition group. Similarly *at* age 15 over four fifths (84%) of those with later criminal records were warned or charged by the police as compared with just under two-thirds (63%) of those who did not.

History of hearing system contact, however, is somewhat different from police contacts. Unlike the other Scottish research on children's hearings transitions mentioned above (in particular Waterhouse et al 1999), the Edinburgh Study findings show that early hearings history is *not* a significant discriminating factor in terms of which children do or do not go on to have an adult criminal record. As indicated in table 12, there were no significant differences between the groups in terms of having a hearings record (any ground of referral) by age 12 nor in terms of having an offence referral by that age. It was only by age 13 that differences emerged. A significantly higher proportion of those who made the transition to the adult criminal justice system had been referred on offence grounds by that age (43%) as compared with those who did not (32%). Importantly, at age 15, over two-thirds (67%) of those who later made the transition were referred on offence grounds to the Reporter during that year, as compared with around two-fifths (43%) of the non-transition group. At this age too, the mean volume of police charges recorded in Reporter records is also significantly higher in the transition group than amongst offence referrals who did not go on to have an adult criminal record.

As indicated in table 12, a further significant difference between the groups is whether or not a case was ever jointly referred to the Reporter and the Procurator Fiscal (just under half of the transition group had been jointly referred as compared with just a fifth of the non-transition group) as well as history of compulsory measures of care. Just under two fifths (38%) of those who later went on to have a criminal record were placed on supervision at some point in their hearings career as contrasted with well under a fifth (16%) of the non-transition group. Importantly vulnerability may also be a discriminating factor. The proportion of youngsters in the transition group whose grounds for referral at age 15 included a non-offence component was significantly higher (at 34%) than amongst the non-transition group (at 17%), as was the mean volume of needs (including personal, home and school related difficulties) recorded in Reporter files (over twice as high in the transition group).

**Table 12: Offence referrals and institutional history**

Domain	Variable	Transition group (n=182)	P value	Non-transition group (n=223)
School experience	% school exclusion by third year of secondary education	71	.000	35
	% leave school age 16	87	.002	73
	% persistent truant at age 15	46	NS	37
Police history	% warned/charged by age 12	48	.000	32
	% warned/charged by age 13	73	.000	55
	% warned/charged by age 14	91	.000	71
	% warned/charged by age 15	98	.000	86
	% charged at age 15	84	.000	63
Hearing history	% hearings record by age 12	45	NS	36
	% offence referral by age 12	25	NS	19
	% offence referral by age 13	43	.016	32
	% offence referral at age 15	67	.000	43
	% ever jointly referred (Fiscal & Reporter)	47	.000	20
	% ever on supervision (any grounds)	38	.000	16
	% on supervision (offence grounds) at age 15	18	.001	7
	% whose referral included a non-offence component at age 15	34	.000	17
	Volume needs in reports at age 15 (mean)	5.0	.000	2.1
Charges in Reporter records at age 15 (mean)	4.9	.000	1.0	

Note: Significance tests between groups using Pearson chi-square test (categorical variables) and t-test (for volume needs in reports and charges in Reporter records at age 15).

### Offending and victimisation

As might be expected, children referred to the Reporter on offence grounds and who made the transition into the adult criminal justice system were significantly more likely to be involved in high levels of serious offending at every study sweep. Confirming the vulnerability of the transition group, they also appeared to experience greater levels of crime victimisation than their non-transition counterparts although there was no significant difference between the groups in terms of adult harassment (as set out in table 13).

**Table 13: Offending and victimisation**

Domain	Variable	Transition group (n=183)	P value	Non-transition group (n=223)
Serious offending volume	Age 12 (ever) (mean)	7.1	.005	4.7
	Age 13 (mean)	9.0	.000	5.7
	Age 14 (mean)	12.7	.000	7.6
	Age 15 (mean)	12.4	.000	7.2
	Age 16 (mean)	10.5	.000	5.5
	Age 17 (mean)	7.5	.000	3.6
Victimisation	Victimisation at age 15 (mean)	4.2	.019	2.9
	Adult harassment at age 15 (mean)	2.8	NS	2.3

Note: Significance tests between groups using t-test

### Predicting transition into the adult system

Binary logistic regression was again used to determine which of the potential explanatory factors best predicted whether youngsters with an offence referral to the Reporter made the transition into the adult system, when controlling for each of the others. The dependent variable was whether or not an offence referral case went on to have a criminal record (which had values of '0' for no record and '1' for criminal record). The results of the regression modelling are set out in table 14.

