



Ministry
of Justice

Children in Family Justice Data Share

The Public Law Applications to Orders (PLATO) Tool



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1. Children in Family Justice Data Share

Introduction

The Children in Family Justice Data Share (CFJDS) is a collaborative project that has resulted in a database of child-level data linked from across the Ministry of Justice, the Department for Education (DfE) and Cafcass' management information systems. Section 1 of this report introduces the CFJDS, outlining the background to the data share, the context within which it was developed, and a description of the methodology used.

The first output from the CFJDS is published alongside this report. The Public Law Application to Order (PLATO) tool presents analysis of the pattern of applications and orders made in public law Children Act cases, both across geographical regions and for trends over time. The key features of the tool and some example findings are described in Section 2. The PLATO tool can be found [here](#).

Section 3 of the report presents areas for future analysis for the data share in light of priority evidence needs, as well as high-level plans for external stakeholders to access the data.

The data share showcases what can be achieved when government departments and agencies work together and when a range of analytical professions collaborate. The existence and analysis of the data share is a joint effort of social researchers, statisticians, data scientists, operational researchers and economists working together closely and effectively, each bringing their unique expertise to bear on the overall project.

The significant lack of evidence on the outcomes for children who have experienced the family justice system is widely recognised both across government and in the wider research community.¹ The CFJDS is ground-breaking in that it provides, for the first time, longitudinal data on the short and medium-term outcomes for these children. The data will build our understanding of how different experiences and decisions made within the family court can impact on children's educational outcomes, and subsequently, their life chances. This is intended to provide more robust evidence on which to make sound policy decisions for children and their families and has the potential to address some long-established evidence gaps.

This publication reflects a commitment both to transparency in the use of statistics by decision-makers within government, and to the sharing of data for the public good.² The PLATO tool was developed as a priority from the CFJDS due to the policy, cross-government and academic interest in the regional

¹ See, for example, Rogers, B., Trinder, L. and Williams, T. (2015) Towards a family justice observatory to improve the generation and application of research. The Nuffield Foundation.

² As set out in the Data Sharing Statement and Code of Practice: Statistics (2016) UK Statistics Authority.



variation of public law decisions. The tool aims to present the data in an innovative and interactive format that is useful for practitioners and researchers alike.

The scope of the CFJDS to address key evidence gaps in family justice continues to be explored and will inform the ongoing programme of work. Key areas for analysis that are being considered include: building a demographic profile of children who have experience of the family justice system; understanding their pathways through the system; and establishing the impact these interactions have on educational outcomes. Next steps and forthcoming areas for analysis and outputs of the CFJDS are described in Section 3.

1 Background

The purpose of the CFJDS is to develop the evidence base and improve our understanding of the characteristics of children who experience the family justice system, their journeys through the system, and the impact of the family justice system on their educational outcomes. The development of the data share has relied upon collaborative working between MoJ, DfE and Cafcass.

1.1 Setting up the data share

The data share was set up partly as a response to the Family Justice Review (FJR), published in November 2011, which was critical of the management of information and summary data held by the government in relation to cases in the family justice system.³ The review found that disparate stand-alone IT systems and the lack of communication and co-ordination across government departments and agencies led to inefficiencies and delays within the system. Importantly, it also prevented the development of a coherent picture of a child's journey through the family court system and its potential impact on their life chances and outcomes.

The review highlighted that these significant gaps in management information and lack of robust data impacted on the development of evidence-based policy. The final report thus recommended that an integrated IT system should be developed for the family justice system and wider agencies, and in the meantime, the government conduct an urgent review of how better use could be made of existing systems. This project addresses the second part of this recommendation by maximising the use of existing systems and data sources, as committed to by the Government in its response.⁴

The Family Justice Board – set up to drive improvements to the family justice system following the FJR – were highly supportive of the project for its potential in addressing key evidence gaps and established a

³ Ministry of Justice (2011) Family Justice Review Interim Report.

⁴ Ministry of Justice and Department for Education (2012) Government response to the family justice review: a system with children and families at its heart.

formal data share project board structure. Due to the personal and sensitive nature of the data held by each agency, there were significant legal issues to overcome in relation to compliance with the Data Protection Act (DPA), including how personal data would be handled and by whom. Each organisation was required to ensure that their existing privacy notices covered the data share project, and if not to revise it accordingly.

Following extensive discussions with lawyers and data compliance experts, a final Data Sharing Agreement and associated Privacy Notices were agreed throughout 2015. The Data Share Agreement and Privacy Impact Assessment were formally signed by MoJ, Cafcass and DfE in December 2015. The current Data Share Agreement states that this is a one-off exercise and any modifications or extensions to it would require further agreement from all parties. It is hoped that the benefits of the CFJDS will make an extension an attractive option.

Although formal agreement to share the data had been established, significant challenges remained: meeting the requirements of DfE's Data Access Panel to obtain the required National Pupil Database extracts, several unforeseen technical issues with IT infrastructures, and ongoing resource pressures within each organisation. All constituent datasets which comprise the data share were extracted and transferred by the end of 2016.

The data share project has been driven by a working group comprising analysts from MoJ, Cafcass and DfE who have led on the data matching, analysis and development of the PLATO tool. The group has identified priority areas for analysis based on important evidence gaps and policy priorities. MoJ have held two roundtable events with academic experts from both public and private family law and specialist research organisations to draw on their expertise to sense-check our analysis plans and seek their views on the usefulness of the PLATO tool during its development.

1.2 Data included in the data share

The data share is comprised of extracts from three management information systems:

- MoJ FamilyMan, the family courts case management system administered by HMCTS
- Cafcass' electronic Case Management System (eCMS)
- DfE's National Pupil Database (NPD) and Children Looked After (CLA) data.

Table 1 summarises the variables that are included in the respective management information systems within the data share.

