EDUCATION POLICY INSTITUTE

Children missing from education

Estimates, trends and characteristics

Whitney Crenna-Jennings, Allen Joseph and Jo Hutchinson

December 2024

About the Education Policy Institute

The Education Policy Institute is an independent, impartial, and evidence-based research institute that promotes high quality education outcomes, regardless of social background. We achieve this through data-led analysis, innovative research and high-profile events.

Acknowledgements

This report has been funded by Dorothy Thomas, Lord John Nash and Unbound Philanthropy.

We acknowledge the contributions of Zak Watson and Nusrat Happy in the early stages of this project. Zak Watson was seconded from the Civil Service Fast Stream to EPI between September 2022 and February 2023. Nusrat Happy was a Nuffield summer research intern at the Education Policy Institute.

We would like to thank Robbie Cruikshanks, Kerris Cooper and Dr Tammy Campbell for their support with quality assurance; James Zuccollo, Dr Tammy Campbell and Natalie Perera for their editorial advice; and David Robinson, Emily Hunt and Robbie Maris for their support with proofreading.

This publication includes analysis of the National Pupil Database (NPD): https://www.gov.uk/government/collections/national-pupil-database

The Department for Education is responsible for the collation and management of the NPD and is the Data Controller of NPD data. Any inferences or conclusions derived from the NPD in this publication are the responsibility of the Education Policy Institute and not the Department for Education.

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.

About the authors

Whitney Crenna-Jennings is Associate Director for Mental Health, Wellbeing and Inclusion at EPI.

Allen Joseph is a Researcher in the Early Years, Inequalities and Wellbeing team at EPI.

Jo Hutchinson is Director for SEND and Additional Needs at EPI.

Contents

Executive summary

Over recent years, children missing from education have become a major concern for the education sector. The Children's Commissioner and Ofsted's former Chief Inspector have warned that these children are often some of the most vulnerable, and may be at risk of harm, exploitation, or exposure to extremist ideologies.[1] In addition, this group may include pupils waiting for school placements or families who actively choose home education but do not register with their local authority.

Despite growing attention to this issue, its full scale and the characteristics of these children remain understudied. Previous estimates have been hampered by gaps in data collection and the inherently hidden nature of many cases. Without a clear sense of how many children in England might be missing out on their legal entitlement, who they are, and the reasons they are not in education, it is challenging to assess the true extent of the problem or determine appropriate interventions.

To address these gaps, we introduce a novel method which compares GP and school registrations to generate estimates of:

- Children Not in School (CNIS) - ie those of compulsory school age not enrolled in any school.
- Children Missing from Education (CME) - ie those not registered in school and those not registered in home education (we acknowledge that some of these children may be receiving 'suitable' alternative education and not be registered with their local authority).

Using public data as a proof-of-concept, we demonstrate that more accurate estimates are possible with access to and linkage of more sensitive information.

In addition to this, we generate counts of pupils who leave mainstream schools and the English education system entirely and explore their characteristics by following four successive cohorts through the primary and secondary phases using the National Pupil Database.

Part 1: Estimating the number of children not in school and children missing from education

- To estimate the number of children not in school, we subtracted the number of children aged 5-15 enrolled in school from the number of children aged 5-15 registered in GP practices. We then pulled out those *formally* registered in elective home education to arrive at an estimate of the number of children 'missing' from education.

[1] Children's Commissioner's Office, 'Where Are England's Children? Interim Findings from the Children's Commissioner's Attendance Audit'; Wilshaw, 'Advice Letter from Sir Michael Wilshaw, Her Majesty's Chief Inspector, on the Latest Position with Schools in Birmingham and Tower Hamlets', 14 July 2015.

- Using this approach, we estimate that up to **400,000** children are not in school in 2023 – an increase of over 53 per cent from 2017.
- Across the same period, the number of *formally* registered home-educated children more than doubled, increasing by 108 per cent from 45,500 in 2017 to 94,800 in 2023, according to local authority data.
- After accounting for pupils who are *formally* registered in home education, we estimate that as many as **305,000** are missing entirely from education in 2023 – an increase of 41 per cent from 2017. This figure is around 2.5 times higher than the Department for Education's estimate.
- Although further research is needed to establish the drivers of this rise, the increase may be related to the changing nature of children's additional needs, pressures on schools' capacity to meet those needs, and the ability of systems to provide appropriate oversight of decisions regarding children's entry to and exit from schools.[2]

Using the same data, we explore some of the characteristics of children not in school and children missing from education:

- **Age**: Secondary school pupils, particularly those aged 13 to 15, are less likely to be in school. The number of 15-year-olds not in school doubled from around 25,000 in 2017 to around 50,000 in 2023. While the reasons for age differences require further exploration, this trend may be related to developmental changes during adolescence, a period marked by increased academic expectations, changing social dynamics, and the potential onset of mental health problems.[3] Further research is needed to understand why this trend has become more pronounced over time.
- **Gender**: Girls are less likely to be in school than boys, especially during adolescence. In 2023, just over 205,000 girls were not in school compared with around 195,000 boys according to our data. This gap has widened over time and runs parallel to the increasing disparity in mental health outcomes between adolescent girls and boys.[4]
- **Geographic variation**: The number of children not in school varies across local authorities; however, data limitations mean these local-level estimates should be interpreted with additional caution. There is a pressing need for more precise, per-pupil data to better understand and address these variations.

It is important to note that these characteristics reflect those of children not in school, rather than children missing from education. While the Department for Education's new data collection on

[2] Parish, Bryant, and Swords, 'Children Missing Education'.
[3] Rapee et al., 'Adolescent Development and Risk for the Onset of Social-Emotional Disorders'; Casey, Getz, and Galvan, 'The Adolescent Brain'; Chein et al., 'Peers Increase Adolescent Risk Taking by Enhancing Activity in the Brain's Reward Circuitry'; Uhlhaas et al., 'Towards a Youth Mental Health Paradigm'; Crone et al., 'A Neurocognitive Model of Self-Concept Development in Adolescence'.
[4] Newlove-Delgado et al., 'Mental Health of Children and Young People in England, 2023.'; Crenna-Jennings and Joseph, 'Four Charts Which Explain the State of Children's Mental Health in 2023'.

home-educated children is a positive first step towards a better understanding of this issue, more detailed and granular data is needed.[5] The availability of data broken down by single year of age, gender, *and* local authority would greatly enhance our understanding of the characteristics of children missing from education.

Part 2: Pupils who exit the English education system

In part 2 of our analysis, we follow four cohorts of pupils from Reception to Year 11 for those finishing secondary school in 2018, 2019, 2020 and 2021. We find that:

- Over **50,000** pupils leave the English education system during the primary or secondary phases and are not registered in a mainstream school, alternative provision or the independent sector by Year 11. This number increased by 6.9 per cent between the 2018 and 2021 cohorts, while the proportion of the entire cohort leaving rose slightly from 8.1 per cent in the 2018 cohort, to 8.6 per cent in 2020, falling to 8.4 per cent in 2021.
- A small proportion of these pupils (10 per cent) have English and maths GCSE records indicating that, if they pass, they are leaving secondary education with a qualification. Some of these pupils may be external candidates, including those who have been home educated.
- The number of pupils who exit the English education system rises sharply in the secondary phase. About **20 per cent** of all system exits occur in year 10 in the lead-up to GCSEs. This chimes with our findings in part 1 showing that older age groups are more likely to be missing from education.
- Exits from the English education system are characterised by significant inequalities. In the 2019 cohort:
    - **75 per cent of Traveller pupils** and **50 per cent of Gypsy or Roma pupils** exited the English education system, compared with 8.6 per cent of the cohort overall.
    - **White Irish pupils** and **those from 'Other White backgrounds'** were also at significantly increased risk of leaving the English education system, with around 20 per cent of pupils in each group exiting the system.
    - **Persistently disadvantaged pupils** were twice as likely to experience a system exit, at 18 per cent compared with 8.6 per cent of the cohort overall.
    - Other vulnerable groups including those who have been **permanently excluded** and **care-experienced pupils** were at significantly increased risk of system exits.
- In addition, we found that a small but significant proportion of pupils (5.1 per cent in the 2019 cohort) missed at least one term of mainstream education but returned by January of Year 11.
- Pupils with **social, emotional, or mental health difficulties** and **care-experienced pupils** were more than twice as likely to miss a period of mainstream education compared with the overall cohort.

[5] Department for Education, 'Elective Home Education, Academic Year 2023/24'.

Given the quality of the data we had access to in part 1 as well as limitations around identifying migration-related exits in part 2, it is important to recognise that not all children we identified are necessarily being deprived of a suitable education or are automatically at risk. The government has the legal powers to link health and education datasets to allow further investigation of the scale of the issue, as has been demonstrated in Wales.[6]

Policy recommendations

- **Build on plans to establish a register of children outside of education.** The government has announced plans to create a register of 'children not in school.' A more complete register on all children, maintained by the ONS, could integrate data from education, health and other relevant administrative data sources. This register should include pupil-level data from all schools (state, independent, and unregistered) and a register of home-educated children to accurately account for all children. The government has also committed to using a consistent unique identifier across education, health and local authority data systems.[7] This should facilitate data sharing and improve current estimates as children moving between systems can be followed more easily. Robust safeguards must be implemented to ensure data is not inappropriately shared or used for purposes unrelated to the benefit of the child.[8] Further research is also needed to address gaps in these data sets, such as children missing from administrative records altogether. While a register alone will not protect children, it will support local authorities to fulfil their statutory duties and direct support where it is most needed.
- **Require schools to record reasons for removing pupils from their rolls**. Our research shows that rates of English education system exits rise significantly in secondary school and peak in year 10 before pupils sit their GCSEs – and existing gaps in the data prevent an understanding of the factors driving this rise. Just as they are required to report reasons for permanent exclusions, schools should be required to collect and feed data on the reasons why pupils are leaving rolls into centralised data collections. This would allow better oversight of illegal exclusions, including off-rolling; the role played by mental health issues or disengagement from education in system exits; along with a better understanding of the proportion of system exits related to out-migration from the country.
- **Investigate best practices for preventing, engaging with, and supporting children missing or who go missing from education**. Given findings suggesting that pupils who go missing from education have additional vulnerabilities, research is needed to build the evidence on how the government can prevent children from becoming disengaged from education in the first place as the current evidence on improving engagement is weak.[9]

[6] Welsh Government, 'Estimating Numbers of Children Not in State Education Using Linked Administrative Data'.
[7] Adams, 'Pupils to Get Unique ID Number Linking Service Records under Labour'.
[8] Weale, 'Department of Education Criticised for Secretly Sharing Children's Data'; Whittaker, 'Benefit Fraud Squad Snoops on Pupil Data under Secret Deal'.
[9] Education Endowment Foundation, 'Attendance Interventions Rapid Evidence Assessment'.

Research into best practices for engaging children who have never interacted with the education system is ongoing.[10] Together, this research could support the development of targeted strategies responsive to the diverse needs of children.

- **Improve the timeliness, accuracy and reliability of population estimates**. No data source currently provides a definitive number of children in England, let alone the number of children missing from education. Given the role population estimates play in policymaking and resource allocation, combined with wider evidence that local authorities are often unaware of the number of children in their area, the ONS must redouble its efforts to provide timely and reliable estimates of the child population.[11] Government plans to implement a consistent identifier across data systems should, in theory, facilitate better data integration, enabling local authorities to fulfil their statutory duties more effectively while also strengthening confidence in the data.

[10] Ministry of Housing, Communities & Local Government (2018 to 2021), Department for Education, and Lord Stephen Greenhalgh, '£1 Million Education Programme for Gypsy, Roma and Traveller Children Announced'.
[11] Children's Commissioner's Office, 'Voices of England's Missing Children'; Children's Commissioner's office, 'Where Are England's Children? Interim Findings from the Children's Commissioner's Attendance Audit'.

Introduction

Children missing from education represent a growing concern for the education sector and policymakers, as these children may not only be missing out on their legal right to education but also face safeguarding risks. The Children's Commissioner notes these children are often from some of the most vulnerable groups, including trafficking victims, undocumented migrants, or those simply unknown to local services. Furthermore, Ofsted's former Chief Inspector, Michael Wilshaw, has warned that some of these children may face risk of harm, exploitation, or exposure to extremist ideologies.[12] In other cases, children may be waiting for a school placement or families may actively choose to home educate their child but not register as such with the local authority.[13]

Despite growing attention to this issue, the prevalence and characteristics of these children have remained largely understudied. This report contributes to the growing body of literature by investigating the prevalence and characteristics of children missing from education through a novel methodology that examines discrepancies between GP records and school records and analysis of primary and secondary-aged cohorts of pupils in England.

The legal context

Under Section 7 of the Education Act 1996, parents are responsible for ensuring that their child receives an 'efficient full-time education'.[14] The Act requires that every child of compulsory school age receive education tailored to their '[a]ge, ability, aptitude, and any special educational needs or additional learning needs'. The law provides parents with the flexibility to fulfil this obligation through 'regular attendance at school or otherwise' – allowing for alternative arrangements such as home education. This recognises that while formal schooling may be a common route, it is not the only way to meet the educational needs of a child and upholds a parent's right to determine the educational path for their child.

In addition to parental responsibilities, the Education Act 1996 outlines specific duties for local authorities under Section 436A. Local authorities are required to identify, as far as possible, children of compulsory school age who are not registered at a school and are not receiving 'suitable education' through other means. The legislation also empowers local authorities to issue a School Attendance Order if a parent fails to satisfy the local authority that their home-educated child is receiving 'suitable education'. Put simply, the local authority has a parallel duty to identify children in their area who may be missing out on their legal entitlement to education and has powers to require parents to register their child in a school.

[12] Wilshaw, 'Advice Letter from Sir Michael Wilshaw, Her Majesty's Chief Inspector, on the Latest Position with Schools in Birmingham and Tower Hamlets', 14 July 2015.
[13] Department for Education, 'Children Missing Education, Academic Year 2023/24'.
[14] 'Education Act 1996'.

However, the current legal framework lacks clarity and enforcement mechanisms. Parents are not legally required to notify their local authority if they choose to home educate their child from the outset. If a parent chooses to withdraw their child from school to home-educate them, the school will likely notify the local authority (LA) — though the Children's Commissioner's interviews of some local authorities suggests this notification does not always occur in practice.[15] Additionally, the legislation does not clearly define what constitutes a 'suitable' education outside of school, nor does it give local authorities the power to regularly monitor the quality of home education. Meanwhile, parents are not required to have any qualifications, follow the National Curriculum, or aim for the child to obtain specific qualifications.[16] Even if a parent refuses to allow a local authority representative to enter their home or speak to their child, this cannot, by itself, be grounds for concern about the education being provided.[17] This fragmented approach, coupled with insufficient statutory definitions and powers, *potentially* risks some children missing out on their entitlement to an 'efficient full-time education'.

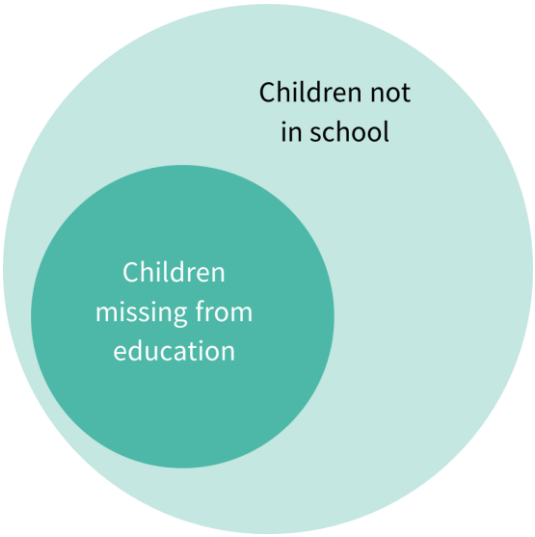
Defining children missing from education

Given the complexities of the legal context, it is important to define what we mean by 'children missing from education'. In public debate, the term 'children missing from education' often leads to confusion due to its dual usage: it can refer both to children who are severely *absent* from school and to those who are not *registered* in any school. This conflation complicates discussions of the underlying causes and potential solutions, as these groups may have distinct characteristics, motivations and face varying levels of risk.

We delineate two groups in the first part of our analysis. First, there are children of compulsory school age who are not enrolled in any school, which we refer to as **children not in school (CNIS)**. We refer to the group of children of compulsory school age who are neither registered in schools *nor* registered in home education as **children missing from education (CME)**. The Venn diagram below illustrates this distinction (see Figure 1). We acknowledge that some children who are not registered in a school or in home education may still be receiving a suitable education. For example, some parents who are suitably home educating their children may not have registered them with their local authority. In the second part of our analysis, we look at children who are ever registered in a state school who leave the English education system entirely, whom we refer to as **pupils who go missing**, by the spring term of Year 11.

[15] Children's Commissioner's office, 'Lost in Transition'.
[16] Department for Education, 'Elective Home Education: Departmental Guidance for Local Authorities'; Department for Education, 'Elective Home Education Departmental Guidance for Parents'.
[17] Coram Child Law Advice, 'Home Education'.

Figure 1: Distinguishing between children missing from education and children not in school



Note: Not drawn to scale

Current estimates of children missing from education

Estimating the prevalence of children missing from education has proved challenging, in part due to a lack of clarity around what constitutes a 'suitable' education. The Local Government Association estimated that over a quarter of a million children might have been missing from formal full-time education in 2018/19.[18] However, these estimates were highly uncertain, with figures potentially ranging from 200,000 to over 1 million. This broad range highlights the challenges in accurately determining the number of children missing from education.

Official data from the Lost Pupil Database provides another potential estimate of children missing education, though local authorities question its validity. A Freedom of Information request to the Department for Education (DfE) by the Children's Commissioner Office (CCO) found that the Lost Pupil Database, a section of the 'School2School' system used by schools and local authorities to track CME, contained 87,183 unique pupil records as of May 2023.[19] However, local authorities also warned the CCO that this database's accuracy was limited due to inconsistent updating and usage difficulties, suggesting these figures may underestimate the true scale of CME.

In 2023, DfE began collecting data from local authorities on the number of children missing from education.[20] This data is based on counts of CME reported by local authorities, rather than being drawn from a comprehensive, per-pupil dataset. This means that it will reflect those 'known' to be CME to the local authority. During the 2022/23 academic year, DfE estimated 117,100 children were missing from education at some point, up from 94,900 the previous year. These figures suggest a

[18] Parish, Bryant, and Swords, 'Children Missing Education'.
[19] Children's Commissioner Office, 'Children Missing Education - The Unrolled Story'.
[20] Department for Education, 'Children Missing Education, Academic Year 2023/24'.

potential upward trend in CME across the available (albeit limited) data points, though it is important to recognise that this increase may be partially attributed to improvements in data quality and recording practices. Given that this data collection process is relatively new, inconsistencies in how local authorities define and report CME likely influence these figures, adding another layer of complexity to understanding the true scope of the issue.

