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1

2 **The education of children in care and children in need: who falls behind**

3

and when?

4

5 **Sinclair, I., Luke, N., Fletcher, J., O'Higgins A., Strand S., Berridge D.,**

6 **Sebba, J., and Thomas, S.**

7

8 **Abstract**

9 We seek to explain the development of the educational gap between children in ‘out of home
10 care’ (CLA), children deemed in social need (CIN), and other pupils.

11 A cohort of 642,805 pupils aged 16 in 2013 was used to chart the educational progress of the
12 full cohort, the CLA ($n = 6,236$), the CIN in 2012 or 2013 but not CLA ($n = 20,384$), and a sample
13 individually matched with the CLA ($n = 11084$).

14 At age 7 attainment of the CLA and CIN was approximately one standard deviation lower
15 than the cohort average and predicted attainment at 16. At this point the persistent ‘CIN’ (those with
16 earlier and persistent needs) had the lowest attainment relative to others and this declined further
17 during secondary school. Those entering care before or during primary school had very low
18 attainment at age 7 but their relative attainment did not decline.

19 Attainment of CLA and CIN at age 16 likely reflects early environment, special educational
20 needs and poor relationships with secondary school. Policy, research and intervention should focus on
21 CIN as well as CLA, do so before entry to care, and take account of the onset of, and probable reasons
22 for, educational difficulties.

23

24 Keywords: foster care, education, children in need

25 **Introduction**

26 Children and young people looked after by the state (CLA) on average do not do well in
27 education (Dill *et al.*, 2012; Stone and Zibulsky, 2015). Some enjoy educational success (Jackson and
28 Cameron, 2012), and children who are looked after for longer tend to have better results than other CLA
29 (Sutcliffe, Gardiner and Melhuish, 2017; DfE, 2018c). As a group, however, they are much more likely
30 than their peers in the general population to score poorly on tests, fail exams, drop out of school, be
31 excluded or have irregular attendance (Scherr, 2007; Trout *et al.*, 2008). In this way they are more likely
32 to reach adulthood with few or no qualifications and equally poor prospects (Buehler *et al.*, 2000; Berlin,
33 Vinnerljung and Hjern, 2011; Dregan, Brown and Armstrong, 2011; Dregan and Gulliford, 2012;
34 Centre for Social Justice, 2015).

35 It is striking, if perhaps less well known, that in controlled comparisons between the CLA and
36 those in receipt of social services but living in the community, the latter have equally poor (Smithgall
37 *et al.*, 2004; Berger *et al.*, 2009, 2015; Font and Maguire-Jack, 2013; Piescher *et al.*, 2014; Cage,
38 2018) or even worse educational outcomes than those who are in care (McClung and Gayle, 2010;
39 *Anonymous*, 2015). Socio-economic disadvantage, maltreatment and special needs are all common in
40 these vulnerable groups, associated with poor educational performance and thus possible explanations
41 for their low attainment (Smithgall *et al.*, 2004; *Anonymous*, 2007; Berger *et al.*, 2009; McClung and
42 Gayle, 2010; DfE, 2018a). Children returning home from care to such circumstances do worse in
43 certain respects than apparently similar children remaining in care (*Anonymous*, 2005; Wade *et al.*,
44 2011).

45 The comparisons cited above have been, for the most part, cross-sectional. As a result, we do
46 not know when the CLA and CIN first fall behind educationally, how they progress over time, or what
47 the relationship is between attainment at the start and towards the end of the child's education. On the
48 evidence available the educational trajectories of the CLA may be similar to, or differ from, those of
49 the CIN or of other children who start from a similar point of attainment but are not CIN or CLA.
50 Their low attainment may first become apparent before entry to care, around entry, or during care
51 itself. It may also become worse or improve over these different periods. A description of these

52 trajectories should improve our understanding of the likely impact of care, of the time before care, and
53 of the difficult home circumstances of the CLA and CIN. It should also inform the timing of
54 educational interventions and the relative priority given to improving the education of those already in
55 care as against those at risk of entering it.

