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Child poverty and multidimensional disadvantage: Tackling “data exclusion” and extending the evidence base on “missing” and “invisible” children

Overview report

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CASEReport 114

February 2018

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Acknowledgements

The project has been funded by the Nuffield Foundation and the authors would like to thank the Foundation as well as Tracey Budd, Teresa Williams and Ruth Maisey for their support and input.

The Nuffield Foundation is an endowed charitable trust that aims to improve social well-being in the widest sense. It funds research and innovation in education and social policy and also works to build capacity in education, science and social science research. The Nuffield Foundation has funded this project, but the views expressed are those of the authors and not necessarily those of the Foundation. More information is available at www.nuffieldfoundation.org

The authors would also like to thank numerous individuals and organisations that have provided guidance and comments at different stages of the project. We are particularly grateful to members of the project Advisory Group, including Paul Bywaters (Coventry University), Leon Feinstein, Sandra Gulyaurtlu and Emily Emmott (Children's Commissioners Office), Judy Sebba and Nikki Luke (REESE centre, University of Oxford) Sarah Mann Friends (Families and Travellers), Katie Rix and Ed Mortimer (National Childrens Bureau), Liz Speed (Equality and Human Rights Commission), Chloe Alexander (Carers' Trust), Jose Manuel Roche (Save the Children), Paul March and Peter Matejic (Department for Work and Pensions) and Nando Sigona (University of Birmingham). Judy Sebba and Nikki Luke (REES centre, University of Oxford) provided input and shared good practice on the derivation of variables within the CIN/CLA datasets, for which we are extremely grateful. Sarah Mann provided detailed feedback on the Roma, Gypsy and Traveller workstream. Responsibility for errors of fact or interpretation remains with the authors. Eleni Karagiannaki from CASE has provided helpful comments and methodological guidance throughout the project, for which we are extremely grateful.

This work contains statistical analysis of a number of secure access datasets. Datasets were made available by the UK Data Service, ONS and individual data providers. Neither the UK Data Archive nor the original data creators, depositors or copyright holders of the data bear any responsibility for the analysis. Full dataset acknowledgements are provided at the end of this report.

We would like to thank DWP for approving access to the safe room version of the Family Resources Survey / Households Below Average Income survey and to the UK Data Service Support team for their efficient continued support with data analysis and clearance. Special thanks to Dawn McDonagh (HBAI team, DWP) who provided very helpful guidance relating to complex survey design adjustments.

This work contains statistical data from ONS which is Crown Copyright. 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. We are grateful to the ONS Secure Research Service (SRS) support team for their efficient support with data analysis and output clearance. Special thanks to Martin Johnson for his extensive support with data application and analysis of the National Pupil Database. We are also grateful to Louise Feebrey, Anneka Nelson-Girtchen and Daniel Brown from the Department for Education for their support with Children Looked After and Children in Need census datasets. We are thankful to Tammy Campbell from CASE for sharing her knowledge of the National Pupil Database with us from the application to the analysis stages of our work; to Kerris Cooper for editorial comments; to Cheryl Conner for ongoing administrative support throughout the project, and to Nic Warner and the IT team at RLAB.

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This report provides an overview of the findings from the Nuffield Foundation research project, ‘Multidimensional child poverty and disadvantage: tackling “data exclusion” and extending the evidence base on “missing” and “invisible” children’. The report sets out the background and rationale for the project; clarifies the aims and scope of the study; describes methods and data; and sets out the key substantive findings for the four groups of children examined within the project. We conclude by drawing lessons and implications from the project and setting out recommendations for tackling the phenomenon of “data exclusion” and building up quantitative evidence on missing and invisible groups in the future. Further details of the project findings are provided in a series of underlying papers that can be accessed via our project website:

(http://sticerd.lse.ac.uk/case/new/research/child_poverty_and_disadvantage.asp).

Glossary

AHC: After Housing Costs

BHC: Before Housing Costs

CIN: Children In Need

CLA: Children Looked After

CSEW: Crime Survey for England and Wales

EEA: European Economic Area

EHRC: Equality and Human Rights Commission

FRS: Family Resources Survey

HBAI: Households Below Average Income survey

HSE: Health Survey for England

LLID: Limiting longstanding illness or disability

MCS: Millennium Cohort Study

NPD: National Pupil Database

QLFS: Quarterly Labour Force Survey

RGT: Roma, Gypsy and Traveller

SCM: Adult self-completion module

USoc: Understanding Society

Children in recent migrant families: children whose parent(s) were born outside the UK and arrived in the UK within the last 10 years

Disaggregation: breakdowns of data by characteristics

Intersectional analysis: analysis of data by more than one characteristic

Multidimensional disadvantage analysis: analysis of disadvantage across several dimensions, such as living standards, health, education, and physical security

Multiple disadvantage: disadvantage experienced by an individual across several dimensions at the same time

Protected characteristics: characteristics recognised in equality legislation

1. Aims and objectives

The project aimed to broaden and deepen knowledge and understanding of child poverty and multidimensional child disadvantage in Britain by tackling “data exclusion” and building up the quantitative evidence base on missing and invisible children. Underlying objectives were to extend the identification of groups of children at high risk of child poverty and multidimensional disadvantage, with a view to improving measurement and informing national monitoring exercises and better-targeted policy development and practice interventions.

The project focused on tackling “data exclusion” through the development and application of secondary data analysis methods and techniques. The project outputs illustrate how estimates and understanding of child poverty and disadvantage can be enhanced by a focused effort to include children potentially at very high risk, rather than relying solely on standard analysis of household survey data, such as is carried out for the Households Below Average Income series and, secondly, demonstrate that it is possible to extend evidence on statistically ‘hard to reach’ groups of children using existing sources, without the need to carry out expensive new data collection.

The project builds up evidence on four exemplar groups of children that are generally missing from, or “invisible” within, standard analyses of child income poverty and multidimensional disadvantage: young carers, children from the Roma, Gypsy and Traveller (RGT) ethnic minority group, children in recent migrant families, and children at risk of abuse and neglect. The four groups of children covered within the project were *not* put forward as a comprehensive or complete list of missing and “invisible” children. Rather, the rationale for their selection relates to the potential for tackling the deficit through creative and innovative use of existing data sources and through the development and application of secondary data analysis techniques.

The following research questions were addressed as part of the project:

- What progress can be made in tackling “data exclusion” and building up quantitative evidence on missing and invisible children through the application and development of secondary data analysis methods and techniques?
- Which existing social survey and / or administrative data sources support the identification of young carers, children from the Roma, Gypsy and Traveller ethnic minority groups, children in recent migrant families, and children at risk of abuse and neglect?

- What are the advantages and limitations of the data sources that are available and which secondary data analysis methods and techniques are useful in building up evidence on missing and invisible groups?
- What conceptual and technical issues arise in relation to developing operational measures for identifying these groups and how reliable are headcounts and population estimates using these sources?
- What can be learnt from these data sources about the extent of poverty and multidimensional disadvantage amongst these groups? How do rates of disadvantage compare with rates amongst the general population of children and with comparator groups?
- To what extent is being a member of one of these groups associated with an increased risk of poverty and disadvantage, independently of other characteristics known to increase risk of poverty and disadvantage such as age, household composition and parental characteristics?
- What implications and lessons can be drawn from each workstream and looking forward what are the main priorities and the next steps that should be taken in tackling “data exclusion” and building up the evidence base on missing and invisible groups?

2. Background and motivation

There have been longstanding discussions in social policy about the paradox whereby quality public services such as health and education are least likely to be delivered to the most disadvantaged populations in greatest need (for relevant recent findings, see, for example, Gordon 2012, Sutton Trust 2017). In the context of child poverty measurement, a similar paradox arises, whereby some of the most disadvantaged groups of children are excluded from social statistics on child income poverty and multidimensional disadvantage. As a result, some of the most at risk children are not covered by, or separately identified within, national monitoring exercises and standard analyses. This phenomenon is of concern because it might potentially result in measurement failure (for example, underestimating the extent of child poverty because relevant population groups are not included within official estimates); failures of monitoring and reporting (when the position of key groups is not addressed by responsible public authorities and bodies); and failures of public action (for example, the failure to recognise and address the needs of the relevant groups of children within anti-poverty interventions and policies).

Concerns about ‘data exclusion’ were highlighted by the Joint Committee on Human Rights in its legislative scrutiny of the Child Poverty Act (2010). The Committee welcomed the new legislation and the establishment of the new official child poverty targets as a “significant human rights enhancing measure” and a means of implementing Article 27 of the Convention of the Rights of the Child in Britain. However, at the same time, the Committee raised concerns that data limitations could mean that some of the most at risk and disadvantaged children might be excluded from, or invisible within, national arrangements for monitoring and eradicating child poverty. Indeed, the Committee suggested that arrangements for monitoring child poverty that fail to cover and identify the position of some of the most disadvantaged groups of children might be discriminatory under Article 14 of the European Convention of Human Rights (Human Rights Joint Committee, 2009)¹.

