

Permanently Progressing?

Building secure futures for children in Scotland

Linking two administrative datasets about looked after children: testing feasibility and enhancing understanding

Jade Hooper, Linda Cusworth and Helen Whincup

Key messages

- Linkage of data was ultimately possible, but the process from start to finish was more complex and time consuming than anticipated. This had implications for the analysis we were able to undertake.
- Using date of birth, gender and local authority, we linked data from the Children Looked After Statistics (CLAS data) with that held by the Scottish Children's Reporter Administration (SCRA). We successfully matched the records for 1,000 children.
- Taking account of all 1,834 records from CLAS and 1,396 records from SCRA, two thirds (67%) of the children had records which matched as expected (i.e. they had a Supervision Requirement (SR) in the CLAS data and matched to SCRA records, or did not have a SR and did not match to SCRA records). This left a third (33%) of children whose CLAS and SCRA records did not match as expected or where records were matched for children unexpectedly.
- There was considerable variation across different local authorities in the rate at which records matched. This varied from 54% to 97%.
- For 418 children of the 1,000 linked children, professionals had previously been sufficiently worried about them to make a referral to the Reporter. Almost three fifths (58%) of the children who had a previous referral were under one year old at the time of that referral demonstrating that the worries had been relatively early in the children's lives. The majority of those referrals had not led to the Reporter arranging a Children's Hearing at that point, however subsequent concerns led to the child becoming looked after in 2012-13.
- Patterns of referral varied, and that for children who were in the *away from home* group their first referral to the Reporter (which for some children would also have been their index referral) was more likely to be from social work, than the police.

Introduction

This report on the linkage of Children Looked After Statistics (CLAS) with data from Scottish Children's Reporter Administration (SCRA) is one strand of the *Permanently Progressing?* study.¹ The study is the first in Scotland to investigate decision making, permanence, progress, outcomes and belonging for children who became 'looked after' at home, or away from home (with kinship carers, foster carers or prospective adopters) when they were aged five and under. Phase One ran from 2014-18 and is designed to be the first phase in a longitudinal study following a large cohort of young children into adolescence. Phase one involved a team from the Universities of Stirling, York, and Lancaster in collaboration with Adoption and Fostering Alliance (AFA) Scotland.

Why is this issue important?

The Scottish Government collects information from all 32 local authorities about children who are looked after in their area; the Children Looked After Statistics (CLAS data). The Scottish Children's Reporter Administration (SCRA) collects information about children who are referred to SCRA, some of whom will appear in the CLAS data. The CLAS and SCRA data do not share a common identification number and until now linking these two datasets has not been attempted. One priority identified by the Scottish Government's Data Strategy (2015)² is maximising the use of data to answer policy questions including the effectiveness of Scottish Government's strategies of early engagement, early permanence and improving the quality of care. Another priority was that important information about children is held by other agencies, including health and education departments. This study tests the feasibility of linking complex administrative data.

What does the research tell us?

We gained permission from the Scottish Government to access anonymised CLAS data on the total cohort of 1,836 children in all 32 local authorities who: were aged five or under on 31 July 2013 *and* started to be looked after at or away from home between 1 August 2012 and 31 July 2013. Of these, 1,355 (74%) children became looked after away from home during the baseline year and are referred to as the *away from home* group, and 481 (26%) became looked after at home and were not looked after away from home at any point during the baseline year. These children are referred to as the *at home* group. The Scottish Government provided anonymised child-level data on this cohort of children for the years 2012-13, 2013-14, 2014-15 and 2015-16 covering a four-year period (1 August 2012 – 31 July 2016). The *Pathways* strand of the study analysed this data to track the pathways and timescales to permanence for the 1,836 children.

Information is collected by Scottish Children's Reporter Administration (SCRA data)³ on all children involved in the Children's Hearings System at each stage of the process including where a referral does not result in a Hearing. Valuable additional data about the majority of the 1,836 children in our cohort is held by the Scottish Children's Reporter's Administration (SCRA) about the grounds for referral to the Children's Reporter and the subsequent progression of children through the Children's Hearings System.

