Children in Need of help and protection

Preliminary longitudinal analysis

December 2018
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Introduction

In March 2018, to launch the Children in Need (CIN) review, we published a data and analysis report looking at a range of educational outcomes for children in the social care system. The evidence showed CIN on average have poorer outcomes at every stage of education than their peers. They start behind other children in the early years and have a widening attainment gap throughout school. There are large overlaps between CIN, special educational needs (SEN) and free school meals (FSM), however, even controlling for these factors, attainment is lower for CIN than their peers. They are also more likely than other children to be not in education, employment or training (NEET) after age 18.

While offering new insight, there were two main limitations to our previous analysis:

1. A child’s social care status on the 31st of March 2016 was used to create subgroups, so children who had received social care services in the past year, but were not receiving services on this particular date, were omitted from our cohort.

2. We used the 2015-16 single year cohort of CIN, so were limited in our ability to understand children’s journeys in the social care system.

To address these limitations, we have created a dataset which links the CIN census longitudinally from 2014-15 to 2016-17 and matched it to 2016-17 education records. We have also created an ‘ever-CIN’ measure to identify pupils who have been in need at any point between 2011-12 and 2016-17.

Figures published in this report are not official statistics and, given this is the first analysis of its kind, they should be treated as experimental.

The data and analysis is published alongside:

- Improving the educational outcomes of Children in Need of help and protection: interim findings
- The Children in Need of help and protection Call for Evidence: Analysis of responses
- A literature review on what works to improve the educational outcomes of Children in Need of help and protection

Taken together, these publications develop a stronger evidence base and understanding of what makes a difference to the educational outcomes of CIN in practice, how some CIN achieve better educational outcomes than others, and what works in enabling CIN to achieve their potential.
# Main points

| **Number of children in the social care system** | There were 1.5 million children referred to or in need of social care services between 2014-15 and 2016-17. Of these, 1.1 million children were in need in at least one year and 0.4 million were deemed not to be in need.  
At least 1 in 10 pupils in state schools in 2016-17 had been in need at some point since 2011-12. |
|---|---|
| **Frequency of contact with social care** | Over a third of children who were in need in 2014-15 were in need in 2016-17 (38%).  
There were 200,000 children who were in need for at least one day in all three years between 2014-15 and 2016-17. |
| **Escalation and de-escalation** | Children on a child in need plan or child protection plan tend to either remain at that level of support one year on (43%), or to de-escalate (48%). De-escalation one year on is more frequent at lower levels of support and is lower amongst looked after children (26%). |
| **Educational outcomes** | Pupils who were in need at some point in every year between 2014-15 and 2016-17 had worse educational outcomes than pupils with less frequent contact.  
Pupils who were in need at any point between 2011-12 and 2016-17 had worse educational outcomes than pupils who were not, indicating lasting negative impact beyond the point of being in need. |
Data and definitions

Overview of dataset
The longitudinal CIN dataset links together three years of children’s social care data from 2014-15 to 2016-17 using local authority child identifiers. The dataset contains records of 1.5 million children who were referred to or in need of social care services for at least one day in any of the three years. For each child, the dataset contains details of every referral, child in need plan, child protection plan and episodes of being looked after across the three years. For more detail on the linking methodology see Section 5.1.

Definitions used in the analysis of journeys
A child can move between various stages of the social care system within a year, including into and out of need. To gain an initial insight into the complexities of these journeys, each child is given a yearly activity label based on the following hierarchy:

- **LAC**: if a child has been looked after for at least one day in the year then their yearly activity label is ‘LAC’.
- **CPP**: if a child is not labelled as LAC and has been on a child protection plan for at least one day in the year, then their yearly activity label is ‘CPP’.
- **CINP**: if a child is not labelled as LAC or CPP and has been in need for at least one day in the year, then their yearly activity label is ‘CINP’ (child in need plan).
- **CIN**: a child in any of the above three categories.
- **Referred not in need**: if a child is not labelled as LAC, CPP or CINP and has had a referral in the year, then the child yearly activity label is ‘referred not in need’. This includes referrals that resulted in no further action with or without an assessment.
- **Not CIN**: if a child is not in any of the above categories and is not unborn or an adult.
- **Unborn/Adult**: specific labels of ‘unborn’ and ‘adult’ are used where a child is labelled ‘not CIN’ and is ineligible due to age. For example, a child who becomes in need at birth in 2016-17 will be labelled as ‘unborn’ in 2014-15 and 2015-16.