As shown in the table, a key predictor of children's hearing to adult criminal justice transitions is being male (with an odds ratio of 2.9). School exclusion also continues to be an important predictor when other factors are held constant. Amongst the youngsters with a hearings referral on offence grounds, those who had been excluded from school by third of secondary education were over *three* times as likely to have a criminal record by age 19 as their counterparts with no such history.

Other predictors are high volume of needs recorded at age 15 and whether the child was ever jointly referred by the police to both the Procurator Fiscal and the Reporter. While the latter could be regarded as evidence of the seriousness with which the child's offending was viewed by the police, some caution in interpretation is required. As indicated in the table, high volume of self-reported serious offending at age 17 is a predictor of children's hearing to adult criminal justice transitions. However when undertaking preliminary regression modelling *neither* self-reported serious offending at earlier study sweeps *nor* high volume of officially recorded offending (as measured by the number of charges recorded in Reporter files) proved to be significant. This suggests that: (i) involvement in serious offending at a young age amongst those referred to the Reporter on offence grounds *cannot* be used as a predictor of later transition to the adult criminal justice system; and (ii) the continued significance of joint referral in the final model above, is indicative of the impact of early labelling on subsequent criminal justice careers, although further analysis would be required to confirm this (see McAra and McVie 2005, McAra and McVie in 2007).

**Table 14: Predicting criminal record status amongst those in the hearing system**

Variables entered into first model	Final model n=328	Odds ratio	P value	Lower confidence interval	Upper confidence interval
Gender	Male	2.9	.001	1.5	5.6
Family separation by age 15	-				
School exclusion by third year secondary education	Excluded	3.1	.000	1.9	5.3
School leaver at age 16	-	-	-		
Warned or charged by police by age 12	-	-	-		
Offence referral by age 13	-	-	-		
Ever joint Reporter/Fiscal referral	Ever joint Reporter/Fiscal referral	2.6	.001	1.5	4.6
Ever on supervision	-	-			
Volume of charges in reports at age 15	-	-			
Non-offence component to referral at age 15	-	-			
Volume of needs in reports at age 15	Volume of needs in reports at age 15	1.3	.000	1.2	1.6
Volume of serious offending at age 17	Volume of serious offending at age 17	1.3	.010	1.1	1.5
Volume victimisation at age 15	-	-	-	-	-

Note: Criminal record n=139, no criminal record n=189.

## CONCLUSIONS AND POLICY IMPLICATIONS

While only a small proportion (8.8%) of the Edinburgh Study cohort had a criminal conviction by the age at which they were screened (around 19 years), the rate of conviction was in keeping with national criminal convictions data (8.1%). Criminal record status was found to be disproportionately high amongst young people who had been referred to the children's Reporter, especially those with records that included an offence component. Such youngsters presented with a higher number of convictions than their counterparts with no hearings history and had greater experience of high tariff disposals, including community service, probation and detention. The findings also show that half of those with a criminal record by age 19 were convicted more than once. The majority of those with multiple criminal convictions tended to be generalist rather than specialist offenders, with around a third of youngsters with a criminal record having convictions in three or more of the broad crime/offence categories.

Youngsters with criminal records by age 19 were disproportionately more likely to be male and to report higher levels of involvement in serious offending (at all study sweeps) than those who did not receive convictions. Of those known to the hearings system, the majority came to the attention of the Reporter aged 13 or older and neither involvement with the hearing system, nor experience of police warnings, appears to have impacted positively on their subsequent offending and conviction history. Such children were generally highly vulnerable and 'needy' (as measured by our indices of social deprivation; victimisation; and the volume of problems recorded in Reporter files at the point of transition from the juvenile to adult criminal justice system). Indeed a key point of concern is that many of the most vulnerable youngsters known to the hearings system for offending were propelled so rapidly into the adult criminal justice system and, once there, appeared to be up-tariffed relatively quickly.

Improving engagement with school may be one of the key ways forward in tackling conviction rates amongst young people. Experience of school exclusion by third year of secondary education and leaving school at or before age 16 are important predictors of criminal record status by age 19. Reviewing education policy as it relates to school exclusion (in particular whether such children might be better dealt with in alternatives to mainstream education) and maximising the number of youngsters retained in full-time education at school after age 16 may have a longer term pay-off in criminal justice (as well as educational) terms.