In the years following the enactment of the Child Poverty Act (2010), the Coalition Government put emphasis on the need to address and tackle data deficits and to separately identify and report on the position of the most “vulnerable” groups of children in national poverty monitoring exercises. For example, the Coalition Government’s ‘Child Poverty Strategy 2014-2017’ was an important step forward in that it explicitly recognized that some of the most disadvantaged children may not be captured in standard measures and committed to explicitly track the position of ‘at risk’ children including children from single parent and large families; children from some ethnic minority groups (putting particular emphasis on children from the Bangladeshi and Pakistani ethnic groups and children with Gypsy, Roma or Irish Traveller heritage); children with parents with drug / alcohol dependency problems; and children with a disabled parent (with caring responsibilities identified as a particular risk factor). Building up a quantitative evidence base that separately identified and tracked child poverty outcomes amongst these groups was recognized as a key statutory responsibility under the Child Poverty Act 2010 (Department for Education, 2014; HM Government 2014: Annex D).

Whilst the statutory targets established in the Child Poverty Act (2010) were repealed following the May 2015 General Election, annual publication of data is required under the Welfare Reform and Work Act 2016, and ensuring that the most disadvantaged groups of children are covered by, and visible within, these statistics remains an important ongoing concern². Moreover, data deficits for key groups of children – such

¹ The need for additional data for monitoring the position of key “vulnerable” and at “risk” groups has also been highlighted within international human rights monitoring processes and is a basic reporting requirement under the UN Convention on the Rights of the Child. See, for example, UNCRC (2005 2008) and OHCHR (2012).

² Welfare Reform and Work Act 2016, c. 7, Children living in low-income households, Section 4, <http://www.legislation.gov.uk/ukpga/2016/7/section/4>. The strength of opposition to the repeal of the Child

as the challenges involved in building up evidence on outcomes for children affected by harmful parental alcohol and drug use - have been recognized as key barriers to the development of a number of the life-chances measures that were originally proposed as possible replacements for income focused child poverty measures.

Internationally, there is a growing emphasis on poverty as a multidimensional phenomenon covering domains such as education, health and physical security as well as living standards (e.g. Stiglitz et al, 2009; European Commission, 2009; ONS, 2012; ONS, 2014a), and a substantial research literature on the conceptualisation and measurement of multidimensional poverty and inequality has emerged in recent years (Sen, 1987; Bourguignon and Chakravarty, 2003; Alkire and Foster, 2011; Burchardt and Vizard, 2011; Nolan et al, 2017; Yang and Vizard, 2017). The emergent body of research literature in this area includes a number of outputs focussing specifically on children's multidimensional disadvantage (Bradshaw, 2011; Main and Bradshaw, 2012; Ben-Arieh, 2008; Biggeri et al, 2011; Clery et al, 2014). To date, however, relatively little attention has been given within the emerging body of literature on multidimensional child poverty and disadvantage to addressing the phenomenon of "data exclusion" - whereby some of the potentially most disadvantaged children are either not covered by statistics on child poverty and multidimensional disadvantage, or are "invisible" within such statistics – or of how the data infrastructure for "missing" and "invisible" groups can be addressed moving forward.

The current project was designed to address this research gap and to broaden and deepen knowledge and understanding of child poverty and multidimensional child disadvantage in Britain by tackling "data exclusion" and building up the quantitative evidence base on "missing" and "invisible" children. The project builds on and supplements a number of ongoing initiatives that aim to improve the data infrastructure and evidence on "missing" and "invisible" groups for different public policy purposes. This includes ongoing work by the Equality and Human Rights Commission to build up data and evidence by protected characteristics and on specific "vulnerable" and "at risk" groups as a basis for equality and human rights monitoring; and ongoing work by the Children's Commissioner for England to build up data and evidence on "vulnerable children" as a basis for more informed policy decisions and interventions in children's policies³. More broadly, the current project

Poverty Act is discussed in Stewart and Roberts (2016). In Scotland, the child poverty indicators have been retained and new targets put into place through the Scotland Child Poverty Act (2017).

³ See, for example Alkire et al, 2009; Candler, et al 2011; Holder, et al 2011; EHRC, 2010, 2015ab, 2016ab, 2017; Burchardt and Vizard, 2011; Clery et al, 2014; Vizard and Speed, 2014; Vizard et al, forthcoming on equality and human rights monitoring; Children's Commissioner, 2017; Coram and Coram International, 2017; Alma Economics, 2017ab; Cordis Bright, 2017ab; and Aldaba, 2017 on vulnerable children. Other relevant initiatives

contributes to an emerging body of research that focusses on the application of secondary data analysis methods for the purposes of equality, inequalities and human rights analysis, including analysis of outcomes for “vulnerable” and “at risk” groups, by bringing together existing social survey and administrative data sets; exploiting new opportunities for analysis created by new questions, new identifiers and increased access to administrative data; and taking forward deeper and creative application of techniques such as systematic disaggregation, depth analysis for key groups, intersectional analysis, data pooling, data matching / linking and so forth.

Whilst the focus of this study is on secondary data analysis, we acknowledge that “data exclusion” is often associated with underlying patterns of discrimination, stigmatisation and lack of equal social recognition. For example, patterns of discrimination and stigmatisation continue to impact on Gypsy, Traveller and Roma children, whilst lack of social recognition of unpaid caring activities, including those undertaken by children, and the different or additional needs associated with disability or mental health problems are key problems facing young carers. Lack of social recognition of adverse parental behaviours (for example, where children are affected by domestic violence or parental substance abuse) is another underlying factor (Feinstein, 2017), whilst invisibility in social statistics is also sometimes associated with the illegal or covert nature of the underlying activities involved, for example, in the context of undocumented migrant children and children without legal identity, or in the context of abuse and neglect and child sexual exploitation (Alma Economics, 2017: 10). We acknowledge that in building up the evidence base on missing and invisible groups, a range of broader initiatives including research and advocacy around data gaps and informational black holes, dissemination of good practice, qualitative research, new primary data collection, enhanced public policy and legislative measures, as well as social activism to increase public awareness, challenge discrimination and promote equal social recognition, are also required.

focus on inequalities analysis by protected characteristics (Hills et al, 2009, 2013, 2015; Cabinet Office, 2017; and ONS, 2018). Broader initiatives focussing on vulnerable groups include Bramley et al, 2015; Rodgers et al, 2015; and InGrid (nd).

3. Analytical framework, methods and data review

The analytical framework the study adopts for conceptualising child poverty and multidimensional disadvantage reflects the framework proposed in Burchardt and Vizard (2011). This framework has theoretical underpinnings in Sen's capability approach and evaluates the position of individuals and groups across 10 critical domains of life, four of which are covered in the current project (the standard of living domain, the health domain, the education domain, and the physical security domain). The standard of living domain corresponds most closely to the conventional concept of material poverty, while health, education and learning, and physical security (including bullying) are widely recognised as important components of multidimensional measures (UNICEF, 2012; DCFS, 2008; Alkire et al, 2009; Stiglitz et al, 2009; ONS, 2012; ONS, 2014a). Analysis of these domains can improve knowledge and understanding of the risks facing these particular groups of children, as well as contributing to debates about the measurement of child poverty and multidimensional disadvantage more broadly.

The project outputs establish and illustrate the progress that can be made through deep-dive work exploiting opportunities for new analysis opened up by new social survey and administrative data questions, increased access to administrative datasets and creative and innovative analysis of existing datasets by developing and applying secondary data analysis methods and techniques such as data pooling, data linking and matching.

Published statistics and quantitative research on child poverty and multidimensional disadvantage are often based on household surveys. These have established strengths of reliability and generalisability, but also some well-known but rarely-addressed challenges: some of the most disadvantaged subgroups of children are missing or "invisible" because (1) key characteristics, whilst being recorded, are not separately analysed; (2) because they are not included in the sampling frame or the numbers sampled are small; or (3) because key identifying characteristics are not recorded.

Within the scope of the current project, the difficulty of evaluating child poverty and multidimensional disadvantage amongst young carers relates to challenges (1) and (2), with specialist household income surveys such as the Family Resources Survey having a long history of recording caring status amongst children and young people, but the data to date have been under-exploited, and sample sizes are relatively small. The difficulty of evaluating multidimensional poverty and inequality amongst children

from the Roma, Gypsy and Traveller ethnic minority groups relates primarily to data challenges (2) and (3), with RGT children either being excluded in sampling frameworks or being sampled in numbers that are too small for statistical analysis. The difficulty of evaluating multidimensional poverty and inequality amongst migrant children relates to challenge (3) above, because migrant status is rarely recorded at the child level. Likewise, the difficulty in evaluating multidimensional poverty and inequality children at risk of neglect and abuse relates primarily to challenge (3), with the relevant characteristics often not recorded in surveys.

The project outputs establish and illustrate the progress that can be made in addressing these data challenges and building up new evidence on child poverty and multidimensional disadvantage for each of the four focus groups across the four domains. The workstream for each exemplar group began with a data review in order to identify and scope opportunities for building up new evidence through deeper and creative use of existing sources. Initial feasibility analysis was undertaken to address issues such as sample size, options for data pooling and data linkages. Each source was reviewed in detail and an assessment was made of the best sources of headcount and population fraction estimates, as well as the extent to which each data source supports the analysis of outcomes across the four domains, given sample size and the potential for data pooling, linking/matching etc., for each of the four groups of children covered by the project. Priority areas for in-depth analysis of outcomes for each group, together with priorities for future research, were also identified through the data review.

Table 1 presents our initial mapping of potential data sources. The data review covered a range of different social survey and administrative sources and aimed to maximise the potential of new social survey questions and administrative data releases and recent waves of longitudinal data, including the 2011 Census, the Family Resources Survey (FRS), the Children In Need (CIN) Census, Understanding Society (USoc), the Millennium Cohort Study (MCS), the Crime Survey for England and Wales (CSEW), the Children Looked After (CLA) Census, the Children in Need Census (CIN) and the National Pupil Database (NPD)⁴. Full details of the data review and additional tables are provided in the supplementary online Appendix 1.

