

What came first: Is there a causal role of child welfare service interventions on likelihood of having criminal cautions or convictions?

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Date: September 2024

This Data Insight summarises findings from working with the Ministry of Justice & Department for Education linked dataset - England. Using de-identified data from the National Pupil Database and the Police National Computer, the research looks at the order in which children were in contact with the child welfare service and criminal justice system. This report then estimates the likelihood of having any criminal caution or conviction, including only those cases where children were involved with the child welfare service one year or more before they had any criminal caution or conviction and up until 2020. The data was made available through Ministry of Justice Data First, funded by ADR UK.

Background

The role of child welfare services in England is to safeguard the health and development of children, with several possible actions which can be taken by social work teams following a referral based on the level of need and assessed risk to the child. These include:

- taking **no further action** (possibly following an assessment)
- the child becomes a **child in need**
- the child is placed on a **child protection plan**
- the child is placed in an out of home placement: **child looked after**^(1,2)

Compared to the general population, children who are referred to or receive an intervention from child welfare services are more likely to be from deprived or low-income households. They are

also known to have worse outcomes in education, such as lower school attendance, a higher likelihood of being excluded, and worse GCSE performance ⁽³⁻⁶⁾.

Less is known about criminal justice system outcomes for children with a child welfare referral or intervention in childhood. In England, it was previously understood that those who had been a child looked after were overrepresented in the criminal justice system ^(7,8). Evidence from Australia and the USA shows that there is a stepped increase in likelihood of offending as the level of child welfare service involvement increased. This means that risk of offending was greater for those referred relative to the general population, for those who were child in need relative to those referred, and so on. With the greatest risk of offending experienced by those who were a child looked after ^(9,10).

We undertook discussions with practitioners and other users of the linked education and criminal justice system data. These discussions showed that conducting an analysis that took account of the order and timing of contacts with different services was necessary. By doing this we can more confidently say that one event may be causing another event, in this case whether child welfare service interventions increase the risk of criminal justice system cautions or convictions (see Box 1 for an explanation of what this means). To do this the analysis is restricted to include only cases where the *child welfare service intervention came first*: where it occurred more than one year before the first recorded criminal justice system caution or conviction. Other groups referenced in the research are:

- those whose child welfare service and criminal justice system contact occurred at *around the same time* (within the same two-year period, e.g., the criminal justice system contact occurred within one year before or one year after the child welfare service intervention)
- those whose *criminal justice system contact preceded the child welfare system intervention* by more than one year.

Box 1. When we talk about child welfare system involvement *increasing the likelihood* of a criminal caution or conviction, what do we mean?

It is very difficult to confidently say that one thing causes another thing, especially when you are using data or measurements that have already been collected. We can be more sure that child welfare service interventions are *causing* criminal cautions and convictions (making them more or less likely to happen) if we take extra steps in the way we analyse the data. Many of these steps were taken in an earlier analysis of the data⁽¹¹⁾ and in this report we take an additional step of only looking at outcomes for children who were involved with child welfare services before they had any criminal justice outcome recorded. But it is still difficult to understand *how* the child welfare service intervention could change the likelihood of a child or young adult having a criminal caution or conviction.

One very important thing to consider is that children with child welfare system involvement are more likely to have faced challenges and adversity in their early lives. These experiences can impact children in multiple and different ways. The difficulties that children have faced and the way that it has impacted on them is something that the current analysis does not take into account, as these things have not been measured in the available data. The child welfare intervention is directly linked to childhood adversity in that the intervention should be in line with the needs and safety of the child. So when we say that the child welfare system involvement changes the likelihood of something happening, we may also be saying that childhood adversity changes the likelihood too.