Table 1 Data variables within in the data share

MoJ FamilyMan (England and Wales)	Cafcass' eCMS (England only)	DfE's NPD and CLA (England only)
Number and role of parties (children, parties and legal representatives)	Child demographic data (age, gender, location)	Child demographic data (age, gender, ethnicity, SEN and language)
Case and court information (case start and end date)	Adult demographic data (age, gender, location)	Protected characteristics
Family court events and timings	Application type	Placement type
		Episode details
		Legal status (of looked after child's most recent episode during processing year)
		Attainment data at Key Stages 1 to 5
		School absences and exclusions

The data share includes data for over 504,000 Children Act cases⁵ involving 698,000 individual children who entered the family justice system between 2000 and 2016.⁶ This is 768,000 'cases by child' which is a count that considers each child's individual journey (as an example, if one case involves three children, it is counted as three cases by child).

Table 2 presents the breakdown of data included in the data share by public law and private law Children Act cases, and the children involved in them.

Table 2 Data included in the data share by public and private law Children Act cases

Law Type	Cases	Children
Public law Children Act	117,294	178,236
Private law Children Act	386,804	528,394
Total	504,098	706,630*

⁵ The data share includes data on Children Act cases only and therefore excludes adoption. This is being considered for further analysis (see section 3.1).

⁶ The original data share covered cases from 2000 to 2015 but was updated in 2017 to include FamilyMan and Cafcass data to the end of 2016.

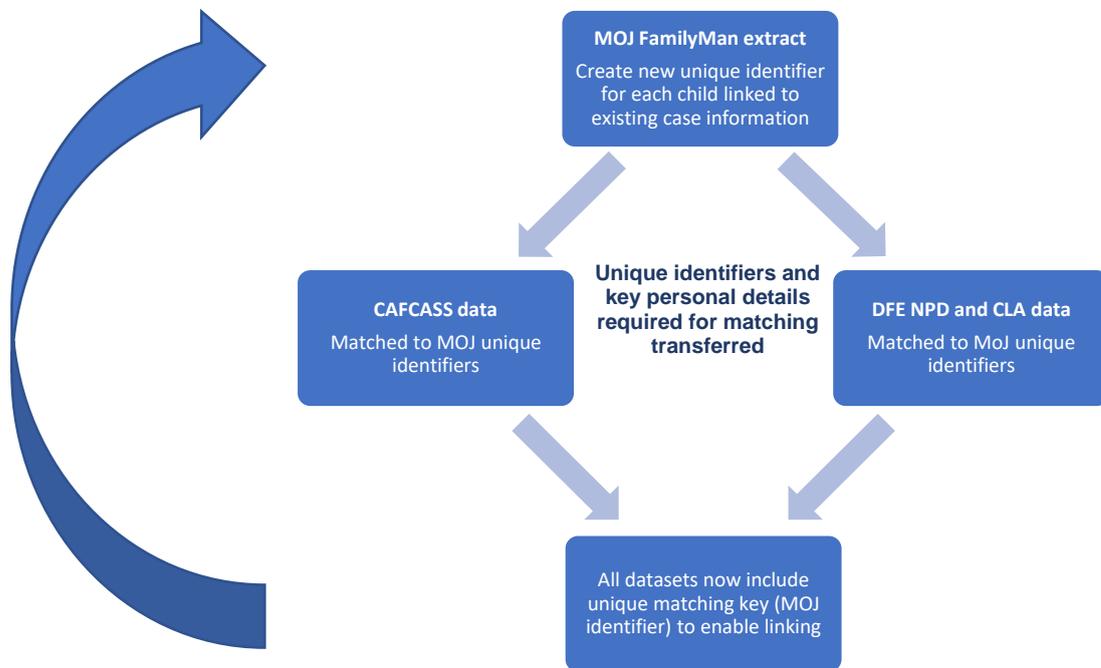
**The total child count is higher than the number of individual children because a child will be counted twice if they have been subject to both a public and a private law case.*

1.3 The matching process

Matching the three datasets was a complex exercise. Children were identified and matched by variables that were recorded in each individual dataset and combined to create a dataset where each child is represented once. The matching rates across the datasets are currently between 70% and 75%.

To produce the linked dataset, analysts in MoJ Analytical Services applied a set of matching rules. A simplified diagram of the matching process is presented in Figure 1.

Figure 1 A simplified diagram of the data share matching process



Key steps in the matching process were:

1. All children involved in public or private family law cases from 2000 to 2016 were given a new unique identifier. These unique identifiers were collated in a dataset, alongside the existing case number and children’s identification number from FamilyMan.
2. FamilyMan data was matched to Cafcass’ eCMS data by linking the case number or children’s identification number in the first instance. This was then followed by matching with other personal details (including surnames, forenames, date of birth and postcode) in an iterative process designed to improve the match rate.

3. DfE matched their NPD and CLA data to the new MoJ unique identifiers using 'fuzzy matching' algorithms. Fuzzy matching algorithms are rules used to link data based on non-perfect matches between data variables. For example, accepting partial matches on names to accommodate misspellings or abbreviated forms, or correcting for errors in date of birth by swapping date and month values.
4. The datasets were then combined into a master table using the common MoJ unique identifiers. The master table can be used to link the new MoJ unique identifiers (and Cafcass and DfE identifiers) back to the original case numbers in FamilyMan.

1.4 Understanding the potential of the data share

The data share is a comprehensive and detailed database which provides opportunities for analysis that have not been possible before. Some of these key strategic evidence gaps the data share has the potential to address include:

- Building a picture of the demographic profile of children with experience of the family justice system including their age, gender, ethnicity and special educational needs (SEN).
- Providing longitudinal data on the pathways of children from their first entrance to the family justice system through to their case and educational outcomes. Linking detailed case-level data such as the type, pattern and timing of applications and orders made with educational attainment at Key Stages 1 to 5 will build our understanding of how different experiences and decisions made within the family court can impact on children's educational outcomes.
- Comparing the demographic profile of children, both in public and private law, with children in the general population, as well as to observe how the profile of children in the family justice system has changed over time.

These areas are not exhaustive. The data share working group continue to interrogate the feasibility of the data share to identify and prioritise areas for future analysis. These are outlined in section 3.1.

1.5 Limitations with the data share

The validity and generalisability of the data within the matched dataset is subject to some caveats due to the different nature of the three individual databases. The datasets cover different geographical areas. MoJ data is based on both England and Wales, and DfE and Cafcass datasets cover England only. Around 10% of cases have been excluded due to incomplete records in FamilyMan.