Definition of ‘ever-CIN’
‘Ever-CIN’ is defined to be all pupils who are known to have been in need at any point between 2011-12 to 2016-17 based on whether their Unique Pupil Numbers (UPN) can be found in the CIN census for any of those years. For more detail see Section 5.2.
1. Children’s journeys through social care

Section 1 looks at the number and ages of children referred to or in need of social care services between 2014-15 and 2016-17, and illustrates the journeys taken by children through the social care system over the three years.

There were 1.5 million children referred to or in need of social care services between 2014-15 and 2016-17. Of these, 1.1 million children were in need in at least one year and 0.4 million were deemed not to be in need. Children were most commonly of primary school age in the final year they received services.

Based on the defined yearly activity labels, there were 199 different journeys taken by the 1.5 million children referred to or in need of social care services between 2014-15 and 2016-17. The top 15 journeys represent 74% of these children.

Over a third of children who were in need in 2014-15 were in need in 2016-17 (38%) and there were 200,000 children who were in need for at least one day in all three years between 2014-15 and 2016-17. Children who were CINP or CPP tended to either remain at that level of support one year on (43%), or de-escalate (48%). De-escalation one year on was more frequent at lower levels of support and was lower amongst LAC (26%).

1.1 Overview of children

Figure 1: Number of referrals, CIN, CPP and LAC episodes per child, 2014-15 to 2016-17

Notes:
1. Referrals can include one referral per child that started before 2014-15 and continued into 2014-15 where applicable.
2. CIN episodes include distinct referrals that lead to either a child in need plan, child protection plan or episode of care, and can include one CIN episode that started before 2014-15 and continued into 2014-15 where applicable.
3. CPP includes distinct child protection plans and can include one CPP episode that started before 2014-15 and continued into 2014-15 where applicable.
4. LAC includes distinct episodes of care open from 2014-15 to 2016-17.
Of all children who were referred to or in need of social care services between 2014-15 and 2016-17:

- 76% were referred once, 17% were referred twice and 7% were referred three or more times.
- 62% experienced one CIN episode over the period and 13% experienced two or more.
- 12% experienced one CPP episode during the period and 1% experienced two or more.
- 9% experienced one or more episodes of care, including respite care.

**Figure 2: Percentage of children by academic age of most recent year in the social care system, 2014-15 to 2016-17**

The majority of children are primary school age (31%) in their most recent year in the social care system, followed by the pre-primary and secondary school ages (27% and 24% respectively). Children aged above secondary school age made up 14% of children, with those aged 18 and over only receiving services due to disability or special educational needs.

Note: Academic age is calculated as at 31st August in the last census year a child was in the system. This includes being referred with no further action, CINP, CPP or LAC.
1.2 Social care journeys

A child can move between various stages of the social care system between years, including into and out of need. Based on the defined yearly activity labels (see ‘Data and definitions’) we explored:

- the most common journeys of children over the three years (figures 3-4)
- the journeys of all children who were CINP, CPP and LAC in 2014-15 over the following two years (figures 5-7)
- the activities of children in 2014-15 compared to 2016-17 (table 1)

Figure 3: Top 15 most frequent journeys for all children referred to or in need of services between 2014-15 and 2016-17

Based on the defined yearly activity labels (see ‘Data and definitions’), there were 199 different journeys taken by the 1.5 million children referred to or in need of children’s social care services between 2014-15 and 2016-17. The top 15 journeys (figure 3) represented 74% of these children. The top five most frequent journeys, representing 44% of children, involved contact with the social care system in only one of the three years, either on a CINP or referred not in need. Journeys with more frequent contact with social care were less common and mostly involved CINP.
Of the 1.5 million children referred to or in need of social care services between 2014-15 and 2016-17, 200,000 children (14%) were in need for at least one day in all three years. Figure 4 shows that within this subgroup of children, over half (59%) were either CINP in all 3 years or LAC in all 3 years.