¹ <http://www.stir.ac.uk/ccwp/researchanddevelopmentprojects/permanently-progressing/>

² Scottish Government (2015) *Looked After Children Data Strategy*. Edinburgh: Scottish Government

³ The SCRA website contains full official statistics, information about SCRA, and research reports

Objectives of data linkage

Data linkage can be described as “the process of combining information, believed to be on the same individual, from two different records” (Brownell and Jutte, 2013, p.21).⁴ There were two aims for this strand of the research:

- To test the feasibility and success of data linkage; and
- Track children’s histories from the first point of contact with the Children’s Hearings System (CHS), which may be before August 2012 for some if they started their journey through the CHS before 2012. For example, if they were looked after prior to August 2012 or were referred to CHS but no Hearing was arranged. Linking the SCRA and CLAS data for the four years provides additional information not available if looking only at CLAS *or* SCRA data, and allows fuller analysis of both the child and process factors associated with pathways to permanence or lack of permanence.

Linkage Process

The linkage was completed through the Administrative Data Research Network (ADRN), which is “a partnership between universities, government departments, national statistics authorities and funders and researchers” (Harron et al, 2017 p.4).⁵ The linked dataset was created through support from the Administrative Data Research Centre for Scotland (ADRC-S) (part of ADRN). ADRC-S facilitated the use of a ‘trusted third party’ (TTP), the National Records of Scotland (NRS) to link variables derived from the CLAS and SCRA data in a way that ensured that the children were not identified directly. NRS created a new linked dataset with original identifiers removed which was then made available to the researchers to analyse within a safe haven, operated by National Services Scotland (NSS). As the datasets do not share a common identification number, linkage was achieved using date of birth, gender, and local authority at the time the child became looked after in 2012-13. We were able to safely link the CLAS and SCRA data for 1,000 children. As this linkage had not been previously attempted there was no ‘road map’ about what steps were required, what each would involve, or the time it would take. The process took approximately eighteen months and we had eight days in the safe haven to complete analysis. Full details are provided in the main report on the steps involved.

Did the CLAS and SCRA data link in the way we expected?

Overall there were 1,834⁶ records from CLAS and 1,396 records from SCRA in the datasets made available to us in the safe haven. Based on whether children had ever had a Supervision Requirement recorded in the CLAS data in 2012-13, we expected records for 1,287 (70%) of the 1,834 children to match to a SCRA records. We also expected all 1,396 children with SCRA records (except the excluded 12 non-twin pairs) to match to their respective CLAS records. In the end, three quarters (976, 76%) of the 1,287 CLAS records matched as expected, whilst one quarter (311, 24%) did not. This also left 396 of the 1,396 SCRA records that did not match to a CLAS record.

Where a match was possible between SCRA and CLAS, children had two records. Where a match was not made, children had just one record. Overall, there were 2,230 children in the dataset, some with one record and some with two records. Around two thirds (67%) of the 2,230

⁴ Brownell, M.D. and Jutte, D.P. (2013) Administrative data linkage as a tool for child maltreatment research. *Child Abuse and Neglect*, 37(2-3), pp. 120-124.

⁵ Harron, K., Dibben, C., Boyd, J., Hjern, A., Azimae, M., Barreto, M L. and Goldstein, H. (2017) Challenges in administrative data linkage for research. *Big Data and Society*, 4(2).

⁶ There were two children whose CLAS data was sent to ADRN but did not appear in the linkage. This was most likely caused by a computing error. Due to time constraints, the decision was made to continue.

children had records which matched as expected (i.e. they had a Supervision Requirement in the CLAS data and matched to SCRA records, or did not have a SR and did not match to SCRA records). This left about one third (33%) of children we were unable to match, or where records matched unexpectedly. This included children with shared linkage characteristics (local authority, gender and date of birth). As we were unable to identify if they were twins, they were excluded from the analysis. It is likely that some with SCRA only (396) and CLAS only (311) data are the same children. However, inconsistencies between details in the children's CLAS and SCRA records prevented their successful match and it was not possible to identify which of the records contained inaccuracies.