However, there are ways in which child welfare service interventions could increase the likelihood of having a criminal caution or conviction. This is particularly the case for children who are looked after in out of home placements. For example, children living in residential or foster care may have the police called in response to what can be considered as a minor behaviour, like intentionally breaking a cup. If children have more contact with the police, they are more likely to be cautioned or convicted for an offense, regardless of the rate to which the child engages in criminal behaviour^a. Out of home placements (like residential or foster placements) may also change the extent to which a child is vulnerable to exploitation from others in the community.

For children who are supported by a social worker while remaining at home (as a child in need or when on a child protection plan) the way in which the child welfare intervention may change their risk of having a criminal caution or conviction is more challenging to understand. It may be that having contact with the child welfare service increases scrutiny of the family from all services, including the criminal justice system. But also, as mentioned above it may be that the child welfare service intervention indicates the difficulties faced by the child and family and it is this that changes the likelihood of having a criminal caution or conviction. An example of how this could happen may be that the parent(s) or care giver(s) do not supervise or monitor the child's behaviour in the community. Although there is less research to draw from to understand how these levels of child welfare intervention are associated with criminal justice system outcomes.

^a Not all criminal behaviour is known to the police and self-reported crime is different to documented rates held by criminal justice systems.

This Data Insight describes:

1. The differences between children according to the order in which they had contact with the criminal justice system and the child welfare system.
2. A conservative estimate for the increased likelihood of a criminal caution or conviction for children with a child welfare service referral or intervention, only if the welfare service intervention came before the recorded criminal justice system contact by one year or more.

What we did

The methodology was designed to estimate the odds of criminal cautions or convictions by the year 2020 using a [regression model](#) on the linked dataset. The full sample consists of 1,708,570 children born between 1 September 1995 and 31 August 1998; by the year 2020 the children were aged 22-25 years. This project used only those child welfare cases where dates and child age of first child welfare service intervention could be determined, and in the criminal justice system data, only those cases where there was data for the date of the first criminal caution or conviction; this was true of 89% of the sample. Only those cases where the *child welfare service intervention came first* were used in the regression model, reducing the sample to $N = 14,350$ or 41% of cases. This was formed of those individuals where the highest intervention was child in need, child protection plan, and child looked after. As this report seeks to provide a sensitivity analysis for the more robust full sample regression models⁽¹¹⁾, the regression analyses used a subsample of the general population (no child welfare service referral or intervention) of 150,000, which was randomly selected from the full population.

Child welfare service involvement was derived from the Children in Need and Children Looked After datasets, with the *highest* level of child welfare involvement used in each case. This ranged from no involvement, referral only, child in need, child protection plan, to child looked after⁽¹²⁾. The data covers any welfare involvement from age 5-18 years, meaning that data for children from birth to 5 years is missing from this sample. The linked dataset used in this analysis contains only the most recent episode and period of care for each case and for each reporting year. As such, some cases of child looked after or child protection plan may have been classified as child in need in situations where multiple episodes or periods of care occurred within the reporting year, and the child looked after status or child protection plan occurred in an earlier episode or period.

For some but not all cases the dates for first criminal justice system formal caution or conviction and first child welfare service intervention were available^(13, 14). Due to differences in recording dates (the National Pupil Database uses either the academic year or April to March reporting years, and the Police National Computer uses the calendar year):

- Firstly, the age in years a child was when the date occurred was calculated.
- Then a two-year window was given to determine where there were possible overlaps between the first criminal justice system formal caution or conviction and first child welfare service intervention.
- Three groups were then formed for those whose *child welfare service intervention came first*, the child welfare service intervention and criminal justice system caution or conviction

occurred at *around the same time* (within the same 2-year window), and those where the *criminal justice system contact came first*.

A binary (yes/no) measure of whether the individual had ever had a criminal caution or conviction was derived from the Police National Computer dataset.