Figure 5: Social care journeys over three years of children on a CINP in 2014-15
Figure 5 shows that of all the journeys taken by children who were CINP in 2014-15, over the following two years:

- 43% remained as CINP in 2015-16
- 45% were not CIN in 2015-16
- 4% escalated to CPP and 1% escalated to LAC in 2015-16
- flows from CINP in 2015-16 to 2016-17 were similar to the flows from the previous year.
- looking across the three-year period, 29% of children who were CINP in 2014-15 were in need in 2016-17

**Figure 6: Social care journeys over three years of children on a CPP in 2014-15**

Figure 6 shows that of all the journeys taken by children who were CPP in 2014-15, over the following two years:

- 46% remained CPP in 2015-16
- 7% of children escalated to being LAC in 2015-16
- 47% de-escalated to either CINP (25%), not being CIN (20%) or referred not in need (2%) in 2015-16
- flows from CPP in 2015-16 to 2016-17 were similar to the flows from the previous year
- looking across the three-year period, 50% of children who were CPP in 2014-15 were in need in 2016-17
Figure 7 shows that of all the journeys taken by children who were LAC in 2014-15, over the next two years:

- 73% of LAC in 2014-15 remained LAC in 2015-16
- 26% of LAC in 2014-15 de-escalated to either CINP (17%), CPP (2%), not being CIN (8%), or referred not CIN (less than 1%) in 2015-16\(^1\)
- flows from 2015-16 LAC to 2016-17 were similar to the flows from the previous year
- looking across the three-year period, 79% of children who were LAC in 2014-15 were in need in 2016-17

\(^1\) Individual percentages do not match to total due to rounding.
Table 1: Transitions (in %) from 2014-15 activities to 2016-17 activities

<table>
<thead>
<tr>
<th>2014-15 activity</th>
<th>2016-17 activity</th>
<th>CINP</th>
<th>CPP</th>
<th>LAC</th>
<th>Referred not in need</th>
<th>Not CIN</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>CINP</td>
<td>2014-15 activity</td>
<td>CINP</td>
<td>23</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>57</td>
</tr>
<tr>
<td>CPP</td>
<td>CPP</td>
<td>27</td>
<td>14</td>
<td>9</td>
<td>5</td>
<td>43</td>
<td>2</td>
</tr>
<tr>
<td>LAC</td>
<td>LAC</td>
<td>24</td>
<td>1</td>
<td>53</td>
<td>1</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>Referred not in need</td>
<td>Referred not in need</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>74</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 1 summarises the transitions from one activity to the next between 2014-15 and 2016-17. Looking across the three-year period:

- of children who were CINP in 2014-15, in 2016-17: 23% were CINP, 4% were CPP and 2% were LAC
- of children who were CPP in 2014-15, in 2016-17: 27% were CINP, 14% were CPP and 9% were LAC
- of children who were LAC in 2014-15, in 2016-17: 24% were CINP, 1% were CPP and 53% were LAC
- of children who referred but not in need in 2014-15, in 2016-17: 10% were CINP, 3% were CPP and 1% were LAC
- overall, 38% of children who were in need in 2014-15 were in need in 2016-17
2. Educational outcomes

Section 2 looks at the average educational outcomes of children in 2016-17 by their social care journeys between 2014-15 and 2016-17. Only journeys with at least 150 pupils have been analysed as interpreting results from small numbers of pupils can be misleading. The analysis was carried out by separating journeys of SEN and non-SEN pupils since SEN pupils are known to have far lower attainment. As observed patterns for both groups were similar, the results presented below group together SEN and non-SEN pupils.