While the DfE figures capture CME *known* to local authorities, concerns remain regarding children who leave the state education system and become unaccounted for. The CCO has found that thousands of children are leaving the state education system for 'unknown' destinations; while some may be transitioning to home education, local authorities were unable to track the whereabouts of as many as 10,200 children who left state education between 2022 and 2023.[21]

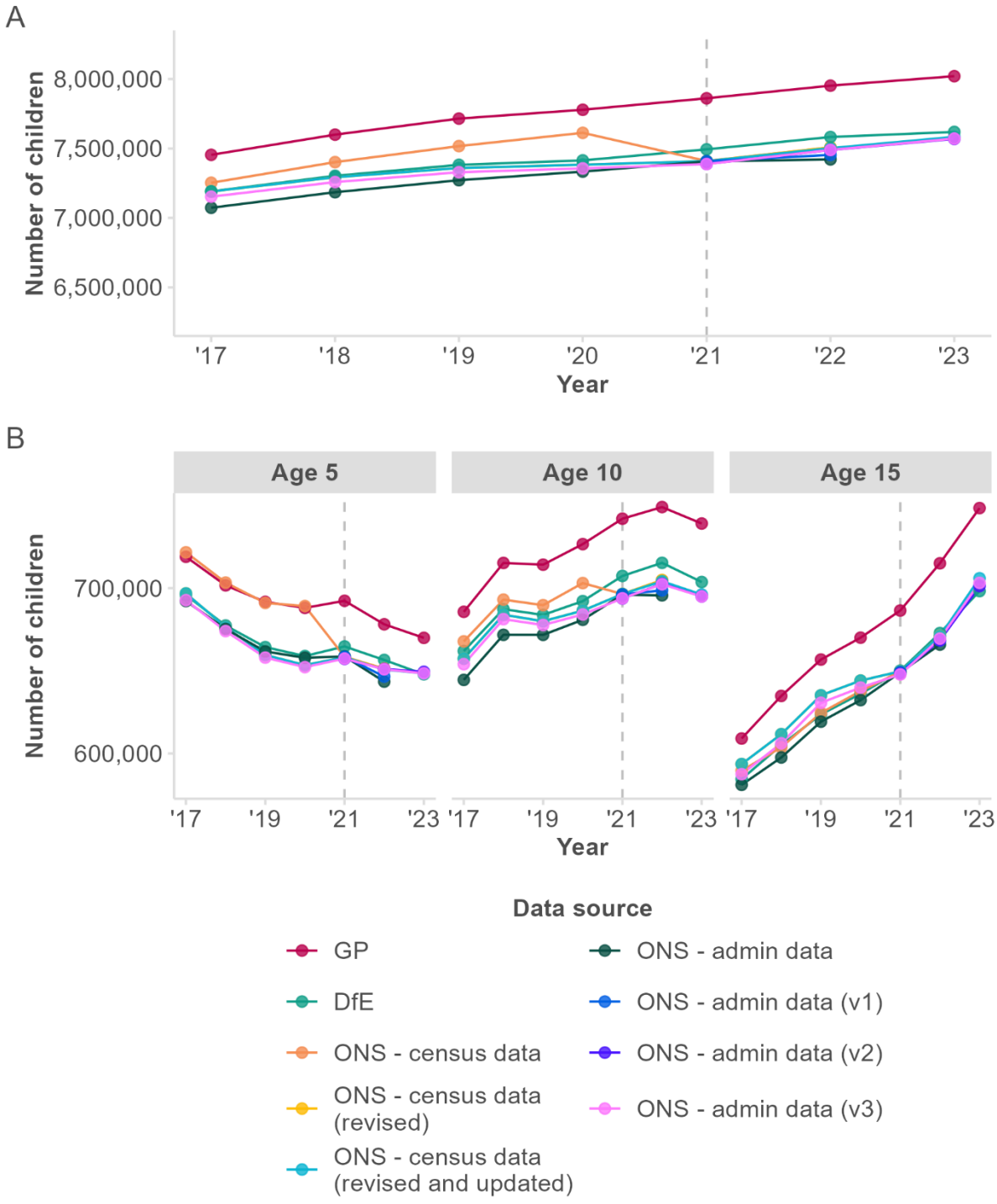
Challenges in estimating the number of children missing from education

Accurately estimating the number of children missing education is further complicated by the lack of reliable population data. The Children's Commissioner found that local authorities often do not have precise estimates of the total number of children in their area, let alone how many are missing from education.[22] This issue is evident when comparing population estimates from different sources, including those derived from the ONS, NHS and DfE data.[23]

Figure 2 shows this inconsistency at the national level. Panel A shows that no single source arrives at the same number of children. We found noteworthy variation in both the number and year-on-year growth rates. These discrepancies also exist within versions of ONS data, including their original census estimates (and subsequent versions rebased for the 2021 Census and updated immigration figures) and the newly developed administrative-data-based population estimates. Panel B shows this data broken down by age; it suggests that for some years and some ages, the GP and ONS data were aligned. For example, the (original and unadjusted) ONS and GP data broadly align (eg at age 5 during 2017-2019) or at least trend in the same direction (eg at age 15 during 2017-2023). However, data points beyond the census, as well as the revised statistics, align less well with the GP data and instead, align more closely with the DfE data. In any case, these gaps in the alignment of government data affect the accuracy of population figures and, in turn, make it difficult to determine how many children are missing from education.

[21] Children's Commissioner's office, 'Lost in Transition'.
[22] Children's Commissioner's office, 'Where Are England's Children? Interim Findings from the Children's Commissioner's Attendance Audit'.
[23] We included the ONS's newly developed administrative data-based population estimates, which use a variety of datasets—such as the school census, civil registration (births and deaths) data, and Home Office Borders and Immigration Data—to estimate the population size. Note, these estimates are currently in development, and while they offer valuable insights, they are not intended to replace the official mid-year population estimates.

Figure 2: Population estimates from various sources over time



Source: GP records from NHS Patients Registered at a GP Practice data; DfE figures from Schools, pupils and their characteristics dataset; ONS figures from census based population estimates and administrative data based population estimates; ONS figures were revised based on 2021 Census and updated further to account for international migration

Variations in practice amongst parents, schools, and local authorities also complicate efforts to understand the true scale of children missing from education. Although schools are required to inform local authorities when pupils are removed from their register, in practice, this does not always happen.[24] Moreover, while schools and local authorities encourage parents to notify the school if they decide to home educate, there is no legal requirement for parents to do so; local authorities also reported to the Children's Commissioner instances in which parents failed to inform schools of their decision to home educate.[25] These communication gaps may lead to children to become unaccounted for as they move through or exit the education system.

In addition to data collection and sharing challenges, identifying children who have never interacted with the education system or other public services remains inherently difficult. For example, this group could include children who have never been on a school roll, such as those who have been trafficked into the country, unaccompanied asylum seekers, those born to parents with insecure immigration status, or those who have gone missing from care.[26] The absence of records for *all* children complicates efforts to address and understand the *true* scale of CME.

In summary, the investigation of children missing from education is plagued by gaps in data collection, variability in local practices, and the inherently hidden nature of many CME cases. It is clear that in order for local authorities to fulfil their statutory education and safeguarding responsibilities, they urgently need the data and tools to help identify and locate these children.

To attempt to address these limitations, our research employs a novel approach using GP registration records and school enrolment data. This method operates on the premise that whilst children may not attend school, they may still be registered with a GP, allowing us to estimate the potential upper-bound of the CME problem.

Specifically, this research aims to:

- develop a national picture of the prevalence, trends and characteristics of children missing from education.
- quantify the number of pupils who are, at some point, registered in a state school but who leave education by the spring term of Year 11.

[24] Children's Commissioner's office, 'Lost in Transition'. Migration Observatory, 'Recent estimates of the UK's irregular migrant population'.
[25] Children's Commissioner's office.
[26] Children's Commissioner's office, 'Voices of England's Missing Children'; Children's Commissioner's office, 'Where Are England's Children? Interim Findings from the Children's Commissioner's Attendance Audit'; Children's Commissioner Office, 'Looked after Children Who Are Not in School'.

Methods

Data sources

The following data sources were used:

- **GP registration records** were obtained from the 'Patients Registered at a GP Practice' dataset, which provides headcounts of individuals registered at GP practices across England.[27] For our time series analysis, this data was extracted from the National Health Applications and Infrastructure Services (NHAIS), an NHS IT system used to calculate GP payments and provide patient lists for various national screening programmes. Using ONS postcode lookup files, we then aggregated the headcounts to the local authority and national levels based on the postcodes of GP practices. We used the snapshots from 1 September of each year to extract headcounts from the NHAIS system, with the age of patients based on their age as of that date.[28]
- **School registration records** were obtained from the publicly available 'Schools, pupils and their characteristics' dataset.[29] This dataset provides headcounts of pupils in mainstream schools, special schools, independent schools, pupil referral units, and alternative provision in England. We included pupils attending alternative provision establishments that are not maintained by a local authority but for whom the authority pays full tuition fees, or who are educated under arrangements made and funded by the authority. The headcounts are based on the postcode of the school, rather than the pupil's home address, as this was the data available to us. Age was based on pupils' age as of 31 August of each year.
- **Information on elective home education** came from various sources including surveys conducted by the Association of Directors of Children's Services, Education Otherwise, Department for Education amongst others.
- **Department for Education data covering all pupils in England** comes from the National Pupil Database (NPD). The following DfE data sources were included in the dataset constructed for this analysis:
    - School Census termly records autumn 2007 to summer 2021 [Oct/Jan/May]
    - Alternative Provision 'AP' Census 2008 to 2021 [Jan]
    - Pupil Referral Unit 'PRU' Census 2012 to 2021 [Jan]
    - Children Looked After 'CLA' Census 2006 to 2019 [Mar]
    - Children In Need 'CIN' Census 2009 to 2019 [Mar]
    - KS4 attainment records 2018 and 2019

[27] NHS England, 'Patients Registered at a GP Practice'.
[28] For example, NHS England, 'Patients Registered at a GP Practice, September 2023'.
[29] Department for Education, 'Schools, Pupils and Their Characteristics, Academic Year 2023/24'.

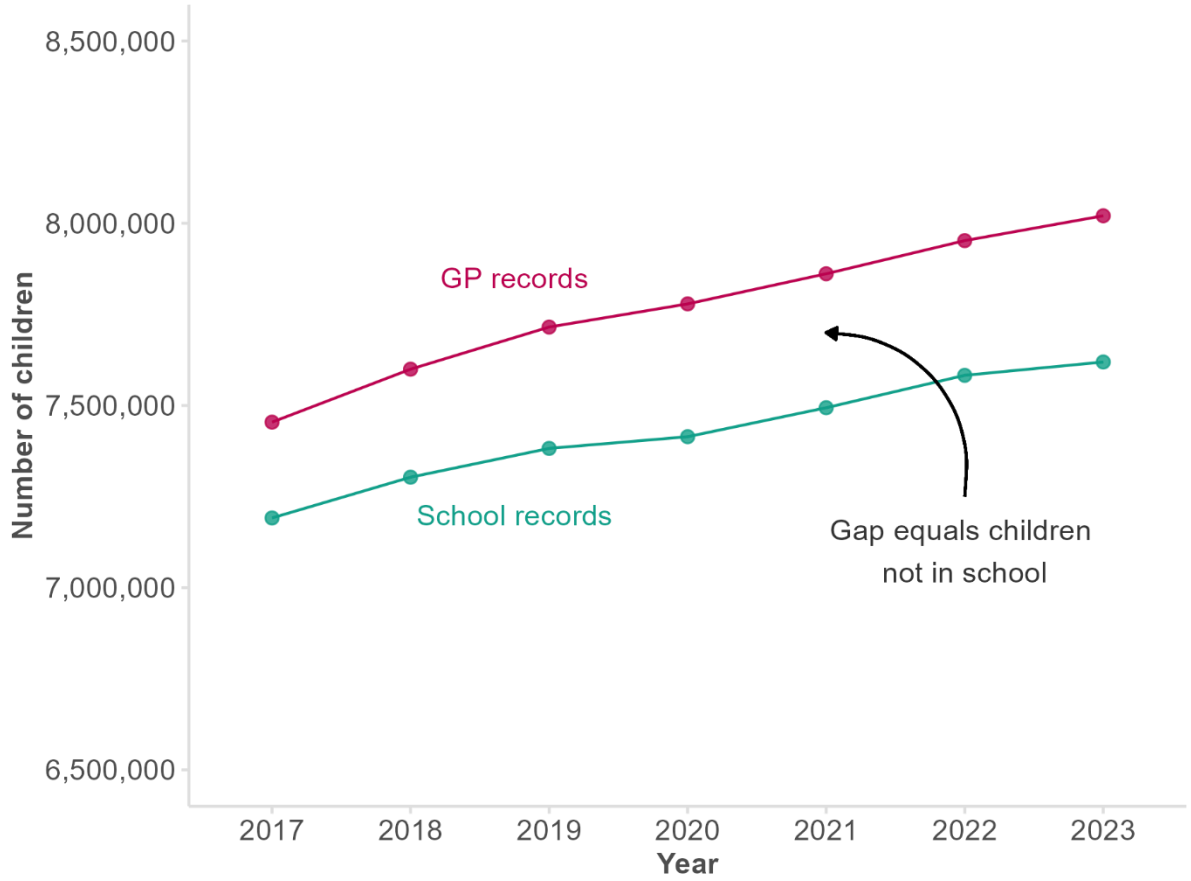
Approach

Part 1

Using GP and school registration data, we took a two-step approach to identify the number of children missing from education—see Figure 3. First, we compared the number of children enrolled in schools against the number of children registered in GP practices across England to generate a potential 'upper-bound' estimate of the number of children not in schools:

Children not in school = GP records – School records ± Error[30]

Figure 3: Methodology used to calculate children not in school



Then, using the best available estimates of elective home education, we subtracted the number of children in home education in a given year to determine the number of children missing from education.

Children missing from education = Children not in school – Elective home education ± Error

We focused on children aged 5-15 because they are consistently available across our publicly available datasets. Pupils aged 16 may appear in other data sources, such as the Individualised

[30] We acknowledge that this approach may miss children who are entirely outside both systems. The implications of this are discussed in Annex A

Learner Records (ILR) if they move to a college. Similarly, pupils aged 18 and above may be found in other data sources, such as the Higher Education Statistics Agency (HESA) data if they attend a higher education institution. While these statistics are available, they are based on headcounts rather than individual per-pupil files which may lead to overcounting. The risk of overcounting is likely to be minimised when pupils are all in school, rather than being distributed across various pathways such as school, college, higher education, employment, etc.

To build a time series, we considered data from 2017 to 2023. This range was chosen because 2017 is the first year when the Alternative Provision (AP) census headcounts became publicly available, and 2023 represents the latest academic year for which we have data.

Part 2

We analysed cohorts of children finishing Year 11 in 2018, 2019, 2020 and 2021 using NPD data. Cohort membership was based on the school year recorded for pupils in the relevant academic year. This captures Reception through to Year 11 (inclusive) for the majority of pupils.

Records were matched across data sources, terms and years using the anonymised pupil matching reference as the sole matching key. Cohorts were constructed from the School Census, AP Census (and PRU Census records, where relevant) to form the core of the analytical dataset. Duplicate records for the same time and census type were deleted based on file order to produce no more than one record per PMR at one point in time. It is possible to have records from the School Census, AP Census and/or PRU Census for the same child where they have been dual-registered or have moved between institutions over time, and these records are retained in the analysis. The time structure of the core dataset is longitudinal spanning 36 school terms. All other datasets were matched to this core but retained for analysis only if they refer to children in the specified cohorts based on the School Census, AP census and/or PRU Census. The additional data were restructured to fit the termly structure of the core dataset. If pupils in the core dataset appeared in the exclusions, CIN or LAC censuses, we generated a flag to identify them.

Using the method above, we arrived at the following cohort sizes:

- 2018: 644,570
- 2019: 641,112
- 2020: 656,607
- 2021: 670,020

We generated flags to identify the following types of school exits:

- **Mainstream education exits:** Pupils who leave the roll of a mainstream state school and are not registered in a mainstream state school in any subsequent term up to and including the spring term of Year 11.
- **English education system exits to unknown destinations:** Pupils who leave the roll of a mainstream school and are not registered in a mainstream school up to and including the spring term of Year 11, nor are they registered in an independent school according to KS4 attainment records (for the 2020 and 2021 cohort, we have imputed this figure using

publicly available DfE data) or in alternative provision in Year 11. We do not account for pupils who are only ever registered in an independent school, only those who have ever been registered in a state school.

- **Returns to mainstream education by the spring term of Year 11:** Pupils who leave the roll of a mainstream state school for at least one term but return to a mainstream state school by the spring term of Year 11.

We also provide figures for exits to alternative provision and the independent sector, as well as a proxy measure of migration-related exits – we flag pupils who joined the education system after Reception and have English as an additional language.

We use the spring term of Year 11 as our 'endpoint' as this is the last term in which a pupil's results count for that school.

We also generated the following socio-demographic flags to explore the characteristics of the groups of pupils listed above:

- Gender
- Ethnicity
- Ever identified with a Special Educational Need or Disability (SEND): overall and by type
- Ever eligible for free school meals; persistently disadvantaged (eligible for free school meals for at least 80 per cent of relevant years)
- Care-experienced children and 'children in need' (those ever in contact with local authority children's services)
- Ever permanently excluded in primary or secondary
- Ever suspended in primary or secondary

Strengths, limitations and future directions

Using the number of patients registered in GP settings as a proxy measure of the population of children offers several advantages. Firstly, GP records provide comprehensive population coverage because individuals are encouraged (though not required) to register with a GP to access primary healthcare services.[31] Secondly, regular interactions with the healthcare system—whether for routine check-ups, vaccinations, or merely from birth with the assignment of NHS numbers—may mean these records accurately reflect changes in the population. Furthermore, unlike official population estimates, which are released annually with a significant lag, GP patient registration headcounts, which include breakdowns by age, sex, and home postcode, are updated monthly and publicly available, providing a timely and reliable source for demographic analysis. Lastly, GP records can be updated through central NHS systems to reflect deaths.[32] As the ONS notes, "*The NHS Patient Register provides a broad coverage source for the England and Wales population, with a*

[31] Office for National Statistics, 'Patient Register: Quality Assurance of Administrative Data Used in Population Statistics, Dec 2016 - Office for National Statistics'.
[32] Office for National Statistics, 'Developing Our Approach for Producing Admin-Based Population Estimates, England and Wales - Office for National Statistics'.

good degree of accuracy for statistical purposes".[33] Taken together, these factors informed our decision to use this data to estimate population size and the number of children missing from education.

In addition to these advantages, our choice was informed by broader considerations of ONS population estimates. As highlighted in ONS's own analysis of EU migration, their traditional measurement methods can face limitations; when comparing intentions-based survey data collected at borders through the International Passenger Survey with actual behaviour data from employment and benefits records captured in the Department for Work and Pensions' Registration and Population Interaction Database, the ONS found that EU net migration figures were potentially understated by around 90,000 people per year over a nine-year period.[34] Furthermore, census-based estimates become increasingly uncertain with each year following the census.[35] Moreover, the ONS has acknowledged that some of their usual methods for measuring population and migration were disrupted during the pandemic.[36] It is also worth noting that the ONS is currently aiming for administrative-data-based population estimates to become the official mid-year population estimates by 2025, recognising the need to strengthen current methodologies by incorporating administrative data sources.[37] These factors reaffirmed our decision use patients registered at a GP as a useful proxy measure of the population.

Nonetheless, our approach has several limitations which could be addressed in future research. Our figures for Part 1 are based on headcounts rather than individual per-pupil data; this could potentially lead to double counting, particularly when groups overlap, such as pupils in schools and alternative provision. Moreover, not all individuals will be registered at a GP (eg such as those unable to register with an NHS GP, those deliberately avoiding official records, those from communities who experience healthcare discrimination, or those solely using private healthcare). We had initially hoped to integrate A&E data, assuming that these individuals might still access emergency services; however, A&E visits data without more detailed per-pupil information would have further exacerbated the existing risk of double counting. Lastly, GP registration data, while informative, is also subject to over-coverage as the registered population exceeds the actual population, adding uncertainty to our estimates. Nonetheless, it is possible that these sources of errors might 'balance out' over time, reinforcing the overall trends and estimates observed in our study, even if the exact figures remain imperfect. We discuss implications in more detail in Annex A.

[33] Office for National Statistics, 'Patient Register: Quality Assurance of Administrative Data Used in Population Statistics, Dec 2016 - Office for National Statistics'.
[34] Lindop, 'Are There Really 6m EU Citizens Living in the UK?'
[35] Office for National Statistics, 'Measures of Statistical Uncertainty in ONS Local Authority Mid-Year Population Estimates - Office for National Statistics'; Office for National Statistics, 'Dynamic Population Model, Improvements to Data Sources and Methodology for Local Authorities, England and Wales: 2021 to 2022 - Office for National Statistics'.
[36] McKeown, 'An Evolving Picture of UK Population Change'.
[37] Office for National Statistics, 'Population Estimates for England and Wales'.

In addition, we consulted with experts—including the CCO, ONS, DfE, Greater London Authority, NHS England, GPs, and academic researchers—to inform our methodology and address potential data issues. These consultations echoed the challenges of using GP registration data and emphasised the importance of quantifying the uncertainty in our estimates. Their insights guided us in conducting sensitivity analyses. We explored using alternative data sources and the impact of this on our findings (see Annex B); they reinforce our choice to use GP data but acknowledge the need for stronger alignment between government data. We also explored the feasibility of correcting for data issues (see Annex C). These corrections reduced our estimates but rely on strong assumptions and can only address data issues where the scale of the problem is known (eg percentage of duplicate records). We therefore report on unadjusted estimates, highlighting the underlying data quality issues that require attention in future research.