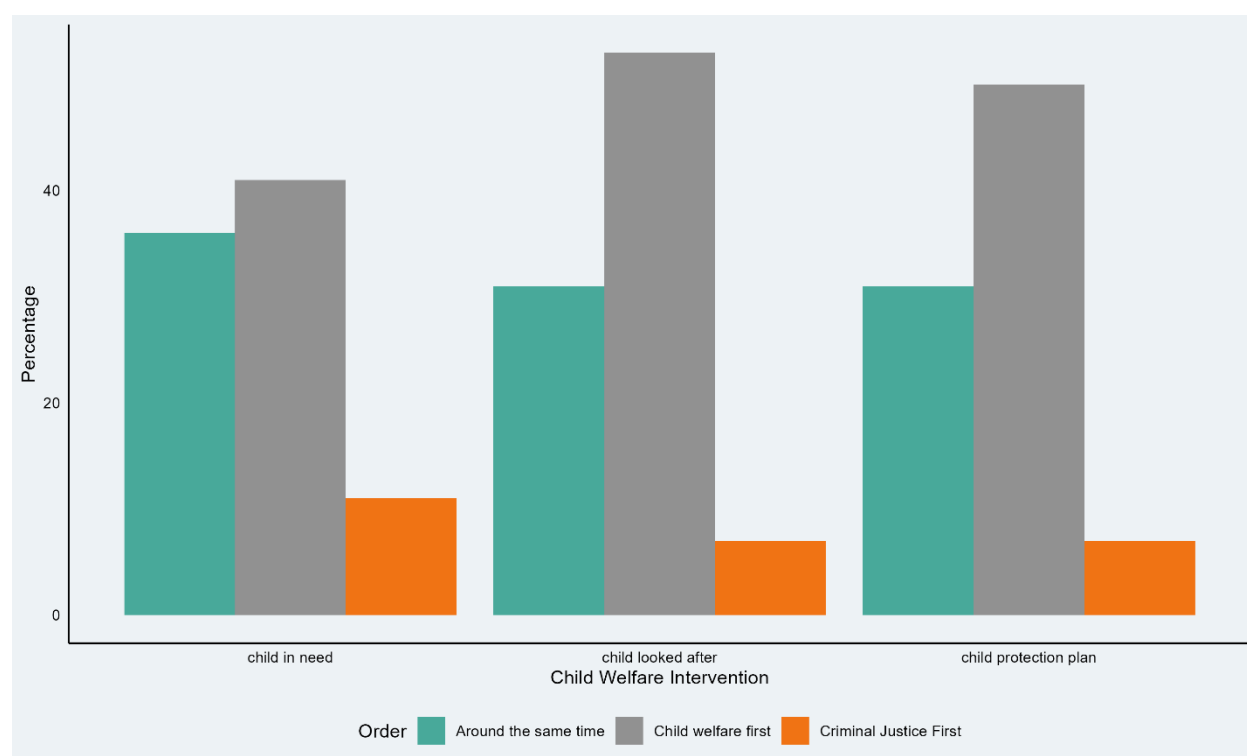
Other factors known to increase or decrease the likelihood of child welfare service involvement and also likelihood of criminal justice system contact were included in the regression models. These measures were taken from the school census (free school meal eligibility, major ethnic categories, gender, special educational need provision), exclusions (fixed term exclusions), key stage 4 (GCSE Maths and English grade A-C) and attendance (proportion of missed sessions in secondary school) datasets ^(2, 15-19). Unlike in the full regression models, the second level predictor of local authority was not included in the models.

What we found

The majority of children who had both a criminal justice system caution or conviction and an intervention from child welfare services, had the child welfare service intervention first.

Figure 1 shows that more children had their child welfare system intervention before they had a formal caution or conviction from the criminal justice system and this was consistent across every level of child welfare intervention (for exact values and details of missing data see Table 1).

Figure 1. The proportions of cases with different ordering of child welfare system and criminal justice system formal contacts.



Note. *Child welfare first* = child welfare service intervention before criminal justice system recorded contact, *Around the same time* = child welfare service intervention occurred one year before or one year after criminal justice system recorded contact, *Criminal justice first* = criminal justice system recorded contact occurred before child welfare service intervention.