We see that children with different journeys through the social care system attain different outcomes in education. Children who were in need in all three years achieved worse outcomes than those who were in need less often. Children who did not have contact with social care in the year of taking academic assessments tended to achieve better outcomes.

2.1 Attainment and frequency of contact with social care

Table 2: Attainment of pupils at Key Stage 2 (KS2) and Key Stage 4 (KS4) in 2016-17 by frequency of contact with social care

<table>
<thead>
<tr>
<th>Pupils activity between 2014-15 to 2016-17</th>
<th>Percentage of pupils reaching expected standard in KS2 reading, writing and maths</th>
<th>Average Attainment 8 score at KS4</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIN in all three years</td>
<td>28%</td>
<td>18</td>
</tr>
<tr>
<td>CIN in two out of three years</td>
<td>39%</td>
<td>28</td>
</tr>
<tr>
<td>CIN in one out of three years</td>
<td>43%</td>
<td>32</td>
</tr>
<tr>
<td>Other pupils</td>
<td>63%</td>
<td>47</td>
</tr>
</tbody>
</table>

Note:
1. CIN includes all children who were CINP, CPP or LAC.
2. A child with a single episode spanning more than one collection year was counted as having a CIN episode in either two out of three years or all three years.

Table 2 shows that pupils who were in need in more years had worse attainment than pupils who were in need less often. Pupils who were CIN in all three years between 2014-15 and 2016-17 were least likely to achieve the expected standard at KS2 (28%), followed by those who were CIN in two years (39%), and then by those who were CIN in one year (43%). Pupils who were CIN in all three years also had the lowest Attainment 8 score (18), followed by those who were CIN in two years (28), and then by those who were CIN in one year (32).
2.2 Educational outcomes at Key Stage 2

Children with different journeys through social care had different educational outcomes at Key Stage 2 (KS2). Based on the defined yearly activity labels (see ‘Data and definitions’) and journeys where there were at least 150 children, there were 39 different journeys with the percentage of children achieving the expected standard at KS2 ranging from 23% to 47%.

Figure 8: Top ten journeys with the highest percentage of pupils reaching the expected standard at KS2 reading, writing and maths in 2016-17

<table>
<thead>
<tr>
<th>Activity in 2014-15</th>
<th>Activity in 2015-16</th>
<th>Activity in 2016-17</th>
<th>Percentage reaching expected standard in KS2 reading, writing and maths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not CIN</td>
<td>Ref. not in need</td>
<td>Not CIN</td>
<td>47%</td>
</tr>
<tr>
<td>Not CIN</td>
<td>CINP</td>
<td>Not CIN</td>
<td>46%</td>
</tr>
<tr>
<td>Not CIN</td>
<td>Not CIN</td>
<td>Ref. not in need</td>
<td>45%</td>
</tr>
<tr>
<td>Ref. not in need</td>
<td>Not CIN</td>
<td>Not CIN</td>
<td>45%</td>
</tr>
<tr>
<td>Not CIN</td>
<td>Not CIN</td>
<td>LAC</td>
<td>44%</td>
</tr>
<tr>
<td>CINP</td>
<td>Not CIN</td>
<td>Not CIN</td>
<td>44%</td>
</tr>
<tr>
<td>Not CIN</td>
<td>Not CIN</td>
<td>CINP</td>
<td>43%</td>
</tr>
<tr>
<td>CINP</td>
<td>CINP</td>
<td>Not CIN</td>
<td>43%</td>
</tr>
<tr>
<td>CPP</td>
<td>Not CIN</td>
<td>Not CIN</td>
<td>41%</td>
</tr>
<tr>
<td>Not CIN</td>
<td>CINP</td>
<td>Ref. not in need</td>
<td>41%</td>
</tr>
</tbody>
</table>