In our part 2 cohort analyses, the main limitation is that we cannot identify exits in which pupils have migrated out of the country. We use a rough proxy measure of migrant status, but this will not accurately indicate which system exits are due to out-migration.

Ultimately, until more detailed and linked datasets are available, our estimates add to the small body of evidence attempting to quantify the number of children missing or who go missing from education. Government bodies, such as the ONS with its access to the underlying health and education data, could more accurately link datasets (rather than rely on headcounts as we have) and address these limitations.[38]

[38] Office for National Statistics, 'Developing Our Approach for Producing Admin-Based Population Estimates, England and Wales - Office for National Statistics'; Office for National Statistics, 'Developing Admin-Based Population Estimates, England and Wales - Office for National Statistics'.

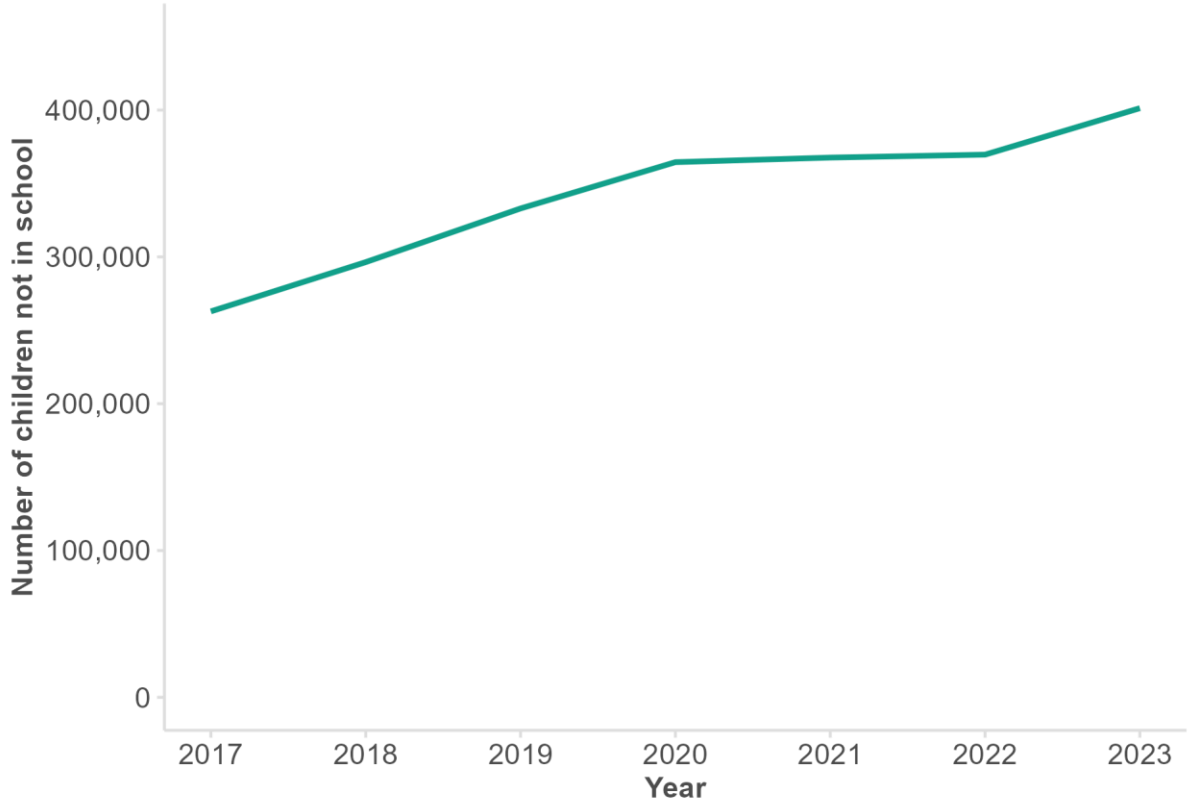
Findings

Part 1: National estimates, trends and characteristics of children not in school and children missing from education

How many children are not in school?

Comparing GP and school registration records, we find that the number of children not in school has grown from by approximately 53 per cent between 2017 and 2023 (see Figure 4). To our knowledge, this is the first attempt to examine how this number has changed over time, capturing both pre-pandemic and post-pandemic periods. Although the number of children not in school remained stable during the pandemic, in subsequent years the number has continued to increase.

Figure 4: The number of children not in school over time



Based on research by the Local Government Association (LGA), there are three potential reasons behind this increase: the changing nature of children's additional needs; pressures on schools' capacity to meet those needs; and the ability of systems to provide appropriate oversight of decisions regarding children's entry to and exit from school.[39]

Wider research supports this perspective. For example, the growing prevalence of mental health problems amongst young people over the past decade has coincided with rising rates of persistent

[39] Parish, Bryant, and Swords, 'Children Missing Education'.

absence and suspensions.[40] Additionally, EPI research shows that school-driven exits, a proxy for off-rolling, may be increasing.[41] Lastly, local authorities have reported a growing demand for alternative provision for children who are unable to attend school due to their mental health needs, often becoming aware of a child's attendance issues only *after* the child has left the school system.[42]

What are the characteristics of children not in school according to this data?

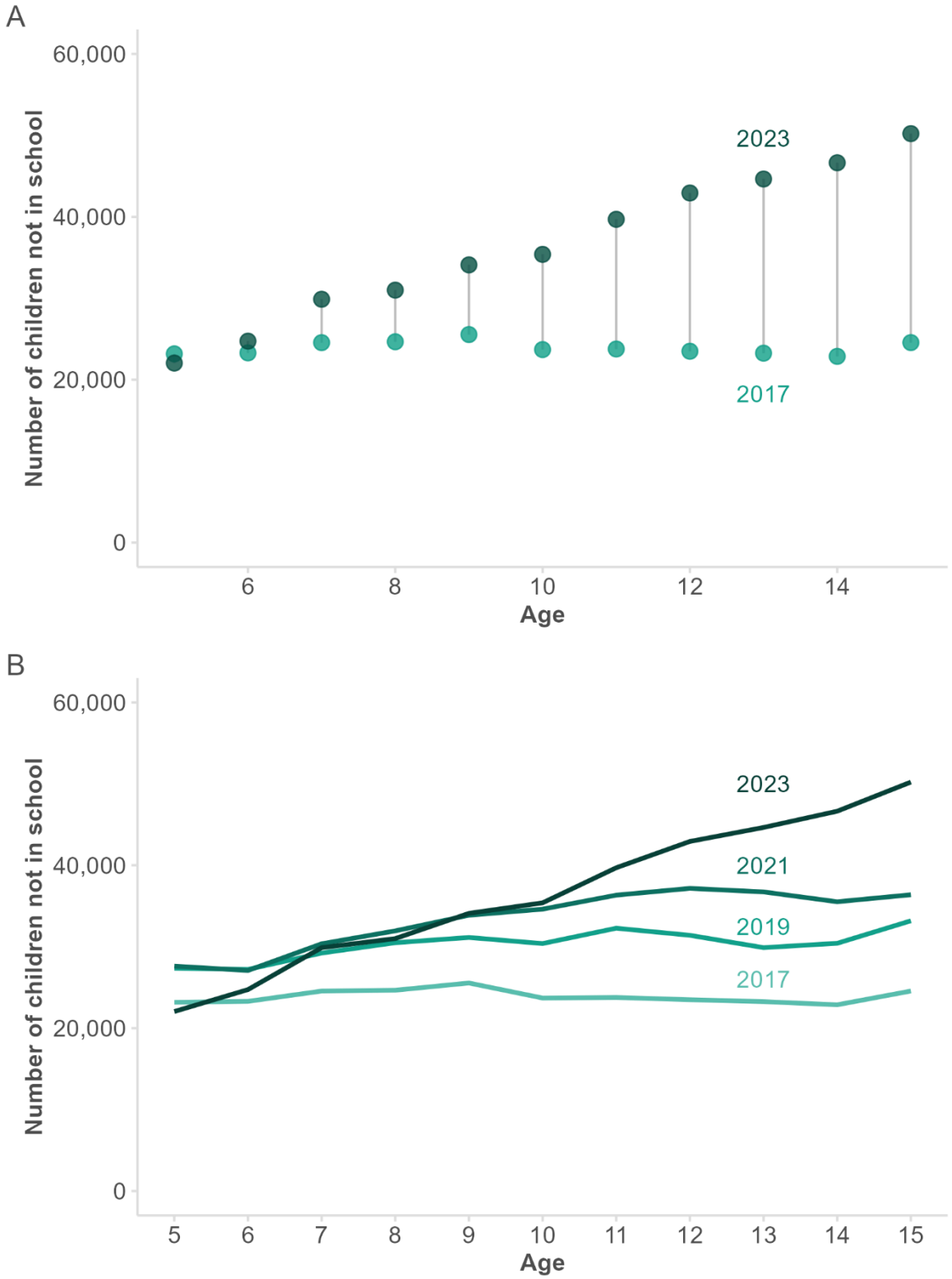
Age

Congruent with previous research, we found that older children are less likely to be in school, as illustrated in Figure 5. Unique to our research, we break down how this varies by single year of age over time. In 2017, we estimate that that almost 25,000 15-year-olds were not in school. By 2023, this figure had doubled with over 50,000 15-year-olds not in school. Although differences across age groups were not very pronounced in 2017, they have become so over time (see Panel A). Panel A also suggests that the sharp overall rise in the number of children not in school between 2017 and 2023 is driven by pupils in secondary school, particularly those aged between ages 13 and 15. Meanwhile, Panel B suggests that the 'age-gap' trend is becoming more pronounced over time – particularly post-pandemic.

The increase in the number of children missing from education as they get older is seen in other datasets. Our findings are corroborated by post-pandemic DfE data, with 10-12 per cent of cases occurring in secondary school, compared with 7-8 per cent in primary school. [43] The Welsh post-pandemic data appears to show a similar pattern, with the proportion of children missing from education records—either never recorded or no longer enrolled—rising from 5.3 per cent at age 5 to 9.0 per cent at age 15.[44]

[40] NHS England, 'Mental Health of Children and Young People in England 2023 - Wave 4 Follow up to the 2017 Survey'; Hunt, 'Examining Post-Pandemic Absences in England'; Department for Education, 'Suspensions and Permanent Exclusions in England, Academic Year 2022/23'.
[41] Hodge et al., 'The Features of Effective School Groups'; Hutchinson and Crenna-Jennings, 'Unexplained Pupil Exits from Schools', April 2019; Hutchinson and Crenna-Jennings, 'Unexplained Pupil Exits from Schools', October 2019.
[42] Children's Commissioner's office, 'Lost in Transition'.
[43] Department for Education, 'Children Missing Education, Academic Year 2023/24'.
[44] Welsh Government, 'Estimating Numbers of Children Not in State Education Using Linked Administrative Data'.

Figure 5: Number of children not in school by age and over time



We know that adolescence is a period marked by increased academic expectations, evolving self-concepts, changes in sleep patterns, shifting family and peer dynamics, and the potential onset of mental health issues – all of which could potentially play a role in the well-documented patterns of

higher absenteeism and our own findings during secondary school.[45] However, further research is required to understand why the trend towards higher absence for older pupils has become more pronounced over time.

Gender

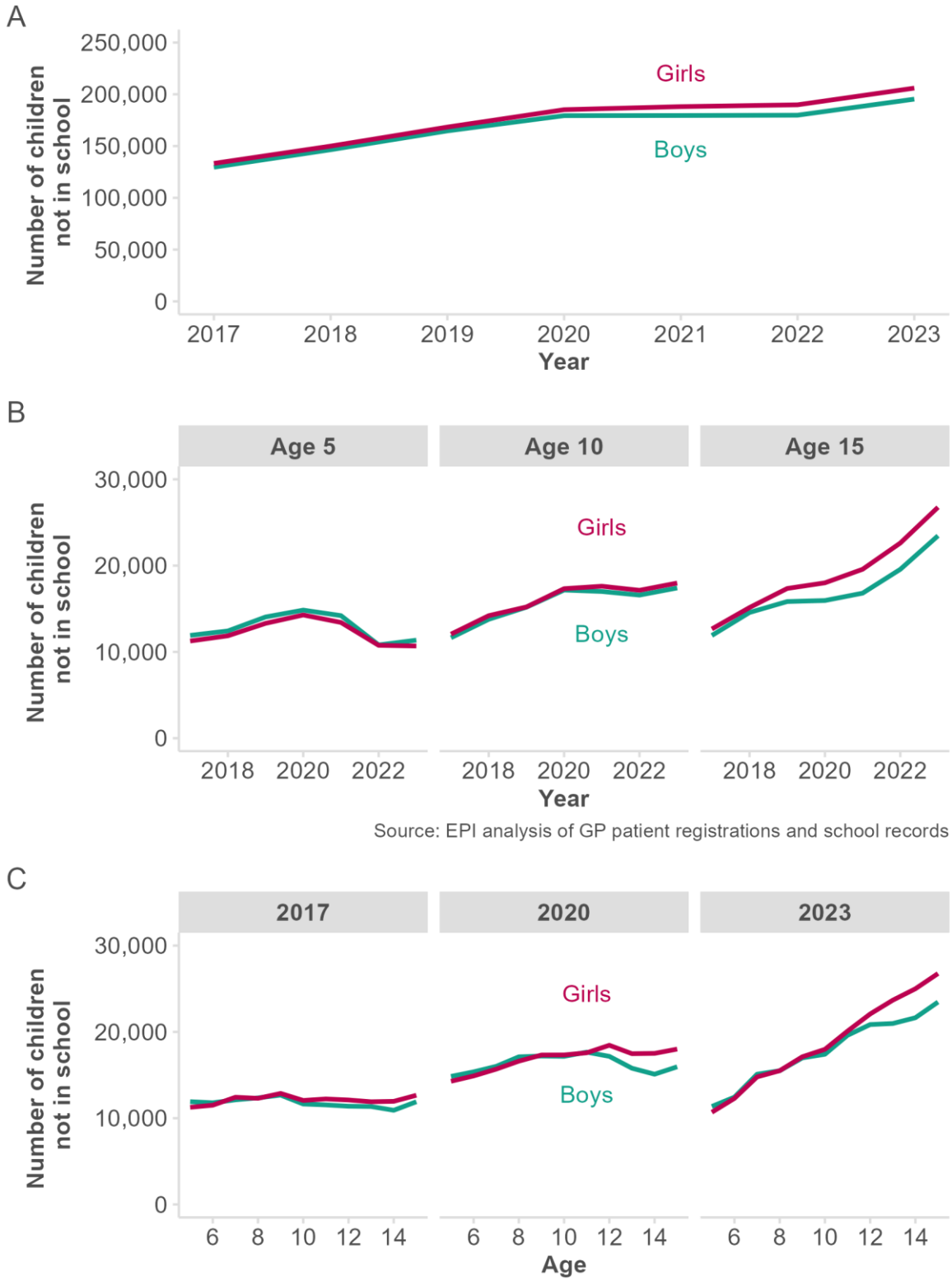
Our analysis reveals that girls are less likely to be in school compared with boys, as shown in Panel A of Figure 6. In 2023, approximately 206,000 girls and just over 195,000 boys were not in school, compared with 133,000 girls and close to 130,000 boys in 2017.[46] This indicates that while girls have historically been more likely to not be in school, this gap has widened over time.

Moreover, unique to our study, we identified an interaction between gender and age, as shown in Panel B and Panel C. Panel B shows that while girls and boys are equally likely to not be in school during childhood, by adolescence, older girls aged 13 to 15 are less likely to be in school than boys of the same age group. Similarly, Panel C shows that although this pattern has always existed in our data, the interaction effect between age and gender appears to have become more pronounced over time.

[45] Rapee et al., 'Adolescent Development and Risk for the Onset of Social-Emotional Disorders'; Casey, Getz, and Galvan, 'The Adolescent Brain'; Chein et al., 'Peers Increase Adolescent Risk Taking by Enhancing Activity in the Brain's Reward Circuitry'; Uhlhaas et al., 'Towards a Youth Mental Health Paradigm'; Crone et al., 'A Neurocognitive Model of Self-Concept Development in Adolescence'.

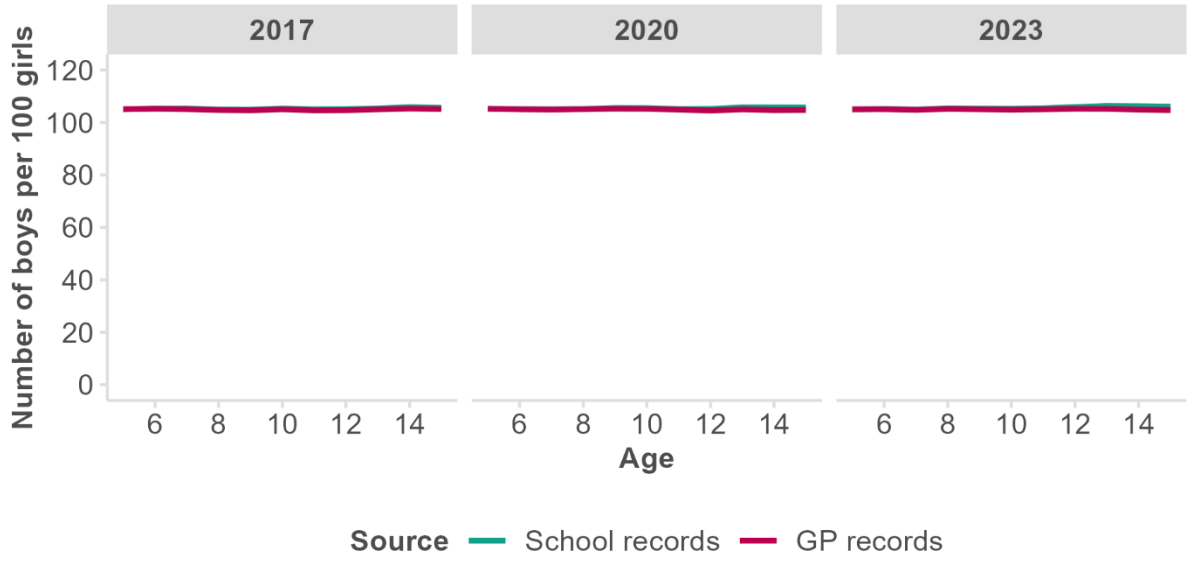
[4646] These figures will not sum to the national yearly totals because we excluded the 'Unknown' gender category from the AP census since this category, representing fewer than 30 children per year, does not exist in the school census or GP registration data.

Figure 6: Number of children not in school by gender



This finding cannot be solely attributed to gender differences in GP registrations. The gender ratio—the number of boys to girls— in GP records aligns with that in school records, as shown in Figure 7. Therefore, the higher rates of girls not being in school are unlikely to be explained by any potential differences in GP registrations between genders, such as if boys and girls registered at different rates due to varying patterns of help-seeking behaviour. This suggests that other factors may be contributing to the higher rates of not being in school amongst girls.

Figure 7: Gender ratio in GP records and school records



We note that the gender and age interaction is consistent with trends in pupil absences due to pupil illness (see Figure 8). DfE's own research has found that girls have a similar rate of absence to boys until around the age of 12; from age 13 onwards, girls' absence rates surpass those for boys.[47] While it is unclear whether this pattern has changed over time due to limited publicly available data, this similarity could suggest that the drivers behind our findings and those in pupil absences may be similar.

[47] Department for Education, 'Absence Rates by Gender, Age and Free School Meal Status'.