⁴ The terms Children in Need and Looked After Children are defined in the Children Act 1989, Section 17(10) / Part III, Section 22, available at <http://www.legislation.gov.uk/ukpga/1989/41/contents>, accessed May 2013.

Table 1: Initial mapping of data sources to groups, headcount estimates and domains

	Headcounts	Standard of living	Education	Health	Physical security
Young carers	2011 Census USoc FRS CSEW	(2011 Census) US FRS/HBAI (CIN / CLA)	USoc CIN linked to NPD USoc linked to NPD	2011 Census USoc FRS (CIN / CLA)	US CSEW
Children in recent migrant families	<i>2011 Census</i> <i>FRS</i> <i>QLFS</i> (CLA: unaccompanied asylum seekers)	<i>2011 Census</i> <i>FRS/HBAI</i> <i>QLFS</i>	Usoc boost linked to NPD (NPD/CLA census: unaccompanied asylum seekers)	2011 Census FRS	CSEW
Roma, Gypsy and Traveller children	2011 Census	(2011 Census) (CIN / CLA) Usoc	NPD CIN / CLA linked to NPD	2011 Census (CIN / CLA)	CSEW
Children at risk of abuse or neglect	CIN / CLA (official register) CSEW	MCS (CIN / CLA)	MCS CIN / CLA linked to NPD	MCS (CIN / CLA) HSE	MCS CSEW

Note: FRS = Family Resources Survey; HBAI = Households Below Average Income; QLFS = Quarterly Labour Force Survey; CLA = Children Looked After; CIN = Children in Need; USoc = Understanding Society; NPD = National Pupil Database; CSEW = Crime Survey for England and Wales; MCS = Millennium Cohort Study; HSE = Health Survey for England. Sources in (parentheses) have partial coverage.

The project outputs illustrate that progress can be made in building up new evidence on child income poverty and multidimensional disadvantage for the four focus groups using the following methods:

- Analysing characteristics that are identified within household surveys but are not generally analysed (young carers, linking children's data in the FRS with the HBAI, and analysing outcomes using three years of pooled data);
- Analysing characteristics that are not identified within household surveys by making use of parental information (children in recent migrant families, identified using parental country of birth and years since arrival, linking to children within the household, linking children's FRS dataset with HBAI, and analysing outcomes using three years of pooled data);
- Exploiting opportunities for analysis opened up by new administrative data collection (RGT children using 2011 Census);
- Identifying children living in households where there is domestic abuse (by identifying households that report domestic abuse using the adult self-completion module of CSEW, and identifying children living within these households);
- For children aged 10-15, extending the analysis by linking to the CSEW children's dataset and examining outcomes such as bullying, truancy and experiences of crime; exploiting new administrative data matching opportunities, by analysing CIN/LCA and NPD.

Table 2 provides a summary of the sources for population fractions / headcount estimates for each group identified through the data review. Further details of population fractions and headcounts, including details of our estimates, their limitations and alternative sources, are provided in sections 4-8.

Table 2: Sources for population fractions / headcount estimates identified through the data review

<p>Young carers</p>	<p>2011 Census CSEW (10-15 year olds) FRS USoc (10-15 year olds)</p>
<p>Children in recent migrant families</p>	<p>2011 Census FRS (for more recent data) CLA (unaccompanied asylum seekers)</p>
<p>Roma, Gypsy and Traveller children</p>	<p>2011 Census</p>
<p>Children at risk of abuse or neglect</p>	<p>Social survey based estimates: CSEW SCM (children living in households where there is domestic abuse) CSEW SCM (children living in households where there is drug use) Official recognition: CIN/CLA CIN/CLA – primary need = abuse and neglect / subject to child protection plan CIN / CLA (concern of domestic violence/substance misuse identified at end of assessment) Subgroups: RGT who are CIN/CLA Unaccompanied asylum seekers who are CIN/CLA Young carers</p>

Note: see notes to Table 1. SCM=Adult self-completion module

Table 3 presents a summary of the different domains covered and measures used within the outcomes analysis for each group. Note that the outcomes analysis did not aim for consistency across data sources, measures or work-streams, but rather on making the “best use” of existing data sources in order to maximize the potential for building up new quantitative evidence on specific outcomes. The outcomes that we evaluate and the measures that we use vary, depending on the data sources available and the potential for in-depth analysis.

The age groups examined within the outcomes analysis also varies. The focus of the study was on children aged 0-17, in line with the definition in the UN Convention on the Rights of the Child, which defines a “child” as a person under the age of 18. However, the age thresholds we apply vary because of underlying conceptual issues as well as data availability, definitions adopted in data sets and sample size. Conceptually, the definition of childhood is not straight forward, with different definitions and thresholds relevant to different administrative, legislative and social contexts. Moreover, the feedback and comments we received from experts in our focus areas often highlighted the importance of extending analysis to cover young adults, including 18 year olds in some instances, and young adults within the age 16-24 age group (such as young adult carers and care leavers). The thresholds we have adopted also depart in some instances from those adopted within particular social contexts. For example, within the Roma, Gypsy and Traveller communities, 16 year olds are often viewed as independent adults rather than children and we report on 0-15 and 16-18 year old age groups.

Table 3: Summary of outcomes analysis by domain, group and measures

	Standard of living	Educational outcomes	Health	Physical security
Young carers	Low income characteristics (six indicators, FRS/HBAI) Economic activity of household/housing quality (Census)	Parental educational status (<16s) Own education status (16-17) (2011 Census for E & W) School truancy/absences due to caring activities (US YQ 10-15)	LLID Subjective health (2011 Census for E & W) Mental health (SD) (US YQ 10-15)	Bullying (US YQ 10-15) and fear of crime and perception of personal safety (US 16-24) Bullying and experience of personal crime (CSEW YQ 10-15)
Children in recent migrant families	Low income characteristics (six indicators, FRS/ HBAI) Economic activity of household /housing quality (2011 Census for E&W) Unaccompanied asylum seekers in CIN/CLA primary need = low income	Parental educational status (<16s) Own education status (16-18) (2011 Census for E & W)	LLID Subjective health (2011 Census for E & W)	
Roma, Gypsy and Traveller children	Economic activity of household Housing quality (2011 Census for E & W)	Parental educational status (<16s) Own education status (16-18) (2011 Census for E & W)	LLID Subjective health (2011 Census for E & W)	
Children at risk of abuse or neglect	Low income as a primary need (CIN/CLA) Deprivation measures (free school meals / IDACI (CIN/CLA linked to NPD)	Various educational attainment outcomes (CIN/CLA linked to NPD) School truancy amongst children living in households where there is domestic abuse (CSEW SCM linked to YQ 10-15)	Disability and SEN status (CIN); SEN status, Mental health (SDQ), health checks/immunization/ teeth checks up to date (CLA) LLID amongst children living in households where there is domestic abuse (CSEW SCM linked to YQ 10-15)	Bullying, violence and personal crime amongst children living in households where there is domestic abuse (CSEW SCM linked to YQ 10-15) Bullying, violence and personal crime amongst children living in households where there is drug use (CSEW SCM linked to YQ 10-15)

Note: FRS = Family Resources Survey; HBAI = Households Below Average Income; 2011 Census for E & W = 2011 Census for England and Wales; CLA = Children Looked After; CIN = Children in Need; USoc = Understanding Society; NPD = National Pupil Database; CSEW = Crime Survey for England and Wales (SCM=Self-completion module; YQ=Youth Questionnaire); MCS = Millennium Cohort Study; HSE = Health Survey for England

4. Young carers

The in-depth secondary data analysis for this workstream focused on the Family Resources Survey (FRS) and Households Below Average Income Survey (HBAI). The prevalence of child income poverty and material deprivation amongst young carers was evaluated by linking the FRS children's data file to the HBAI dataset. In order to ensure robust results given relatively small sample size and annual data fluctuations, all analysis was based on pooled three-year data. Pooled data for three financial years 2013/14, 2014/15 and 2015/16 is expressed as shorthand as '2013/14–2015/16'. Similar shorthand is used to refer to pooled three-year data for other years. Adjustments for complex survey design were made using secure versions of the datasets within the UK Data Archive safe room environment.

4.1 Identification, population fractions and head-counts

The FRS collects information on those providing and receiving help on an unpaid basis (that is, not as part of a paid job). Carers are identified as people who provide care for a person who experiences physical or mental ill-health or disability, or problems relating to old age, inside or outside of their household on an unpaid basis (that is, not as part of a formal job or contract or voluntary work), based on responses to two FRS questions. Respondents are shown a show card identifying a range of relevant care giving activities that fall within the scope of the concept of unpaid care.

The sample of young (child) carers was identified using information on unpaid caring activities in conjunction with information about age from the FRS children's data file, which contains records for all children and dependent young people up to and including 19 years in the FRS sample. The coverage of this file includes (1) children under 16 years of age, (2) unmarried or non-cohabiting 16 to 19 year old in full-time non-advanced education⁵. Under-fives were excluded from the analysis because of low sample size.