Figure 9: Bottom ten journeys with the lowest percentage of pupils reaching the expected standard at KS2 reading, writing and maths in 2016-17

<table>
<thead>
<tr>
<th>Activity in 2014-15</th>
<th>Activity in 2015-16</th>
<th>Activity in 2016-17</th>
<th>Percentage reaching expected standard in KS2 reading, writing and maths</th>
</tr>
</thead>
<tbody>
<tr>
<td>CINP</td>
<td>CINP</td>
<td>CINP</td>
<td>23%</td>
</tr>
<tr>
<td>CPP</td>
<td>CPP</td>
<td>CPP</td>
<td>25%</td>
</tr>
<tr>
<td>CINP</td>
<td>LAC</td>
<td>LAC</td>
<td>27%</td>
</tr>
<tr>
<td>CINP</td>
<td>CINP</td>
<td>CPP</td>
<td>29%</td>
</tr>
<tr>
<td>CPP</td>
<td>CINP</td>
<td>Ref. not in need</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 8 shows that in the ten journeys with the highest average attainment at KS2, children tended to have contact with social care in only one out of the three years (8 out of 10 journeys). Figure 9 shows that in all the ten journeys with the lowest average attainment at KS2, children had contact with social care in all three years.
2.3 Educational outcomes at Key Stage 4

Children with different journeys through social care had different educational outcomes at Key Stage 4 (KS4). Based on the defined yearly activity labels (see ‘Data and definitions’) and journeys where there were at least 150 children, there were 40 different journeys with average Attainment 8 scores ranging from 14 to 35.

Figure 10: Top ten journeys with the highest average Attainment 8 scores at KS4 in 2016-17

<table>
<thead>
<tr>
<th>Activity in 2014-15</th>
<th>Activity in 2015-16</th>
<th>Activity in 2016-17</th>
<th>Average Attainment 8 scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ref. not in need</td>
<td>Not CIN</td>
<td>Not CIN</td>
<td>35</td>
</tr>
<tr>
<td>Not CIN</td>
<td>CINP</td>
<td>Not CIN</td>
<td>35</td>
</tr>
<tr>
<td>Not CIN</td>
<td>Ref. not in need</td>
<td>Not CIN</td>
<td>35</td>
</tr>
<tr>
<td>CINP</td>
<td>Not CIN</td>
<td>Not CIN</td>
<td>34</td>
</tr>
<tr>
<td>Ref. not in need</td>
<td>Ref. not in need</td>
<td>Not CIN</td>
<td>34</td>
</tr>
<tr>
<td>Not CIN</td>
<td>Not CIN</td>
<td>Ref. not in need</td>
<td>33</td>
</tr>
<tr>
<td>CPP</td>
<td>Not CIN</td>
<td>Not CIN</td>
<td>33</td>
</tr>
<tr>
<td>CINP</td>
<td>Ref. not in need</td>
<td>Not CIN</td>
<td>32</td>
</tr>
<tr>
<td>Ref. not in need</td>
<td>CINP</td>
<td>Not CIN</td>
<td>31</td>
</tr>
<tr>
<td>CINP</td>
<td>CINP</td>
<td>Not CIN</td>
<td>31</td>
</tr>
</tbody>
</table>

| Other pupils       |                    |                    | 47                          |

Figure 11: Bottom ten journeys with the lowest average Attainment 8 scores at KS4 in 2016-17