Figure 8: Gender and age interaction effects on pupil absences

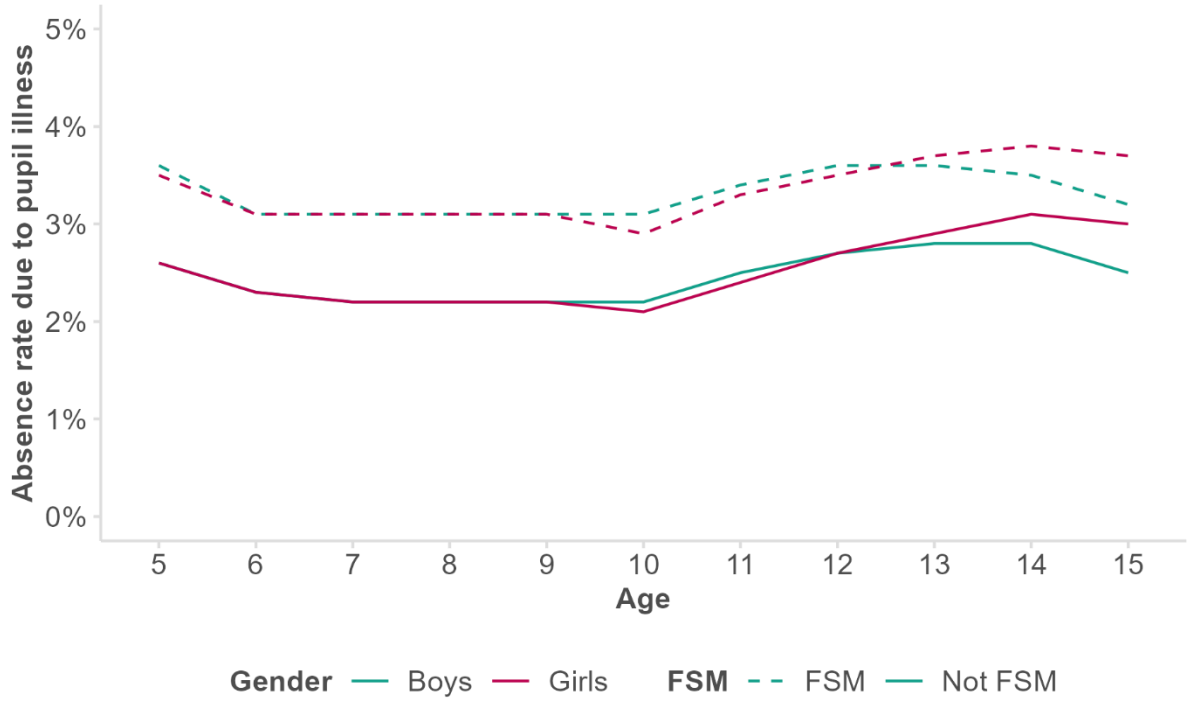


Figure recreated from Department for Education (2018) Absence rates by gender, age, and free school meal status. © Crown copyright 2018. Contains public sector information licensed under the Open Government Licence v2.0.

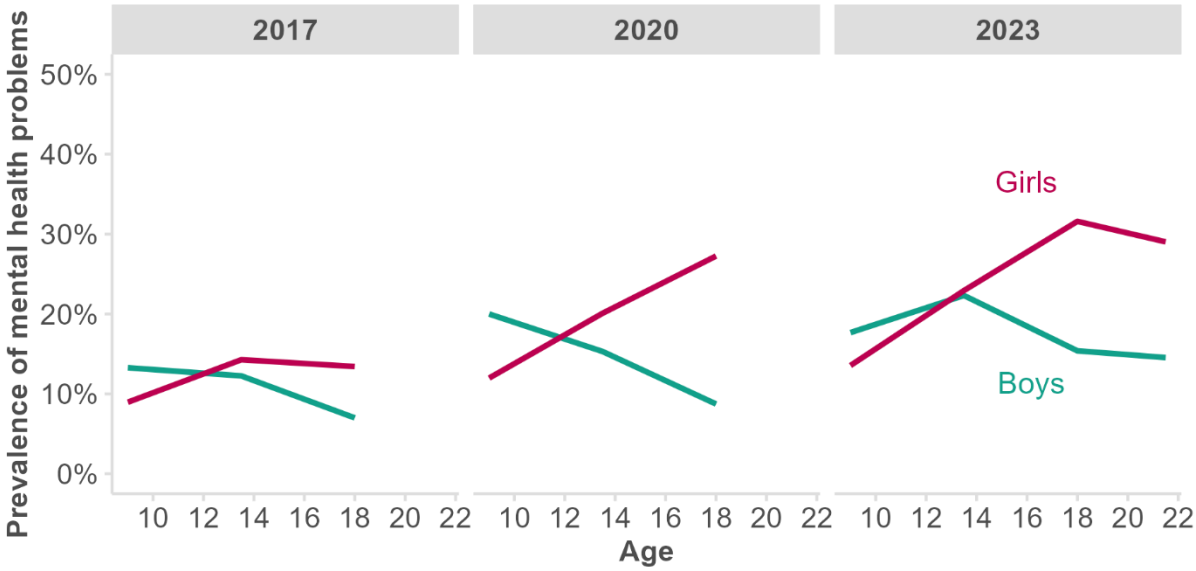
While further research is needed, evidence on the timing of onset of mental health problems may help to explain these findings. Evidence suggests that girls have a higher risk of developing mental health issues during adolescence compared with boys (see Figure 9) and this gap appears to have grown over time.[48] These disorders are often linked to school attendance challenges, including school avoidance behaviours, though the causal direction of this relationship remains unclear.[49] These findings must also be considered against a backdrop of the social impact of the pandemic: recent studies show that half of girls in late adolescence experience elevated psychological distress and close to a quarter have engaged in self-harm.[50]

[48] NHS England, 'Mental Health of Children and Young People in England 2023 - Wave 4 Follow up to the 2017 Survey'; Crenna-Jennings and Joseph, 'Four Charts Which Explain the State of Children's Mental Health in 2023'.

[49] NHS England, 'Mental Health of Children and Young People in England 2023 - Wave 4 Follow up to the 2017 Survey', 4. We note that boys, who are at greater risk of externalising disorders, may face different challenges. Whilst they are more likely to face permanent exclusion, they may still be accounted for if placed in alternative provision.

[50] Holt-White et al., 'Briefing No. 4. COVID Social Mobility & Opportunities (COSMO) Study'.

Figure 9: Gender and age interaction effects on mental health



Source: Mental Health of Children and Young People in England, 2023, NHSDigital
Notes: Mid point of age bands used; the 2017 and 2020 sample did not include a comparable age group of 20-23 year olds

Qualitative findings from the Office of the Children's Commissioner (CCO) supports mental health issues as a plausible driver. CCO researchers interviewed parents and local authorities to unpick the factors behind why children are leaving the school system.[51] Parents reported a lack of support for their children's mental health, including issues such as anxiety, noting that schools were often unaware of the severity of these issues. Local authorities highlighted an increase in mental health issues, particularly amongst adolescent girls, as well as a growing demand for alternative provision as more children found regular school attendance increasingly difficult. Lastly, both parents and local authorities reported challenges in securing timely and adequate support for children with mental health needs. These findings chime with NHS data showing long waiting times for children and young people's mental health services.[52]

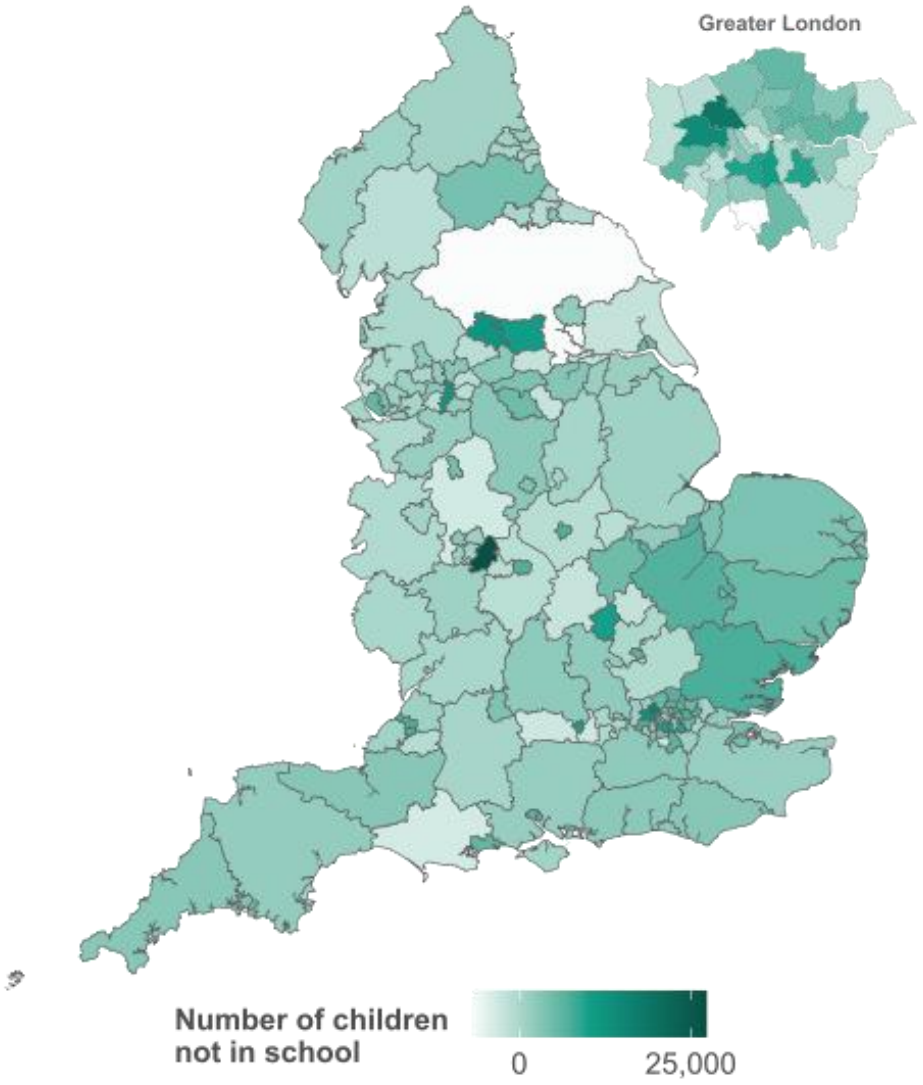
Taken together, these factors support the idea that our findings may, at least in part, be explained by the greater mental health challenges faced by adolescent girls.

[51] Children's Commissioner's office, 'Lost in Transition'.
[52] Children's Commissioner Office, 'Children's Mental Health Services 2022-23'.

Local variation

We found geographic variation in the number of children not in school (see Figure 10). In 2023, the areas with the highest number of children not in school included Birmingham, Brent, Ealing, Manchester and Bradford. The areas with the lowest number of children not in school included North Yorkshire, Dorset, Staffordshire, West Berkshire and Wokingham. It is important to acknowledge that we do not account for the population of children in local authorities so in more highly-populated areas, just as there will be more children in school, there may be more children not in school.

Figure 10: Number of children not in school by local authority in 2023



Source: EPI analysis of GP records and school records;
Office for National Statistics licensed under the Open Government Licence v.3.0
Contains OS data © Crown copyright and database right 2024

It is also important to acknowledge that our method, which subtracted school headcounts from GP headcounts, occasionally resulted in negative values for the number of children not in school in certain local authorities. Of the 153 local authorities analysed, 120 (78 per cent) showed a positive

number of children not in school as expected, while 33 local authorities had negative values. This occurred when the number of pupils registered in schools exceeded those recorded in GP practices within a given area. Additionally, because our data only looked at the postcodes of GPs and schools, geographical factors likely amplified these discrepancies. For instance, a child might live, go to school, and visit a GP all in the same area, or they might live in one area, go to school in another, and visit a GP in yet another. Variations in local catchment areas could have affected local counts, even if these errors 'balanced out' in the national picture. These negative values ultimately highlight the need for access to more detailed, linked per-pupil data, which would enhance the accuracy of our approach.

Even access to more detailed per-pupil data would not reveal the underlying reasons for the geographic differences. DfE identifies three broad reasons for this variation in CME by local authority in its own data including: differences in CME identification and support practices, inconsistent working definitions of CME, and varying criteria for closing CME cases.[53] For instance, some local authorities only close a CME case once they confirm that a child is enrolled in school, while others may close a case as soon as another local authority identifies the child. Moreover, the threshold for when a child receiving unsuitable home education is classified as CME varies across authorities, as does whether CME figures include children awaiting a school place or those on a school roll but under CME enquiries.

Alternatively, geographical differences might be influenced by factors unrelated to measurement. It could be related to differences in cultural practices (eg the perceived role of formal schooling), variations in school systems and practices (eg levels of support for children with additional needs), or differences in the populations served by local authorities (eg areas with large Gypsy, Roma, and Traveller communities or military bases). Additionally, differences in the broader environment and context, such as the stability of placements for care-experienced children or regional socio-economic conditions, could also play a role. These factors require further investigation if policymakers are hoping to target resources to specific local authorities.

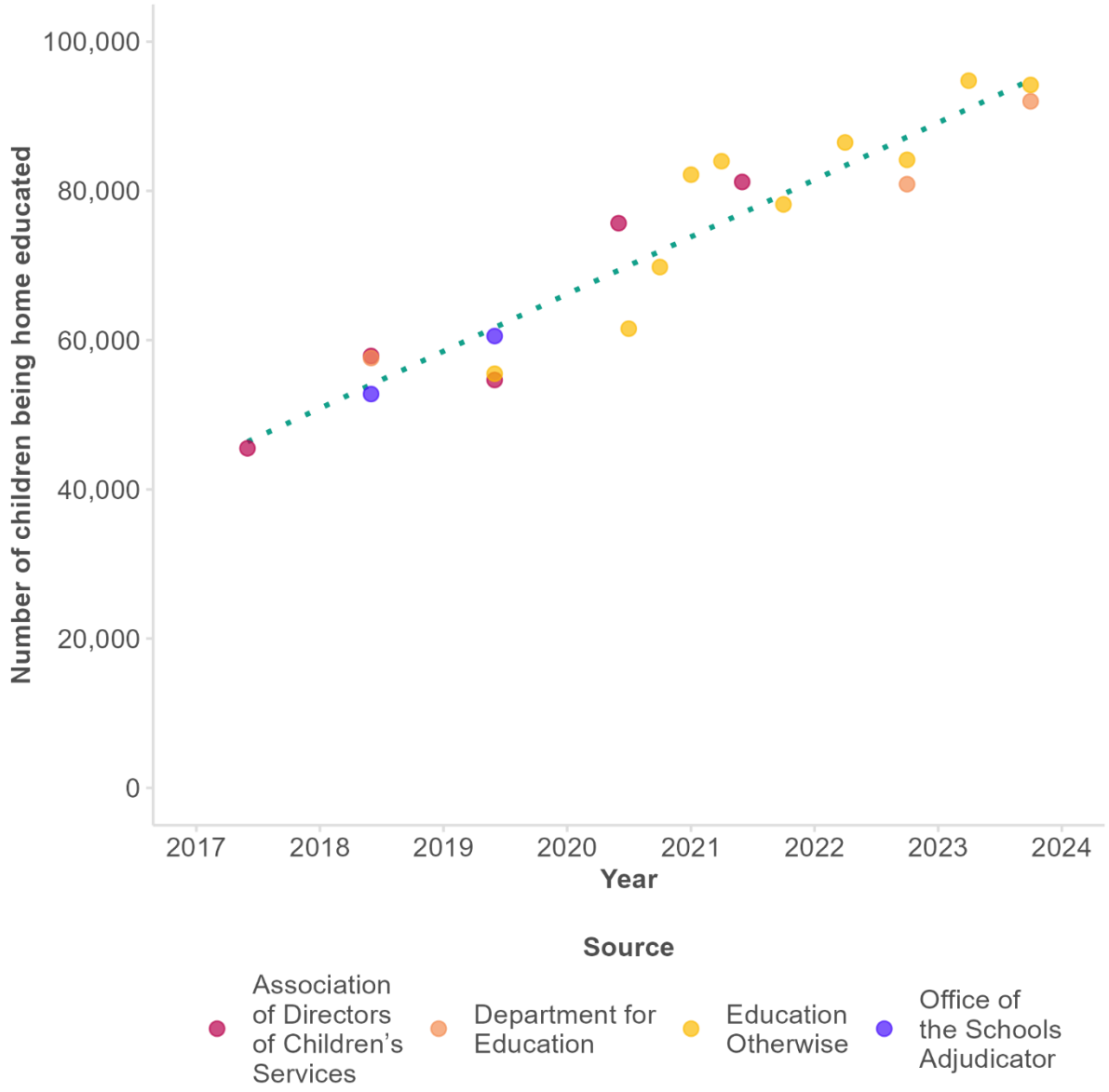
Given the data issues at the local level, we recommend interpreting our local-level data with caution. Our findings ultimately highlight the need for more detailed per-pupil information to refine future estimates of CME at a local level even if they cannot reveal the reasons for them.

How many children are in elective home education?

Using data collected by various organisations, including the Office of the Schools Adjudicator, Association of Directors of Children's Services, Education Otherwise, and the Department for Education, we estimate that the number of registered home-educated children on census day has grown, from 45,500 in 2017 to 94,800 in 2023 (see Figure 11).[54]

[53] Department for Education, 'Children Missing Education, Academic Year 2023/24'.
[54] Association of Directors of Children's Services, 'ADCS Elective Home Education Survey October 2017'; Education Otherwise, 'Home Education Trends'.

Figure 11: Estimates of elective home education over time



One major challenge in estimating the number of home-educated children is the reliance on data from local authorities, typically from Freedom of Information requests. Inconsistent response rates from local authorities make it challenging to compare figures reliably over time.[55] To address this, some research organisations have uprated figures based on local authority pupil populations to account for non-response. While this method of imputation attempts to fill gaps in the data, it may lead to an overestimation of the national figures as missing data may not be random. For example, non-responses may reflect the (lack of) resources available in the area to tackle CME within the local authority. In fact, when Education Otherwise reached a 100 per cent response rate,

[55] Education Otherwise, 'Home Education Trends'.

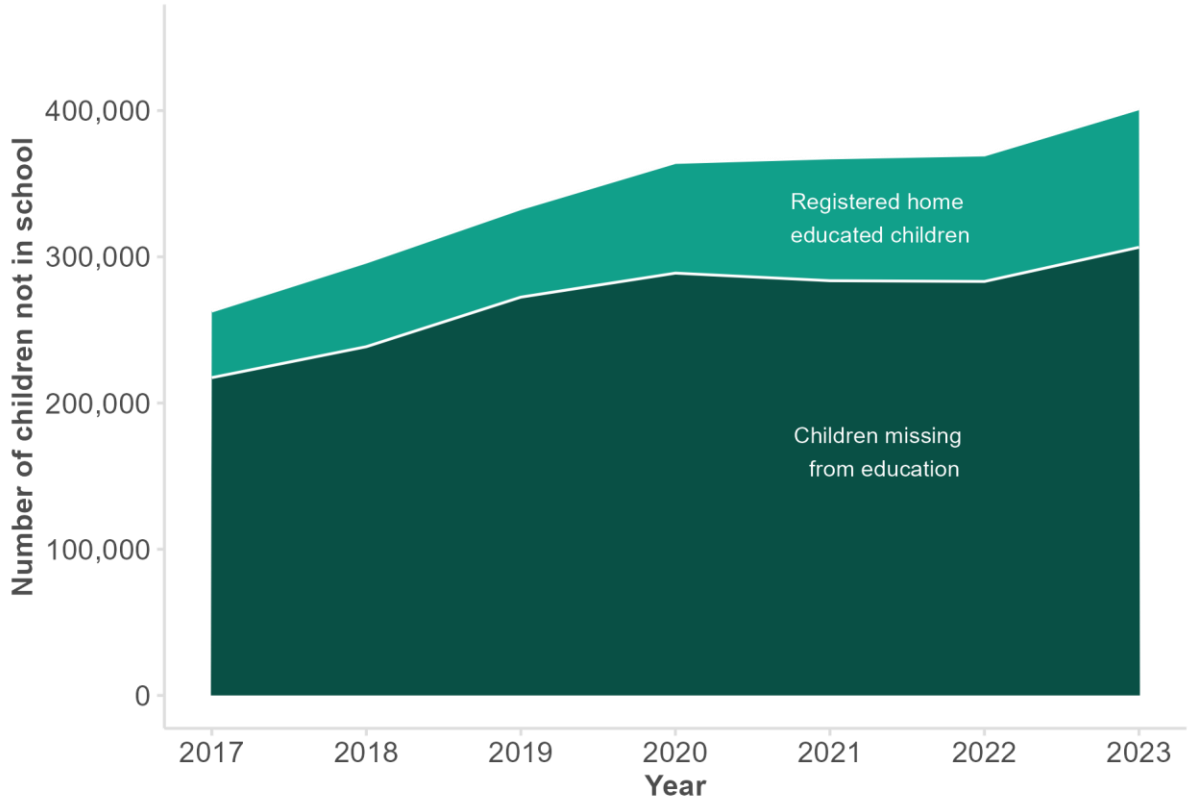
their figures were slightly smaller than surveys that used extrapolation techniques to estimate a national figure.