Our FRS based estimates using pooled data for 2013/14-2015/16 suggests that 1.2% of dependent children aged 5 to 19 were young carers, corresponding to a headcount estimate of 120,000 dependent children aged between 5 and 19 (rounded up to the nearest 10,000). However, we acknowledge that the FRS/HBAI under-estimates the national population fraction of young carers and we do not recommend this source

⁵ Unmarried or non-cohabiting 19 year olds in full-time non-advanced education were included in this definition from April 2006.

as a basis for estimates of population headcounts. The “value added” of the FRS/HBAI as a data source for young carers relates to specialist household income data which is used as a basis for national poverty and child poverty estimates. Prior to the current study the potential of using the FRS/HBAI datasets to produce poverty statistics covering unpaid carers, including child poverty statistics covering young carers, had not been taken forward. The current study aimed to address this research gap.

The most widely cited estimates of the numbers of young carers in the UK are based on population census data. The censuses for England and Wales, Scotland and Northern Ireland all include specific questions on unpaid caring activities as well as questions on age. Using the 2011 Census, we estimate that 2.1% of children aged five to seventeen in England and Wales are young carers, equivalent to approximately 179,000 (Safeguarded 2011 Census data)⁶. However, whilst this a larger population fraction, the census itself is likely to under-estimate the true numbers of children providing unpaid care. One explanation is that young carers are often ‘hidden from view’ - with the provision of unpaid care by children being unrecognized, undisclosed and even concealed. This may particularly be the case when children are providing unpaid caring activities for parents who experience mental health problems and substance dependency. Under-reporting may also be a particular concern where adults respond to social survey questions on behalf of children in their households (rather than the questions being posed directly to children themselves) (BBC, 2010; Children’s Society, 2013; DH, 2008; Clay et al, 2016; Cheesbrough et al, 2017).

Cheesbrough et al (2017) highlight the potential importance of a new question that has been included within the Crime Survey for England and Wales as a basis for more robust estimates of young carer population proportions and headcounts in the future. Unlike both the Census and the FRS, this new question specifically asks children themselves (rather than responding adults) about the unpaid help and support they provide. Moreover, this instrument specifically refers to help that is provided for people who are misusing drugs and alcohol, as well as for people who are physically or mentally ill. The new question also includes caring for people both inside and outside the household.

⁶ Usual resident population

Using this new source, we estimate prevalence rates of 4.5% amongst children aged 10-15 using the children's dataset for 2015/16 (estimated population of 168,000 children)⁷. Estimates based on previous year's data (2014/15), which only cover caring for someone inside the household and also do not specifically ask about caring for someone who is mentally ill/has substance misuse issues, show that 3.0% of children aged 10-15 were carers⁸. Additional headcount estimates based on the Understanding Society youth questionnaire are reported in the data review (see online Appendix 1).

4.2 Outcomes

The workstream on young carers produced the first estimates of prevalence and trends in child income poverty and material deprivation amongst young carers aged 5-19 in the UK using specialized data from the Family Resources Survey / the Households Below Average Income Survey. In addition, we compared trends in the prevalence of child poverty amongst young carers over the period that coincided with the financial crisis, economic downturn and the onset of austerity with trends amongst other children.

Looking across six child poverty indicators (relative low income BHC and AHC; absolute low income BHC and AHC; low income and material deprivation; and severe low income and material deprivation), we found that child poverty rates were higher amongst young carers than other children based on three years of pooled data for 2013/14–2015/16. The differences in child poverty rates amongst young carers and other children were statistically significant in relation to two of these indicators (anchored low income before housing costs, and a combined measure of low income and material deprivation).

Comparing these estimates with those based on three years of pooled data for 2005/06–2007/08, young carers fared worse than other children over the period in terms of the relative trends in their child poverty risks. We concluded that there was a reversal in fortunes over this period. Young carers were relatively protected from poverty prior to the financial crisis of 2007/8, the subsequent economic downturn and

⁷ Exact question in 2015/2016: "Some people your age provide help or support to people who are physically or mentally ill, disabled or misusing drugs or alcohol. This could be a parent, brother, sister, another relative or someone else. Is there anyone like this who you have to look after on an ongoing basis? This could include people who live with you and people who do not".

⁸ Exact question in 2014/15: "Some people your age may have to look after other people. This could be a brother or sister, a relative or someone else who is disabled or sick. Is there anyone like this who lives here with you that you have to look after on a regular basis?"

the onset of austerity, but failed to keep up with other children of their age group in terms of their child poverty outcomes over the period to 2013/14–2015/16.

Possible explanations for this phenomenon were addressed. Using a multivariate approach, we found little evidence of compositional or demographic changes in the population driving the trends we observed. Moreover, multivariate analysis suggested that the association between child poverty and unpaid caring activities strengthened over the period under observation.

The analysis highlighted the particular importance of labour market factors over the period, with marked declines in the share of income from employment in young carers' household income. The observed increase in child poverty rates amongst young carers raises important questions about the effectiveness of social security protection towards the end of the period under observation. The analysis also puts the spotlight on housing costs as a factor underlying child poverty.

Supplementary work on young adult carers was also undertaken. The sample of young adults covers adults aged 20-24 and non-dependent young adults aged 16-19 (who are either married or cohabiting or who are not in full-time non-advanced education). Carers were identified through the same methodology discussed above. The proportion of young adult carers (particularly 16-19 year olds) in receipt of Carer's Allowance increased over the period – perhaps giving some grounds for optimism regarding recent public policy efforts to strengthen the recognition and protection of young adult carers within public policy frameworks (see supplementary online Appendix 1 for further details).

4.3 Lessons, implications and potential future projects

Four main lessons and implications were drawn from the workstream. First, the analysis established the feasibility of analyzing child poverty outcomes amongst young carers and comparing patterns and trends with other groups of children using FRS/HBAI. We recommend that the research is repeated in order to assess child poverty outcomes amongst young carers in the coming years, particularly as welfare reforms continue to feed through.

Second, whilst sample size was found to be reducing over the observation window, we found this to be adequate for the analysis based on three years of pooled data. However, the use of a complex survey design increased uncertainty around the point

estimates. As a result, increases in child poverty amongst young carers over the observation period that are intuitively large and substantial were not found to be statistically significant changes after standard errors had been adjusted. We recommend that data providers should take into account any implications for the analysis of vulnerable children when departing from random samples and adopting complex survey designs. In addition, the variables required to undertake the complex survey correction had to be derived from postcode level data as part of our analysis with significance testing was being undertaken within the safe room environment at Essex. We recommend that DWP consider making the derived / anonymised variables that are necessary for undertaking complex survey corrections available with the standard FRS/HBAI datasets.

Third, we acknowledge that estimates of the national population of young carers based on the FRS/HBAI sample are likely to under-estimate the numbers and the proportion of young carers in the population. For this reason, we do not recommend the use of the FRS as a basis for headcount estimates of population proportions or headcounts of young carers. Rather, we recommend the FRS/HBAI as a means of obtaining the best available estimates of income poverty amongst households that include a young carer.

Fourth, we acknowledge that the data window examined is too early to draw definitive conclusions about the effects of ongoing welfare and disability benefit changes, and of the overall impact of the welfare reform programme, on child poverty outcomes amongst young carers. However, at the time of writing, there are increasing concerns about the impact of welfare reform measures on households that include individuals with disabilities, whilst recent forecasts suggest that there will be a substantial upturn in overall child poverty rates in the UK in the period up to 2020/2021. Since a substantial proportion of young carers live in households in receipt of welfare benefits and tax credits - and since many young carers live in households that include disabled siblings or parents and who are in receipt of disability benefits - these forecasts raise the prospect of further deterioration in child poverty outcomes amongst young carers in the upcoming period. For this reason, it is particularly important that the analysis in this workstream is regularly updated using future releases of FRS/HBAI.

5. Children in recent migrant families

Our in-depth secondary data analysis for this workstream focused on the Family Resources Survey / HBAI. Using a similar methodology to that set out for young carers for the poverty measures (detailed above), child level income poverty estimates have been produced by linking child level records to household income data using the children's and adults datasets. Whilst child level information on nationality and year of arrival in the UK is not available within the FRS, a sample of children from migrant family backgrounds has been identified by linking child level records to information on their parents and then by exploiting the adult level information on migration characteristics (country of birth and years since last arrival to the UK) that is available within the FRS dataset. Access to this adult level information on migration status was available through FRS Safe Room access. Safe Room access to the FRS data also supported the use of cluster and strata identifiers to account for the complex survey design of the survey. The sample consisted of all dependent children in the data, which means all those aged 0 to 15 as well as all dependent 16 to 19 year olds. In order to achieve a large enough sample for various groups of migrant families, the last three years of available data were pooled: financial years 2013/14, 2014/15 and 2015/16, referred to as 2013/14–2015/16 hereafter.

5.1 Identification, population fractions and head-counts

Migrants comprise diverse groups of people, not least in terms of country of birth, nationality, immigration status, and time spent in the UK⁹. In identifying children living in 'migrant families', we used information on parents' country of birth, distinguishing between parents born in the UK, EEA and non-EEA countries. Parents' status may be mixed e.g. one was born in the UK and another in a non-EEA country. In this case, we categorised the child according to the most 'advantaged' status: UK born, followed by

⁹ Migrants are often defined and identified in data sources as foreign-born or foreign nationals (see Anderson and Blinder (2015) for further discussion on different definitions and the implications). 'Migrant children' are identified both as children who are foreign-born, that is, those who were born outside their country of residence, and children who were born in their country of residence whose parents are foreign-born (e.g. UNICEF Office of Research, 2009). Some studies have focused on specific groups of children with respect to their country of origin (e.g. Zuccotti et al, 2015) or immigration status (or that of their parents), including children without legal immigration status (Sigona and Hughes, 2012) and refugee children/young people (Allsopp et al, 2014). However, as research on migrant children and migrants more widely reveals, citizenship and immigration status are not static, with changes in the status of children and their parents over time having implications for their trajectories and outcomes.