<table>
<thead>
<tr>
<th>Activity in 2014-15</th>
<th>Activity in 2015-16</th>
<th>Activity in 2016-17</th>
<th>Average Attainment 8 scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>CINP</td>
<td>LAC</td>
<td>LAC</td>
<td>14</td>
</tr>
<tr>
<td>CINP</td>
<td>CINP</td>
<td>LAC</td>
<td>14</td>
</tr>
<tr>
<td>Not CIN</td>
<td>CINP</td>
<td>LAC</td>
<td>16</td>
</tr>
<tr>
<td>CINP</td>
<td>CINP</td>
<td>CINP</td>
<td>16</td>
</tr>
<tr>
<td>CINP</td>
<td>CINP</td>
<td>CPP</td>
<td>18</td>
</tr>
<tr>
<td>Not CIN</td>
<td>LAC</td>
<td>LAC</td>
<td>19</td>
</tr>
<tr>
<td>Not CIN</td>
<td>Not CIN</td>
<td>LAC</td>
<td>20</td>
</tr>
<tr>
<td>CINP</td>
<td>CPP</td>
<td>CPP</td>
<td>21</td>
</tr>
<tr>
<td>CPP</td>
<td>CPP</td>
<td>LAC</td>
<td>21</td>
</tr>
<tr>
<td>LAC</td>
<td>LAC</td>
<td>LAC</td>
<td>47</td>
</tr>
</tbody>
</table>

Other pupils

Figure 10 shows that in the ten journeys with the highest average attainment at KS4, children tended to have no contact with social care in 2016-17 (9 out of 10 journeys). Figure 11 shows that in the ten journeys with the lowest average attainment at KS4, children tended to contact in all three years (7 out of 10 journeys).
3. Ever-CIN

Section 3 looks at the educational outcomes and overlaps with SEN and FSM of pupils who have been CIN at any point between 2011-12 to 2016-17 (‘ever-CIN’).

We see that at least 1 in 10 pupils in state schools\(^2\) in 2016-17 had been in need at some point since 2011-12. The majority of ‘ever-CIN’ had either SEN or FSM, or both. Pupils who were ‘ever-CIN’ had worse educational outcomes than pupils who were not, indicating lasting negative impact beyond the point of being in need.

3.1 Overlaps of ‘ever-CIN’ with other types of disadvantage

Figure 12: Overlap of ‘ever-CIN’ with pupils claiming free school meals (FSM) and pupils who have special educational needs (SEN)

Note:
1. ‘Ever-CIN’ represents all children identified in the NPD as being CIN at any point between 2011-12 to 2016-17. ‘Never-CIN’ represents all children in the NPD not identified as ‘ever-CIN’.
2. Figures are rounded to the nearest 100 and therefore may not match percentages exactly.

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\(^2\) Pupils aged 4-15 at the start of academic year 2016-17 in state-funded school provision. See Section 5.3 for more details.
Figure 12 shows that of all 7.3 million pupils in state schools in 2016-17, at least 763,000 pupils (10%) had been ‘ever-CIN’. Of these pupils: 35% had SEN, 42% had FSM, 17% are had both SEN and FSM, and 39% had neither SEN nor FSM.

Compared to ‘never-CIN’ pupils, ‘ever-CIN’ are almost three times as likely to have SEN (13% compared to 35%), almost four times as likely to be claiming FSM (11% compared to 42%), and nearly six times as likely to have both FSM and SEN (3% compared to 17%).

3.2 Educational outcomes of ‘ever-CIN’

Our previous analysis showed that pupils who were CINP, CPP or are LAC had worse educational outcomes than pupils who were not, including controlling for SEN and FSM. In this analysis, the impact of being ‘ever-CIN’ on educational outcomes is explored using four categories:

- ‘Never-CIN’: pupils who have not been identified as in need at any point between 2011-12 and 2016-17.
- ‘Ever-CIN’: pupils who have been identified as CIN at some point between 2011-12 and 2016-17.
- ‘CIN – at 31 March 2017’: pupils who have an open episode at the 31 March 2017. This is the most recent data available at the time of analysis.
- ‘CIN-prior’: pupils who were CIN at some point between 2011-12 and 2016-17, but were no longer in need on 31 March 2017.