Recognition of the vulnerability of many convicted children (in particular recognition that neediness often underpins challenging behaviour), suggests that conviction rates may be more effectively reduced by subsuming youth justice within a broader social inclusion agenda, as the recent youth court pilots have aimed to do. In particular, study findings show that social deprivation, street-life (hanging out most evenings), victimisation and family relationship difficulties form the backdrop to the lives of these youngsters and such factors are closely bound up with their offending (see also Smith and McAra 2004, Smith 2004, McAra 2005, McAra and McVie 2007). As a consequence, community regeneration initiatives, the promotion of parenting skills and programmes to enable young people to fulfil their potential through educational, cultural and sporting activities are strongly advocated. Importantly, however, the findings from *this* report would indicate that children at risk of criminal conviction in the later teenage years cannot readily be identified prior to the early teenage years (as

noted above, most such offenders only come to the attention of the Reporter at age 13 or older and later conviction is *not* predicted by early involvement in serious offending). This might suggest that universal social inclusion initiatives aimed at enhancing the lives of all children would be more advantageous than approaches that target specific children and families prior to the teenage years, although further research would be required to assess this more fully.

Finally, our findings indicate that the children's hearing and adult criminal justice systems could go much further in supporting vulnerable offenders. The generalist nature of much offending and the strong association between needs and deeds, suggests that the holistic approach of Kilbrandon continues to be of salience in respect of youth justice interventions. Of the serious and vulnerable offenders who are identified by the police and the Reporter by age 13, only a minority ever receive help and support from social work. Moreover, where such children do receive social work intervention, this is often patchy in content (with little one to one contact between the child and social worker) and associated with *inhibited* desistance from offending (see McAra and McVie 2007). These findings indicate that improving the quality of social work services on offer within the children's hearing system for offenders aged 13 to 15 should be part of the package of reducing offending amongst those made subject to compulsory measures of care. Social work services (made available on a voluntary or statutory basis, where relevant) to youngsters who are convicted for the first time could also be reviewed, given the very rapid progression to a second conviction found in this study. Other, broader, improvements to the system might include: expanding the role of the youth court to include solemn as well as summary cases (thereby keeping a broader range of young people out of the adult court system); and recognising that young male offenders, even in the mid to late teenage years, require to be treated first and foremost as troubled and not troublesome children.

## ANNEX 1: DESCRIPTION OF VARIABLES

DOMAIN	VARIABLE	VARIABLE DESCRIPTION
DEMOGRAPHIC	GENDER	Male=1, Female=0.
	SE STATUS	Head of household socio-economic status Manual/unemployed=1, non-manual=0. Information on socio-economic status was collected at two sweeps. At sweep one, respondents' descriptions of their parents' occupations were coded using the Registrar General Social Classification Scheme. A best estimate of socio-economic status from this data could be assigned to only 61.4% of the cohort. At sweep four, a survey of parents' provided more precise and up to date information on socio-economic group. This provided a grouping for 69.5% of all study respondents at sweep four. Despite the fact that there was three years between the two sources of socio-economic group data, they were strongly correlated (0.637). Therefore, to improve the data for regression analysis it was decided to use the sweep four data (which was most up to date and accurate) and, where this data was missing, use data from sweep one if possible. This process produced a socio-economic group code for 88.3% of all cohort members. To make analysis simpler, and to allow reasonable leeway for error, the respondents were divided into two broad social class groupings according to whether their parents' occupation was classed as 'non-manual' (i.e. SEG groupings I, II and IIIa) or 'manual or unemployed' (i.e. SEG groupings IIIb, IV, V and unemployed).
	FAMILY	<i>'Which of these people do you live with most of the time?' (various options given including birth parents and other alternatives)</i> Living in non-two birth parent family=1, living with 2 birth parents=0.
	DEPRIVATION SCALE	Neighbourhood deprivation scale based on 6 census-defined indicators of social or economic stress: percentage of the population who had lived in the area for less than 12 months; percentage of the population aged 10-24; percentage of households consisting of lone parents and children; percentage of households overcrowded; percentage of households in local authority housing; and percentage of the population unemployed. A standardised score was created for each variable and then added together to give a composite social deprivation score. 91 Edinburgh neighbourhoods were created using a geographic information system and a deprivation score was assigned to each. The deprivation scale ranges from zero for the most affluent areas to 13.31 for areas with the highest levels of social and economic stress.