The descriptive statistics shown in Table 2 shows that for those with different orders of child welfare service and criminal justice system formal contacts. The table showed that there was little difference between order groupings (CWS first, around the same time, and CJS first) apart from in the group where child welfare service intervention came first, who had:

- Better outcomes for school absences
- Fewer school suspensions/fixed term exclusions
- A slightly lower proportion of permanent school exclusions
- A lower proportion of custodial sentences

Boys were more likely to have their first contact be a criminal justice system contact.

Including cases where the child welfare service intervention was not due in any way due to the child's prior formal contact with the criminal justice system, children with a child welfare intervention were more likely to have a caution or conviction by early adulthood.

This increased risk of a criminal caution or conviction increased with the level of child welfare service intervention, but those with a referral but no intervention had a higher likelihood than those who were child in need or on a child protection plan (Table 3). This pattern was different to the original analysis which found a stepped increase in risk of having a criminal caution or conviction in line with the level of child welfare service intervention⁽¹¹⁾. The difference between the two analyses is because this analysis used a smaller and selected sample, which did not affect the referral only group but did change the child in need and child protection plan groups. This means interpretations should be made with great caution.

Table 1. Level of child welfare intervention and the order of formal contact with child welfare and criminal justice systems, and missing cases.

CWS	Child welfare first	Around the same time	Criminal Justice First	Missing Data	Total
child in need	6930 (41%)	5980 (36%)	1800 (11%)	2020 (12%)	16,730
child protection plan	1290 (50%)	800 (31%)	190 (7%)	310 (12%)	2,590
child looked after	6140 (53%)	3650 (31%)	850 (7%)	1010 (9%)	11,650
Total	14350 (41%)	10430 (36%)	2850 (11%)	3340 (12%)	30,960

The *child looked after* population was three times more likely than those without any child welfare intervention to have a criminal caution or conviction by 2020.

This is a slightly reduced estimate than in the full regression model, but the findings provide support for the potential adverse impact of being a child looked after on risk of being criminalised. It is important to consider that the child looked after population has experienced out of home placements because there is a significant concern for their safety and wellbeing. As such, the causal effect of being a child looked after is conflated with in many cases the impact of trauma,

adversity, and maltreatment, and/or the absence of healthy caregiver attachments, nurturing and stable environments, or other enrichment experiences, which is not directly measured here ⁽²⁰⁻²²⁾.

All of these potential interpretations should be made with caution considering that these findings are based on an analysis that:

- Used a selected sample rather than a full sample of children.
- There was a lot of missing data for the dates of child welfare service or criminal justice system contacts.
- Children were excluded where the timing of the child welfare service intervention and criminal justice system contact occurred within the same two-year window, and due to data limitations, this meant more accurate event timings could not be calculated.

Table 2. Descriptive statistics for children with both child welfare intervention and a formal contact with the criminal justice system