Figure 13: Percentage of pupils reaching the expected standard at KS2 reading, writing and maths in 2016-17
Figure 13 shows that pupils who were ‘ever-CIN’ were less likely to achieve the expected standard at KS2 compared to pupils who were ‘never-CIN’ (40% compared to 64%). This is the case for ‘ever-CIN’ and ‘never-CIN’ pupils who were: SEN (13% compared to 20%), FSM (34% compared to 47%), and neither SEN nor FSM (59% compared to 73%).

Of pupils who had neither SEN nor FSM, those who were ‘CIN-prior’ were less likely to achieve the expected standard at KS2 compared to pupils who were ‘never-CIN’ (60% compared to 73%). This indicates that the negative impact of being CIN extends beyond the point of being in need. However, comparing the outcomes of ‘CIN-prior’ to ‘CIN – at 31 March 2017’ shows that children who were no longer in need were more likely to reach the expected standard at KS2 than pupils who were still in need (42% compared to 31%).

**Figure 14: Average Attainment 8 scores for pupils in 2016-17**

![Average Attainment 8 scores chart]

Figure 14 shows pupils who were ‘ever-CIN’ had lower average Attainment 8 scores than pupils who were ‘never-CIN’ (29 compared to 48). This is the case for ‘ever-CIN’ and ‘never-CIN’ pupils who were: SEN (16 compared to 30), FSM (26 compared to 38), and neither SEN nor FSM (39 compared to 51).

Of pupils who had neither SEN nor FSM, those who were ‘CIN-prior’ had lower average Attainment 8 scores than pupils who were ‘never-CIN’ (40 compared to 51). This indicates that the negative impact of being CIN extends beyond the point of being in need. However, comparing the outcomes of ‘CIN-prior’ to ‘CIN – at 31 March 2017’ shows that children who were no longer in need had higher average Attainment 8 scores than pupils who were still in need (32 compared to 20).
4. Next steps in data and analysis

The analysis in this report offers significant new insights into children’s experiences in the social care system by building a picture of all children’s journeys over time for the first time. Due to the complexity of the data and these journeys, the aim of our preliminary methodology was to simplify these journeys to ease understanding.

However, going forward we aim to:

- construct longer and more granular journeys by adding additional years of data and child characteristics data
- use cluster analysis to group children based on observed similarities, including child level characteristics and social care journeys
- explore differences in educational attainment by subgroups of children through constructing child typologies
- present more robustly how the duration of time spent in different stages of the CSC system and the proximity to assessment are associated with educational outcomes
- explore the relationship between social care journeys and educational trajectories across key stage assessments rather than at a single key stage
5. Annex: creation and linking of datasets

Section 5.1 outlines the method used to create the longitudinal CIN dataset which underpins the analysis in chapters 1 and 2.

Section 5.2 outlines the method used to identify pupils who are ‘ever-CIN’ in chapter 3.

Section 5.3 outlines the pupils included in the analysis of educational outcomes in chapters 2 and 3, and how this dataset was linked to the longitudinal CIN and ‘ever-CIN’ datasets.

5.1 Creation of the longitudinal CIN dataset

The analysis of children’s journeys through social care in chapters 1 and 2 is based on a new longitudinal CIN dataset. The annual CIN census for the years 2014-15, 2015-16 and 2016-17 were linked together using unique identifiers derived from local authority child identifiers. These identifiers were then used to track the social care events experienced by each child across the three-year period.

Linking the annual censuses underlined a number of known data quality issues where information was inconsistent from one year to the next, or within a single year. In order to create a robust first iteration of the longitudinal dataset, any record with an issue was removed.

The main issues, which led to the removal of records, were:

- inconsistencies in the opening/closing dates; for instance where the closing date of an episode is before the start date
- inconsistencies in the duration of social care episodes, for instance where the time a child spent as LAC was greater than the total time spent in need
- missing data in the referral and/or CPP data
- inconsistencies in a child’s characteristics such as date of birth, gender and UPN across years
- children who moved between local authorities over the three-year period

Other issues, which were partly or wholly resolved, were:

- erroneous child identifiers which did not allow matching across years. In records where this was the only issue, UPNs were used to match across years if possible
- local authority child identifiers which occasionally changed from one year to the next. Local authorities provide the mapping of old identifiers to new identifiers; hence, these were taken into account during the linking process.