56 A second gap in the literature cited above reflects a tendency to treat CLA as a homogeneous
57 group whose members have similar needs, educational trajectories and responses to care. This
58 assumption does not seem to be true, since there are marked differences between early entrants (those
59 entering care before 11) and later entrants. The former tend to have fewer difficulties with school
60 (*Anonymous, 2007*) and better final attainment than later entrants and particularly so if they stay in
61 care for an extended time (*Anonymous, 2018; Sutcliffe, Gardiner and Melhuish, 2017; DfE, 2018c*).
62 These early entrants are almost always in care for reasons of abuse and neglect (*Anonymous, 2007*).
63 The mechanisms that lead to their better attainment following removal to care may be similar to those
64 that reduce cognitive deficits among maltreated Rumanian orphans following adoption (*Rutter et al.,*
65 *2007*) – both situations involve removal from a difficult environment. By contrast later entrants enter
66 care for reasons which often include their own challenging behaviour and have much greater
67 difficulties with school (*Anonymous, 2007*). These groups may benefit from removal from the setting
68 in which their difficulties occur. However, their ‘antisocial behaviour’ may also need a more
69 behavioural approach (*NICE, 2013*).

70 With one recent exception (*DfE, 2018b*) there is an absence of similar evidence for the lack of
71 homogeneity of the CIN. This group are thought to need social work services and would be expected
72 to contain similar sub-groups to the CLA albeit with difficulties that are not so serious as to require
73 care. In addition, they include disabled children, a category sufficient to qualify a child as CIN, but
74 not, in itself, sufficient to justify admission to care (*DfE, 2018a*). Some of these needs, for example
75 severe or multiple learning difficulties, are likely to be apparent early. It is therefore likely, although
76 not yet shown, that the CIN also vary in ways likely to reflect the time at which their needs are first
77 noticed by the authorities.

78 Against this background this article will use a national data set to:

- 79 • Compare the attainment and characteristics of the CIN and CLA at age 7 with that of all
- 80 children at that age and a comparison group of similar initial attainment and socio-economic
- 81 status
- 82 • Assess how far differences in the attainment of these groups at this can be explained by
- 83 variables in our data set
- 84 • Examine how far the final outcomes are determined by attainment at age 7
- 85 • Describe the educational trajectories from age 7 of the comparison group and sub-groups of
- 86 the CLA and CIN along with their relationship to the timing of any admission to care
- 87 • Use information available on the characteristics and behaviour of these children to suggest
- 88 explanations for these trajectories and the differences between them.

89 **Methods**

90 **Sample**

91 The study used national data collated by the English Department for Education about the

92 educational status of 642,805 children in England who appeared on the National Pupil database

93 (NPD) and who were eligible for GCSEs (examinations at age 16 years) in 2013. We were able to link

94 this dataset to Local Authority Returns (also known as SSDA903) on children who were looked after

95 (CLA) at 31st March 2013 and children who were assessed as in need (CIN) in 2012 or 2013. Local

96 authority data records information about children’s time in care and in contact with social care. There

97 have not been any major changes to the policy or legislation context, so that the analysis below has

98 important implications for children currently in care.

99 Our analysis examines the attainment and trajectories of four key sub-samples:

- 100 • the CLA, children looked after in out of home care on 31st of March 2013 ($n = 6,236$)
- 101 • the CIN, children deemed in need in 2012 or 2013 ($n = 20,383$)
- 102 • a matched comparison group, comprising two ‘nearest neighbour’ children matched to each
- 103 CLA child on attainment and eligibility for free school meals at age 7 ($n = 11,804$)

104 • an unmatched comparison group ($n = 605,102$)

105 These sub-samples are based on all children in each category but have been made mutually
106 exclusive, so that the CIN do not include CLA and the CIN are excluded from the matched
107 comparison group. In order to include all the CLA and CIN, we allowed matching on missing
108 information on the matching variables. The missing values were later imputed, where necessary. The
109 first three sub-samples formed our analysis sample and are the exclusive focus of later parts of this
110 paper.