Moreover, the estimates may not fully capture the true scale of home education due to limitations in reporting. Notably, parents are not legally required to inform LAs about their decision to home-educate, which leads to potential undercounting.

How many children are missing from education?

The number of children missing from education remains large and is increasing, as shown in Figure 12. Between 2017 and 2023, even after accounting for the maximum number of homeschooled children, we found a 41 per cent increase in the number of children missing from education.

Figure 12: Number of children missing from education



The rise in children missing from education could be driven by the same factors as those discussed above – changes in children's needs and experiences, schools' struggles to meet those needs, and gaps in the system's oversight of decisions about school entry and exit.

It is important to note that these figures exceed current official estimates. DfE, which began publishing this data in 2021/22, estimated that 117,100 children were missing from education at any point in the 2022/23 academic year.[56] Our estimate is approximately 2.5 times higher. While

[56] Department for Education, 'Children Missing Education, Academic Year 2023/24'.

measurement issues complicate matters, as discussed in Annex A, it is possible that this discrepancy may also be due to differing definitions. DfE's figure collects this information from local authorities based on those *known* to be children missing from education whilst our estimate likely encompasses a broader set of children, who have never been on a school roll and thus may be missing from education unbeknownst to the local authority.

Although DfE's new data collection marks a positive first step, there remains a lack of detailed information, particularly regarding home-educated children.[57] The absence of pupil-level data available, and pupil-level data which is broken down by single year of age, gender, and local authority, is a barrier to fuller understanding of the characteristics of children missing from education.

In any case, our findings suggest that the number of children missing from education is a growing and persistent problem. Even if we were to correct for known data issues (see Annex C) it seems unlikely that we would arrive at a definitive and precise number given the data currently available to us. We can however conclude that there a substantial number of children whose destinations – and therefore safeguarding status – are unknown.

[57] Department for Education, 'Elective Home Education, Academic Year 2023/24'.

Part 2: National estimates and characteristics of pupils who leave English education

Next, we look at pupils registered at some point in a mainstream school who subsequently leave during the primary or secondary phases, using data covering all pupils in England from the National Pupil Database.

We analysed cohorts of pupils finishing Year 11 in 2018, 2019, 2020 and 2021, following them from reception to Year 11 and identifying those who leave mainstream education, state education, and the English education system entirely – using the spring term of Year 11 as our 'end point', congruent with our existing research on unexplained exits.[58] We also identified those who left mainstream education for a period of time but returned to a mainstream school by the spring term of Year 11.

We find that more than 50,000 pupils leave a mainstream school permanently at some point during the primary or secondary phase and are not registered in a mainstream school, alternative provision or the independent sector in January of Year 11 (see 'Exits to unknown destinations' in Figure 13). This number has increased by 6.9 per cent comparing the 2018 to the 2021 cohorts.[59] As we did not hold data on Key Stage 4 assessments for the 2020 and 2021 cohorts, we imputed estimates of pupils who leave a mainstream school and are registered in an independent school for their Key Stage 4 assessments using DfE data, applying the percentage change in number of pupils registered in independent schools at age 16 to our 2020 and 2021 cohorts.[60] In the 2018 and 2019 cohorts, about half of pupils registered in alternative provision in Year 11 also had KS4 records indicating they sat their exams at an independent school; we took this overlap into account in our imputed 'independent school exits' estimate for the 2020 and 2021 cohorts. This uncertainty is represented by the dotted lines in Figures 13 and 14.

Some of the pupils who have permanently left the English education system will have migrated out of the country, but we are not able to identify them in the data; to proxy migrant status, we flag pupils who join the English education system after Reception and have English as an additional language. These pupils account for around a quarter to one fifth of all exits (see the purple line in Figure 13; these are not included in our 'exits to unknown destinations' figures). Given the bluntness of our proxy measure, this will not be a highly accurate measure of the number of pupils migrating out of the country, partly because it does not capture pupils from English-speaking families or countries who may be migrating.

[58] Hutchinson and Crenna-Jennings, 'Unexplained Pupil Exits from Schools'.
[59] It is worth noting here that we are missing data for the 2006/2007 autumn term, which may very slightly affect our estimates for the 2018 cohort, as we cannot account for exits happening between the autumn and spring terms of Reception. Additionally, due to the pandemic, we are missing data for the summer 2019/2020 term, which may slightly affect our estimates for the 2021 cohort, as we cannot account for exits happening between the summer term and autumn 2020/21 term.
[60] Department for Education, "Schools, pupils and their characteristics"

Finally, we find that between 30,000 to 35,000 pupils leave a mainstream state school for at least one term but are on roll in a mainstream school by the spring term of Year 11.

In Figure 14, we present the same data as a proportion of the whole cohort. We find that the proportion of pupils leaving the English education system permanently rose slightly between the 2018 and 2021 cohorts – from 8.1 per cent in the 2018 cohort to 8.6 per cent in the 2020 cohort, to 8.4 per cent in the 2021 cohort.

Figure 13: Number of pupils in four cohorts experiencing different types of education exit

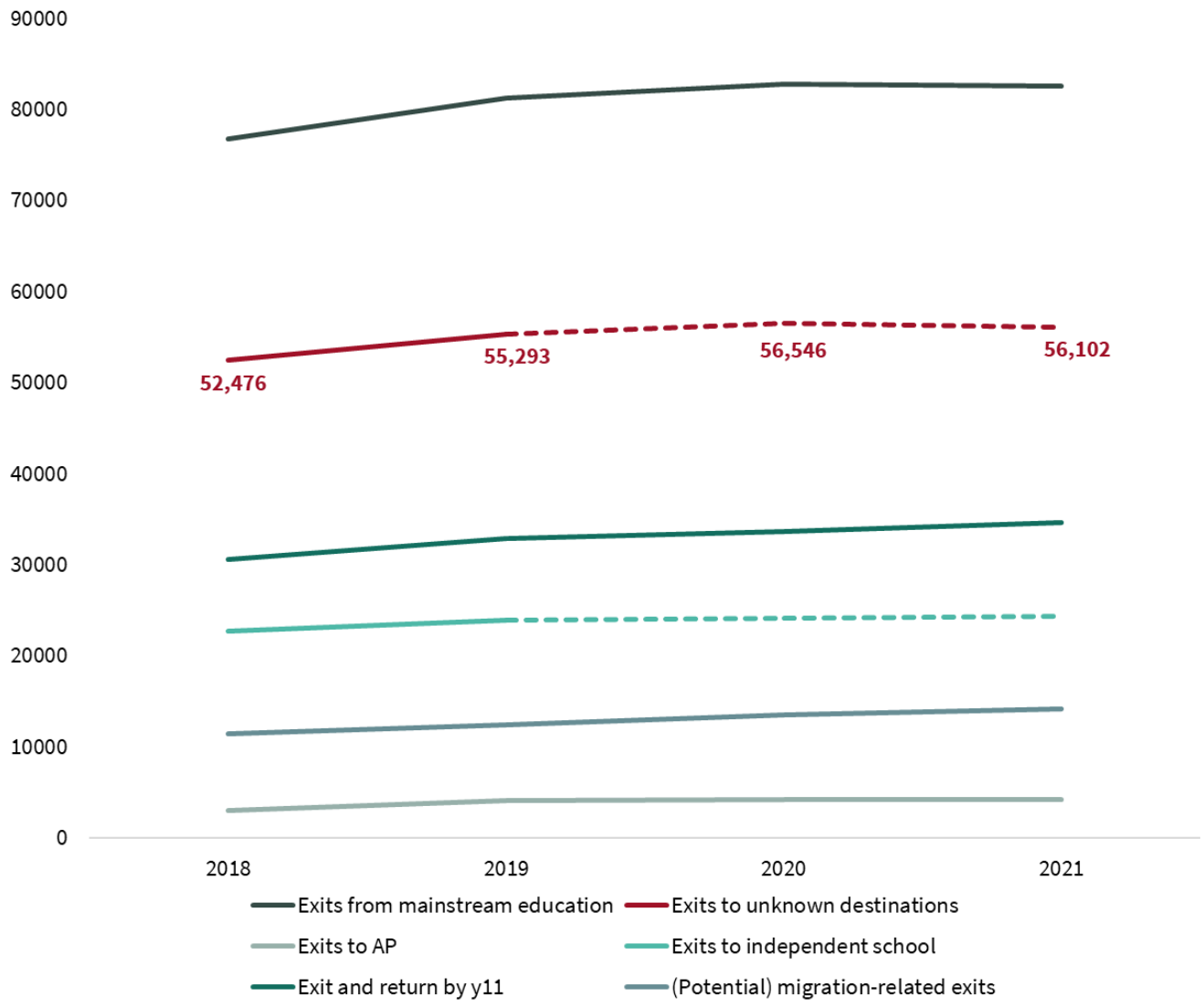
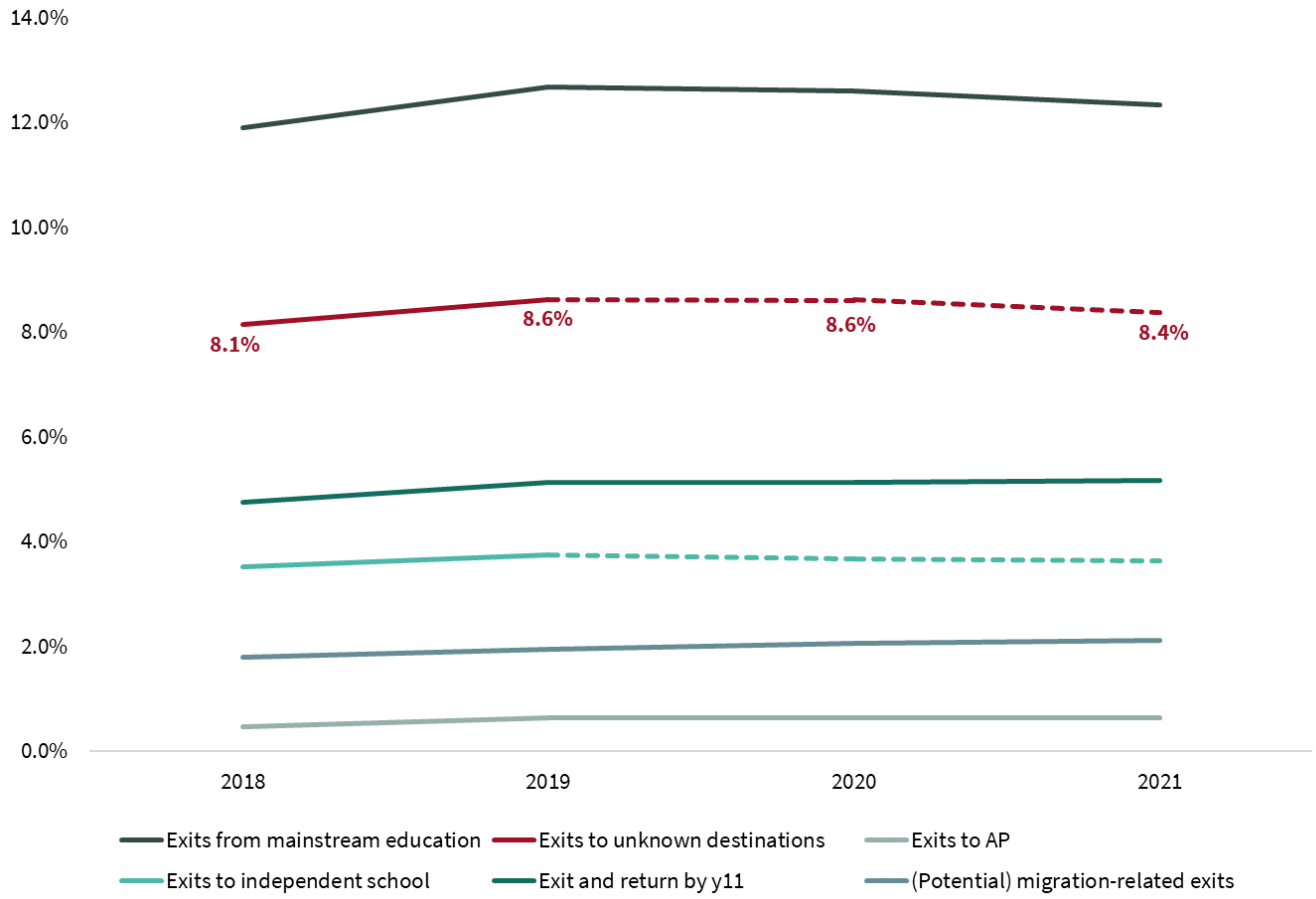


Figure 14: Proportion of the four cohorts experiencing different types of education exit



How many pupils leave the education system through the primary and secondary phases?

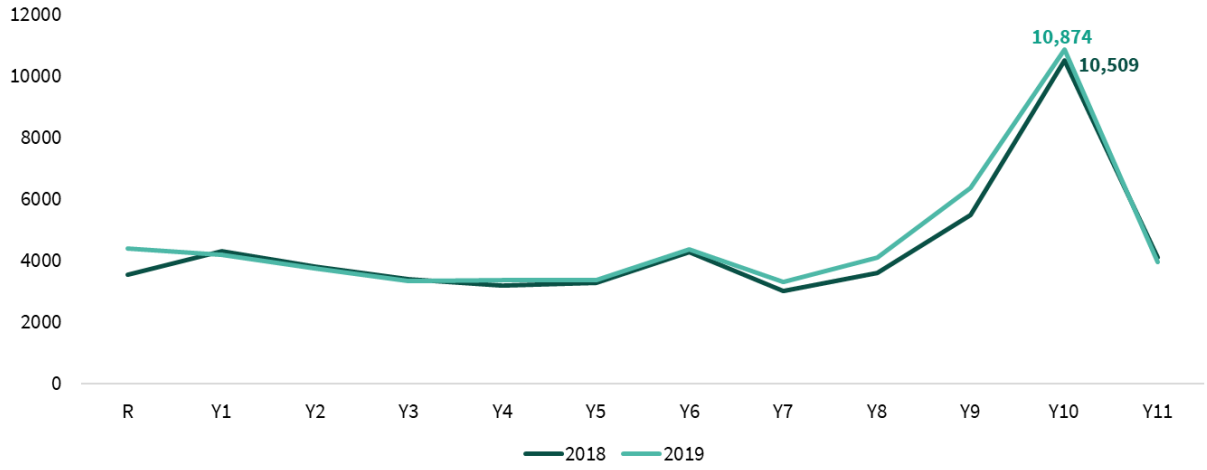
We also looked at the number of pupils leaving the English education system in each school year for the 2018 and 2019 cohorts, as we hold complete data for these cohorts (see Figure 15).

We find that the number of English education system exits remains broadly steady at between 3-4,000 each school year through primary school, with a slight peak in year 6, followed by a substantial rise through the secondary years. In both cohorts, one fifth of all permanent exits through the primary and secondary phases are occurring in year 10. In Year 11, we are only including exits between the autumn and spring terms, so would expect a smaller number. It is notable, however, that we see the same number of, or more, exits between the first and second terms of Year 11 as we see in all of years 7 and 8. This concurs with existing research, as well as our analysis in part 1, showing that older children are more likely to be missing from education.

To explore the role of gender, we provide a breakdown by gender and school year for the secondary phase for the 2019 cohort in Annex D. We found that girls and boys had a roughly similar likelihood of exiting the education system through the secondary phase. It is important to note

that only the latter years of these cohorts cover the same years we looked at in part 1 – where we found that girls in older age groups, particularly in more recent years up to 2023, were more likely than boys to be missing from education.

Figure 15: Number of system exits by school year for the 2018 and 2019 cohorts



Digging deeper into pupil registrations in Year 11

For our system exit estimates above, we use the Year 11 spring term (January census) as our 'end point' – as pupils who are on roll in the January census count towards school performance calculations. However, a minority of pupils who exit a mainstream state school and are not registered in a mainstream state school up to and including the Year 11 spring term, or in alternative provision or the independent sector in Year 11, are still in contact with the education system. For example, of the 55,293 pupils who leave the system and do not re-enter a state school by the spring term of Year 11 in the 2019 cohort, 1,164 (2.1 per cent) are registered in a mainstream school in the summer term, and 5,355 (9.7 per cent) have Key Stage 4 English or maths attainment records.

It is not clear from the data why this is the case. Some may be 'penalty add-backs'; these pupils, who reach age 16 before Year 11, are always reported in a school's results the year after which they have completed year 10, eliminating the possibility of them repeatedly being counted as not having reached the end of secondary school.[61] Others who are not on a school's roll in the spring term but whose results count towards national calculations may be external candidates including home educated pupils.[62]

[61] Philip Nye and Dave Thomson, 'Who's left: How do pupils count in league tables, and how does our reweighting approach work?'
[62] See Dave Thomson, 'The Curious Case of the Year 11 Summer Returners' for more insight into this group.

What are the characteristics of pupils who exit the system for unknown destinations?

Next, we looked at social and demographic characteristics of the pupils who leave the English education system permanently, and those who return by the spring term of Year 11 (see Figures 16 and 17). We focused on the 2019 cohort, as this is the most recent cohort for which we can account for pupils who move into the independent sector in our data.

Overall, 8.6 per cent of the cohort left the English education system permanently. However, we find significant ethnic inequalities in system exit rates, with pupils from Traveller, Gypsy / Roma, and White Irish and 'Other White' backgrounds substantially more likely to exit the school system. A full 75 per cent of Traveller pupils, along with half of Gypsy / Roma pupils leave the English education system and do not return by January of Year 11. This could partially be explained by the mobility of these communities, who may be moving across UK borders; it is also the case, however, that these pupil groups are much more likely to experience school exclusion (three to four times more likely than pupils overall) as well as other poor outcomes in education.[63] The comparatively high system exit rate amongst White Irish pupils and 'Other White' pupils (around one fifth of each group) could potentially be related to Brexit.[64] Other ethnic groups are at slightly higher risk compared with their White British peers; these include pupils from a range of backgrounds including 'any other Asian background', 'any other mixed background', White and Black African pupils, and Chinese pupils. This is a potential indicator that some of the system exits we identified are cases of pupils moving to or back to their family's home country during the primary or secondary phases.

Persistently disadvantaged pupils (those who were eligible for free school meals for at least 80 per cent of all eligible years when they were on roll) were twice as likely to experience a system exit, while certain types of SEND are associated with a higher likelihood, including having 'profound and multiple learning difficulties' and having an Education Health and Care Plan. Given longstanding constraints and weakness in the SEND system, with many pupils waiting months or years to receive support, this finding could indicate that these pupils are more likely to be waiting for suitable education or to move into home education.

Finally, other vulnerable pupil groups we looked at are also at significantly higher risk of a system exit, including pupils who are care-experienced (about 50 per cent as likely as the cohort overall) and those who have ever been permanently excluded (twice as likely).

[63] Equality and Human Rights Commission, "Educational challenges facing children and young people from Gypsy, Roma and Traveller backgrounds"
[64] Guardian, 'There's not many left now: Census shines light on dwindling Irish population in Britain'

Figure 16: Characteristics of pupils who left the English education system in the 2019 cohort

Characteristic		N	Number	% of group	% of exits
	All pupils	**641112**	**55293**	**8.6%**	**-**
Gender	Girls	308029	26122	8.5%	47.2%
	Boys	333083	29171	8.8%	52.8%
Ethnicity	Bangladeshi	10994	322	2.9%	0.6%
	Indian	18410	1745	9.5%	3.2%
	Any Other Asian Background	11819	1802	15.2%	3.3%
	Pakistani	26570	1383	5.2%	2.5%
	Black African	23380	2341	10.0%	4.2%
	Black Caribbean	8706	604	6.9%	1.1%
	Any Other Black Background	4696	471	10.0%	0.9%
	Chinese	2641	359	13.6%	0.6%
	Any Other Mixed Background	12504	1440	11.5%	2.6%
	Mixed White and Asian	7483	640	8.6%	1.2%
	Mixed White and Black African	3936	424	10.8%	0.8%
	Mixed White and Black Caribbean	8701	497	5.7%	0.9%
	White British	428638	24066	5.6%	43.5%
	White Irish	2326	469	20.2%	0.8%
	Traveller of Irish Heritage	748	564	75.4%	1.0%
	Any Other White Background	39064	8715	22.3%	15.8%
	Gypsy / Roma	3014	1557	51.7%	2.8%
Disadvantage	Ever FSM	208513	17121	8.2%	31.0%
	Persistently disadvantaged	58038	10292	17.7%	18.6%
Additional needs	Any type of SEND	250634	20472	8.2%	37.0%
	Specific Learning Difficulty	35350	1983	5.6%	3.6%
	Moderate Learning Difficulty	53658	4127	7.7%	7.5%
	Severe Learning Difficulty	5188	427	8.2%	0.8%
	Profound & Multiple Learning Difficulty	1623	254	15.7%	0.5%
	Speech, Language and Communication Needs	34991	2408	6.9%	4.4%
	Hearing Impairment	3312	167	5.0%	0.3%
	Visual Impairment	1895	105	5.5%	0.2%
	Multi-Sensory Impairment	418	22	5.3%	0.0%
	Physical Disability	5742	377	6.6%	0.7%
	Autistic Spectrum Disorder	15172	1011	6.7%	1.8%
	Other Difficulty/Disability	20212	1324	6.6%	2.4%
	Social, Emotional & Mental Health	34190	3147	9.2%	5.7%
	Education Health and Care Plan	30959	3163	10.2%	5.7%
	Care-experienced pupils	16800	2190	13.0%	4.0%
	'Children in need'	148670	13770	9.3%	24.9%
	Permanently excluded	7438	1379	18.5%	2.5%
	Suspended	94597	8654	9.1%	15.7%

What are the characteristics of pupils who miss some education but are registered in a mainstream school in January of Year 11?