EEA, followed by non-EEA. In further analysis, we also examined parental citizenship (again differentiating between UK nationals, EEA nationals and non-EEA nationals).

We distinguished between children living in 'recent migrant families' from those in 'UK-born or long-term resident families' according to parental length of time in the UK. Once again, where one parent arrived more recently than the other, we categorised the child according to the more advantaged status. What counts as 'recent' requires consideration of various issues. We defined 'recent' as parents who had lived in the UK for 10 years or less. (Note that basing the classification of children on their family's migration status in this way means the child themselves might or might not have been born in the UK.) One reason for using a 10-year threshold was to exclude from the recent migrant group non-EEA born parents who had lived in the UK for a sufficient length of time to have been granted permanent legal residence status (Indefinite Leave to Remain). Recent migrant families, without access to rights and entitlements (and related resources) associated with permanent residence status may face particular risks in terms of poverty and disadvantage. It should be noted, however, that some migrant children and their parents may live for more than 10 years in the UK without permanent residence status (Sigona and Hughes, 2012), and some non-EEA national parents may obtain permanent residence within a shorter period of time (particularly those resident for five to ten years). Our further detailed analysis includes parental nationality, and number of years since arrival in the UK, as covariates.

We estimated headcounts of children living in recent migrant families using FRS/HBAI, but triangulated our estimates using the 2011 Census for England and Wales. Using three years of pooled data from FRS (2013/14–2015/16), we estimate that around 8% of dependent children aged 0 to 19 are living in recent migrant families in the UK (2.1% are EEA migrants and 6.1% are non-EEA migrants), which corresponds to an estimated annual headcount of approximately 1.1 million children. Of these, 290,000 (with 95% confidence range of between 260,000 and 330,000 children) are EEA-born families and 830,000 (95% CI: 770,000 – 900,000) are non-EEA-born families.

It is difficult to evaluate the accuracy of the headcounts we provide from this source in comparison to others. Firstly, this is because we adopted a very specific definition for what constitutes a 'recent migrant family' that requires information on country of birth and length of time in the UK of both parents, which is not available from surveys where only one adult is the respondent, for example, CSEW. Secondly, surveys ask different questions of different sub-sets of respondents, for example the Census has information on the country of birth for children while the FRS only has this information for those aged 16 and over.

Matching our FRS definition as closely as possible, using 2011 Census for England and Wales (10% sample of household's dataset, safe room access), we estimate that approximately 7% of children and young people aged 0 to 18 are living in recent migrant families (for those who live with parents, this is based on parental migration status, for those who do not live with either own/adoptive or step-parents, this is based on their own country of birth and length of stay in the UK). According to the Census, children living in recent migrant families with parents born in EEA countries comprise 2.3% of all children and young people of that age, while those with parents born in non-EEA countries comprise 4.5%. This is equivalent to a headcount in England and Wales of 842,000 children and young people aged 0 to 18 living in recent migrant families (283,00 of whom are in EEA-born families and 559,000 are in non-EEA-born families) (these figures are rounded to the nearest 1,000).

Both the FRS and 10% sample of households from the 2011 Census underestimate the total number of children in migrant families in the UK through not counting those living in communal accommodation (e.g. hostels). However, this is likely to be a small fraction of the total. Neither source allows us to separately identify unaccompanied asylum seekers, although those who are living with families (for example, with foster parents) are in principle included in the sampling frame of both the FRS and the Census 10% household sample.

5.2 Outcomes

The analysis focused on comparisons between dependent children living in recent migrant families and those living in families with parents who are UK-born or are long-term residents, using pooled FRS data from the three years 2013/14–2015/16. We used the definitions described above.

Looking across all 6 poverty measures (relative low income BHC and AHC; absolute low income BHC and AHC; low income and material deprivation; and severe low income and material deprivation), there is a systematic pattern of children in recent migrant families being at a higher risk of poverty compared to children from UK-born/long-term resident families:

- Children who live in non-EEA-born recent migrant families have a higher risk of poverty compared to those in UK-born/long-term resident families according to all six poverty measures. These differences are all statistically significant.

- Children living in EEA-born recent migrant families also have a higher risk of poverty than children in UK-born/long-term resident families measured by all poverty measures. These differences are all statistically significant.
- Children who live in non-EEA recent migrant families are at a higher risk of low income and material deprivation, and of severe income and material deprivation, than children in either EEA recent migrant families or UK-born/long-term resident families. The differences between non-EEA and UK-born/long-term resident families are statistically significant.

As well as being at higher risk of poverty, the depth of poverty amongst children who live in more recently arrived migrant families also seems to be greater than that for children whose parents are UK-born or long-term residents, once housing costs are taken into account. The “poverty gap” provides information on the mean or median shortfall from the poverty line of the household income of children. The median and mean after housing costs “poverty gaps” amongst children in recent migrant non-EEA-born families are greater than for children living in UK-born/long-term resident families (both results are statistically significant). For children in EEA-born recent migrant families, the mean gap is also greater (and statistically significantly so) than UK-born/long-term residents, and the median gap is large but not statistically significant. These gaps, and differences between groups, are much less pronounced based on before housing costs income, pointing to the critical role that housing costs are playing in recent migrant family poverty.

The characteristics of children living in recent migrant families (both EEA and non-EEA) differ from those who live in UK-born families or families who are long-term residents. On the one hand, they have some advantages: they are more likely to have better educated parents, less likely to be in poor health or have a disability, and they are more likely to live in two parent families. On the other hand, children from recent migrant families are disadvantaged in that they are more likely to live in a household where at least one adult is not in work, they are much more likely to live in privately rented accommodation, and, unsurprisingly, they are much less likely to have parents who are UK nationals. Further analysis of the association between poverty risks and these and other factors point towards the role of employment income and housing costs as explanatory factors underlying the differences in poverty risks among children living in recent migrant families and those living in UK-born/long-term resident families, as well as differences in entitlements and access to income-related benefits based on parental nationality.

5.3 Lessons, implications and potential future projects

Four main lessons and implications were drawn from the workstream. First, defining migrant status is particularly complex, especially for children. Ideally migration status would be identified based on full information about country of birth, nationality/citizenship, year most recently arrived in the UK, reason for migration, and immigration status on arrival and at present, for all family members. However, no survey currently contains all this information.

Second, the Family Resources Survey is a particularly useful source, and allows us to identify children in migrant families with a reasonable degree of accuracy and robustness. Nevertheless, our reliance on adult level country of birth and year of arrival information has important limitations. Misclassification of children might result from missing parental information or from incorrect inferences from parental information. Since there is no information on country of birth for children under 16, or reason for migration, we cannot identify unaccompanied asylum seekers who are being cared for by social services (including by foster parents), even if they are living in a household. Although this is a very small group numerically, they have particular needs and vulnerability.

Third, the FRS would be enhanced by including children in the question about country of birth and nationality, not just those aged 16 and over. In addition, other potential improvements include the incorporation of an additional question on the reason for migration (such a question is already included in the Labour Force Survey), notwithstanding the limitations of data on reasons for migration (e.g. mixed reasons that are obscured by categories of 'work' or 'family' related reasons). In order to better understand the relationship between legal status and risk of poverty and disadvantage for children in migrant families, an additional question is needed to determine if and when non-EEA national parent(s) have obtained permanent residence status (Indefinite Leave to Remain). However, while this data may be important, it raises ethical and practical issues regarding disclosure of legal status. Including UK-born individuals in the question about length of stay in the UK would also be an improvement (since not all of those born in the UK may have lived in the UK all their lives).

Fourth, a number of the FRS variables needed for analysis of migrant children, including parents' country of birth and nationality, are held only in the Safe Room at Essex and are not released to researchers through the data archive. Information required to derive variables needed for survey analysis (since FRS has a complex survey design) are also only available at the Safe Room. This has considerable time and resource implications. Even if confidentiality concerns preclude the wider release of information about specific countries of birth/nationalities, depositing derived variables based on regions and other groupings (such as EEA and non-EEA) in the End User Licence version of the data would greatly enhance the range and efficiency of analysis that researchers could undertake using this source.

6. Children from the Roma, Gypsy and Traveller ethnic groups

Our in-depth secondary data analysis for this workstream focused on the 2011 Census of England and Wales. This included a pre-coded category for 'Gypsy or Irish Traveller' for the first time, to which we add children identified as Roma. We used the Secure Microdata Files of the random sample of 10 per cent of households from the 2011 Census of England and Wales, accessed via Secure Research Service (SRS) at the Office for National Statistics. The household file allows identification of those living in the same family within households, such as children and their parents, with information for all household members provided. This allows us to assign parental information, such as parental educational qualifications, to their children.