DfE databases are drawn from the School Census, which includes data from local authority nurseries, schools and academies. These databases therefore only include children over two years of age, and the reliability of data is likely to improve from ages four and upwards (when children reach legal school age). The Cafcass database, conversely, includes children from all ages who are involved in a family law case in which a Cafcass Family Court Adviser is appointed, and therefore a proportion of children in the

Cafcass database cannot be matched to DfE data. The MoJ dataset captures all children involved in the family justice system, but not all can be matched to the Cafcass and DfE datasets and thus for a proportion of children in the family justice system some of the demographic details are unknown.

Educational outcomes for Key Stages 1 to 5 are only included for academic years 2003/04 to 2014/15 which limits the longitudinal data available for some children. Any future extension of the data share would mitigate this issue, and begin to include data following a subset of children through their entire school experience.



2. Public Law Applications to Orders (PLATO) tool

The Public Law Applications to Orders (PLATO) tool is the first output from the CFJDS. PLATO enables analysis of the conversion rate⁷ between applications and orders made in public law Children Act cases, both across geographical regions and for trends over time. This tool was developed as a priority from the data share analysis due to the policy, cross-government and academic interest in the regional variation of public law decisions. The PLATO tool can be found [here](#).

2.1 Data used for the tool

The data used in the PLATO tool is a subset of the data generated from the data share. The tool uses public law data from 2010 to 2016, due to issues with completeness of data outside this range within FamilyMan.⁸ It does not use DfE data. It is based on a total of 78,000 cases involving 119,000 children, or 123,000 cases by child.

Due to the nature of the data and the matching process, the tool should be interpreted with some caveats and assumptions in mind. Local authority data for each public law case is recorded by Cafcass. Due to incomplete matching between FamilyMan and Cafcass' eCMS, and the fact that we do not have the equivalent Welsh data from Cafcass Cymru, around 41% of cases in FamilyMan could not be linked to the local authority which made the application. Data at local authority level is therefore only available for a subset of cases.

Local authorities do not necessarily make all applications to the same Designated Family Judge (DFJ) area.⁹ Furthermore, court orders are not necessarily made within the same DFJ area that received the initial application. To simplify the analysis, data at local authority level only represents cases that *remained* within the region or DFJ area selected in the tool. Applications from the local authority made outside the DFJ area or region selected are excluded. Conclusions from the analysis at local authority level should therefore be drawn with care.

The findings in the PLATO tool are not comparable to other published statistics or research, including the regular MoJ publication Family Court Statistics Quarterly¹⁰ due to different units of data and analysis.

⁷ The proportion of cases, or cases by child, that convert from a specified application type to a specified order type. For example, the care conversion rate is the proportion of care applications that result in a care order.

⁸ Data collected prior to 2010 in FamilyMan is incomplete as case level data from most family proceedings courts was not collected centrally.

⁹ There are 45 Designated Family Judge areas in England and Wales. These specify the geographical area of all the courts a Designated Family Judge is responsible for.

¹⁰ See the Family Court Statistics Quarterly collection: <https://www.gov.uk/government/collections/family-court-statistics-quarterly>.

2.2 Tool features

The PLATO tool consists of three main sections:

- **Summary:** presents an overall picture of public law Children Act cases between 2010 and 2016. This tab can be filtered by the types of application and/or orders that a case includes. It demonstrates the year-on-year trends in total volumes, cases as a proportion of the child population by region¹¹, and the regional trends in conversion rates between selected application and order types.
- **Cases by application type:** provides detailed geographical breakdowns of public law Children Act cases by the applications involved. The number of cases per child population¹² are presented on a map, which can be shown at regional or DFJ area level, and are coloured based on how much they differ from the national or regional average. The map can be filtered by the application types involved in the case. Clicking on a region or DFJ area also brings up a bar chart of the number of cases by local authority within that area, to allow for more detailed insights.
- **Cases by order type:** provides geographical breakdowns of public law Children Act cases, for selected application and order types. For instance, the map can display the proportions of children with cases involving care applications who received care orders, by region or DFJ area, and provides comparisons to the national or regional average. As for the applications map, a bar chart is provided to show application to order conversion rates at local authority level.

The application (order) types presented in the tool refer to all applications (orders) that were made in a case. For example, if a child was subject to a care and supervision application, received a care order, and had a subsequent special guardianship application and a special guardianship order, this would be represented as a “care + supervision + special guardianship” application resulting in a “care + special guardianship” order. These application and order combinations are then grouped into several categories. A flow chart demonstrating how the groupings were categorised is shown in the Appendix of the tool and in Annex A of this report.

The user can select whether to display the data using the count of cases or cases by child. Selecting by cases will count each case number once (which may involve multiple children). This would be suitable to consider court workload, for example. Selecting cases by child will count each case number and each unique child once. This would be suitable for considering the number of children affected by certain decisions, for example.

¹¹ The regions used in the tool are South West, South East, London, Midlands, North West, North East and Wales.

¹² Based on mid-year population estimates (0-17 years old) for each year (ONS Population Estimates Unit).

A guide to help users navigate the tool is included in Annex B.

2.3 Illustrative findings

In this section we provide some example findings to illustrate the type of themes that can be drawn from the tool. This is intended to support the user in navigating the tool and interpreting the analysis and is not intended as a summary of the most important or key findings. Users are encouraged to interpret the analysis of the PLATO tool bearing in mind the data limitations and methodological assumptions that have been applied to the data share overall and PLATO specifically.

The PLATO tool has been designed to be used by practitioners, analysts and academics, both within and outside government, to gain a more detailed understanding of the regional variation of the public law system. It is not possible to use the tool to draw clear conclusions in relation to local practice or decision-making but rather presents research hypotheses that require further in-depth and qualitative investigation. The PLATO tool does not enable the user to make a judgment on the 'appropriate' volume or pattern of applications and orders made in public law.