DOMAIN	VARIABLE	VARIABLE DESCRIPTION
POLICE CONTACT	POLICE WARNING OR CHARGE	<i>'During the last year, were you given a formal warning at a police station at a police station? 'Were you charged by the police for committing a crime?'</i> Yes=1, No=0.
	PREVIOUS WARNING OR CHARGE	Respondent reported being warned or charged by the police at a previous sweep of the survey. Yes=1, No=0.
OFFENDING BEHAVIOUR	SERIOUS OFFENDING	Seven types of 'serious' offending were combined to create a 'serious offending' variable: <i>theft from a motor vehicle, riding in a stolen motor vehicle, carrying an offensive weapon, housebreaking or attempted housebreaking, fire raising, robbery and involvement in 6 or more incidents of violence.</i> The total number of incidents of these seven offence types were added to create a volume scale, ranging from 0 to a potential 77 for anyone who said they had committed all seven offence types more than 10 times (assuming a minimum of 11 for each).
	VOLUME OF CHARGES IN REPORTS	Volume of charges in Reporter records.
SCHOOL	TRUANCY	<i>'During the last year, did you skip or skive school?'; 'How many times did you do this during the last year?'</i> More than 5 times=1, 5 times or less=0.
	SCHOOL EXCLUSION	Whether school record indicates formal exclusion from school by third year of secondary education: Yes=1, No=0.
	EARLY SCHOOL LEAVER	Whether school record indicates the child left school at the minimum leaving age: Yes=1, No=0.
VULNERABILITY	VICTIMISATION	Number of times in past year someone: <i>threatened to hurt you; actually hurt you by hitting, kicking or punching you; actually hurt you with a weapon; stole something of yours; used threat or force to steal or try to steal something from you.</i>
	ADULT HARASSMENT	Number of times in past year: <i>an adult stared at you so that you felt uncomfortable or uneasy; followed you on foot; followed you by car; tried to get you to go somewhere with them; indecently exposed themselves to you.</i>
	VARIETY OF NEEDS	In the past year number of types of problems (personal, school, home) logged in children's hearing record.
	JOINT OFFENCE AND CARE AND PROTECTION GROUNDS	Were grounds for referral to the Reporter logged in children's hearings record offence only or joint offence and care and protection grounds?
HEARINGS 'FORM'	HEARINGS RECORD AT SWEEP 1	Does the child have a children's hearings record at sweep 1 (by age 12)? 1=Yes, 0=No



## **ANNEX 2: IMPUTATION**

A common problem associated with longitudinal analysis of survey data is missing data, caused either by respondent attrition whereby members of the cohort fail to answer a particular year's survey or by failure to respond to one or more items within the questionnaire. Multiple imputation is a relatively new technique which is aimed at overcoming this problem (for an introduction to the technique and issues involved see <http://www.multiple-imputation.com/> ). In multiple imputation, the software uses all the available data in the sample to provide a probable estimate for any missing value. This process is repeated several times leading to the creation of several different datasets in which the originally missing data may be replaced by different estimates depending on the certainty with which the software feels it can predict the missing value. These new datasets are then analysed and the results combined to provide one overall model. Imputed data has been used for self-reported serious offending in this report.

## **ANNEX 3: NOTE ON METHODOLOGICAL ISSUES**

### *Access*

Access to data from the Scottish Criminal Records Office was granted following lengthy and careful negotiation with representatives from SCRO and the Scottish Executive. We are extremely thankful to those members of SCRO who extracted the necessary data on our behalf.

### *Consent*

Information held by SCRO is largely a matter of public record; however, this does not (and should not) justify automatic access to these data. We had to satisfy a number of strict criteria about how we would use and report the data. We also had to inform the cohort about this aspect of the research and, on the basis of existing consent procedures, invite participants to withdraw from this element of the research. Only 16 cohort members withdrew.

### *Individual matching*

The identities of cohort members were checked very carefully to ensure that only 100% matches against the SCRO database were included in analysis. Where cases could not be matched to this degree of certainty, data was not collected. Equally, where individuals were matched but SCRO records contained only pending information or no actual conviction information, these records were stripped from the dataset. It should be emphasised that no information about the cohort, other than name and date of birth, was provided to SCRO.

### *Complexity*

There were some practical difficulties associated with organising and analysing data from the SCRO. First, the data were provided in electronic form (in text format), however, this was not suitable for electronic analysis. Data had to be extracted from the text files and entered manually into a separate system (SIR) before being converted into SPSS format for analysis. Second, data entry was complicated by the fact that multiple hierarchies that exist within the SCRO data i.e. records relate primarily to individuals; however they contain separate information relating to trials, charges and disposals. Such complex data required careful handling and analysis (for example, disposal data required to be aggregated before analysis at the individual level could be undertaken, as each individual potentially could have multiple disposals).

### *Limitations*

Although the data collected from SCRO are hugely valuable to developing our understanding about transitions into the adult criminal justice system, there are some limitations from a research point of view in what these data can tell us. There is no 'qualitative' information on the nature of the crimes committed or their relative severity; it is sometimes unclear exactly what crime has been committed (when vague legal definitions are used); information about disposals was sometimes found to be missing; breaches or revocations of legal orders were recorded, but there was no information on what this meant or what the repercussions for this were; and there are restrictions on what these data can tell us about 'system contact' without having access to other police and Procurator Fiscal data. These comments are not intended to reflect poorly on the current SCRO system of administration, but to warn the unwary researcher against seeking to answer inappropriate questions using SCRO data.



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