6.1 Identification, population fractions and headcounts

We estimate that 0.2% of the population aged 0-18 are identified as RGT within the 10% sample of households, which corresponds to a count of approximately 21,000 Roma, Gypsy and Traveller children in England and Wales. Of these, 85.5% (approximately 18,000) are aged 0-15 and the remaining 14.5% (approximately 3,000) are aged 16-18. In undertaking the 2011 Census, significant efforts were made to enumerate the static and mobile populations, including engagement with Gypsy and Irish Traveller movements, local authorities and agencies to raise awareness and encourage response among the RGT population, and to ensure that ONS had as comprehensive a list as possible of authorised and unauthorised sites (ONS, 2014b). Questionnaires were delivered by hand to a number of sites by special enumerators, and there was follow up by a team of collectors where questionnaires were not returned within a given period who could provide direct assistance with completing forms. Civil society groups welcomed the inclusion of the Gypsy and Irish Traveller

category and the enumeration efforts, but nevertheless regard the final figure as a significant underestimate of the population – whilst recognising that there are major challenges to alternative methodologies for counting RGT as well (Ryder and Cemlyn, 2014; Irish Traveller Movement in Britain, 2013). The household microdata file of the 2011 Census allows for in-depth analysis of RGT children’s household and family circumstances and we regard it as the best available source for RGT data.

6.2 Outcomes

Disadvantage amongst Roma, Gypsy and Traveller children was evaluated across three domains: living standards, education and health.

Two indicators were investigated in the standard of living domain: housing and economic activity. Housing deprivation was defined as living in overcrowded accommodation, or in a non-self-contained dwelling, or in accommodation with no central heating. Almost 50% of RGT children were found to experience housing deprivation, compared to 16% of other children. Economic activity deprivation was defined as living in a household where no adult is in paid work. Over half of RGT children aged 0-18 were found to be living in households where no adults are in paid work households, more than three times the proportion of children in other ethnic groups.

In relation to the education domain, for children aged 0-16, educational deprivation was defined as living in a household where the parent(s) (or if no parent was present, the household reference person) had no educational qualifications. For 17 and 18-year olds, educational deprivation was defined as having no educational qualifications. Based on these thresholds, more than three-fifths of RGT children aged 0-18 were found to experience deprivation in the education domain, compared with 1 in 10 children amongst other children.

In relation to the health domain, health deprivation was defined for 0-18 year olds as having poor health (fair/bad/very bad) or a limiting long-standing illness or disability. RGT children were found to be substantially more likely to experience poor health or disability than was the case for other children.

The extent of multidimensional deprivation amongst RGT children was calculated based on a simple count of deprivations across these four indicators, using the thresholds identified above. Nearly a quarter of Roma, Gypsy and Traveller children in England and Wales aged under 19 were found to be deprived in relation to 3 or more indicators, compared to just two per cent of other children. Further analysis using ordered logistic regression techniques suggested that RGT children aged 0-18 have

eight times the odds of experiencing a higher number of deprivations than children from other ethnic groups.

Whilst no one dimension was found to explain the extent of multiple deprivation, lack of educational opportunities and attainments of RGT children and their parents were found to be key components. RGT children living in caravans and other mobile or temporary structures were found to have particularly high levels of educational and household employment deprivation, but overall accommodation type was not found to be the sole or most important predictor of multiple deprivation, or of deprivation on any given dimension as measured in the Census. Moving RGT children into fixed accommodation is unlikely by itself to reduce levels of deprivation amongst RGT children and is not consistent with the preferences of many families.

6.3 Lessons, implications and potential future projects

Three main lessons and implications were drawn from this workstream. First, censuses, and other administrative sources, some of which already record Roma, Gypsy and Traveller ethnicity, are under-utilised as a source of robust and comparable data, allowing the scale, intensity and multi-dimensionality of the challenges facing Roma, Gypsy and Traveller children to be investigated and tracked. It is both desirable and feasible to exploit Census data, as a step towards tackling the data deficit, and the results can improve knowledge and understanding of multidimensional child poverty as well as the design of child poverty and Roma, Gypsy and Traveller integration policies.

Second, the 2011 Census question that supports identification of RGT children should be regarded as good practice and included within social surveys. Specific measures were undertaken at the time of the Census to ensure adequate coverage of caravan and mobile dwellings, and these measures should be extended and generalised, with the involvement of RGT civil society, as a step towards tackling the data deficit.

Third, administrative data collection that supports monitoring of RGT children should also be expanded. The health service, housing and social security administrations could learn more from good practice in education in recording and tracking the progress of Roma, Gypsy and Traveller children. In-house analysis of these data should help to identify target groups for policy interventions, while making anonymised datasets with ethnic group identifiers available to researchers (such as the Census microdata files and the National Pupil Database), subject to strict data security requirements, greatly enhances the possibility of independent scrutiny of the outcomes for particular groups who are subject to policy initiatives.

Fourth, proposed new linkages of the 2011 census and the National Pupil Database offer potential for repeating the RGT study and including child level educational outcomes within the analysis.

7. Children at risk of abuse and neglect

This workstream focused on exploratory analysis of the Crime Survey for England and Wales, including the adult self-completion modules on domestic abuse and on drug use linked to the children's dataset (which includes additional data on 10-15 year olds). Access to the CSEW self-completion module and children's dataset was made available by the UK Data Service through the Secure Lab web-based interface. Other data sets drawn on include the official register of children who are in contact with Children's Social Services reported within the Children in Need (CIN) Census and the Children Looked After (CLA) Census, both of which can be linked to the National Pupil Database. The National Pupil Database, as well as CIN and CLA data, were made available by the Department for Education (DfE) and accessed via Secure Server at LSE.

7.1 Identification, population fractions and head-counts

The workstream explored the potential for deriving national survey based headcount estimates of children who live in households where there is domestic abuse, and children who live in households where there is drug use, using Crime Survey for England and Wales. In-depth data on both domestic abuse and drug use is collected by CSEW through its specialist self-completion module. Having initially reviewed alternative data sources in this area (for example, MCS), a number of advantages were identified in producing estimates based on the more in-depth and specialist questions and data within the CSEW dataset. Households where domestic abuse¹⁰ or drug use¹¹

¹⁰ Questions about experience of domestic abuse by partner or ex-partner or a family member are asked of those aged 16-59 who agreed to take part in the self-completion module on intimate violence, (the core sample consists of adults of all ages from 16, but the self-completion is asked of those 16 to 59 only). The intimate violence module covers non-sexual abuse, sexual assault and stalking. We focus on domestic abuse, defined as intimate violence perpetrated by a partner/ex-partner or a family member in the last 12 months. The measure covers instances where the perpetrator is the partner or ex-partner of a family member: domestic violence (non-sexual abuse refers to physical force, emotional or financial abuse or threats to hurt the respondent or someone else close to them); sexual assault refers to experience of indecent exposure, sexual threats or unwanted touching (within 'less serious sexual assault categories'); and rape or assault by penetration including attempts ('serious' sexual assault); and stalking by a partner/ex-partner or family member.

¹¹ Questions about the use of the following drugs within the last year were included: amphetamines, amyl nitrite, anabolic steroids, cannabis, powder cocaine, crack cocaine, ecstasy, glues/solvents, heroin, ketamine, LSD, magic mushrooms, mephedrone, methadone, methamphetamine and tranquillisers. Those who used at least

are reported were identified using the CSEW self-completion module for 2015/16. The domestic abuse and use of drugs questions are answered by one responding adult aged 16-59 within each household and the questions posed focus exclusively on the responding adults' own experiences of domestic abuse and drug use. As noted below, we acknowledge that this method will result in an underestimate of the extent of domestic abuse and drug use in households, because information on experiences of domestic abuse and drug use by non-responding adults is not taken into account. The information on responding-adult experiences of domestic use and drug use was used to identify households where domestic abuse and drug use are reported and was then combined with data on the presence of children within these households as a basis for headcount and population fraction estimates. Although the main CSEW dataset does not include child level information, the number of children under 16 in each household is recorded. Data on the average number of children living in households where an adult respondent reported experiencing domestic abuse or drug use in the last 12 months, together with the total estimated count of households with children in England and Wales, was then used as a basis for estimating population fractions and headcounts.

Based on this methodology, we estimate that at least 7% of children under the age of 16 are living in households affected by domestic abuse in England and Wales¹². This is a substantially higher prevalence rate than that estimated in other key sources (e.g. Radford et al, 2011; subsequently cited by Harker et al, 2013; and Alma Economics, 2017). Our prevalence estimate corresponds to an estimated 761,000 children (rounded to the nearest 1,000) living in households with domestic abuse in 2015/16. In relation to drug use, we estimate that at least 515,000 children (rounded to nearest 1,000) under the age of 16 are living in households where there is drug use is reported by the responding adult and 167,000 children (rounded to nearest 1,000) where class A drug use is reported. We estimate that at least 4.7% and 1.5%¹³ of children under 16 in England and Wales are living in households with an adult who is taking any drugs and class A drugs, respectively.

one of these drugs would be classified as using 'any drugs' in the past 12 months. The 'Class A drug' measure includes use of powder cocaine, crack cocaine, ecstasy, heroin, LSD, magic mushrooms, methadone, methamphetamine within the last year. For further details, see Home Office and ONS (2017).

¹² The 7% figures is based on the estimated 10,960,403 children aged 0-15 living in England and Wales in 2015 (ONS, 2017) and our estimated 760,900 children aged 0-15 living in households with domestic abuse in England and Wales.

¹³ The 4.7% figures is based on the estimated 10,960,403 children aged 0-15 living in England and Wales in 2015 (ONS, 2017) and our estimated 515,000 children aged 0-15 living in households where an adult has taken any drugs in the past year in England and Wales.

Additionally, we estimate that at least 30,344 children aged under 16 are living in households where the responding adult experienced domestic abuse *and* reported taking Class A drugs (see Table 4).