Characteristics	Child welfare and Criminal Justice Order			
	Child welfare first	Around the same time	Criminal Justice First	
Gender	<i>Female</i>	5140 (35%)	3940 (37%)	760 (26%)
	<i>Male</i>	9560 (65%)	6770 (63%)	2160 (74%)
Ethnicity	<i>White</i>	11790 (80%)	8900 (83%)	2470 (85%)
	<i>Asian</i>	570 (4%)	320 (3%)	80 (3%)
	<i>Black</i>	980 (7%)	580 (5%)	140 (5%)
	<i>Chinese</i>	c	c	c
	<i>Mixed Heritage</i>	930 (6%)	630 (6%)	140 (5%)
	<i>Other ethnic groups</i>	170 (1%)	100 (1%)	20 (1%)
	<i>Not disclosed</i>	260 (2%)	180 (2%)	60 (2%)
FSM Eligibility	<i>Not eligible</i>	2860 (19%)	2590 (24%)	540 (18%)
	<i>Eligible</i>	11840 (81%)	8120 (76%)	2380 (82%)
SEN provision	<i>No recognised SEN</i>	5050 (34%)	3900 (36%)	960 (33%)
	<i>School support</i>	6690 (45%)	5020 (47%)	1370 (47%)
	<i>Statement</i>	2960 (20%)	1790 (17%)	590 (20%)
School Absence	<i><10%</i>	6080 (41%)	3260 (30%)	800 (27%)
	<i>11-20%</i>	4720 (32%)	3700 (34%)	980 (34%)
	<i>>20%</i>	3850 (26%)	3740 (35%)	1140 (39%)
School Suspensions	<i>None</i>	4650 (32%)	2790 (26%)	660 (23%)
	<i>One</i>	2220 (15%)	1400 (13%)	380 (13%)
	<i>Two or more</i>	7830 (53%)	6520 (61%)	1880 (64%)
School Exclusions	<i>None</i>	14000 (95%)	9930 (93%)	2680 (92%)
	<i>One</i>	680 (5%)	760 (7%)	230 (8%)
	<i>Two or more</i>	c	c	c
Maths & English A-C	<i>Achieved</i>	1700 (12%)	1160 (11%)	280 (10%)
	<i>Not Achieved</i>	12860 (87%)	9450 (88%)	2610 (89%)
Custodial Sentences	<i>None</i>	12280 (83%)	8640 (81%)	2090 (71%)
	<i>One</i>	650 (4%)	500 (5%)	140 (5%)
	<i>Two or more</i>	1780 (12%)	1580 (15%)	700 (24%)
Most severe CJS outcome	<i>Caution</i>	6120 (42%)	4180 (39%)	960 (33%)
	<i>Sentence Awaited</i>	c	c	c
	<i>Other</i>	c	c	c
	<i>Monetary</i>	480 (3%)	140 (1%)	40 (1%)
	<i>Miscellaneous</i>	1810 (12%)	750 (7%)	180 (6%)
	<i>Supervisory</i>	3860 (26%)	3560 (33%)	900 (31%)
	<i>Custodial</i>	2430 (17%)	2070 (19%)	830 (29%)

Note. c = values suppressed due to low numbers; *Most severe CJS outcomes: Sentence Awaited* = formed of 56 disposal codes including pre-sentence drug testing order, sentence postponed, and remand on unconditional bail; *Other* = includes 14 disposal codes across three categories of pseudo (e.g., heard at court), and court martial (e.g., loss of privilege); *Monetary* = is formed of 37 disposal codes including fine, penalty notice, and prison fee; *Miscellaneous* = is formed of 296 disposal codes covering for example,

supervision and treatment order, driving license revoked and trial aborted; *Supervisory* = is formed of 234 disposal codes including those relating to care orders e.g., youth rehabilitation order with fostering, and many others including anti-social behaviour order, and mental health treatment requirement; *Custodial* = is formed of 143 disposal codes including imprisonment, youth custody, and suspended sentence.

Table 3. Regression model for child welfare system highest level of intervention as a predictor of later formal criminal justice system contact

Characteristic	OR ¹	95% CI ¹	p-value
Child social welfare involvement (highest)			
None	—	—	
Referral only	2.06	2.00, 2.12	<0.001
Child in need	1.32	1.27, 1.37	<0.001
Child protection plan	1.81	1.69, 1.93	<0.001
Child looked after	3.11	2.98, 3.24	<0.001
Birth Year (Academic Sept-Aug)			
1995/96	—	—	
1996/97	0.78	0.76, 0.80	<0.001
1997/98	0.65	0.64, 0.67	<0.001
Gender			
Female	—	—	
Male	2.84	2.78, 2.91	<0.001
School absences			
Low <10%	—	—	
Medium 10-19%	1.45	1.41, 1.49	<0.001
High >20%	1.95	1.89, 2.02	<0.001
Fixed term school exclusions			
None	—	—	
One	3.12	3.02, 3.21	<0.001
Two of more	6.56	6.40, 6.73	<0.001
Support for special educational needs (SEN)			
No recognised SEN	—	—	
School support	1.23	1.20, 1.26	<0.001
SEN statement	0.81	0.78, 0.84	<0.001
Ethnicity (Major categories)			
White	—	—	
Asian origin	0.79	0.75, 0.82	<0.001
Black	1.22	1.17, 1.27	<0.001
Mixed	1.23	1.17, 1.29	<0.001
Any other	0.92	0.83, 1.01	0.080
Unclassified	0.97	0.89, 1.05	0.4
Free school meal eligibility			
Not Eligible	—	—	
Eligible	1.41	1.38, 1.45	<0.001