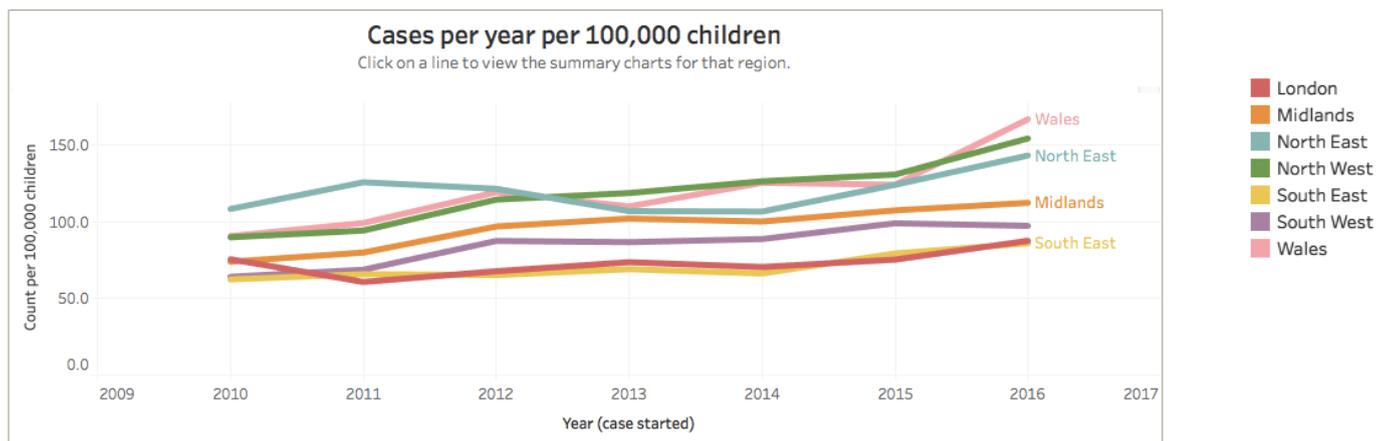
Overall trends

Overall, both the total volume of public law cases and the volume of cases involving a care application have increased each year from 2010 to 2016. During this period, 56% of children who were subject to a care application received a care order. Of those who did not, the most common order groupings were supervision (20%) and special guardianship (11%).¹³

The rise in care application volumes has outpaced the growth in the child population in all regions. Nationally, between 2010 and 2016, the average rate of care applications has been 124 cases by child per year per 100,000 children (Figure 2). The largest growth in care application volume was in Wales between 2015 and 2016, where there was a 34% increase from 148 to 217 cases by child per 100,000 children.

¹³ Note that other cases will include supervision and/or special guardianship orders, included in these other order groups: Supervision and Special Guardianship; Care and Supervision; Care and Special Guardianship; and Special Guardianship. Users can select these groups on the PLATO tool by clicking Ctrl/Cmd-Click.

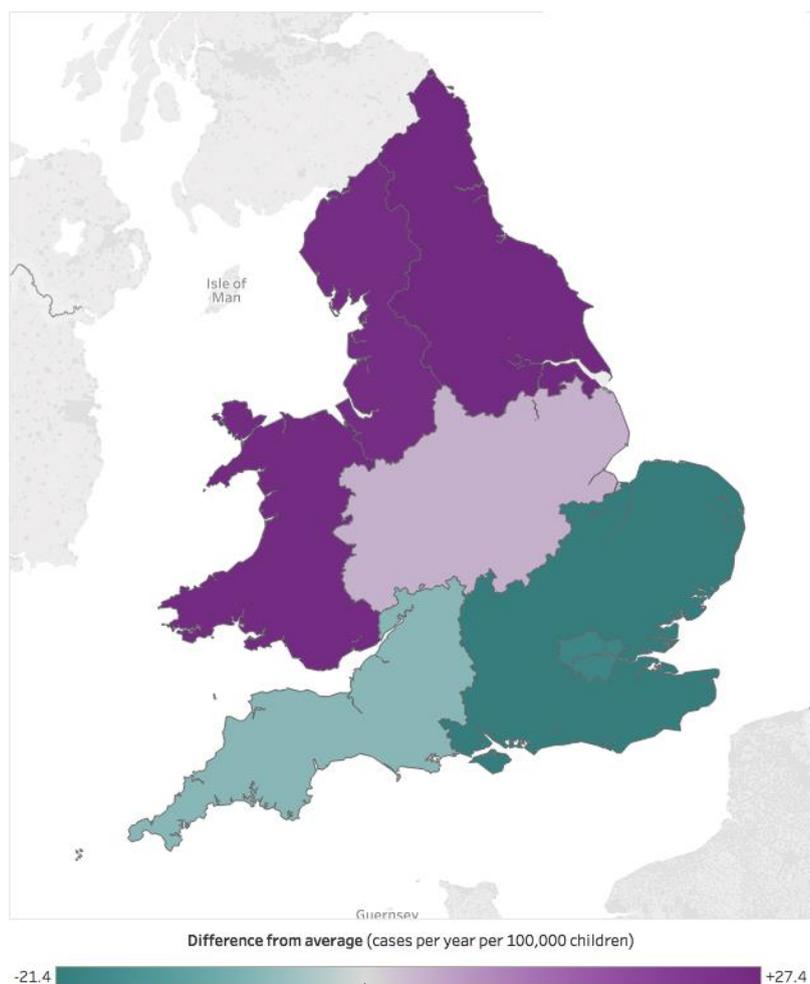
Figure 2 Public law cases per year per 100,000 child population



Regional variation in applications (all figures cover 2010-2016)

The North East, North West and Wales had substantially higher volumes of care applications compared with the South West, South East and London (Figure 3).¹⁴ At regional level, the North West had the highest average rate of care applications at 160 cases by child per year per 100,000 children between 2010 and 2016.