111 The NPD gives data on attainment and other education related variables at the end of four
112 'Key Stages' (KS) of schooling: KS1 (at age 7), KS2 (at age 11), KS3 (at age 14) and KS4 (at age
113 16). Key Stage 1 and 2 take place in primary school and Key Stage 3 and 4 cover the period of
114 secondary school to age 16.

115 The CLA sub-sample was further sub-divided into entry groups with the KS1 entry group
116 comprising those first entering care between birth and end of KS1, the KS2 entry group comprising
117 those first entering care between end of KS1 and end of KS2 and so on. We further divided the KS4
118 group into two, as we expected that young people who entered care less than a year before their KS4
119 exams (KS4b) would significantly differ from those who had been in care at least a year at that point
120 (KS4a).

121 In England, children who return home from care, before the age of 18 almost always do so
122 within the first year, and then return to care within a short period if they are not going to remain with
123 their families. In keeping with this, the average time the entry groups spent in care following their first
124 entry varied from 11 years 6 months (KS1 group), through 6 years 11 months (KS2 group), 3 years 3
125 months (KS3 group), 1 year 6 months (KS4a group) to 10 months (KS4b group). If we had classified
126 our groups by their last as opposed to their first entry into care, we would have allocated no more than
127 5 per cent of them to a later entry period.

128 Our data allowed us to define three sub-groups for the CIN, according to whether they were
129 deemed CIN in 2012 but not 2013, 2013 but not 2012, or both 2012 and 2013.

130 The study sample and analysis samples are shown in figure 1 below.

131

132 **Insert figure 1 here**

133

134 **Outcome measures**

135 We standardised the nationally mandated ‘end of Key Stage’ attainment scores across the
136 total study sample so that each Key Stage score had a mean of 0 and standard deviation of 1. Changes
137 in this score over time reflect changes in the child’s educational attainment relative to their peers.

138 **Explanatory variables**

139 Independent variables were created from data available in the NPD and which were shown in
140 earlier work (AUTHORS) or analyses (AUTHORS) to relate to educational outcomes. They
141 comprised:

- 142 • Demographic characteristics: gender, ‘ethnicity’ (White British or not white British) and
143 language spoken at home (whether ever in a home where English was not the first language)
- 144 • Early family poverty (as indicated by the proxy measure, eligibility for free school meals
145 (EFSM) when aged 7 in 2004
- 146 • Special educational needs (SEN): whether the child was ever recorded as having Autism
147 Spectrum Disorder (ASD), Behavioural, Emotional or Social Difficulty (BESD), Severe or
148 Multiple Learning Difficulty (SMLD), Moderate Learning Difficulty (MLD), and Other SEN.
- 149 • School type attended at different key stages: whether at a non-mainstream state (NMS) school
150 (i.e. special schools, pupil referral units, alternative provision, secure provision and further
151 education colleges) or not
- 152 • Change of school during KS4: whether the child moved school in either Year 10 or Year 11
- 153 • Unauthorised absences from school: absences lasting half a day expressed as a percentage of
154 possible half-day attendances in a given year

- 155 • Exclusions from school: whether the child was recorded as excluded on a fixed term or
156 permanent basis, within a given Key Stage period.

157 Demographic variables, EFSM status and special educational needs were treated as fixed variables.

158 Taken together the explanatory variables allow us to see how far the CLA and CIN differ
159 from other children in their gender, the apparent poverty of their families, ethnicity, and cognitive and
160 psychological difficulties. Regression and other techniques then allow us to examine how far these
161 differences explain the age 7 attainment and subsequent educational progress of the CLA and CIN and
162 how far this needs to be explained by variables not contained in our data, which include those relating
163 to their family functioning.

164

165 **Missing Data**

166 All children had an attainment score at KS4 but there were missing scores at KS1 (12%), KS2
167 (12%) and KS3 (10%). Those with missing attainment scores at any point were roughly 4 times as
168 likely as others to be recorded as not speaking English as a first language at home, 4 times as likely to
169 be in NMS at KS4 and 180 times as likely to be in an independent school at KS4.