Finally, we explored the characteristics of the 32,896 pupils, or 5.1 per cent of the cohort, who miss at least one term of mainstream education, but are enrolled in a mainstream school by January of Year 11 in the 2019 cohort (see Figure 17).

We found that all ethnic groups were at increased risk of missing a period of mainstream education relative to White British pupils; the highest risk is seen amongst Gypsy / Roma, Black African, Black Caribbean, and other Black pupils, who were more than twice as likely as their White British peers to miss at least one term. Additionally, pupils with most SEND types were at slightly increased risk; most notably, pupils with social, emotional or mental health difficulties (SEMH) were more than twice as likely to miss a period of mainstream education compared with the cohort overall. As discussed in part 1, mental health issues have been linked to school avoidance and absence. This may play a role in pupils leaving formal education and moving into home education for periods of time in cases where they experience significant school-related anxiety, for example, and/or their needs are not being met in a mainstream school.

Similar to pupils with identified SEMH, care-experienced children were more than twice as likely to miss some mainstream education. The Children's Commissioner's Office has found that pupils who are care-experienced are more likely to be missing from education; this may be related to moves between homes or care settings, the higher prevalence of additional needs including mental health struggles amongst children who are care-experienced, and experiences of stigmatisation or bullying.[65]

Finally, pupils who were permanently excluded were over four times as likely as the cohort overall to miss some time in mainstream education – which is likely at least partially related to delays in finding a new education setting for these pupils.

[65] Children's Commissioner's Office. "Looked After Children Who Are Not in School." Department for Education. "Outcomes for Children in Need, Including Children Looked After by Local Authorities in England, Reporting Year 2023."

Figure 17: Characteristics of 2019 cohort pupils who left a mainstream school and returned by Year 11

Characteristic		N	Number	% of group	% of returns
	All pupils	**641112**	**32896**	**5.1%**	**-**
Gender	Girls	308029	14821	4.8%	45.1%
	Boys	333083	18075	5.4%	54.9%
Ethnicity	Bangladeshi	10994	892	8.1%	2.7%
	Indian	18410	1164	6.3%	3.5%
	Any Other Asian Background	11819	951	8.0%	2.9%
	Pakistani	26570	2470	9.3%	7.5%
	Black African	23380	2375	10.2%	7.2%
	Black Caribbean	8706	796	9.1%	2.4%
	Any Other Black Background	4696	421	9.0%	1.3%
	Chinese	2641	140	5.3%	0.4%
	Any Other Mixed Background	12504	1014	8.1%	3.1%
	Mixed White and Asian	7483	526	7.0%	1.6%
	Mixed White and Black African	3936	301	7.6%	0.9%
	Mixed White and Black Caribbean	8701	560	6.4%	1.7%
	White British	428638	16334	3.8%	49.7%
	White Irish	2326	115	4.9%	0.3%
	Traveller of Irish Heritage	748	45	6.0%	0.1%
	Any Other White Background	39064	2427	6.2%	7.4%
	Gypsy / Roma	3014	347	11.5%	1.1%
Disadvantage	Ever FSM	208513	16740	8.0%	50.9%
	Persistently disadvantaged	58038	4474	7.7%	13.6%
Additional needs	SEND	250634	17116	6.8%	52.0%
	Specific Learning Difficulty	35350	2154	6.1%	6.5%
	Moderate Learning Difficulty	53658	3704	6.9%	11.3%
	Severe Learning Difficulty	5188	363	7.0%	1.1%
	Profound & Multiple Learning Difficulty	1623	98	6.0%	0.3%
	Speech, Language and Communication Needs	34991	2322	6.6%	7.1%
	Hearing Impairment	3312	175	5.3%	0.5%
	Visual Impairment	1895	118	6.2%	0.4%
	Multi-Sensory Impairment	418	18	4.3%	0.1%
	Physical Disability	5742	345	6.0%	1.0%
	Autistic Spectrum Disorder	15172	1275	8.4%	3.9%
	Other Difficulty/Disability	20212	1428	7.1%	4.3%
	Social, Emotional & Mental Health	34190	4330	12.7%	13.2%
	Education, Health and Care Plan	30959	3015	9.7%	9.2%
	Care-experienced pupils	16800	2120	12.6%	6.4%
	'Children in need'	148670	12840	8.6%	39.0%
	Permanently excluded	7438	1609	21.6%	4.9%
	Suspended	94597	8969	9.5%	27.3%

Discussion

Summary of results

By comparing GP records to school registrations, we estimate that the number of **children not in school** has grown by 53 per cent between 2017 and 2023. The rise in registered home education explains some of this increase. This trend appears to be particularly pronounced among older children, with the number of 15-year-olds not in school doubling within this period. Gender differences are also evident, with adolescent girls less likely to be in school compared with boys – particularly in more recent years.

Additionally our findings suggest that the number of **children missing from education** may have risen by 41 per cent over this period. While data limitations mean that we cannot discern *true* CME cases from children who are not in the country, there are many children whose education destinations are simply unknown. Our estimates of children missing from education are approximately 2.5 times higher than DfE's figures. This discrepancy reflects differences in data collection methods and definitions. For example, it is possible that our figures incorporate children who may not be fully captured by the official reporting mechanisms. It is likely the true number of children missing from education lies somewhere between these two estimates.

In our cohort analysis of **pupils who go missing from education**, we find that more than 50,000 pupils who are registered at some point in a state school leave mainstream education and are not re-enrolled in a mainstream school, alternative provision or the independent sector by Year 11. Of these, a small proportion have Key Stage 4 attainment records – indicating that, if they pass, they are leaving secondary education with a qualification. Some of these pupils will be migrating out of the country and likely moving into other education systems; data limitations mean we are not able to account for these cases. However, the over-representation of vulnerable groups, for example those who are care-experienced or who are permanently excluded, in the group of pupils who permanently leave the system is a cause for concern.

As highlighted by the LGA and DfE, the reasons for children missing from education are likely to be complex, multifaceted, and possibly vary depending on whether a CME case is known, suspected, or a 'known unknown'.[66] For example, children may leave school at the instigation of the parent (eg because they feel the school is not meeting their child's needs) or at the instigation of the school (eg off-rolling). The CME group also comprises children who have never been enrolled in school.

Recent data from the DfE, collected for the first time in Autumn 2023, provides further insight into potential reasons.[67] Of the *reported* CME cases, 20 per cent were believed to have moved out of the country or out of the local authority, while 8 per cent were awaiting school application outcomes,

[66] Parish, Bryant, and Swords, 'Children Missing Education'.
[67] Department for Education, 'Children Missing Education, Academic Year 2023/24'.

and 7 per cent had moved into a new local authority but had not yet applied for a school place and were not receiving suitable education in the meantime. Adding to the complexity, these groups may not be mutually exclusive, suggesting multiple routes through which children may end up missing from education. It is also possible that some children classified as CME should more appropriately be considered CNIS (ie not in school but receiving suitable home education).

Given the limitations of the data, it is important to recognise that not all children identified as CME or those who leave the English education system are necessarily being deprived of a suitable education or are automatically at risk. Some of these children may be in home education without registering with their local authority since they are not legally required to do so. Some may be receiving appropriate education in alternative settings.

Implications

While some parents choose home education for philosophical reasons, surveys suggest that some families are home educating their child out of necessity rather than preference.[68] For some, a shift to home education has been due to dissatisfaction with the school system, not getting a preferred school place, their child's needs not being met, or experiences of bullying.[69]

Our inability to accurately account for these children using existing data raises questions about variation in the quality and suitability of home education, and safeguarding risks, including in unregistered education settings. Children may be placed in a variety of formal and informal education settings, including unregistered schools; at home with varying levels of educational input; in employment; or be completely unknown to local authorities. DfE has shared that some parents are reluctant to inform local authorities that their child is attending an unregistered education setting.[70] Furthermore, these unregistered settings can refuse to provide information as there is no legal requirement for them to do so. In evidence to the Education Select Committee, Ofsted has stated that there is a high bar to kickstart the process of inspection of unregistered schools.[71] When they have inspected unregistered schools, Ofsted have found serious safeguarding or health and safety concerns in approximately 40 per cent of settings.

There have been a range of responses to the substantial number of children whose education destinations are unknown. These have included calls for timely access to linked administrative data and a compulsory register of all children not in school. Plans to introduce the latter have been under consideration for some time by successive Conservative governments, with the current Labour government committed to introducing a register.[72] While relying on existing data will not find children who are missing from government records altogether, access to linked GP

[68] Department for Education, 'Elective Home Education, Academic Year 2023/24'.
[69] Staufenberg, 'Home Education Rises, with Schools Left to "Pick up Pieces"'; Children's Commissioner's office, 'Lost in Transition'.
[70] Department for Education, 'Children Not in School - Schools Bill Factsheet'.
[71] House of Commons Education Committee, 'Strengthening Home Education'.
[72] Andrews, Khandekar, and Cruikshanks, 'General Election 2024 An Analysis of Manifesto Plans for Education'.

registrations, emergency hospital care data, and schools data may identify some communities who never interact with primary care or school systems.[73]

Building on this research, the ONS is uniquely positioned to advance research on children missing from education through its data linkage capabilities and access to sensitive information. As part of its efforts to provide more timely population estimates, the ONS has made significant strides in linking administrative datasets.[74] A linkage in Wales using the SAIL Databank, a database which links various administrative data sources, found 6.4 per cent of children in GP records were not in education data.[75] This highlights the potential for similar work in England, should the government choose to prioritise it.

While demographic data are currently used to link these administrative datasets, there have also been calls for the creation of a consistent unique identifier or the adoption of an existing one (eg the NHS number) to consistently connect a diverse range of datasets over time.[76] It is promising that the current government has committed to using a consistent unique identifier across data systems. This approach could overcome the limitations of current methods, which use various identifiers across different government departments (eg the NHS number in health; the Unique Pupil Number for pupils enrolled in state schools; LA-ID used by local authorities) and are subject to matching errors as they rely solely on demographic information.[77] A universal identifier would not only streamline data sharing among multiple agencies—including schools, health services, and local authorities —but also enable local authorities to better identify at-risk children, understand their circumstances, and provide necessary support. Furthermore, it could enable the tracking of children as they move through different systems, such as between local authority care placements.

While data linking and a register offer potential benefits for identifying and safeguarding children, they also raise concerns about privacy and the broader impact on families, particularly home educators.[78] The implementation of a register has been perceived as punitive toward home educators; many parents who homeschool argue that a compulsory register undermines their

[73] House of Commons Women and Equalities Committee, 'Tackling Inequalities Faced by Gypsy, Roma and Traveller Communities'.
[74] Office for National Statistics, 'Developing Admin-Based Population Estimates, England and Wales - Office for National Statistics'; Office for National Statistics, 'Developing Our Approach for Producing Admin-Based Population Estimates, England and Wales - Office for National Statistics'.
[75] Welsh Government, 'Estimating Numbers of Children Not in State Education Using Linked Administrative Data'.
[76] Valle, Graham, and Payne, 'A Consistent Identifier in Education and Children's Services'; Children's Commissioner's office, 'Voices of England's Missing Children'; Children's Commissioner's office, 'Where Are England's Children? Interim Findings from the Children's Commissioner's Attendance Audit'; Children's Commissioner Office, 'Utilising Data to Improve Children's Outcomes Annex to A Positive Approach to a Parenting: Part 2 of the Independent Family'.
[77] Children's Commissioner Office, 'Utilising Data to Improve Children's Outcomes Annex to A Positive Approach to a Parenting: Part 2 of the Independent Family'.
[78] Weale, 'Parents of Matilda Stage Star in Council Home Schooling Row'; Staufenberg, 'Home Education Rises, with Schools Left to "Pick up Pieces"'.

rights and stigmatises their choice, without addressing the underlying issue that led to their choice to home educate their child. Moreover, media outlets, including *Schools Week* and *The Guardian*, have reported on concerns regarding the Department for Education's data-sharing practices.[79] These reports include claims that the Department for Work and Pensions may have used pupil data for benefit fraud investigations, and that the Home Office may have accessed pupil data for immigration enforcement purposes. It is therefore of utmost importance that data sharing is solely used for the benefit of the child, with robust safeguards and clear data governance arrangements in place to protect individuals' confidentiality. Although the implementation of this register is beyond the scope of this report, the government must prioritise transparency and accountability so that any data collection and monitoring efforts are both ethical and responsible.

A register is unlikely to fully address all the challenges set out in this report nor is it enough to merely identify the children missing from education. The evidence on improving school engagement is weak and investigation of best practices for engaging and providing for children who have never interacted with or been lost by the education system is ongoing.[80] In the interim, it is important that the government continue to address these data challenges, maintain the focus on developing a register for children missing from education, and establish tools for local authorities to identify these children so that they are able to fulfil their statutory duty and ensure all children receive a suitable education.

Policy recommendations

- **Build on plans to establish a register of children outside of education.** The government has announced plans to create a register of 'children not in school' to be maintained by local authorities. A more complete register on all children, maintained by the ONS, could integrate data from education, health and other relevant administrative data sources. This register should include pupil-level data from all schools (state, independent, and unregistered) and a register of home-educated children to accurately account for all children. The government has also committed to using a consistent unique identifier across education, health and local authority data systems.[81] This should facilitate data sharing and improve current estimates as children moving between systems can be followed more easily. Robust safeguards must be implemented to ensure data is not inappropriately shared or used for purposes unrelated to the benefit of the child.[82] Further research is also needed to address gaps in these data sets, such as children missing from administrative records altogether. While the register alone will not protect children, it will

[79] Weale, 'Department of Education Criticised for Secretly Sharing Children's Data'; Whittaker, 'Benefit Fraud Squad Snoops on Pupil Data under Secret Deal'.
[80] Education Endowment Foundation, 'Attendance Interventions Rapid Evidence Assessment'; House of Commons Women and Equalities Committee, 'Tackling Inequalities Faced by Gypsy, Roma and Traveller Communities'.
[81] Adams, 'Pupils to Get Unique ID Number Linking Service Records under Labour'.
[82] Weale, 'Department of Education Criticised for Secretly Sharing Children's Data'; Whittaker, 'Benefit Fraud Squad Snoops on Pupil Data under Secret Deal'.

enable local authorities to fulfil their statutory duties and direct support where it is most needed.

- **Require schools to record reasons for removing pupils from their rolls**. Our research shows that rates of English education system exits rise significantly in secondary school and peak in Year 10 before pupils sit their GCSEs – and existing gaps in the data prevent an understanding of the factors driving this rise. Just as they are required to report reasons for permanent exclusions, schools should be required to collect and feed data on the reasons why pupils are leaving rolls into centralised data collections. This would allow better oversight of illegal exclusions, including off-rolling; the role played by mental health issues or disengagement from education in system exits; along with a better understanding of the proportion of system exits related to out-migration from the country.
- **Investigate best practices for preventing, engaging with, and supporting children missing or who go missing from education**. Given findings suggesting that pupils who go missing from education have additional vulnerabilities, research is needed to build the evidence on how the government can prevent children from becoming disengaged from education in the first place as the current evidence on improving engagement is weak.[83] Research into best practices for engaging children who have never interacted with the education system is ongoing.[84] Together, this research could support the development of targeted strategies responding to the diverse needs of children.
- **Improve the timeliness, accuracy and reliability of population estimates**. No data source currently provides a definitive number of children in England, let alone the number of children missing from education. Given the role population estimates play in policymaking and resource allocation, combined with wider evidence that local authorities are often unaware of the number of children in their area, the ONS must redouble its efforts to provide timely and reliable estimates of the child population.[85] Government plans to implement a consistent identifier across data systems should, in theory, facilitate better data integration, enabling local authorities to fulfil their statutory duties more effectively while also strengthening confidence in the data.

[83] Education Endowment Foundation, 'Attendance Interventions Rapid Evidence Assessment'.
[84] Ministry of Housing, Communities & Local Government (2018 to 2021), Department for Education, and Lord Stephen Greenhalgh, '£1 Million Education Programme for Gypsy, Roma and Traveller Children Announced'.
[85] Children's Commissioner's Office, 'Voices of England's Missing Children'; Children's Commissioner's office, 'Where Are England's Children? Interim Findings from the Children's Commissioner's Attendance Audit'.

References

Adams, Richard. ‘Pupils to Get Unique ID Number Linking Service Records under Labour’. *The Guardian*, 9 January 2024, sec. Education. https://www.theguardian.com/education/2024/jan/09/labour-would-link-services-data-for-children-in-england-to-boost-standards.

Andrews, Jon, Shruti Khandekar, and Robbie Cruikshanks. ‘General Election 2024 An Analysis of Manifesto Plans for Education’, June 2024. https://epi.org.uk/wp-content/uploads/2024/06/GE-report-2024-FINAL.pdf.

Association of Directors of Children’s Services. ‘ADCS Elective Home Education Survey October 2017’, October 2017. https://www.adcs.org.uk/wp-content/uploads/2024/05/ADCS_EHE_Survey_Analysis_2017_FINAL.pdf.

Baker, Carl. ‘Population Estimates & GP Registers: Why the Difference?’, 12 December 2016. https://commonslibrary.parliament.uk/population-estimates-gp-registers-why-the-difference/.

Burch, Patrick, Tim Doran, and Evangelos Kontopantelis. ‘Regional Variation and Predictors of Over-Registration in English Primary Care in 2014: A Spatial Analysis’. *J Epidemiol Community Health* 72, no. 6 (1 June 2018): 532–38. https://doi.org/10.1136/jech-2017-210176.

Casey, B. J., Sarah Getz, and Adriana Galvan. ‘The Adolescent Brain’. *Developmental Review: DR* 28, no. 1 (2008): 62–77. https://doi.org/10.1016/j.dr.2007.08.003.

Chein, Jason, Dustin Albert, Lia O’Brien, Kaitlyn Uckert, and Laurence Steinberg. ‘Peers Increase Adolescent Risk Taking by Enhancing Activity in the Brain’s Reward Circuitry’. *Developmental Science* 14, no. 2 (2011): F1–10. https://doi.org/10.1111/j.1467-7687.2010.01035.x.

Children’s Commissioner Office. ‘Children Missing Education - The Unrolled Story’, September 2024.

———. ‘Children’s Mental Health Services 2022-23’, 14 March 2024. https://www.childrenscommissioner.gov.uk/resource/childrens-mental-health-services-2022-23/.

———. ‘Looked after Children Who Are Not in School’, May 2023. https://assets.childrenscommissioner.gov.uk/wpuploads/2023/05/cc-lac-not-in-school.pdf.

———. ‘Utilising Data to Improve Children’s Outcomes Annex to A Positive Approach to a Parenting: Part 2 of the Independent Family’, December 2022. https://assets.childrenscommissioner.gov.uk/wpuploads/2022/12/cc-family-review-utilising-data-annex.pdf.