Of the 1,834 children from the CLAS cohort, we would have expected 547 (30%) *not* to match with a SCRA record, due to no Supervision Requirement being recorded in the CLAS data during 2012-13.⁷ This was true for most of these children (523, 96%). However, 24 (4%) of the 547 were matched to SCRA records unexpectedly. These 24 children did not have a Supervision Requirement recorded in the CLAS data during 2012-13, but were selected by SCRA as having had one in their records during this time. For 15 of these 24 children, they were later recorded in the CLAS data as having had a Compulsory Supervision Order (CSO) after the baseline year. This suggests possible erroneous or missing legal reason dates in the data. For the remaining nine of the 24 children, no Supervision Requirement or CSO was recorded in the CLAS data over the four years (2012-16) and it is likely that inaccurate recording of legal reasons in the CLAS data resulted in no SR or CSO being listed.

Local authority variation

In the final linked sample of 1,000 children, there was at least one child from 31 local authorities. There were large variations across local authorities in the rate at which the records matched as expected from 54% to 97%. This means some local authorities will be better represented than others and for some local authorities there are potentially high rates of missed matches as a result of inaccurate records. It is important that the data collected is accurate to plan and evaluate services. The variation evident through the linkage process is likely to have implications for planning services around children's lives.

Variation by whether children were looked after at home or away from home

For the looked after *at home* group, 81.5% matched as expected and 18.5%⁸ did not, and for the looked after *away from home* group, 82% matched as expected and 18% did not. Overall, for the 1,834 children included in the *Pathways* strand, their records matched as we would have expected in 82% of cases. During our analysis of the CLAS data on 1,836 children for the *Pathways* strand, those looked after *away from home* made up nearly three quarters of the sample (1,355, 74%), with the remaining 26% (481) looked after *at home* in the baseline year (2012-13). For this analysis of 1,000 children whose CLAS and SCRA information was linked, the *away from home* group made up 61% (607), whilst the *at home* group made up 39% (393).

What does analysis of the linked data tell us about the children?

How many children had a previous referral?

For 582 (58%) of the 1,000 children, no previous referral was recorded in the SCRA data, however, two fifths (418, 42%) had a previous referral recorded by SCRA; essentially, people were already worried about two fifths of the children before they became looked after in 2012-13. For most (367, 88%) of the 418 children, the previous referral did not lead to a Children's Hearing, instead, the Reporter's decision was either no further action (32%) or to refer to the local authority (29%). In 15% of cases there was insufficient evidence to allow the case to move forward to a Hearing.

⁷ Children who were looked after away from home under Section 25 Children (Scotland) Act 1995.

⁸ Where possible percentages have been rounded up or down.

For 12% (51) of the 418 children a Hearing was arranged. Of these 51, grounds were established for 34 children, but not for 13 and this detail was missing for four children.

Although people were sufficiently worried about 418 of the 1,000 children to refer them to the Reporter, only 27 had a Supervision Requirement from this first referral. This is information which would not have been available from the CLAS data alone, and in the light of the expressed commitment to early engagement (Scottish Government, 2015)⁹ is significant.

From the SCRA records the source of children's previous referrals can be seen. Just under two thirds of children were referred by the police (265, 63%), one third (136, 32.5%) by social work and for a small number (17, 4%) the source was unknown. A statistically significant association was found between the source of referrals and whether they resulted in a Supervision Requirement; a higher proportion of the previous referrals from social work led to a SR (12.5%) than from the police (3%).

Characteristics and age of children with previous referral¹⁰

Of the children (418, 42%) who had a *previous* referral before their *index* referral, this *previous* referral was their *first* referral. Three fifths (243, 58%) were aged under one year old at the time of this previous referral, whilst one quarter (103, 25%) were between one and two years old. There was a relatively even split of males (202, 48%) and females (216, 52%).