The final linked dataset contained 1.5 million children who were referred to or in need of social care services during the three years, representing 88% of all children identified during the data linking process. Removing records with data issues may have
disproportionately affected children with more complex social care journeys. Consequently, the number and educational outcomes of children with complex journeys may be under represented in the analysis.

5.2 Identification of ‘ever-CIN’ pupils

As part of the annual CIN census, local authorities are required to return the Unique Pupil Number (UPN) of all CIN at any point in the year. This was used to identify as many CIN as possible in the National Pupil Database (NPD) between 2011-12 and 2016-17. However, all CIN cannot be identified using this method as usually: only school age children have UPNs, not all UPNs are completed by local authorities, or UPNs reported may be erroneous.

5.3 Creation of educational outcomes dataset

The analysis of educational outcomes in chapters 2 and 3 was produced using a bespoke educational outcomes dataset which combined data from the National Pupil Database (NPD) with the longitudinal CIN and ‘ever-CIN’ datasets.

The NPD data included in the dataset came from: the School Census (January 2017), AP Census (January 2017), and Key Stage 2 and Key Stage 4 data (Academic Year 2016/17). The data from different sources was linked together using DfE’s pupil matching reference. The School Census and the AP Census provided the age of the pupil at the start of the academic year and the details of special educational needs and free school meal claims. Where a pupil was in both the School and AP censuses, the relevant details were taken from the School Census.

Filters were applied to identify pupils who:

- attended state-funded education establishments in January 2017 where the establishment was their sole or main registration (this covers pupils in primary schools, secondary schools, middle schools, all through schools, special schools, pupil referral units (PRU) and alternative provision (AP) academies or free schools); or
- those who were educated in state-funded alternative provision settings between January 2016 and January 2017 (this covers pupils attending independent schools where the LA pays full tuition fees, pupils in non-maintained special schools and other forms of alternative provision); and
- those who were of “school age”, i.e. aged four to fifteen inclusive at the start of the academic year.

The educational outcomes dataset contains 7,300,000 unique pupil records. This was merged with the longitudinal CIN and ‘ever-CIN’ datasets using the UPNs. After merging, there were 650,000 pupils who were flagged as having been referred to or in need of
social care services between 2014-15 and 2016-17, and 763,000 pupils flagged as having been in need between 2011-12 and 2016-17.

Figures based on this bespoke dataset will differ slightly from comparable figures published in DfE statistical releases for a number of reasons, including:

- around 37,000 school age children in the social care data were not matched to the education data
- differences in underlying data sources – for example, using ‘final’ datasets for Key State 2 and Key Stage 4 whereas statistical releases use the amended/revised version of the data
- differences in social care classifications – for example, this publication defines CIN to be all children on a CINP, CPP or LAC, whereas DfE’s ‘Outcomes for children looked after by LAs’ statistical releases define CIN as children who are in need on the 31\textsuperscript{st} of March of each year, but have not been LAC during the year unless they are on a CPP
Glossary of terms

**AP:** Alternative Provision

**CIN:** Children in Need

**CINP:** Child in Need Plan

**CPP:** Child Protection Plan

**CSC:** Children’s Social Care

**DfE:** Department for Education

**EIF:** Early Intervention Foundation

**FSM:** Free School Meals

**KS2:** Key Stage 2

**KS4:** Key Stage 4

**LAC:** Looked After Children

**NEET:** Not in Education, Employment or Training

**NPD:** National Pupil Database

**PRU:** Pupil Referral Unit

**SEN:** Special Educational Need

**UPN:** Unique Pupil Number