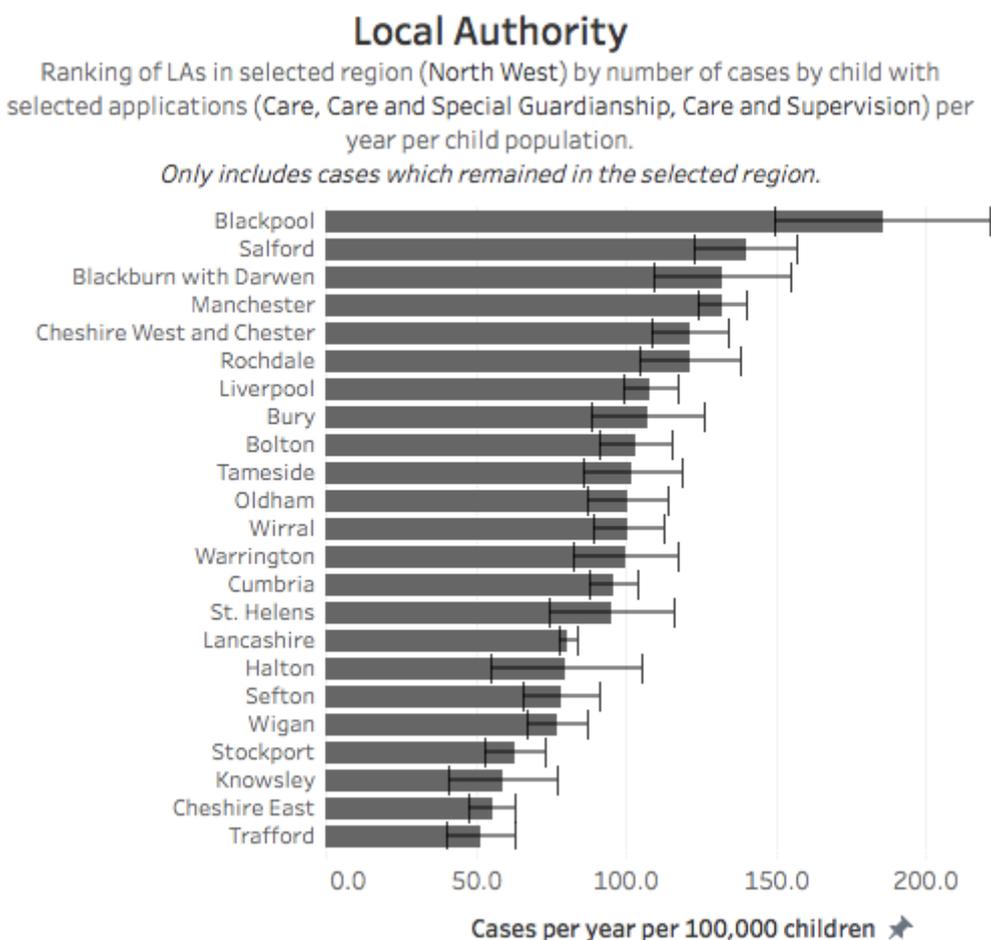
Figure 3 Cases with a care application per 100,000 child population by region



¹⁴ Any differences cited between groups have not been tested for statistical significance.

There is notable variation within all regions at local authority level. For example, in the North West, Blackpool had 186 cases by child per year per 100,000 children, while Trafford had 52 (Figure 4).¹⁵

Figure 4 Cases with a care application per 100,000 child population by local authority within the North West region



**Vertical black lines indicate the 95% confidence interval of each data value.¹⁶*

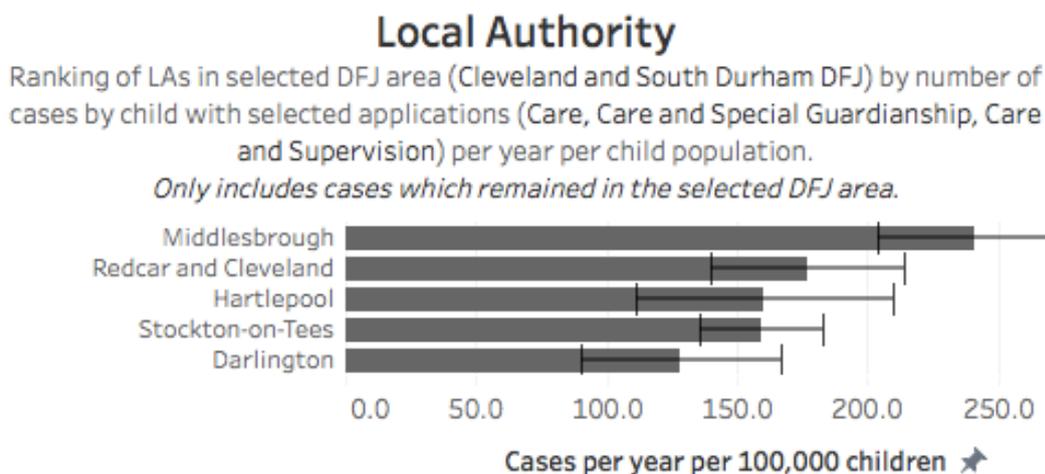
At DFJ area level, Cleveland and South Durham had the highest care application rate,¹⁷ with 312 cases by child per year per 100,000 children, in contrast with Swindon, with 48 cases by child per year per 100,000 children. Within some DFJ areas, there is considerable variation at local authority level. For example, in Cleveland and South Durham DFJ area, Middlesbrough had 241 cases by child per year per 100,000 children, compared with 128 in Darlington (Figure 5).

¹⁵ The number of cases are small for some local authorities, and therefore findings should be interpreted with caution for local authority level analysis.

¹⁶ A 95% confidence interval indicates a 95% probability of data including the true value.

¹⁷ The number of cases, or cases by child, with a care application, per year, per 100,000 children in the population.

Figure 5 Cases with a care application per 100,000 child population by local authority within Cleveland and South Durham DFJ area