For the remaining 582 children, the *index* referral that led to them becoming looked after in 2012-13, was also their *first* referral. At the point of both first (60%) and index (41%) referrals, children were most likely to be under a year old. More children were slightly older at index referral which is expected given that many children had already had at least one previous referral before their index referral.

Source at first and index referral

For the majority of children, their first (59%) and index (69%) referrals came from social work. More police referrals occurred at first (36%) than index referrals (19%). A small number of referrals also came from the court (4%) or jointly from the police and social work (3%) during index referral. For the majority of children a warrant or Interim Compulsory Supervision Order (ICSO) was not made as a result of the first (74%) or index (62%) referrals. As expected, a slightly higher proportion of warrants or ICSOs were granted as a result of index (38%) than first (26%) referrals, as the index referrals led to a Hearing and ultimately a SR or CSO. Sixty-one per cent of children (613) had either a warrant or ICSO or a SR or CSO granted on their first referral, whilst just over one quarter (259, 26%) had both a warrant or ICSO and a SR or CSO granted on first referral.

Number and type of grounds for referral

The CLAS data tells us how many children became looked after in 2012-2013, but it does not tell us why professionals were worried about them. At the time at when children became looked after in 2012-13, the Children (Scotland) Act 1995¹¹ set out the grounds for referral. The majority of children had one ground during both their first (85%) and index (69%) referrals, however, during the index referrals, more children had two or more grounds for referral.

⁹ Scottish Government (2015) *Getting it Right for Looked After Children and Young People. Early engagement, early permanence and improving the quality of care*. Edinburgh: Scottish Government

¹⁰ As we were only provided with the month and year of the children's birth in the SCRA data, we were unable to provide the same level of detail seen in the reports from other strands of the project. For example, we were unable to ascertain those who were under six weeks old at the time of their referral.

¹¹ In June 2013, the Children's Hearings (Scotland) Act 2011 came into force, replacing some aspects of the Children (Scotland) Act 1995 including amending and expanding the grounds for referral.

During the children's first referrals, many had grounds of 'lack of parental care' (77%). This is as expected given their age and the fact that the grounds in the Children (Scotland) Act 1995 likely to apply to young children were limited.¹² During the index referral, nearly all children had grounds of lack of parental care (92%). Just over one quarter of children were referred as the victim of an offence¹³ on their first referral (26%) and just under one quarter during index referral (22%).

More of the children in the *away from home* group had lack of parental care as grounds for referral (84.5%) during their first referral than did the children within the *at home* group (66%). This was reversed when comparing whether they had 'child victim' as grounds for referral during their first referral. In this case, the *at home* group had a higher proportion of children with child victim as grounds for referral during this first referral (35%) than the *away from home* group (19%).

In just over half of cases (53.5%) of the child's first referral all grounds were established.¹⁴ For a small proportion (7%), some grounds were established and for 1% of children, no grounds were established. During the index referral, all children must have had at least one ground for referral accepted or established for a SR or CSO to have been made. For the majority (87%), all grounds were established.

Use of child protection measures

For 159 children (16%) the route from first referral into the Children's Hearing System was through the use of an emergency Child Protection Measure. For the index referral this was via a Child Protection Order (CPO) for about one quarter (253, 25%) of children. Around one quarter (24%) of the *away from home* group initially entered the Children's Hearings System via a warrant/CPO compared with only 1% of the *at home* group.

How long did it take children from first referral to SCRA to becoming looked after in 2012-13?

For the 1,000 children, the average length of time it took children from first referral to SCRA to becoming looked after in the CLAS record was 12 months. The average time from first referral to becoming looked after in 2012-13 was similar for girls (12.5 months on average) and boys (11.5 months on average).

The length of time from first referral to becoming looked after in 2012-13 increased with the age of the child. That is the older the child when they became looked after, the longer the average time between their first referral and becoming looked after.

The average time from first referral to SCRA to becoming looked after in 2012-13 was significantly longer for children from the looked after *at home* group, with an average time of 17.5 months compared with 8.6 months for children from the looked after *away from home* group.