Children’s Commissioner’s Office. 'Looked After Children Who Are Not in School', 25 May 2023. https://www.childrenscommissioner.gov.uk/resource/looked-after-children-who-are-not-in-school/

———. ‘Lost in Transition: The Destinations of Children Who Leave the State Education System’, 22 February 2024. https://www.childrenscommissioner.gov.uk/resource/lost-in-transition/.

———. ‘Voices of England’s Missing Children’, June 2022. https://assets.childrenscommissioner.gov.uk/wpuploads/2022/09/cc-voices-of-englands-missing-children-june-2022.pdf.

———. ‘Where Are England’s Children? Interim Findings from the Children’s Commissioner’s Attendance Audit’. Accessed 10 September 2024.

https://assets.childrenscommissioner.gov.uk/wpuploads/2022/03/cco-where-are-englands-children-interim-findings-mar-2022.pdf.
Coram Child Law Advice. 'Home Education'. *Childlawadvice.Org.Uk* (blog). Accessed 10 September 2024. https://childlawadvice.org.uk/information-pages/home-education/.
Crenna-Jennings, Whitney, and Allen Joseph. 'Four Charts Which Explain the State of Children's Mental Health in 2023'. *Education Policy Institute* (blog), 30 November 2023. https://epi.org.uk/publications-and-research/four-charts-which-explain-the-state-of-childrens-mental-health-in-2023/.
Crone, Eveline A., Kayla H. Green, Ilse H. van de Groep, and Renske van der Cruijsen. 'A Neurocognitive Model of Self-Concept Development in Adolescence'. *Annual Review of Developmental Psychology* 4, no. Volume 4, 2022 (9 December 2022): 273–95. https://doi.org/10.1146/annurev-devpsych-120920-023842.
Dattani, Saloni, Fiona Spooner, Hannah Ritchie, and Max Roser. 'Child and Infant Mortality'. *Our World in Data*, 2023.
Department for Education. 'Absence Rates by Gender, Age and Free School Meal Status', 15 March 2018. https://www.gov.uk/government/publications/absence-rates-by-gender-age-and-free-school-meal-status.
———. 'Children Missing Education, Academic Year 2023/24', 29 February 2024. https://explore-education-statistics.service.gov.uk/find-statistics/children-missing-education.
———. 'Children Not in School - Schools Bill Factsheet', May 2022.
———. 'Elective Home Education, Academic Year 2023/24', 29 February 2024. https://explore-education-statistics.service.gov.uk/find-statistics/elective-home-education.
———. 'Elective Home Education: Departmental Guidance for Local Authorities', April 2019.
———. 'Elective Home Education Departmental Guidance for Parents', April 2019. https://assets.publishing.service.gov.uk/media/5ca21e22e5274a77d9d26feb/EHE_guidance_for_parentsafterconsultationv2.2.pdf.
———. 'Outcomes for Children in Need, Including Children Looked After by Local Authorities in England, Reporting Year 2023', 18 April 2024. https://explore-education-statistics.service.gov.uk/find-statistics/outcomes-for-children-in-need-including-children-looked-after-by-local-authorities-in-england
———. 'Schools, Pupils and Their Characteristics, Academic Year 2023/24', 6 June 2024. https://explore-education-statistics.service.gov.uk/find-statistics/school-pupils-and-their-characteristics.
———. 'Suspensions and Permanent Exclusions in England, Academic Year 2022/23', 18 July 2024. https://explore-education-statistics.service.gov.uk/find-statistics/suspensions-and-permanent-exclusions-in-england.
'Education Act 1996'. Text. Statute Law Database. Accessed 10 September 2024. https://www.legislation.gov.uk/ukpga/1996/56/section/7.
Education Endowment Foundation. 'Attendance Interventions Rapid Evidence Assessment'. Education Endowment Foundation, 15 March 2022. https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/attendance-interventions-rapid-evidence-assessment.
Education Otherwise. 'Home Education Trends: Changing Cohorts', 7 March 2024. https://www.educationotherwise.org/home-education-trends-changing-cohorts/.
Education Policy Institute. 'EPI Responds to Announcement of New Schools Bill'. Education Policy Institute, 10 May 2022. https://epi.org.uk/comments/epi-responds-to-announcement-of-new-schools-bill/.
Equality and Human Rights Commission. 'Response to the Education Committee consultation on educational challenges facing children and young people from Gypsy, Roma and Traveller

backgrounds' 28 January 2022. https://www.equalityhumanrights.com/our-work/advising-parliament-and-governments/response-education-committee-consultation-educational

Guardian, 'There's not many left now: Census shines light on dwindling Irish population in Britain' 5 November 2022. https://www.theguardian.com/uk-news/2022/nov/05/theres-not-many-left-now-census-shines-spotlight-on-britains-dwindling-irish-community#:~:text=However%2C%20last%20week%20brought%20confirmation,ago%2C%20when%20they%20numbered%20407%2C357.

Hodge, Louis, Robbie Cruikshanks, Jon Andrews, and Oana Gavriloiu. 'The Features of Effective School Groups'. Education Policy Institute, April 2024. https://epi.org.uk/wp-content/uploads/2024/04/Effective_school_groups_final-240404-2.pdf.

Holt-White, Erica, Alice De Gennaro, Jake Anders, Carl Cullinane, Erin Early, Rebecca Montacute, Xin Shao, and James Yarde. 'Wave 1 Initial Findings – Mental Wellbeing. COVID Social Mobility & Opportunities (COSMO) Study Briefing No. 4.' London: UCL Centre for Education Policy and Equalising Opportunities & Sutton Trust., November 2022. London: UCL Centre for Education Policy and Equalising Opportunities & Sutton Trust.

House of Commons Education Committee. 'Strengthening Home Education', July 2021. https://committees.parliament.uk/publications/6974/documents/72808/default/.

House of Commons Women and Equalities Committee. 'Tackling Inequalities Faced by Gypsy, Roma and Traveller Communities', 5 April 2019. https://publications.parliament.uk/pa/cm201719/cmselect/cmwomeq/360/full-report.html#heading-10.

Hunt, Emily. 'Examining Post-Pandemic Absences in England'. *Education Policy Institute* (blog), 19 May 2023. https://epi.org.uk/publications-and-research/absence/.

Hutchinson, Jo, and Whitney Crenna-Jennings. 'Unexplained Pupil Exits from Schools: A Growing Problem?' Education Policy Institute, April 2019.

———. 'Unexplained Pupil Exits from Schools: Further Analysis and Data by Multi-Academy Trust and Local Authority'. Education Policy Institute, October 2019.

Lindop, Jay. 'Are There Really 6m EU Citizens Living in the UK?', 2 July 2021. https://blog.ons.gov.uk/2021/07/02/are-there-really-6m-eu-citizens-living-in-the-uk/.

McKeown, Liz. 'An Evolving Picture of UK Population Change', 16 April 2021. https://blog.ons.gov.uk/2021/04/16/an-evolving-picture-of-uk-population-change/.

Ministry of Housing, Communities & Local Government (2018 to 2021), Department for Education, and Lord Stephen Greenhalgh. '£1 Million Education Programme for Gypsy, Roma and Traveller Children Announced'. GOV.UK, 22 July 2021. https://www.gov.uk/government/news/1-million-education-programme-for-gypsy-roma-and-traveller-children-announced.

Newlove-Delgado, Tamsin, Franziska Marcheselli, Tracy Williams, Dhriti Mandalia, M Dennes, Sally McManus, Walt Treloar, Kate Croft, and Tamsin Ford. 'Mental Health of Children and Young People in England, 2023.' Leeds: NHS England, 21 November 2023. https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2023-wave-4-follow-up.

NHS England. 'Mental Health of Children and Young People in England 2023 - Wave 4 Follow up to the 2017 Survey: Data Tables'. NHS Digital, 2023. https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2023-wave-4-follow-up/data-sets.

———. 'Patients Registered at a GP Practice'. Accessed 10 September 2024. https://digital.nhs.uk/data-and-information/publications/statistical/patients-registered-at-a-gp-practice.

———. ‘Patients Registered at a GP Practice, September 2023’, 14 September 2023. https://digital.nhs.uk/data-and-information/publications/statistical/patients-registered-at-a-gp-practice/september-2023.
———. ‘Primary Medical Services Policy and Guidance Manual (PGM)’, 15 November 2017. https://www.england.nhs.uk/long-read/primary-medical-services-policy-and-guidance-manual-pgm/.
‘NHS Number Guidance for GP Practices V1.1’, June 2011. https://webarchive.nationalarchives.gov.uk/ukgwa/20160729151531mp_/http://systems.hscic.gov.uk/nhsnumber/staff/guidance/gppracguide.pdf.
Nye, Philip and Dave Thomson. 'Who’s left: How do pupils count in league tables, and how does our reweighting approach work?' 31 January 2017. https://ffteducationdatalab.org.uk/2017/01/whos-left-how-do-pupils-count-in-league-tables-and-how-does-our-reweighting-approach-work/
Office for National Statistics. ‘Beyond 2011: Administrative Data Sources Report: NHS Patient Register’. Office for National Statistics, November 2012.
———. ‘Child and Infant Mortality in England and Wales’, 31 May 2024. https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/childhoodinfantandperinatalmortalityinenglandandwales/2022.
———. ‘Developing Admin-Based Population Estimates, England and Wales - Office for National Statistics’, 26 November 2021. https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/developingadminbasedpopulationestimatesenglandandwales/2016to2020.
———. ‘Developing Our Approach for Producing Admin-Based Population Estimates, England and Wales - Office for National Statistics’, 21 June 2019. https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/developingourapproachforproducingadminbasedpopulationestimatesenglandandwales2011and2016/2019-06-21.
———. ‘Dynamic Population Model, Improvements to Data Sources and Methodology for Local Authorities, England and Wales: 2021 to 2022 - Office for National Statistics’. Accessed 18 November 2024. https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/methodologies/dynamicpopulationmodelimprovementstodatasourcesandmethodologyforlocalauthoritiesenglandandwales2021to2022.
———. ‘Patient Register: Quality Assurance of Administrative Data Used in Population Statistics, Dec 2016 - Office for National Statistics’, 20 December 2016. https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/methodologies/patientregisterqualityassuranceofadministrativedataused inpopulationstatisticsdec2016.
———. ‘Population Estimates for England and Wales’, 15 July 2024. https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationestimatesforenglandandwales/mid2023.
Parish, Natalie, Ben Bryant, and Beth Swords. ‘Children Missing Education’. Local Government Association, 16 November 2020.
Rapee, Ronald M., Ella L. Oar, Carly J. Johnco, Miriam K. Forbes, Jasmine Fardouly, Natasha R. Magson, and Cele E. Richardson. ‘Adolescent Development and Risk for the Onset of Social-Emotional Disorders: A Review and Conceptual Model’. *Behaviour Research and Therapy* 123 (1 December 2019): 103501. https://doi.org/10.1016/j.brat.2019.103501.

Staufenberg, Jess. ‘Home Education Rises, with Schools Left to “Pick up Pieces”’. *Schools Week*, 7 July 2017. https://schoolsweek.co.uk/home-education-doubles-with-schools-left-to-pick-up-pieces-when-it-fails/.

Thomson, Dave. ' The Curious Case of the Year 11 Summer Returners', 22 May 2019. https://ffteducationdatalab.org.uk/2019/05/the-curious-case-of-the-year-11-summer-returners/

Uhlhaas, Peter J., Christopher G. Davey, Urvakhsh Meherwan Mehta, Jai Shah, John Torous, Nicholas B. Allen, Shelli Avenevoli, et al. ‘Towards a Youth Mental Health Paradigm: A Perspective and Roadmap’. *Molecular Psychiatry* 28, no. 8 (August 2023): 3171–81. https://doi.org/10.1038/s41380-023-02202-z.

Valle, Ivana La, Berni Graham, and Lisa Payne. ‘A Consistent Identifier in Education and Children’s Services’. Department for Education, July 2016.

Waller, Ed, and Gus Williamson. ‘New GP Payment System’, 16 September 2020. https://www.england.nhs.uk/wp-content/uploads/2020/09/B0165_GPPP-system-payment-changes-letter-to-GP-practices-FINAL-with-sigs.pdf.

Weale, Sally. ‘Department of Education Criticised for Secretly Sharing Children’s Data’. *The Guardian*, 12 November 2019, sec. Education. https://www.theguardian.com/education/2019/nov/12/department-of-education-criticised-for-secretly-sharing-childrens-data.

———. ‘Parents of Matilda Stage Star in Council Home Schooling Row’. *The Guardian*, 13 February 2018, sec. Education. https://www.theguardian.com/education/2018/feb/13/parents-matilda-stage-star-lilian-hardy-council-home-schooling-row.

Welsh Government. ‘Estimating Numbers of Children Not in State Education Using Linked Administrative Data’, 18 September 2024. https://www.gov.wales/estimating-numbers-children-not-state-education-using-linked-administrative-data-html.

Whittaker, Freddie. ‘Benefit Fraud Squad Snoops on Pupil Data under Secret Deal’. *Schools Week*, 9 May 2024. https://schoolsweek.co.uk/revealed-secret-deal-to-let-benefit-fraud-squad-snoop-on-pupil-data/.

Wilshaw, Michael. ‘Advice Letter from Sir Michael Wilshaw, Her Majesty’s Chief Inspector, on the Latest Position with Schools in Birmingham and Tower Hamlets’, 14 July 2015. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/444746/Advice_letter_from_HMCI_on_the_latest_position_with_schools_in_Birmingham_and_Tower_Hamlets.pdf.

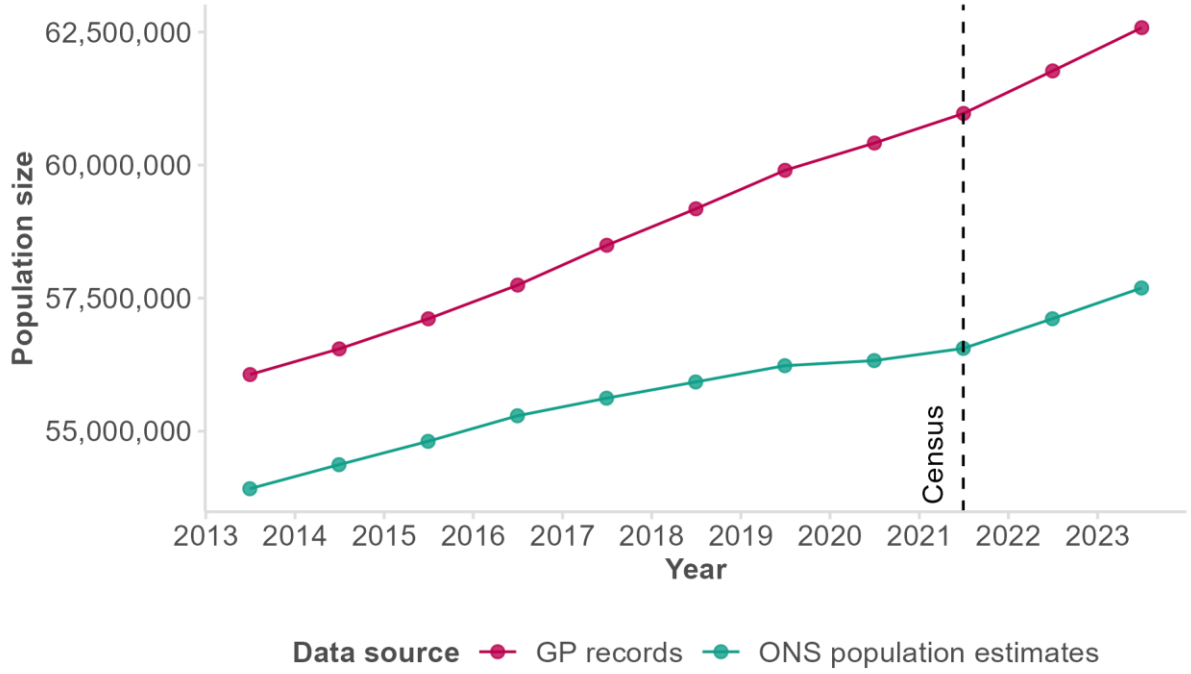
Annex A: Using GP records to estimate the 'upper-bound' number of children missing from education

As discussed, GP records have several limitations which may affect the validity of our findings. List inflation, or over-coverage, occurs when the number of individuals registered with GP practices exceeds the *actual* population.[86] As shown in Figure 18, GP registrations have consistently been higher than ONS estimates, with the gap widening over time. This disparity can also vary by location, such as in urban areas with large student or migrant populations, and by demographic characteristics, particularly for young healthy men who may be, on average, slower to update their GP records.[87]

In this section, we explore the validity of our findings by examining the strengths and limitations of using GP records and school records to estimate the number of children missing from education. We will consider how these errors could affect each dataset independently, as well as how they might 'balance out', potentially reinforcing the overall trends and estimates observed in our study, even if the exact figures are not perfect.

[86] NHS England, 'Patients Registered at a GP Practice'.
[87] Baker, 'Population Estimates & GP Registers'; Burch, Doran, and Kontopantelis, 'Regional Variation and Predictors of Over-Registration in English Primary Care in 2014'; Office for National Statistics, 'Patient Register: Quality Assurance of Administrative Data Used in Population Statistics, Dec 2016 - Office for National Statistics'.

Figure 18: Population estimates using GP registration data and ONS mid-year population estimates



Source: ONS population estimates from census based mid-year population estimates (as of June 30th); ONS figures have been revised based on 2021 Census and updated further to account for international migration. GP records from NHS Patients Registered at a GP Practice data (as of July 1st)

One driver of over-coverage in GP records is individuals remaining on the patient register after they have left the country or migrated to another part of the country.[88] NHS England estimates that practice lists may carry a 3 to 8 per cent error rate due to patient turnover.[89] Despite systems designed to account for emigration, the process relies on self-reporting, and many patients reportedly do not complete the necessary forms to de-register.[90] Although some individuals temporarily leave the UK for work or travel and may legitimately wish to remain registered to maintain access to NHS services upon their return, others permanently emigrate but stay on the register, leading to inflated patient lists. Additionally, non-UK residents who register with the NHS during short stays may also fail to de-register when they leave, further contributing to over-coverage.

Another contributor to list inflation stems from data entry issues, which increases the likelihood of duplicate registrations.[91] These duplicates can occur when patients are registered in more than one area or under different NHS numbers—often due to errors including misspellings or inconsistencies in recording details such as first names (eg, 'Jon' vs. 'Jonathan'), surnames (eg, in

[88] NHS England, 'Patients Registered at a GP Practice'.
[89] NHS England, 'Primary Medical Services Policy and Guidance Manual (PGM)'.
[90] Office for National Statistics, 'Beyond 2011: Administrative Data Sources Report: NHS Patient Register'; Office for National Statistics, 'Patient Register: Quality Assurance of Administrative Data Used in Population Statistics, Dec 2016 - Office for National Statistics'.
[91] NHS England, 'Patients Registered at a GP Practice'.

cases of shared custody of children), or dates of birth (eg, 01-11-2002 vs. 11-01-2002). The manual nature of this process, combined with the fact that different GPs use different computer systems, not only increases the likelihood of these mistakes but also means that they may not affect all practices' patient lists equally.[92]

It is important to note that past audits have revealed that duplicate NHS numbers accounted for only 0.04 per cent of the data extract.[93] Nonetheless, the NHS has taken steps to address duplicate records and improve the accuracy of GP registration data. One key initiative is the ongoing migration from the National Health Application and Infrastructure Services to the Personal Demographic Service (PDS) in 2024, which allows for more frequent updates from a broader range of healthcare services.[94] The NHS emphasises continuous list maintenance through a rolling programme which includes regular checks to reduce list inflation.[95]

While concerns about over-coverage and list inflation in GP records are legitimate, under-coverage also poses significant challenges to the accuracy of population estimates, particularly among specific groups, and in turn our estimate of children missing from education. Under-coverage occurs when certain populations are not included in GP records since there is no legal requirement for patients to register with an NHS GP, allowing some individuals to be missing from our estimate entirely. For example, children from highly mobile families, such as those of armed forces personnel or seasonal workers, or those who exclusively use private healthcare, may be missing from the patient register. Additionally, international migrants; recent returnees or university students who de-registered before leaving; or simply healthy individuals may delay or avoid registering with a GP, leaving them absent from the headcounts used in our analysis. Marginalised groups, such as those from the Gypsy, Roma, and Traveller (GRT) community, asylum seekers, and care-experienced people, may also be underrepresented in GP records due to multiple barriers affecting access to healthcare.[96]

It is also important to consider how over- and under-coverage issues might affect GP and school records in similar ways. For instance, as previously mentioned, errors such as misspellings can occur when registering at a GP practice. At the same time, data input mistakes might happen in school records when administrative staff enter pupils' information for the school census. While it is likely that both the NHS and the Department for Education take steps to correct inaccuracies, it is unknown which organisation is more effective at maintaining accurate records and removing

[92] Office for National Statistics, 'Beyond 2011: Administrative Data Sources Report: NHS Patient Register'; Office for National Statistics, 'Patient Register: Quality Assurance of Administrative Data Used in Population Statistics, Dec 2016 - Office for National Statistics'.
[93] Office for National Statistics, 'Beyond 2011: Administrative Data Sources Report: NHS Patient Register'.
[94] Waller and Williamson, 'New GP Payment System', 16 September 2020. We note however that PDS derived population estimates are also higher than the ONS population estimates.
[95] NHS England, 'Primary Medical Services Policy and Guidance Manual (PGM)'. For example, these checks include verifying patient residency at university addresses for more than four years, confirming details for patients over 100 years old, etc.
[96] Doctors of the World, 'Registration refused: A study on access to GP registration in England'

duplicates, and, if true, why this is the case.[97] There are limited steps we can take to address this as the extent to which these issues affect our data is unclear.