170 The likely explanations for these associations and for the great majority of missing values is
171 that some children had no data returned at one or more key stages. Most commonly this was because:
172 their independent school did not make these returns; they were awaiting placement for NMS and not
173 ‘on the books’ of any school; they were not in the country (hence the association with language
174 spoken at home, although some children will have not been returned because they were in Scotland,
175 Wales or Northern Ireland or abroad elsewhere with English-speaking parents).

176 We treated missing values as a categorical variable where possible. This method was not
177 suitable for the calculation of means, or regressions with missing outcome data which were estimated
178 through multiple imputations using variables associated with missing values or outcomes. SPSS does
179 not support this option for component analysis for which we used its default option (mean

180 substitution). Children who were never recorded as having SEN or as not having English as a first
181 language at home were treated as not having these characteristics.

182 **Analytical Strategy**

183 We used crosstabulations, correlation and linear regression analysis (ordinary least squares) to
184 compare the four sub-samples of the total study sample and to examine the relationship of attainment
185 at age 7 to attainment at age 16. The purpose was to explore the extent of, and possible reasons for,
186 low initial attainment among the CLA and CIN and its association with later progress.

187 Subsequent analysis used the analysis sample (CLA, CIN and matched comparison group),
188 graphing the educational trajectories of its sub-groups and relating them to entry to care where
189 appropriate. A component analysis was used to identify underlying variables that might explain the
190 average level of performance in these groups and their tendency to improve or fall behind. Scores
191 derived from these components were related to the different sub-groups and suggested explanations
192 for their trajectories. All analyses used SPSS v.24.

193 **Ethical Approval**

194 Approval was granted by the Department for Education for England and Wales for the use of
195 the anonymised data for the specified purposes and by the University of XXXX for the secondary
196 analysis.

197 **Results**

198 **How does attainment at age 7 compare for children in care, children in need, and children in the** 199 **general population? What explains any differences?**

200

201 Table 1 gives the distribution of the standardised KS1 scores and our explanatory variables in
202 the main sub-samples. As can be seen, the CLA, CIN and the matched comparison group (analysis
203 sample) are all severely disadvantaged samples with low attainment. Irrespective of sub-group their
204 KS1 scores were on average around 1 standard deviation below those of the unmatched comparison
205 group (for example, the KS1 scores of the CLA were 1.02 standard deviations below those of the
206 unmatched comparison group).

207 Children in the analysis sample were also much more likely than children in the unmatched
208 comparison group to be: eligible for Free School Meals at age 7, assessed at some point between age 7
209 and 16 as having an Autism Spectrum Disorder, a Behavioural, Emotional or Social Difficulty, a
210 Severe/Multiple Learning Difficulty or a Moderate Learning Difficulty, or in a non-mainstream
211 school (NMS) at 11 or 16.

212

213 **Insert Table 1 here**

214

215 Group comparisons within the analysis sample (CLA, CIN and the matched sample) were less
216 stark than those described above but differences were significant ($p < .001$) for all the variables in
217 table 1 with the exception of 'other SEN' ($p < .025$). The starkest differences within the analysis
218 sample related to EFSM, SEN, particularly BESD (behavioural, social and emotional difficulties) and
219 attendance at NMS (non-mainstream) schools (i.e. schools for children thought unsuitable for
220 ordinary schooling for reasons connected with their special needs, behaviour or aptitudes).

221 The regression results in table 2 below are for the analysis sample only and show the strength
222 of the relationship between the predictor variables and KS1 attainment. The table is based on pooled
223 data generated by the SPSS imputation procedure. The variables entered into this procedure included
224 the outcome (which had some missing values) and the independent variables in the regression, thus
225 creating a danger of spuriously high associations with outcome in the regression. In practice a
226 regression which does not include missing values generates a somewhat higher multiple correlation
227 coefficient so this danger seems to have been avoided.

228 Most of these measures do not precede KS1 tests chronologically: for example, special
229 educational needs (ASD to other SEN) are those identified at any point in a child's career between 7
230 and 16, and at KS1 (age 7) only 16% of those subsequently deemed to display BESD at age 16 had
231 already been identified. Most (79%) of the CLA were not yet looked after at KS1 and only 6% of the
232 CLA and 11% of the CIN were in non-mainstream (NMS) schools (i.e. schools for children thought
233 unsuitable for ordinary schooling for reasons connected with their special needs, behaviour or
234 aptitudes). By the end of KS4, all the young people in the CLA sample were looked after and 38% of
235 the CLA and 30% of the CIN were in NMS. The associations of these variables with attainment at 7
236 must therefore largely reflect the situations and characteristics of those who will have these
237 experiences in the future and not the direct influence of the schools or care.