There was variation in the average time from first referral to SCRA to becoming looked after by local authority. On average, the shortest time was four months and the longest was just under two years.

¹² The full Grounds for Referral for Children (Scotland) Act 1995 and the Children's Hearings (Scotland) Act 2011 are set out in the respective acts, both of which can be accessed via www.legislation.gov.uk

¹³ A child in respect of whom any of the offences mentioned in Schedule 1 to the [1975 c. 21.] Criminal Procedure (Scotland) Act 1975 (offences against children to which special provisions apply) has been committed.

¹⁴ If a relevant person or child does not accept or is too young to understand the grounds for referral these will be sent to the sheriff to establish whether the facts laid out can be proven. On the basis of the information, the sheriff may uphold some or all of the grounds, and the child's case will return to the Children's Hearing.

Reporter's decision on first referral¹⁵

There was a statistically significant relationship between whether children were in the *at home* or *away from home* group and the Reporter's decision on first referral.¹⁶ Within the *away from home* group, 70% of first referrals led to a Hearing compared with 53.5% of first referrals for the *at home* group. For 10% of first referrals for the *away from home* group the Reporter made the decision to take no further action, compared with 18% of those from the *at home* group.

Number of Hearings where grounds referred to sheriff for proof

There was no statistically significant relationship between whether children were in the *at home* or *away from home* groups and if grounds were referred to a sheriff for proof up to 31 March 2016. At first sight, this was surprising as we anticipated that this would have been greater in the *away from home* group. However, it is likely to be linked to the young age of the children.¹⁷

Review hearings

The maximum amount of time a CSO (at home or away from home) can remain in place without being reviewed is a year, however an earlier review might be held at the request of the Hearing, the local authority, the child, or the parents. At a review, the Hearing can make a substantive decision (to continue the CSO, vary the CSO including varying contact arrangements, or terminate the order). Where panel members are unable to make a substantive decision, the Hearing is continued.

Within the *away from home* group, 49% had no review hearings continued up to 31 March 2016, whilst 9% had five or more. Within the *at home* group, 58% had no review hearings continued, with 4% having five or more. This shows that children from the *away from home* group were more likely to have a greater number of review hearings continued. Children in the *away from home* group were more likely to have had review hearings with a substantive outcome. Of the *away from home* group 9% had 6 review hearings with a substantive outcome compared with 3% of the *at home* group.

Number of referrals (to 31 March 2016)¹⁸

The number of referrals to the CHS up to 31 March 2016 varied depending on whether children were looked after *at home* or *away from home*. Within the *away from home* group, 35% had one referral up to 31 March 2016 and 42% had three or more referrals. Within the *at home* group, 22% had one referral and 58% had three or more referrals.

As might be expected given they had more referrals overall, children looked after at home had more referrals where the Reporter decided to arrange a Hearing; 69% of children in the *at home* group had one referral that led to a Hearing and 9% had three or more referrals leading to a Hearing. For the *away from home* group, 76% had one referral that led to a Hearing with 3% having three or more referrals which led to a Hearing.

For 41% of children looked after *away from home*, the decision of the Reporter was to arrange a Hearing on each occasion where they were referred. By comparison, 27% of children looked after *at home* had a Hearing on each occasion they were referred to the Reporter. For 3% of the children looked after away from home the Reporter decided not to arrange a Hearing on eight or

¹⁵ The report details Reporter's decision on first referral. As the index referral led to a CSO the Reporters decision was to hold a Hearing.

¹⁶ There were five children excluded from this analysis due to missing details on the Reporter's decision during their first referral.

¹⁷ If a 'Relevant Person' or the child does not accept or is too young to understand the Grounds for Referral, these will be sent to the sheriff to establish whether the facts laid out can be proven.

¹⁸ This is a count of all referral's children received from their first referral up until 31 March 2016. This includes their index referral.

more occasions when they were referred. For 8% of children who were looked after at home, the Reporter decided not to arrange a Hearing on eight or more occasions when they were referred.