¹OR = Odds Ratio, CI = Confidence Interval

Note. Ethnicity major group of *Chinese* was suppressed due to small values.

Why it matters

The data analysis shows an increased risk for children who are referred to or receive an intervention from child welfare services in childhood (aged 5-18 years) to receive at least one caution and conviction by early adulthood. This is after restricting the sample of children with a child welfare service intervention to only include those who received the intervention one year or more before the criminal justice system caution or conviction. The findings therefore provide further evidence of a causal association between the child welfare service intervention and the greater odds of a criminal caution or conviction.

There is substantial evidence that adversity in childhood, in particular maltreatment in the form of neglect and abuse, increases the likelihood of criminal justice system contact and vulnerability to criminalisation⁽²³⁻²⁵⁾. The findings from this report demonstrate that child welfare services, designed to protect children from harm and uphold their healthy development, do not sufficiently protect them to reduce their risk of receiving a criminal caution or conviction (so that it is equal to the general population). In fact, the findings in this report show the highest risk for a formal criminal justice system outcome exists in the population who receive the 'highest' welfare intervention, in the form of an out of home placement (child looked after status), in line with existing evidence in other western nations and the findings of the full analysis⁽⁹⁻¹¹⁾.

New releases of the linked dataset include all episodes and periods of care, which will allow for more accurate judgement of highest level and first child welfare service intervention. A repeated analysis that includes all cases would be beneficial once this data is available. The new release of the linked dataset will also contain details of the child welfare service reasons identified at assessment, such as reports of drug and alcohol use by the child, or indeed reports of criminal or antisocial behaviour. This information may help to flesh out understanding of the association between care experience and criminal justice system contact.

The full care experience history may give better insights into the different care experiences of those in the child looked after category, such as details of care placements (including placement type and frequency of placement change). This may enable better understanding of the reasons behind the increased odds of criminal justice system cautions and convictions for this vulnerable group.