238 All of the variables in table 2 are dummy variables and the outcome variable is standardised.
239 The coefficients estimate how much better or worse in terms of standard deviations a child is

240 estimated to do, if he or she has this characteristic. As can be seen there are substantial negative
241 effects associated with all forms of special need, with being CLA (-.24) or CIN (-.23) or EFSM (-.39)
242 or attendance at an NMS school. Speaking English as a first language at home is associated with
243 higher scores at KS1 (although not later), while the positive association of ‘missing information on
244 EFSM’, probably reflects its association with independent schooling.

245 **Insert Table 2 here**

246 Irrespective of their causal interpretation, the associations in table 2 greatly reduce but do not
247 fully explain the association between being CLA or CIN and attainment. This suggests that variables
248 that are strongly related to being CLA or CIN but not available in our dataset have a strong impact on
249 attainment. The most likely candidates for these unobserved variables are the family circumstances
250 which are the legal justification for being CIN or CLA. Estimates of the size of this impact (the
251 regression coefficients associated with CLA or CIN status) would be increased if we excluded the
252 variables in table 2 that are likely to be, at least partly, direct or indirect consequences of these
253 situations (e.g. attracting the label ‘BESD’ or attending an NMS school).

254 **How far does attainment at age 7 predict attainment at 16 and does this vary by sub-group?**

255

256 How far does attainment at age 7 relate to attainment at age 16 in each group. Correlations
257 between the raw KS1 and KS4 attainment scores within the four different sub-samples showed that
258 continuity was strong in all four but less so among the CLA: CLA ($r = .35$), CIN ($r = .54$), matched
259 comparison group ($r = .51$) and unmatched comparison group ($r = .53$).

260 In order to examine the extent of individual mobility in terms of relative attainment at each
261 Key Stage, we divided the standardised Key Stage attainment scores into thirds, labelling these ‘top’,
262 ‘middle’, and ‘bottom’. Table 3 examines the chances that an individual in the top, middle or bottom
263 third of attainment at KS1 would be in a substantially different position at KS4.

264 **Insert table 3 here**

265 The trajectories of the unmatched comparison group contrast starkly with those of the CIN
266 and CLA. Excluding those with missing KS1 scores comparatively few CIN (12%) or CLA (9%) start
267 in the top third and even fewer (CIN 8%, CLA 6%) finish there. Conversely many start in the bottom
268 third (CIN 66%, CLA 72%) and more (CIN 76%, CLA 80%) finish there. It is striking that around
269 half of those who start in the top group (CIN 44%, CLA 55%) finish in the bottom one.

270 By definition the distribution of the matched group initially resembled that of the CLA (the
271 slight deviations reflect the omission of the CIN). In 2004 (KS1), 10% this group were in the top third
272 and 70% in the bottom one. By the KS4, the overall distribution of this group had improved with 14%
273 in the top group and only 58% in the bottom one. The downward mobility of this group was far less
274 marked than that of the CLA or CIN. Around half of the CLA or CIN who started in the top third
275 finished in the bottom third (CIN 44%, CLA 55%); the same was true for only 11% of the unmatched
276 comparison group.

277 **How do the educational trajectories of children in care, children in need, and children in the**
278 **general population compare?**

279

280 So far, we have documented the relationship between initial attainment at 7 and attainment at
281 16, and the trend for downward trajectories amongst the CLA and CIN. We have not examined the
282 ages at which any deterioration took place or its relationship to any entry to care. Figure 2 below
283 looks in more detail at the sub-groups of the analysis sample, their average standardised attainment
284 scores at the four Key Stages (KS1 at age 7 in 2004; KS2 at age 11 in 2008; KS3 at age 13 in 2011;
285 and KS4 at age 16 in 2013) and its relationship to the timing of their first entry to care.