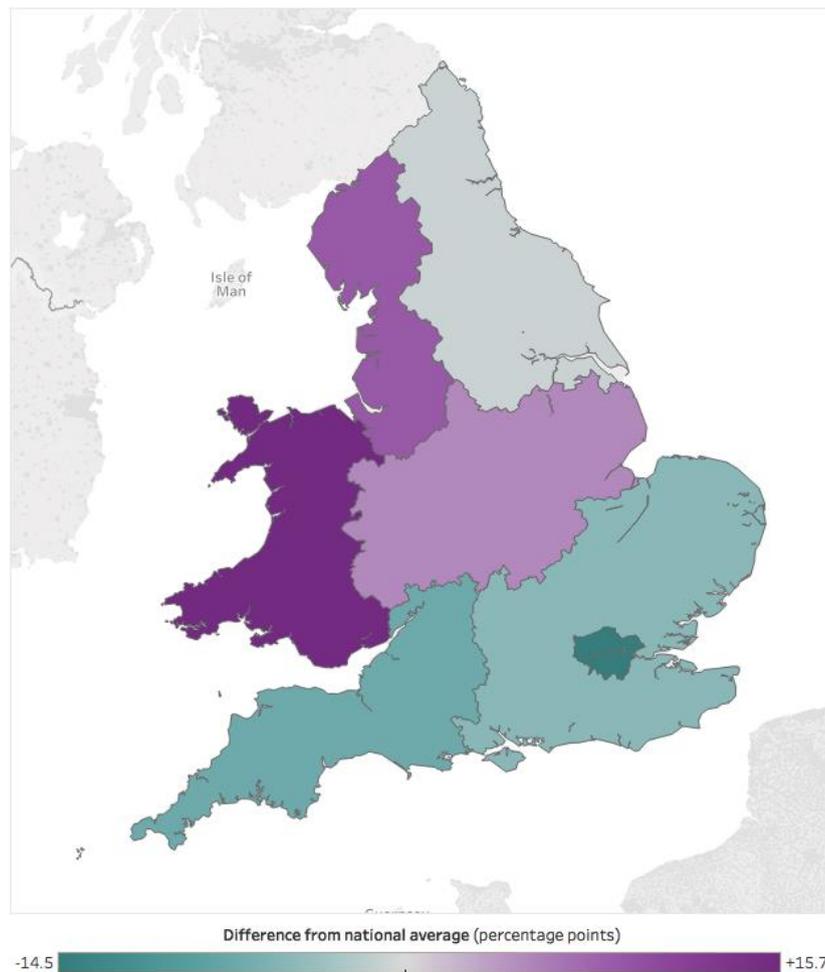
**Vertical black lines indicate the 95% confidence interval of each data value.*

Regional variation in orders (all figures cover 2010-2016)

Nationally, on average 56% of children who have been subject to a care application have received a care order. The North West, Wales and Midlands have higher than average care conversion rates, while the North East, South East, London and South West have lower than average rates (Figure 6). The care conversion rate varies considerably across regions, from 72% in Wales (with North Wales DFJ area having the highest conversion rate of 78%) to 42% in London (where West London DFJ area shows the lowest conversion rate of 40%).

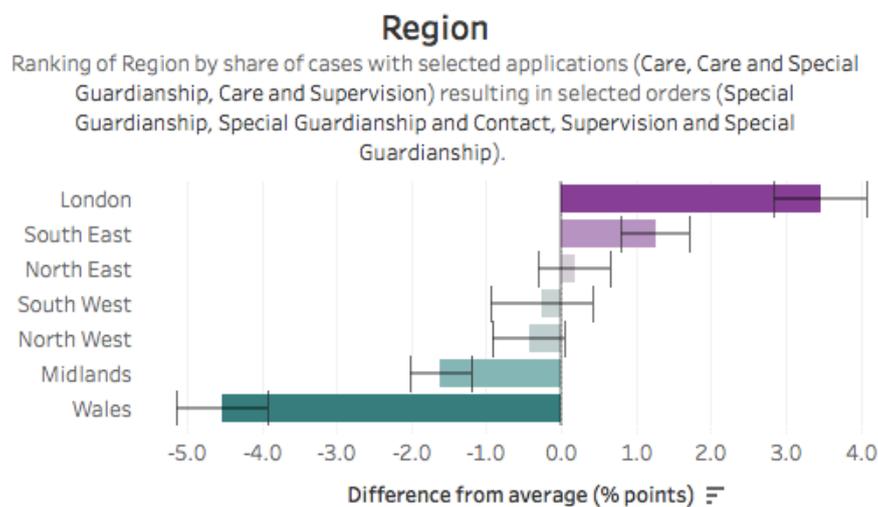
Whilst having the highest average rate of care applications, the North East has a slightly lower than average care conversion rate of 55%. This contrasts with Wales, where care application rates are high, but so is the care conversion rate (72%).

Figure 6 Care application to care order conversion rates by region



There is also regional variation in non-care orders for children who were subject to a care application. For instance, in London, 15% of children who were subject to a care application did not receive a care order but received a special guardianship order, compared with 7% in Wales (Figure 7).

Figure 7 Cases with a care application that resulted in a special guardianship order by region



*Vertical black lines indicate the 95% confidence interval of each data value.

3. Next steps and future work

3.1 Plans for future analysis

The data share working group continue to explore the feasibility of the CFJDS to address key evidence gaps in family justice. Plans for analysis are identified and prioritised against policy needs, as well as being shaped by questions that emerge as the family justice evidence base develops within government and in the external research community. The working group are keen to continue to work with stakeholders to ensure any future analysis and outputs from the CFJDS are relevant and complementary to their work in developing the evidence base. This will include close collaboration during the scoping and implementation of the Family Justice Observatory.¹⁸

Some of the themes that could be explored with the data share are outlined in section 1.4. Several separate pieces of analysis have begun in light of these, using a range of data available in the data share. One example is an analysis of the journeys children take through the family justice system, exploring the number of cases they are involved in, the pattern of applications and orders made, and the length of time it takes to reach a stable outcome.

As the analysis thus far has included public law Children Act cases only, the working group will explore the feasibility of including cases that lead to adoption, and the impact this has on children's outcomes. Another further area for exploration is the impact of interactions of the family justice system on children's educational attainment. There are intentions to publish outputs from these separate analyses going forwards.

Other analytical questions that have been identified for further exploration include:

- What is the overlap between public and private law cases?
- How does stability of orders affect educational outcomes?
- What are the characteristics and outcomes in private law cases where there is harm alleged?

The potential for applying more advanced and innovative techniques for analysis of the data share is also being explored by MoJ analysts. This includes using machine learning to identify drivers of instability in the system, and using advanced interactive data visualisation to interrogate children's pathways through the system.

¹⁸ Broadhurst, K., Budd, T. and Williams, T. (February 2018) The Nuffield Family Justice Observatory for England and Wales: Making it Happen. The Nuffield Foundation.

3.2 Data access

MoJ has gained agreement, in principle, from DfE and Cafcass to provide restricted access to the CFJDS for external researchers under controlled conditions at MoJ premises. This is subject to the findings of a pilot using data from the Police National Computer that is currently underway to test the IT infrastructure, data access and security arrangements – the pilot is due to complete in Spring 2018. If the pilot proves successful, further details on how to apply for access to the data and timings for the approval process will be available.