Several factors indicate that the impact of these issues on our estimates might be less significant than initially anticipated. For example, while concerns about delays in registering newborns causing temporary gaps are legitimate, children are likely to be registered by school age, particularly within the 5-15 age group being studied, given the vaccinations and health visits that occur during this early phase. Furthermore, concerns about list inflation due to delays in updating records for deceased individuals or legitimate duplicate registrations (such as for prisoners serving short sentences who are allowed to register at two GP practices), seem less relevant for children — eg due to the relatively low infant mortality rate in England.[98] While emigration is acknowledged as a potential source of error, it is important to note that children, in most cases, will have fewer opportunities to emigrate independently compared with adults — though we acknowledge this issue remains relevant when families move together. Lastly, data limitations mean that, to the best of our knowledge, we currently do not know the extent to which we are undercounting children — eg such as those in private healthcare as it is unclear how many children solely use private healthcare or if they also use NHS services if they were, say, born in an NHS hospital. This is not to suggest that over- and under-coverage issues should be dismissed entirely. Rather, as we emphasise throughout the report, the extent of their impact on our estimates remains uncertain without access to more detailed records.

[97] 'NHS Number Guidance for GP Practices V1.1'. For example, NHS guidance recommends that patient details be confirmed during interactions with healthcare services, such as verifying addresses and dates of birth when booking appointments, which may help reduce inaccuracies in GP records

[98] Office for National Statistics, 'Child and Infant Mortality in England and Wales'; Dattani et al., 'Child and Infant Mortality'.

Annex B: Population estimates and alternative benchmarks

We conducted sensitivity analysis to understand the impact of using alternative benchmarks, including the ONS population estimates and alternative versions of the GP data. In examining the data, we noted an unexpected discrepancy between the number of children reported by DfE and the ONS in 2021, ie the census year. Specifically, the DfE school records indicate a higher number of children compared with the unadjusted (original) ONS estimates (see Figure 19). This gap persisted even when we did not consider those who were home educated (ie pupils who would not appear in the DfE data). It is also unlikely that this discrepancy is due to double counting from combining the AP census and the school census, as the school census figures alone are still higher than the ONS estimates. [99]

Figure 19: Comparing the number of children based on DfE and ONS estimates

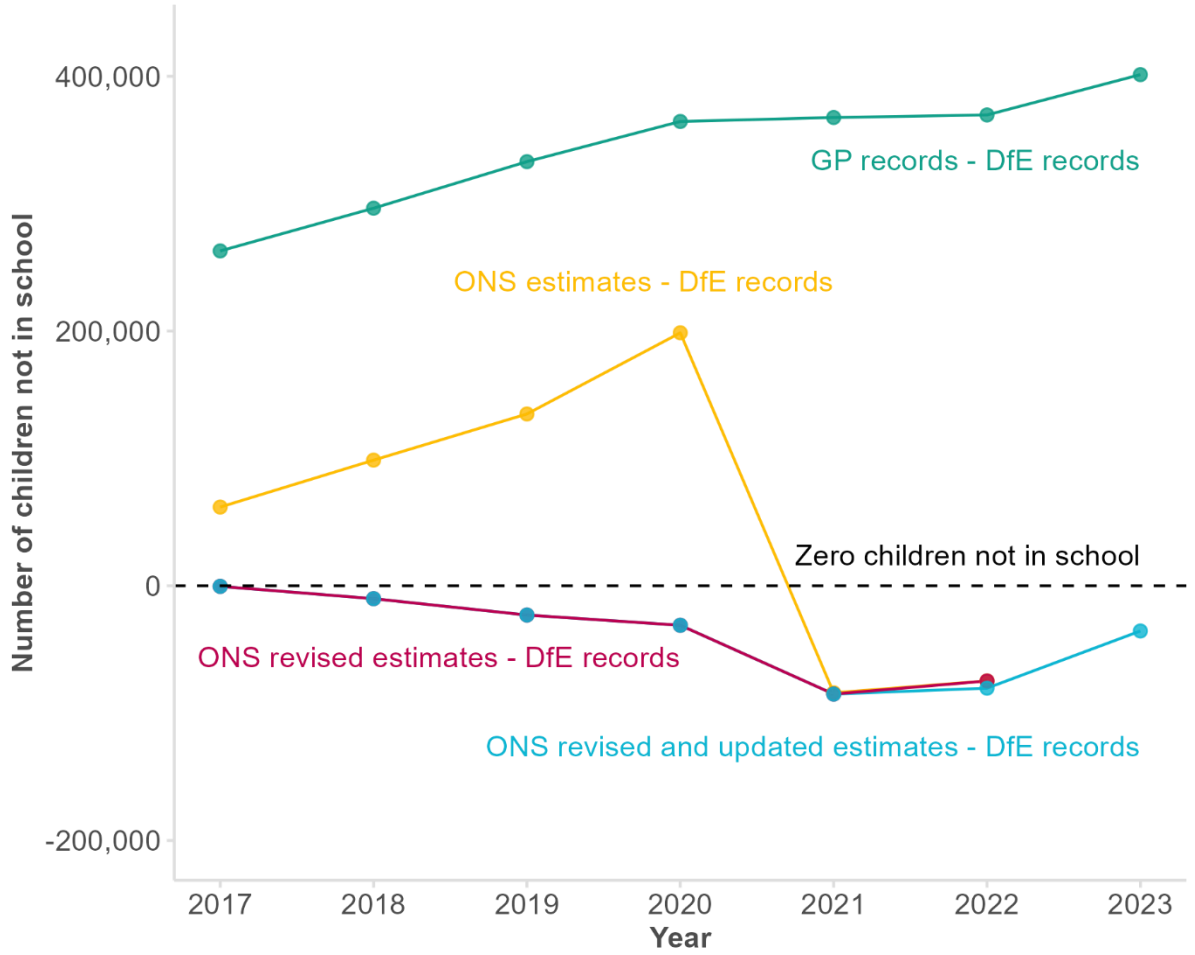
Year	DfE figures	EHE figures	DfE + EHE	ONS figures	Which is larger? DfE or ONS?	Which is larger? DfE + EHE or ONS?
2017	7,191,282	45,500	7,236,782	7,253,046	ONS higher	ONS higher
2018	7,303,122	52,770	7,355,892	7,401,731	ONS higher	ONS higher
2019	7,382,178	54,656	7,436,834	7,517,042	ONS higher	ONS higher
2020	7,414,217	61,534	7,475,751	7,612,793	ONS higher	ONS higher
2021	**7,493,769**	**78,184**	**7,571,953**	**7,409,731**	**DfE higher**	**DfE higher**
2022	7,582,688	80,900	7,663,588	7,507,938	DfE higher	DfE higher

Had we used the ONS population estimates to calculate the number of children not in school, we would have arrived at results that are not only lower than GP-derived estimates, but, in most cases, implausible and negative (see Figure 20). This issue becomes even more pronounced with the revised ONS estimates which account international migration. A negative number seems implausible, especially when contrasted with data from DfE and CCO, which indicate that the actual number (albeit, of children missing from education) is both positive and substantial.[100] This was also the case for ONS population estimates derived from administrative data, meaning that they too would lead to implausible negative counts of children not in school. Our sensitivity analysis therefore further supports our decision to use GP data over alternative ONS population estimates.

[99] For example, in 2021/22, there were 7,468,081 children in schools and 25,688 in alternative provision. In 2022/23, these numbers rose to 7,552,856 and 29,832, respectively. Even when excluding those in alternative provision, the DfE data remains higher than the ONS estimates.

[100] Department for Education, 'Children Missing Education, Academic Year 2023/24'; Children's Commissioner's office, 'Lost in Transition'.

Figure 20: Estimating the number of children not in school using alternative measures

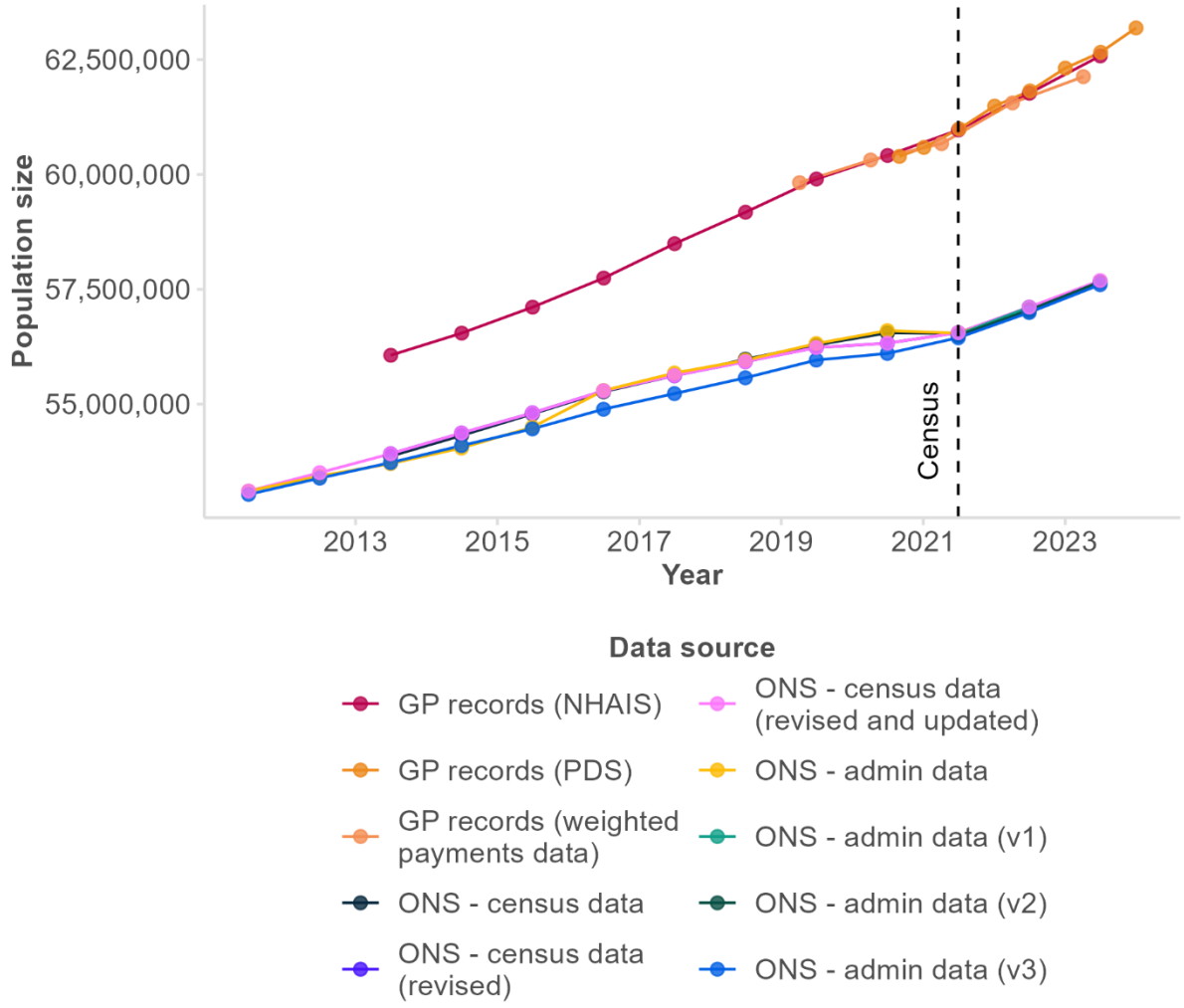


This mismatch between data sources was unexpected for two reasons. Firstly, this would suggest that there are more children in schools than the ONS think are in the country. Secondly, this mismatch occurred during the census year, which typically provides more accurate population counts due to the thoroughness of the census process. In contrast, the population estimates for non-census years rely on projections from the last census, which can accumulate errors over time. This discrepancy raises questions about possible calibration issues with the ONS population estimates, particularly since census years are usually a benchmark for accuracy.

We also examined multiple data sources for the patient registration headcounts and found that they provided similar results. The primary source in this report was the National Health Application and Infrastructure Services (NHAIS) data, but as part of our sensitivity analysis, we also considered the feasibility of using two alternative sources. First, we explored the new Personal Demographic Service (PDS), but it lacked the detailed demographic information required for our analysis during the relevant time period. Second, we examined weighted GP payments data, which adjusts NHAIS counts based on several factors, and found that it mirrored the same

trends.[101] Both the PDS and weighted GP payments data produced higher patient counts than the ONS population estimates (see Figure 21). This consistency suggests that any discrepancies between GP registration figures and ONS estimates are likely due to differences in how populations are tracked rather than the choice of data. As a result, while alternative sources were considered, using them to derive our estimates is likely to result in negligible differences.

Figure 21: Population estimates using alternative GP registration data and ONS mid-year population estimates



Source: GP (NHAIS) records from NHS Patients Registered at a GP Practice data; GP (PDS) records from NHS digital services open data dashboard. Weighted GP records from NHS Payments to General Practice. Census based and admin based mid-year population estimates from ONS. The census based ONS estimates were revised based on 2021 Census and updated further to account for international migration

[101] The weighted patient count adjusts the registered patient count based on factors such as age, gender, patient need, list turnover, regional costs, rurality, and the number of patients in nursing or residential homes. This adjustment is used in allocating funding for GP practices and ensures that the count reflects the practice's specific population needs.

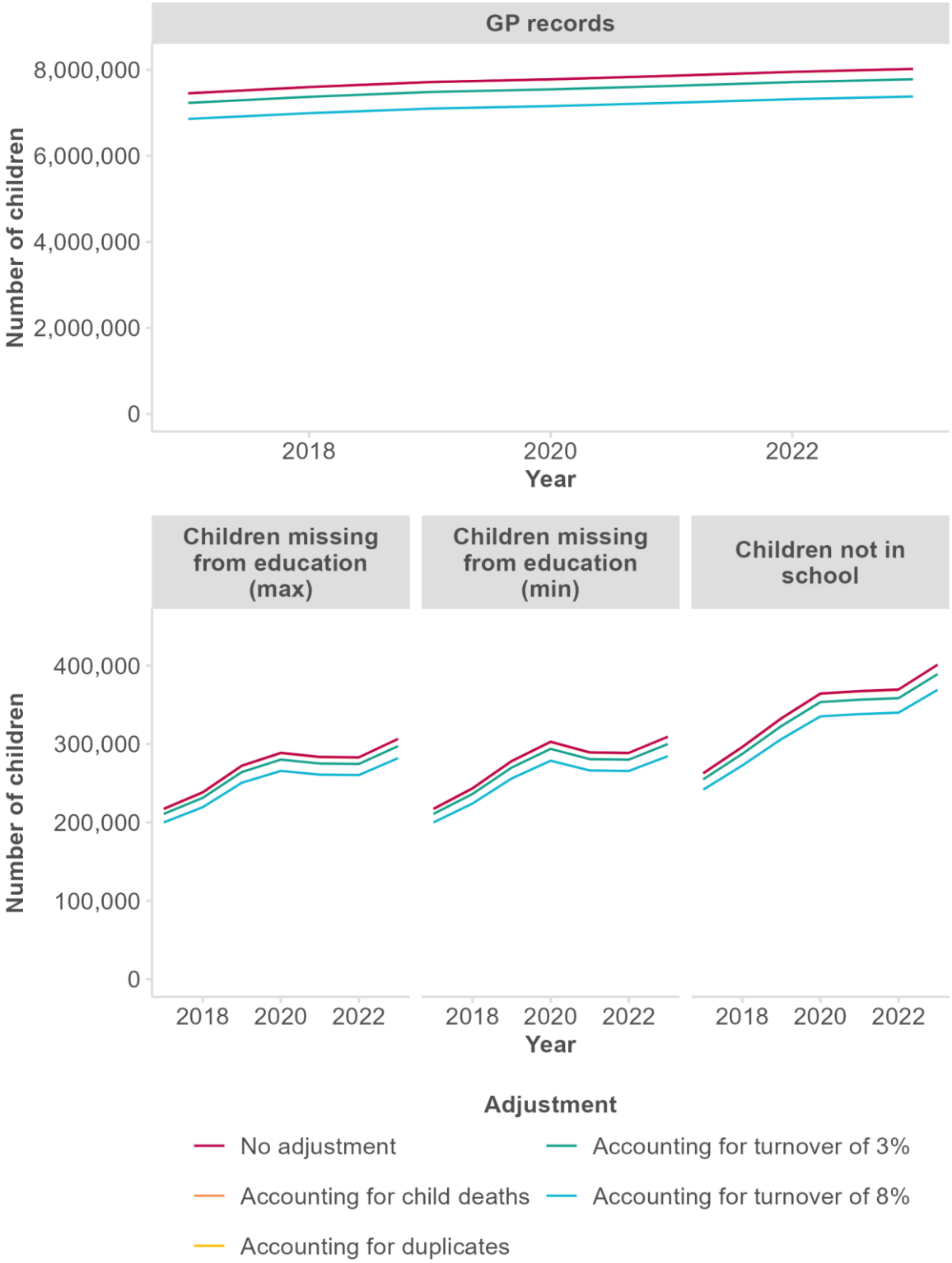
Annex C: Correcting for data errors

We conducted sensitivity analysis to explore the uncertainty in our estimates by correcting for known data issues. We applied corrections to the underlying GP data and our final CNIS and CME estimates for three main factors: duplicate NHS numbers (0.04 per cent based on past audits), over-registration due to deceased individuals (using ONS child death statistics), and patient turnover rates (3-8 per cent error rate estimated by NHS England).[102] These corrections, which reduce our estimates somewhat, as shown in Figure 22, rely on strong assumptions. For instance, we have assumed all deceased children's records remained on the register and applied turnover rates uniformly across ages and genders, despite known variations in over-registration rates by socio-demographic factors. Nonetheless, they suggest that child deaths and duplicates are of lesser concern than errors related to patient turnover given their relative rarity in the data.

While these adjustments for known issues – where estimates of their scale exist – could theoretically refine our estimates, they would not be able to address all data problems (both known and unknown) discussed in Annex A. Therefore, it is unlikely that we would arrive at a definitive count given the data currently available to us. We therefore decided that our core outputs would focus on unadjusted estimates, and we would instead highlight the underlying data quality issues requiring attention. As discussed, linking various data sources will be necessary to improve the accuracy of estimates of the number of children missing from education.

[102] Office for National Statistics, 'Child and Infant Mortality in England and Wales'; NHS England, 'Primary Medical Services Policy and Guidance Manual (PGM)'; Office for National Statistics, 'Beyond 2011: Administrative Data Sources Report: NHS Patient Register'.

Figure 22: The impact of adjusting for sources of error



Annex D: Gender differences in English education system exits in the secondary phase

In our NPD cohort analysis, we looked at gender differences in system exits through the secondary phase (see Figure 23). We did not find substantial differences, with slightly more boys than girls exiting the English education system for an unknown destination each year – mainly related to the slightly higher number of boys than girls in the cohort (333,083 v 308,029). The proportion of boys in the cohort exiting the system was slightly higher than that of girls (9.2 per cent v 8.7 per cent).

Figure 23: Gender differences in system exits through the secondary phase for the 2019 cohort