Table 4: Summary of headcount estimates from CSEW, 2015/16 (England and Wales)

Children in households that report domestic abuse	Children in households that report use of any drug within the last year (1)	Children in households that report use of a Class A drug within the last year (2)	Children living in households where the responding adult reports both experiencing domestic abuse and using Class A drug within the last year
761,000	515,000	167,000	30,344

Source: Authors' analysis using ONS Crime Survey for England and Wales, secure access dataset. SN 7280.

Notes:

1) The 'any drug' measure includes use of amphetamines, amyl nitrite, anabolic steroids, cannabis, powder cocaine, crack cocaine, ecstasy, glues/solvents, heroin, ketamine, LSD, magic mushrooms, mephedrone, methadone, methamphetamine and tranquillisers within the last year. For further details, see Home Office and ONS (2017).

2) The 'Class A drug' measure includes use of powder cocaine, crack cocaine, ecstasy, heroin, LSD, magic mushrooms, methadone, methamphetamine within the last year. For further details, see Home Office and ONS (2017).

We acknowledge that there are several important limitations to this approach. First, we do not capture information about child-level victimization using this methodology – only experience of domestic abuse by the adult respondent (aged 16 to 59) about their own experiences of domestic abuse. Second, both domestic abuse and drug use are likely to be under-reported even within the context of CSEW self-completion module. Third, the reporting window covers the past 12 months, so only households with children where there has been recent exposure to domestic abuse and drug use are captured and reflected within our estimates. Fourth, the age cut off within the estimate is 16, which is a lower threshold than that applied within our other workstreams. This reflects the fact that the CSEW self-completion module is completed by adults aged 16 and over. However, adopting a higher age threshold for children would potentially result in a higher estimate of the total number of children exposed to domestic abuse. Fifth, as noted above, the domestic abuse and use of drugs questions are answered by one responding adult aged 16-59 within each household and the questions posed focus exclusively on the responding adults' own experiences of domestic abuse and drug use. For households with more than one

adult, the figures we provide underestimate the extent of domestic abuse and drug use as they do not reflect on experiences of the non-responding adults within the household. Therefore, we regard the estimates as minimum bound estimates. Sixth, the adult respondent might or might not be the parent of all or any children living in the household. However, it is reasonable to assume that experiences of domestic abuse and drug use of any adult in the household might put children living with them at risk or exposure to domestic abuse. And lastly, the joint measure for domestic abuse and Class A drug use described above, refers to the same respondent.

Notwithstanding these limitations and caveats, the estimates provide important new headcounts of children who live in households affected by domestic abuse and drug use as well as a combination of domestic abuse and Class A drug use. Moreover, the identification of children exposed to domestic abuse and drug use using this methodology enables us to report on a number of outcomes for these groups for children aged 10 to 15 years old (by using this information in conjunction with the CSEW youth dataset). These findings are summarised in section 7.2.

Headcount analysis using the Crime Survey for England and Wales was supplemented with analysis using the CIN/CLA censuses for 2015. Whilst widely recognized as underestimating the population of children at risk of abuse and neglect, these sources are useful in providing headcounts of children who are known to Social Services¹⁴. Gaps between the numbers of children identified through social survey instruments, and numbers recognized by Social Services, can also be made using this administrative data. Table 5 summarises headcount information from the CIN census, with separate breakdowns for children whose primary need at assessment was 'abuse or neglect', children who were the subject of a Child Protection Plan (CPP), and official recognition of domestic violence, drug use and alcohol use as risk factors¹⁵.

¹⁴ Quality issues regarding the data are discussed in our underlying paper.

¹⁵ Key risk factors affecting child's health and development and indicating that the child might be at risk of harm were included in the assessment of Children in Need to facilitate service planning for these children and their families. The needs of the parents and carers form an important part of that assessment. Multiple risk factors were recorded for children who had them (DfE, 2015a).

Table 5: Headcount information from the 2015 CIN census, at 31st March 2015

Total CIN	CIN, primary need category: abuse or neglect	CIN, end of assessment risk factor: domestic violence (2)	CIN, end of assessment risk factor: alcohol misuse (2)	CIN, end of assessment risk factor: drug misuse (2)	CIN, subject to a Child Protection Plan
390,960	192,950	197,700	73,200	72,900	49,690

Source: DfE (2015b)

Note:

1) There were 69,500 children who were Looked After by the Local Authorities at 31 March 2015 (2015c). In principle, all CLA children are also classified as CIN. However, in practice, a small proportion of CLA children do not appear within the CIN census data.

2) 'Risk factors identified at the end of assessment' are related to each episode of need a child has, so it might include the same child more than once, if they had more than one period of need with assessment in the year ending March 2015.

The CIN/CLA censuses also support identification of a range of characteristics. In our analysis, we identify children who are included within the CIN/CLA censuses and are also members of other focal groups covered within the current study. Specifically, we use the information on RGT ethnicity status, young carer status and unaccompanied asylum seeker status within the CIN/CLA censuses to examine the potential for analysing outcomes for these subgroups across different domains. Headcounts for these subgroups are summarised in Table 6 below.

Table 6: Identification of subgroups within the 2015 CIN/CLA census, at 31st of March 2015

	Total	Roma, Gypsy and Traveller ethnicity	Unaccompanied Asylum seeker	Young carer
CIN	390,960	16,780 (1)	1,900 (2)	11,600 (2)
CLA	69,540	340	2,630	

Source: DfE (2015b); DfE (2015c)

Notes:

1) DfE reports on CIN by ethnic group breakdowns (in DfE 2015b), but RGTs are not separately identified within the reporting. Given that the distribution of children by broader ethnic groups in our analysis sample and that reported of the whole CIN cohort by DfE are very similar, we use our analysis sample's figure of 4.5% of RGT children among those who were CIN at 31st of March to estimate the total number of RGT among CIN. Using the total number of CIN with known ethnicity reported by DfE (2015b, Table A4) and taking 4.5% of these children to be RGT, we estimate a figure of 16,780 children.

2) These figures are based on the number episodes of need in the year ending in March 2015, where 'unaccompanied asylum seeker' / 'young carer' was identified as a risk factor. Since this information is based on each episode of need, if a child had more than one episode of need in the year, they might appear in these data more than once.

7.2 Outcomes

Using CSEW to link adult and child level data within the same households, meant that we were able to report on the physical security-related outcomes for children aged 10 to 15 who are living in households with domestic abuse. Using 2015/16 data, we found that 8% of children aged 10 to 15 were living in households affected by domestic abuse – a slightly higher figure than our estimate for all children aged under 16 using the same data.

We found that children aged 10-15 who live in households with domestic abuse are 1.6 times more likely to experience bullying: almost 1 in 3 (31.7%) of these children reported experiencing bullying in the last year compared to just over 1 in 5 (20.8%) of all other children¹⁶.

Children who live in households affected by domestic abuse are also significantly more likely to be victims of personal crime. Experience of personal crime is measured by a number of questions (administered within the Crime Screener section of the survey¹⁷) asking a child about their experience of theft or attempted theft, criminal damage to personal property, violence (kicking, hitting/punching, pushing/shoving, using/hitting with a weapon, physical violence in some other way) in the last 12 months. There are two ONS derived measures for the overall experience of crime within the data: the 'broad definition' and the 'preferred definition'. The former includes minor offences e.g. by other children and family members that would not normally be treated as criminal matters, while the latter only includes those that would be considered criminal matters (ONS 2015, User guide to Crime statistics for England and Wales). Using both measures, we show that children who live in households with domestic abuse are significantly more likely to experience personal crime. The broad measure indicates that 23.2% of these children experienced any personal crime in the last year compared to 17.3% of all other children (the 'preferred', more narrowly defined measure's figures are 16.5% and 11.7%, respectively). Further, we found that children who lived in households affected by domestic abuse were significantly more likely to report experiencing of violence compared to other children (24.7% compared to 16.7%). They are also significantly more likely to be in poorer health with 15.5% of

¹⁶ Children who had experienced bullying were identified using two questions: the first asking "In the last 12 months, has anyone bullied you in a way that frightened or upset you?" and the second: "Have you experienced cyber bullying in the last 12 months? For example has anyone sent you unwanted and nasty emails, texts or messages or posted something nasty about you on a website?"

¹⁷ If the child answered positively to these questions they are then directed to answer the full victimisation module, providing more details about the incidents.

them reporting having long-standing illness or disability compared to 9.4% of all other 10 to 15 year olds.

Our final outcome measure related to education, truancy, also shows a significantly worse position of those who live in households with domestic abuse. Just under 1 in 10 (9.7%) children aged 10-15 who live with domestic abuse reported truanting from school in the past year, compared to 3.5% of all other children.

The above findings point towards substantial disadvantage among children who live in households affected by domestic abuse compared to all other children across a number of measures.

Similar outcomes analysis, where sample size permitted, was undertaken for children aged 10-15 who are living in households where the responding adult reports using any drug within the last 12 months. We found that children who live in these households in 2015/16, were more likely to experience bullying (23.4% among these children vs 20.7% among all other children), and more likely to experience violence (25.1% vs 17.2%). The figures for experience of crime for children who lived in households with drug use were similar to that of all other children.

In supplementary work, we undertook outcomes analysis for CIN/CLA children. This included a review of published sources, existing literature and research reports, and new micro level analysis. Further details are provided in our underlying paper.

7.3 Lessons, implications and potential future projects

There are three key lessons and implications from the worksteam.