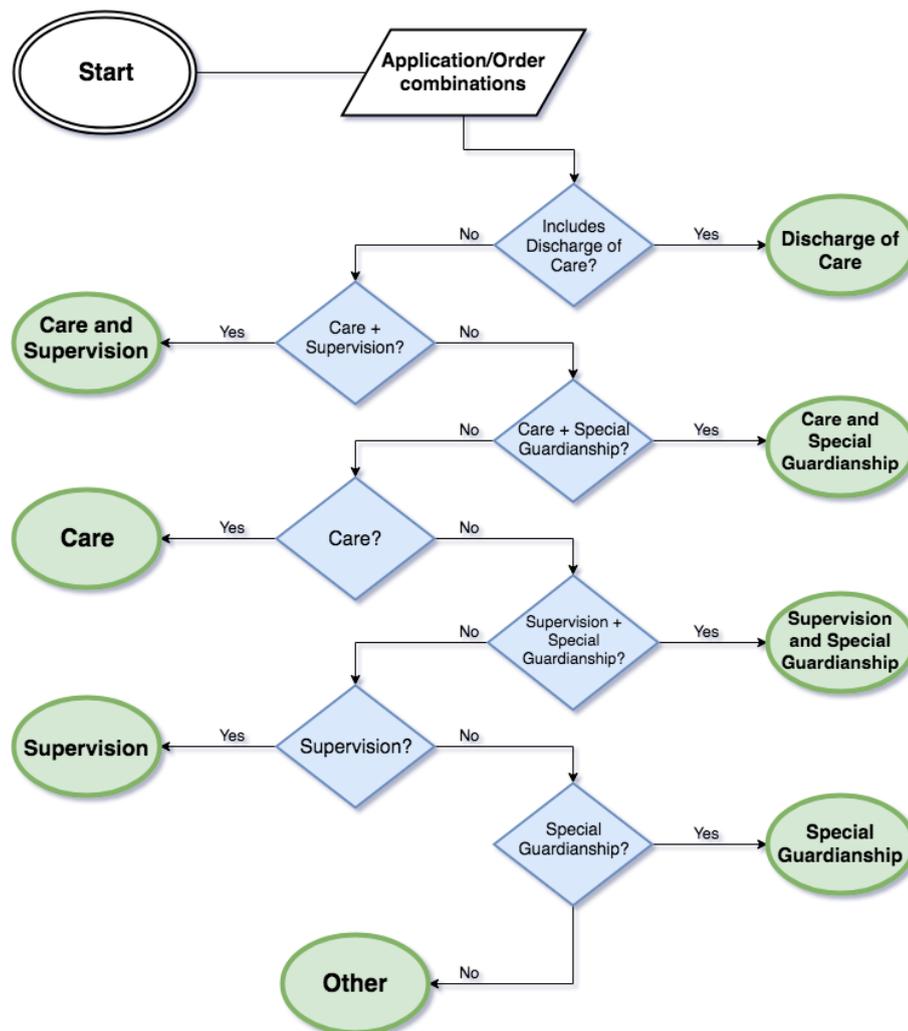
Annex A – Grouping of application and order categories

Each case by child is summarised by:

- The distinct types of applications made in the case
- The distinct types of order made in the case.

For example, a case may be summarised by its applications as “Care + Special Guardianship + Specific Issue”. This does not mean that there was only one of each application, or that they occurred in that chronological order. The orders made in the same case may also be summarised as “Care + Special Guardianship”. Given that there are hundreds of combinations found in the data, these are grouped into non-overlapping categories for ease of use, defined by the hierarchy in Figure A.1. This example case would be assigned the “Care and Special Guardianship” group for both applications and orders.

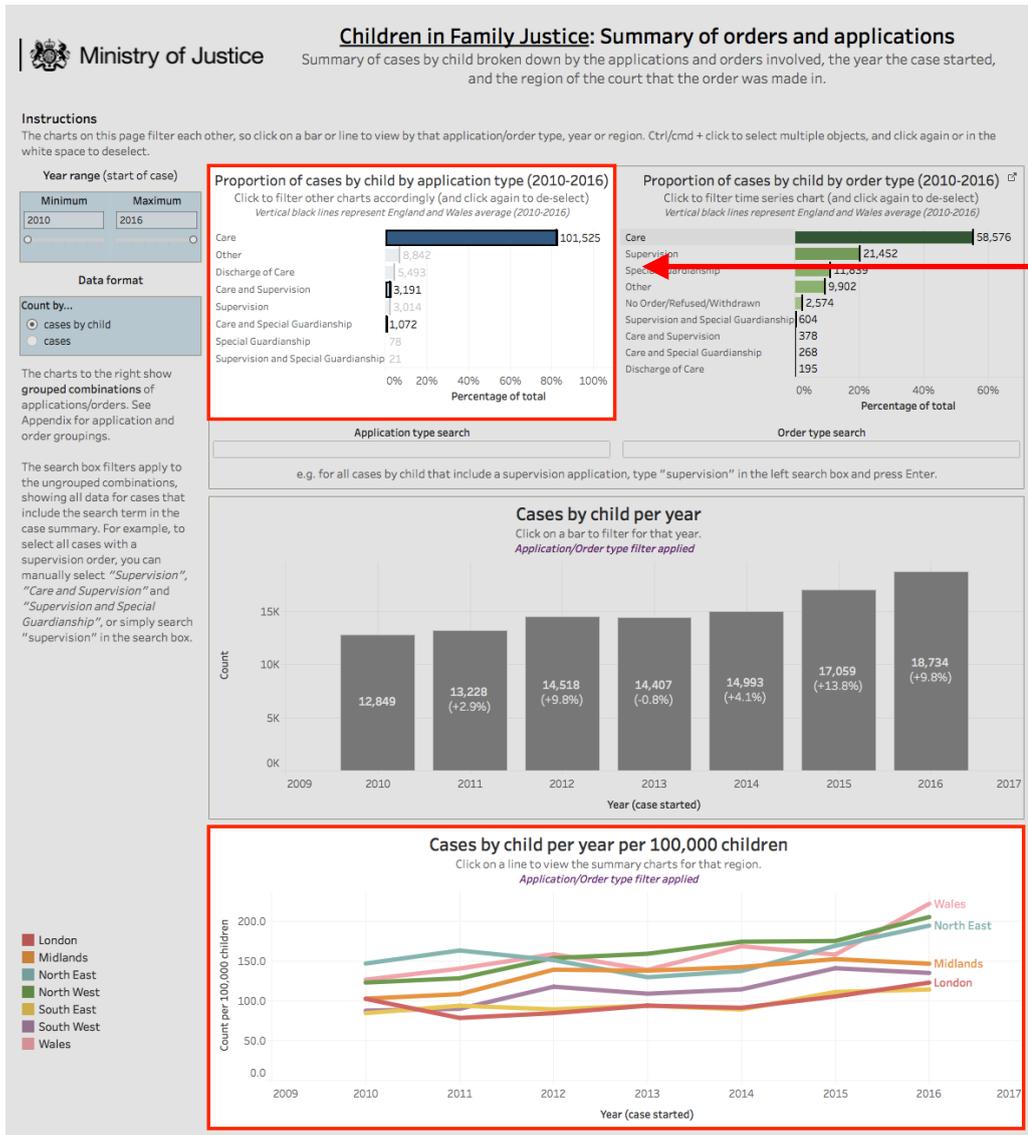
Figure A.1 Flow chart illustrating the grouping of application and order categories