286

287 **Insert figure 2 here**

288

289 The top left quadrant of Figure 2 gives the trajectories of the CLA, CIN and matched
290 comparison group (not CLA or CIN). Initial attainment including imputed scores is on average
291 highest in the matched group, next highest among the CIN and lowest among the CLA. By KS4 this
292 order has changed with the matched group improving, the CLA falling slightly, and the CIN falling

293 more substantially to a position slightly below that of the CLA. These changes are concentrated in the
294 secondary school period between the end of KS2 and KS4.

295 The top right quadrant gives the trajectories of the sub-groups of the CIN. They show a sharp
296 difference between the ‘persisting CIN’ who were CIN in 2012 and 2013 and those who were CIN in
297 one or other of these years but not both. The persisting CIN had by far the lowest initial attainment of
298 all the groups, suffered a sharp drop on entry to secondary school and then flatlined at roughly the
299 same number of SDs below the main cohort and at a very low position. The non-persisting groups had
300 relatively high starting points, declining very slightly over primary school, and then more sharply over
301 the secondary school period.

302 The bottom two quadrants give the trajectories of the CLA groups by entry point. The left-
303 hand quadrant shows that those entering care before or during primary school tended to improve or
304 hold their own until entry to secondary school when they declined slightly or held their own. Overall,
305 they more or less ‘flatlined’. By contrast the trajectories of those entering care during secondary
306 school show a very slight decline over the primary school period and then sharp if varying decline
307 during secondary school. The KS4b subgroup (who entered care less than a year before the last census
308 date) had the sharpest decline relative to peers, with attainment at the end of KS4 1.95 standard
309 deviations below the average for the study cohort.

310 An estimated 30% of this gap between the average for this group and that for the cohort could
311 have been associated with time in care (to measure this, we calculated the average deterioration
312 between the start of the key stage in which the child first entered care and the final attainment. We
313 then divided this by the overall group deficit (i.e. the number of SD the child was below the cohort
314 average at 16 and multiplied by 100). The comparable percentages for the KS4a and KS3 groups were
315 23% and 11%. A further article (Anonymous in press) examines how far declines subsequent to entry
316 were explained by characteristics such as truancy rates which were evident before entry.

317

318 **Do the characteristics of the sub-groups in the analysis sample vary in ways that might explain**
319 **variations in their initial attainment and rates of decline?**

320 We used a principle component analysis (PCA) without rotation to explore the correlations
321 between the variables in the analysis sample. PCA is a technique for representing a set of inter-
322 correlated data (for example, answers to a personality questionnaire) by a much smaller set of
323 uncorrelated components (for example, extroversion and neuroticism). The first component explains
324 the most variation in the data set, the second component the most after allowing for the first, and so
325 on. The degree to which a component explains variation in a particular item in the original data is
326 given by its ‘loading’ on that item and this identifies the contribution of that variable to the overall
327 component score. The individual variables that load most heavily on a particular component guide the
328 interpretation of what that component might represent.

329 The variables we selected for this analysis are those which we expected to predict outcome.
330 Compared to regression analysis – which we can use to identify the contribution of individual
331 variables to attainment at age 16 – PCA allows us to distinguish the contribution of our variables to
332 attainment at age 7 and any subsequent decline relative to other children. As will be seen in figure 3,
333 the components also mapped very usefully onto the different groups and their trajectories.

334 The first eight components (all those with eigen values greater than 1), explained 65% of the
335 total variance and 80% of the variance in the individual attainment scores. The comparable figures for
336 the first component were 19% (total variance) and 70% (attainment scores), and for the second
337 component 13% (total variance) and 5% (attainment scores). The remaining 6 components accounted
338 for 33% of the total variance, but only 5% of the variance in the attainment scores. As our interest is
339 in the attainment scores, we limit our discussion to the first two components, which are shown in table
340 4 below.

341 **Insert table 4 here**

342

343 High scores on component 1 are marked by higher attainment at all time points and an
344 absence of special needs other than BESD. We named this component ‘persistent attainment’. High
345 scores on component 2 are marked by relatively high attainment at KS1 and relatively poor attainment

346 at KS4. This negative trajectory is marked by poor attendance and a label of BESD. We named this
347 component ‘deteriorating attainment’.