First, the analysis has established the feasibility of estimating the number of children living in households with domestic abuse and illegal drug use and the feasibility of a range of outcomes, including physical security outcomes, for children who are living in these households using the Crime Survey for England and Wales. We recommend that the research be repeated in order to (a) establish a time trend for children living in households domestic abuse/substance misuse; (b) to undertake sensitivity analysis by pooling two years of data to increase sample size; (c) to extend the analysis to cover additional outcomes and to include multivariate techniques.

Second, we recommend further work to develop appropriate measures of alcohol use that is harmful for children, since the exploratory analysis we have undertaken (using MCS wave 5, Health Survey for England and CSEW) has highlighted a number of limitations of the measures available.

Third, more in-depth analysis of CIN/CLA (including through data links with NPD) could be undertaken to extend the evidence base on outcomes. However, analysing these datasets requires enhanced security conditions and there are extensive set up costs in terms of data cleaning and variable specification. Initiatives to establish support networks (including shared good practice in relation to data cleaning, variable specification and a user group) and additional dataset support (including additional documentation on variables) would be welcome.

8. Conclusions, recommendations and “next steps”

The findings from each workstream illustrate that, through deeper and creative analysis of existing social survey and administrative data sets, it is feasible to include the four focus groups considered in this project in ongoing monitoring efforts, alongside other more familiar groups such as Bangladeshi/Pakistani ethnic minority children, or children in lone parent families, at high risk of poverty and disadvantage. We recommend that identification of young carers, RGT, children in recent migrant families, and children at risk of abuse or neglect within official publications and releases (such as annual findings from HBAI for young carers and recent migrants) is addressed in the future.

Looking across the workstreams, the substantive findings demonstrate how focussed analysis of outcomes for particular groups of at risk children can be a useful way of analysing not only child income poverty but also multidimensional disadvantage across critical domains of life such as health, education and physical security. The project illustrates that this approach to analysis can broaden and deepen knowledge and understanding of child income poverty and multidimensional disadvantage in a number of different ways and can play an important role in informing better-targeted policy development and practice interventions. The project findings also demonstrate how secondary data analysis techniques, including methodological approaches such as data pooling, data linking / matching and intersectional analysis, can be useful in tackling different kinds of ‘data exclusion’ using existing data sets and can be successfully applied to build up quantitative evidence on hitherto “missing” and “invisible” children. For example, through the identification of groups of children at high risk of multidimensional poverty and disadvantage; through the identification of groups who experience different trends in risks over time; through the identification of groups that are more likely to experience multiple deprivation understood as

disadvantage in more than one domain simultaneously; and through the analysis of underlying explanatory factors and drivers.

Looking forward, there is rich potential for extending the approach and methods adopted within this project in the context of other “missing” and “invisible” groups. The project findings have more general implications that go beyond the particular groups of children considered. In examining outcomes for each of the four subgroups, we have intended, firstly, to demonstrate how estimates and understanding of child poverty and disadvantage can be enhanced by a focused effort to include children potentially at very high risk, rather than relying solely on standard analysis of household survey data, such as is carried out for the Households Below Average Income series and, secondly, demonstrate that it is possible to extend evidence on statistically ‘hard to reach’ groups of children using existing sources, without the need to carry out expensive new data collection. This model can be applied to tackle the phenomenon of “data exclusion” and to build up the data infrastructure on “invisible groups” more widely.

Whilst the current project focussed on in-depth secondary data analysis covering four groups of children, these four focus groups were *not* proposed as a comprehensive or complete list of the groups of children that are “missing from” or “invisible within” social statistics. Rather, the rationale for their selection relates to the potential for building up new evidence by undertaking secondary data analysis of existing data sources as well as the data challenges involved. We recommend that, in the future, consultative methods are taken forward as a means of developing and agreeing a more extensive list of “missing” and “invisible” groups that should be addressed within social and public policy and that should be covered within future research efforts of this type. The Childrens’ Commissioner’s Office and the Equality and Human Rights Commission are already active on this agenda. This exercise should, in the future, cover adults as well as children.

A number of specific priorities for future research have been identified through the project. Given the context of authoritative forecasts of a substantial upturn in child poverty in the upcoming period, ongoing research efforts are required to ensure that child poverty outcomes for the focus groups addressed within this project are regularly monitored and reported on.

In terms of specific follow on project ideas looking forward, we recommend that further research is undertaken to continue to monitor and report on child poverty outcomes amongst young carers in order to establish whether the adverse trends

identified in our study continue in the upcoming period. In relation to children in recent migrant families, the inclusion of the new immigrant and ethnic minority booster sample as part of the ongoing Understanding Society overall sample from wave 6 onwards, provides a new opportunity to analyse physical security outcomes for migrant children from wave 7 (physical security questions are included in the survey on a rotation basis in waves 1, 3, 5 and 7 so far). The availability of migration history data, as well as reason for migration, nationality and British citizenship intentions makes this source our recommended priority for future work. On RGT children, we also recommend further analysis of health outcomes using newly collected administrative data as a particular priority for future research. Proposed new linkages of the 2011 census and the National Pupil Database offer potential for repeating the RGT study and including child level educational outcomes within the analysis. Amongst children at risk of abuse and neglect, further analysis using the CSEW SCM data linked to the children's dataset is a particular priority, including by extending our analysis of children who live in households where domestic abuse and / or drug use is reported. A final concrete proposal relates to the establishment of a data lab / web tool providing a single point of access to quality and reliable data and research findings on "missing" and "invisible" children. Other ideas for follow on projects are suggested in our data review (online Appendix 1).

Whereas concerns are increasingly being expressed about cuts to social statistics, the project highlights new analytical opportunities that are arising from ongoing data developments, including new releases of administrative data, new administrative and social survey linkages / matching exercises and new census and social survey questions. The project demonstrates that there is rich potential for exploiting these data developments and for taking forward the application of quantitative methods in the field of equality, inequality and human rights analysis, including in relation to the analysis of outcomes amongst vulnerable children. For example, the introduction of the new question on Roma, Gypsy and Traveller status within the 2011 Census establishes international good practice and illustrates how targeted efforts to cover communities that experience discrimination and non-standard housing arrangements can be included within national statistical monitoring exercises. Similarly, the new question on unpaid caring activities within the youth questionnaire of the Crime Survey for England and Wales, and the increasing availability of administrative data sets such as the NPD and opportunities for linking administrative data sets (for example, in the context of our work on CIN and CLA), are important steps forward. These data developments and innovations support new and deeper analysis of outcomes for hitherto "invisible" children as well supporting new and improved headcount and population prevalence estimates.

A number of lessons can be drawn from the project regarding sample size and survey design. Sample size in the 10% household sample of the Census was found to be adequate for analysis based on one year of data in the context of Roma, Gypsy and Traveller children. However, in the context of our analyses of child income poverty amongst young carers and children in recent migrant families using the Family Resources Survey, annual sample size was found to be inadequate both from a data confidentiality/disclosure perspective and from the point of view of statistical estimation. An important lesson from the study is that data pooling can, to a certain extent, overcome the problem of limited sample size. At the same time, the trend towards complex survey designs (rather than random surveys) was found to have particularly important implications in the context of research amongst vulnerable children. This design feature increases uncertainty around point estimates and these effects are particularly problematic in the context of research involving small groups. For example, in our work on child poverty amongst young carers using the FRS, data pooling was adopted as a strategy to maximise sample size. However, whilst sample size was as a result adequate to support point estimates, the range of uncertainty resulting from the complex survey design correction was relatively wide. As a result, increases in child poverty amongst young carers over the period of observation that are intuitively large and substantial were not found to be statistically significant changes after standard errors had been adjusted. Looking forward, data providers should take this into account any implications for the analysis of vulnerable children when departing from random samples and adopting complex survey designs.

More generally, the emergence of the new data security and data ethics environment poses new challenges for researchers and is particularly important in undertaking research on “missing” and “invisible” children. This research often deals with small groups of children and with sensitive data in areas such as abuse and neglect. Relevant datasets and variables are increasingly likely to be accessed only under secure conditions and a whole panoply of issues around ethics, confidentiality, identification, disclosure and data security need to be addressed in undertaking research in this area. This has implications for research training, data analysis, data storage, data management and project management with follow-on implications for time and resources including, for example, the time and resources required to maintain secure local environments and / or to travel to remote secure data environments and staff costs in terms of ongoing training and management. Looking forward, data providers can help by making datasets and variables available through standard arrangements where there is no need to apply enhanced conditions. Funders can help by recognising the additional resources required to ensure compliance with the new and emerging data security and data ethics environment. ESRC funding for

Safepods that will provide local access to secure microdata will be key in the future and could potentially eliminate the need for repeated researcher travel to remote safe rooms at Essex and ONS.

Finally, the project contributes to an emerging body of research that focusses on the development and application of quantitative methods to undertake equality, inequalities and human rights analysis, including analysis of outcomes for “vulnerable” and “at risk” children. Looking to the future, ongoing efforts by organisations such as EHRC and Children’s Commissioner for England to improve the data infrastructure for “missing” and “invisible” groups require ongoing supplementation by in-depth academic research projects and dedicated funding streams. This is particularly the case where deeper and more complex analysis and methodological innovation is required. “Deep dive” work on particular groups, as well as the further development and application of quantitative methods to build up evidence on a wider range of “missing” and “invisible” groups, will require both public policy orientated work and parallel academic research. Taking advantage of and fully exploiting the new analytical and methodological opportunities in the upcoming period, including exploiting additional access to new administrative data sources and new data matching / linking opportunities, means that the need for partnerships of this type is likely to increase in coming years.

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