Number of appeals

The *Decision making* strand of the study interviewed 160 people across Scotland involved in making decisions about permanence for children. Some participants were concerned that appeals to the sheriff added delay to permanence processes and took this into account when making decisions. While there was an appeal in almost one in five cases, for most of the 1,000 children there were no appeals up to the end of March 2016. In the *away from home* group, 75.5% had no appeals, 13% had one appeal and 11% had two or more appeals. For the *at home* group, 90% had no appeals with 7% having one appeal and 2.5% having two or more.

Overall status four years after becoming looked after for linked children

By 31 July 2016, of the 1,000 children, almost half, (48%) had remained with or been reunified to birth parents. The next largest 'group' were the 240 children (24%) who remained looked after away from home and for whom there was no evidence that they were on a pathway to permanence. A third group consisted of the 163 children (16%) who had either been adopted, or were placed with prospective adopters. The fourth largest group (8%) were children living with kinship carers (Section 11). The *Pathways* strand, which tracked all of the 1,836 children, showed a similar picture.

Implications for policy and practice

- Linkage of the data was possible, but more time consuming and complex than had been anticipated. This had implications for the time available to analyse linked data, and may act as barrier to linkage.
- The Scottish Government has been clear (Scottish Government, 2015) that data collected needs to be accurate if it is to be used effectively by policy makers and practitioners to plan and evaluate services. There was considerable variation across local authorities in the rate at which records matched, ranging from 54% to 97%. Local authorities may want to reflect on their own data collection procedures and quality assurance checks.
- Data held by SCRA and by CLAS on the same child does not share a common identification number. We linked data based on gender, local authority and date of birth. If a child who was within both data sets had a common identification number, the process of linking important information about children's lives would be far simpler. This is an option policymakers may want to consider.
- Introducing changes to enable more accurate data linkage in future would provide more information about some children, but not all. Children who are looked after away from home using Section 25 of the Children (Scotland) Act 1995 and not referred to the Reporter will not appear in the SCRA data. For one third of children who became looked after away from home in 2012-13, when they were five and under, their first legal status was Section 25.¹⁹ These children form an important group, and it is important that their experiences are the subject of ongoing research.
- Early engagement and early permanence are key priorities for practice set out by the Scottish Government (Scottish Government, 2015). The linkage showed that for 418 of the 1,000 linked children professionals had previously been sufficiently worried about them to make a referral to the Reporter. It also showed that the worries had been relatively early in the children's lives. Almost 60% of the children who had a previous referral were under one year old at the time of that referral. The majority of those referrals had not led to the Reporter arranging a Children's Hearing at that point, however subsequent concerns led to the child becoming looked after in 2012-13. Research in to that stage of decision making would be welcomed.

¹⁹ The *Pathways* strand found Section 25 of the Children (Scotland) Act 1995 was commonly used to place children in all age groups away from home.

Acknowledgements

This summary draws on data from Children Looked After Statistics (CLAS data) supplied to the research team by the data analysis team at the Scottish Government and data collected by Scottish Children's Reporter Administration (SCRA). We owe a debt to Celia MacIntyre (Scottish Government) and Gillian Henderson and Donald Lamb (both SCRA) without whom the linkage would not have been able to happen.

We linked the data on children safely and securely through the support of the Administrative Data Research Network (ADRN). This involved a range of people. Our thanks go to them and to Amy Tilbrook who was a consistent contact there during the linkage process.

Thank you to the anonymous donor who made Phase One of the study possible and to Jane Scott who helped the research team to translate the full report to this briefing paper. The full report on this and the other four strands of the *Permanently Progressing?* study can be found at:

<https://www.stir.ac.uk/about/faculties-and-services/social-sciences/our-research/research-areas/centre-for-child-wellbeing-and-protection/research/permanently-progressing/>

<https://afascotland.com/learning-zone/2-static-content/124-permanently-progressing>

<https://www.york.ac.uk/spsw/research/researchproject-permanentlyprogressing/>

<https://www.cfj-lancaster.org.uk/projects/permanently-progressing>