348 In this model, a child’s attainment score at any key stage is related to their average attainment
349 at all points (component 1) and – to a much lesser extent – their positive or negative attainment
350 trajectory (component 2) and ‘deteriorating attainment’ (component 2). (The next two components
351 accounted for 8 and 6 percent of the variance, and might have been labelled ‘female withdrawal’ (high
352 loadings on being female, having poor attendance, and not being excluded) and ethnicity (high
353 loadings on not being white British or speaking English as a first language at home). Their loadings
354 on KS4 attainment were -.007 and .006).

355 Figure 3 shows the score on component 1 and component 2 for the subgroups in the analysis sample.

356 The key points to note are:

- 357 • The matched comparison group was characterised by relatively high persistent attainment and
358 low deteriorating attainment (their average relative attainment was high and they improved
359 over time)
- 360 • Young people who were CIN in 2012 or 2013 (but not both) had relatively high persistent
361 attainment and high deteriorating attainment (they started relatively well but fell away)
- 362 • The persisting CIN group (CIN in 2012 and 2013) had very low persistent attainment and
363 relatively low deteriorating attainment (their attainment was consistently very low)
- 364 • The CLA who were early entrants (in care by the end of Key Stage 2, so before secondary
365 school) had low persistent attainment but relatively low deteriorating attainment (they had
366 consistently low attainment but did not decline further)
- 367 • The CLA who were late entrants (after age 11) had relatively high persistent attainment but
368 high deteriorating attainment, a feature which became increasingly pronounced the later they
369 entered care.

370 These findings reflect the trajectories shown in figure 2, but also associate ‘persistent low
371 attainment’ with special needs and ‘deteriorating attainment’ with BESD, exclusions and poor
372 attendance at secondary school.

373 Those who were neither CIN nor CLA (the matched comparison group) improved relative to
374 others in the analysis sample, a finding partly explained by their low level of absences, but also,
375 perhaps and as discussed later, by regression to the mean. In contrast to the CIN and CLA they were
376 selected because they had low initial attainment. This will have increased our chance of selecting
377 children who happened to do badly at KS1 relative to their potential.

378

379 **Insert figure 3 here**

380

381 **Discussion**

382 The origins of this paper lie in a controversy about the degree to which the care system is to
383 blame for the low attainment of the CLA at 16, the degree to which the CLA should be regarded, for
384 educational purposes, as a homogeneous group, and the comparative lack of research attention on the
385 educational careers of the CIN. In this context we have found that

- 386 • At age 7 the attainment of the CLA was already 1.2 SD and the CIN -0.94 SD behind
387 their peers
- 388 • Attainment at age 7 is the key predictor of final attainment at 16 for all groups,
389 irrespective of whether or not they are in care
- 390 • In addition, average attainment falls among the CLA and CIN relative to their peer
391 group but rises among others who are similar in socio-economic status and initial
392 attainment

- 393 • The average decline of around 0.3 SD among the CLA is concentrated among the late
394 entrants, is associated with unauthorised absences and exclusion, and begins before
395 entry to care.

396 Given the above, the care system cannot explain the relatively poor early attainment of the
397 CLA, 79% of whom were not in care at age 7 or most probably of the CIN, only a minority of whom
398 are likely to have been in care prior to 2013 and that for relatively short periods. Explanations for the
399 educational gap between the CLA, the CIN and their peers at 16 thus have to be sought primarily in
400 the special educational needs, socio-economic status and, we presume, difficult family circumstances
401 which characterise this group at age 7 and which predict performance at this point.

402 Explanations for the persistence of this low attainment must also be sought outside the care
403 system. All children perform at or within the limits set by this initial attainment, and the reasons for
404 this may have to do with the persisting effects of socio-economic status, gender and ethnicity, the
405 persistence of family environments associated with attainment and, perhaps, a tendency for
406 educational systems to respond to initial attainment in a way that reinforces its effects (Kern and
407 Friedman, 2008; Lesnick, Goerge and Smithgall, 2010; Sylva *et al.*, 2014; Crawford, Macmillan and
408 Vignoles, 2015). ‘Care’ may be one of the signals or labels that play a part in this process. None of
409 this has to do with the quality of the care system per se.