Annex B – Using the tool

There are instructions throughout the tool directing the user through its full functionality. To help get users started, this section shows how the tool was used to produce some of the respective charts in the main report.

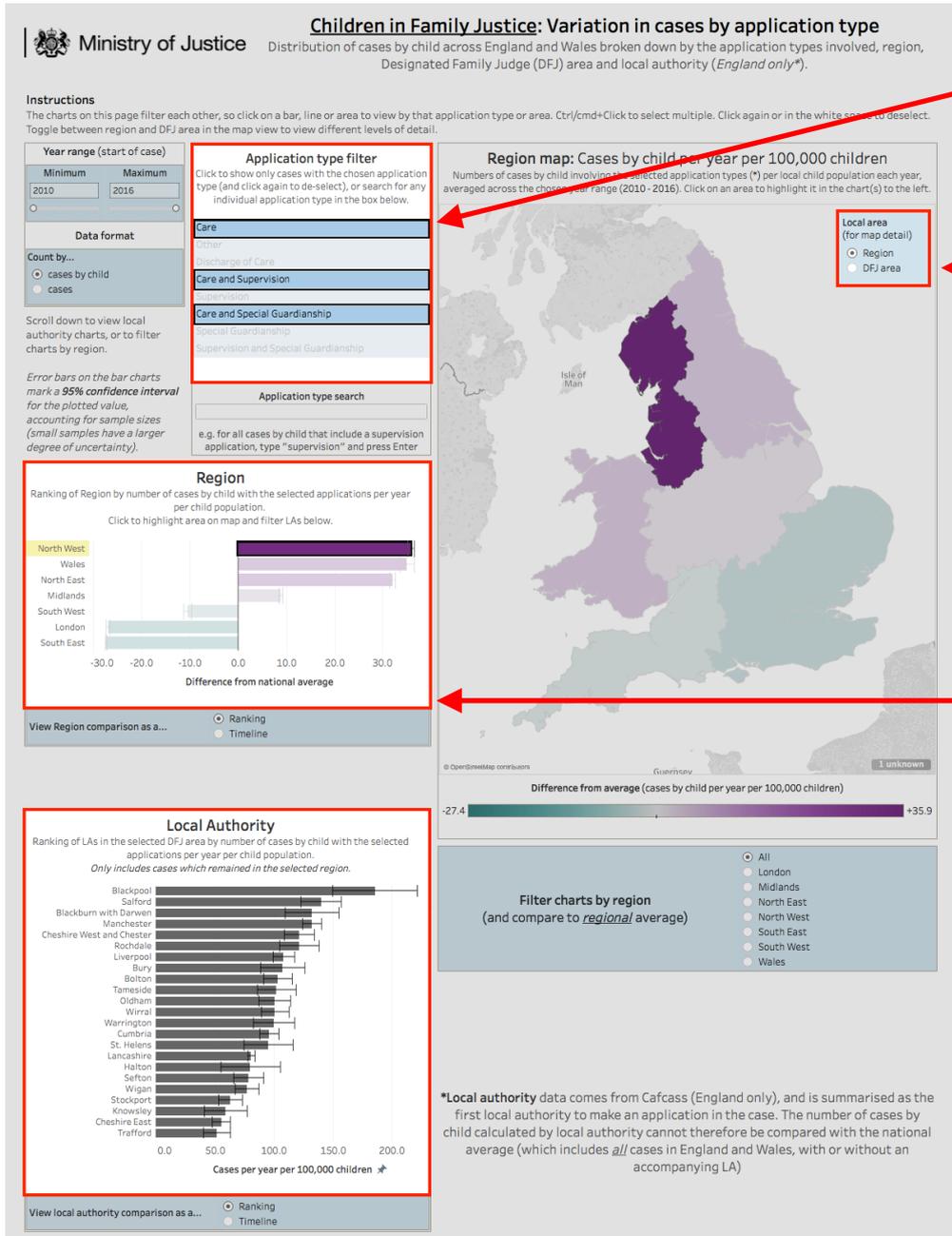
B.1 Figure 2: Public law cases per year per 100,000 child population



On the summary page, click on a bar to select all cases with a given application type. For all cases with a care application, use ctrl/cmd + click to select “Care”, “Care and Supervision” and “Care and Special Guardianship”.

Selecting application type filters the graph of application rate by region to show only cases with care applications (Figure 2)

B2 Figures 3 and 4: Care application rates by region and local authority



On the applications page, select the same application type categories to view all cases with care applications.

Select the 'region' option for the map detail to view the map of care application rates by region (Figure 3).

To filter further by a region (e.g. North West), click on the bar chart or directly on the map.

Selecting the North West filters the chart of care application rate by local authority to include only those in the North East. (Figure 4).