References

1. DfE. Children looked after in England including adoptions. In: Education Df, editor. 2023.
2. DfE DfE. Characteristics of children in need. In: Education Df, editor. gov.uk2022.
3. Bennett DL, Schlüter DK, Melis G, Bywaters P, Alexiou A, Barr B, et al. Child poverty and children entering care in England, 2015–20: a longitudinal ecological study at the local area level. *The Lancet Public Health*. 2022;7(6):e496-e503.
4. Gilbert R, Widom CS, Browne K, Fergusson D, Webb E, Janson S. Burden and consequences of child maltreatment in high-income countries. *The lancet*. 2009;373(9657):68-81.
5. Malvaso C, Magann M, Ribeiro Santiago PH, Montgomerie A, Delfabbro P, Day A, et al. Early versus late contact with the youth justice system: opportunities for prevention and diversion. *Current Issues in Criminal Justice*. 2024;36(1):16-41.
6. Malvaso C, Montgomerie A, Pilkington RM, Baker E, Lynch JW. Examining the intersection of child protection and public housing: development, health and justice outcomes using linked administrative data. *BMJ Open*. 2022;12(6):e057284.
7. DfE DfE. Education, children's social care and offending: Descriptive Statistics. In: Education Df, editor. 2022.
8. Youth Justice Board Y. Keeping children in care out of trouble: An independent review chaired by Lord Laming. 2015.
9. Cutuli J, Goerge RM, Coulton C, Schretzman M, Crampton D, Charvat BJ, et al. From foster care to juvenile justice: Exploring characteristics of youth in three cities. *Children and youth services review*. 2016;67:84-94.
10. Malvaso CG, Delfabbro PH, Day A, Nobes G. Young People Under Youth Justice Supervision With Varying Child Protection Histories: An Analysis of Group Differences. *International journal of offender therapy and comparative criminology*. 2019;63(2):159-78.
11. Leyland A, Webb C, Hughes N, Bennett M. Child maltreatment and social welfare service involvement is linked to higher rates of criminal cautions and convictions by early adulthood. under review.
12. DfE DfE. Children in need: Methodology. In: Education Df, editor. 2023.
13. ADR UK. Data First: Harnessing the potential of linked administrative data for the justice system no date [Available from: <https://www.adruk.org/our-work/browse-all-projects/data-first-harnessing-the-potential-of-linked-administrative-data-for-the-justice-system-169/>].
14. Ministry of Justice. Ministry of Justice: Data First. 2020.
15. DfE. Children with special educational needs and disabilities (SEND). In: Education Df, editor. 2023.
16. DfE DfE. Free school meals: Autumn term. In: Education Df, editor. GOV.UK2021.
17. DfE DfE. Pupil absence statistics: methodology. In: Education Df, editor. 2023.
18. DfE DfE. Pupil exclusion statistics: methodology. In: Education Df, editor. 2023.

19. DfE DfE. Key stage 4 performance, 2019 (revised): Quality and methodology information. In: Education Df, editor. 2020.
20. Baglivio MT, Wolff KT, Piquero AR, Bilchik S, Jackowski K, Greenwald MA, et al. Maltreatment, child welfare, and recidivism in a sample of deep-end crossover youth. *J Youth Adolescence*. 2016;45:625-54.
21. Dillon; A, Boyd; A, Mumme; M, Tilling; K, Brennan; I, Cornish R. Ministry of Justice – Department for Education linked dataset - Feasibility of evaluating early interventions for violence prevention: Data quality report2022. Available from: https://www.adruk.org/fileadmin/uploads/adruk/Documents/Feasibility_study_1_MoJ-DfE_linked_dataset_Data_quality_report.pdf.
22. Hood R, Goldacre A, Jones E, King A, Clements K, Webb C. Categorising demand for child welfare services using latent class analysis: A study of the national data-sets on children in need in England. *The British Journal of Social Work*. 2023;53(8):3704-24.
23. Baidawi S, Sheehan R. Maltreatment and delinquency: Examining the contexts of offending amongst child protection-involved children. *The British Journal of Social Work*. 2020;50(7):2191-211.
24. Baidawi S, Sheehan R, Flynn C. Criminal exploitation of child protection-involved youth. *Children and Youth Services Review*. 2020;118:105396.
25. Jackson DB, Jindal M, Testa A, Ganson KT, Fix RL, Nagata JM. Adverse childhood experiences and adolescent police contact in the United Kingdom. *Pediatrics*. 2022;150(4):e2021055889.

Acknowledgements

This work was produced using administrative data accessed through the Office for National Statistics (ONS) Secure Research Service. The use of the data in this work does not imply the endorsement of the ONS Secure Research Service or data owners in relation to the interpretation or analysis.

This work contains statistical data from ONS and accessed through the ONS Secure Research Service. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

About ADR UK

This work was supported by ADR UK (Administrative Data Research UK). ADR UK is a partnership transforming the way researchers access the UK's wealth of public sector data, to enable better informed policy decisions that improve people's lives. ADR UK is an Economic and Social Research Council (ESRC) investment (part of UK Research and Innovation). Grant Number ES/W002345/1

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