410 The distinction between earlier and later entrants to care reflects other work. Early long-
411 staying entrants are predominantly admitted for reasons of abuse and neglect, make better educational
412 progress (Sutcliffe, Gardiner and Melhuish, 2017; DfE, 2018c) and are seen by their social workers
413 and carers as adapting relatively well to school (*Anonymous* 2007). With the exception of the minority
414 of young people in care because they are seeking asylum independently (*Anonymous*, 2018), later
415 entrants seem to be in conflict with their school, and particularly so if they enter care for reasons of
416 behaviour (*Anonymous*, 2007, McClung and Gayle, 2010). Neither the initial low attainment of the
417 early entrants nor the rapid decline of the later entrants can easily be seen as the fault of the care
418 system.

419 The issue that remains for investigation is how far the ‘flat-lining’ of the early entrants and
420 continuing decline of later ones reflects characteristics (for example, a difficulty in concentration or a
421 habit of truancy) they brought with them to the care system. The evidence presented here suggests that
422 care does not make the situation worse (hence the flat-lining) but that like the CIN those in care do
423 not, like the comparison group, benefit from regression to the mean. The reason for the progress of the
424 latter is probably that unlike the CIN and CLA they were selected from a group of much higher
425 average attainment. Thus, there was, again in contrast to the CLA and CIN, no obvious reason for
426 their low attainment and their natural level to which they ‘regressed’ may well have been considerably
427 higher. We need to know whether high quality care can, if accompanied by high quality education,
428 reverse the educational deficits of both early and late entrants.

429 For the moment, the practical implications of this study seem to be:

- 430 • Start early: the CLA are already over 1 SD behind their peers at seven and this is the
431 main driver of their subsequent performance
- 432 • Be inclusive: a preventive approach cannot exclusively target the CLA, if only
433 because they cannot be sharply identified at an early age. The CLA are part of a wider group
434 of vulnerable, commonly low-attaining children whose identification by either teachers or
435 social workers should lead to early intervention
- 436 • Pay particular attention to the period around entry to secondary school which seems
437 to be the start of the downward trajectories of the later entrants to care and non-persisting
438 CIN. More generally the deterioration that characterises some groups needs to be identified
439 when it begins and methods developed to address the behaviour accompanying it
- 440 • Be multi-disciplinary and use a variety of methods: children enter care for different
441 reasons, their educational deficits have different correlates and the specific causes of their
442 deficits need to be understood if they are to be helped
- 443 • Involve both care and education. Care may protect children from the causes of their
444 deteriorating performance but relief from psychological stress does not, in itself, make good

445 their lack of educational skills. Researchers made the same point over 20 years ago (Heath,
446 Colton and Aldgate, 1994).

447 **Limitations of the study** Almost by definition the CIN and CLA in our samples had faced
448 severe social difficulties by the age of 15 or 16. Low or declining performance in these groups needs
449 to be explained but is hardly surprising. Similar enquiries need to be directed at those who have been
450 CIN or CLA at an earlier age but who no longer have this status at the end of KS4. They also need to
451 seek information on the family circumstances of the CIN on which we did not collect data but which
452 we infer are a major reason for their educational decline. We have now been funded to undertake
453 research of this kind.

454 As argued above, we would see the priorities for research as being to establish a) whether,
455 after allowing for the characteristics that children bring with them into care, care counters, reverses, or
456 exacerbates the effects of the pre-existing environment b) whether and, if so in what circumstances,
457 care can enable children to improve on their relative attainment at entry to care and so catch-up with
458 their peers. We are currently undertaking analyses that bear on these issues.

459 In the end, however, the truth, as well as the usefulness, of the explanations need to be tested
460 by an integrated programme of research and development that would develop more specific
461 interventions, test their effectiveness and extend them to wider groups at risk (see for example Scott *et*
462 *al.*, 2009).

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