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Cover Page:
Austerity, rationing and inequity: trends in children's & young peoples' services expenditure in England between 2010 and 2015

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Austerity, rationing and inequity: trends in children's & young peoples' services expenditure in England between 2010 and 2015

Abstract

This paper investigates local authority (LA) trends in expenditure on Children's and Young Peoples' services (CYPS) in England between 2010 and 2015, a period of government characterised by measures of fiscal austerity. We draw on a rationing framework (Hastings 2009) to contextualise the levels and trends in expenditure under observation. The paper analyses trends in various groupings of expenditure, using a latent growth modelling approach to identify significant trajectories in spending across LAs with different deprivation tertile membership. We find that although some kinds of children's and young peoples' services expenditure have been largely maintained during this period, preventive family support and early intervention services (such as Sure Start Children's centres) have seen substantial reductions in expenditure, in contrast to the dominant narrative that children's services have been protected. Local authorities in the most deprived tertile have faced the greatest cuts, mirroring other research findings on the distribution of austerity measures (Bailey, et al. 2015).

Introduction & Background

The aim of this paper is to give an account of changes in children's services expenditure in England over the period 2010-2015, and to place these changes within an analytical framework that raises important questions about how such expenditure is allocated (CWIP 2017). To this end we employ a 'rationing' framework developed by Hastings (2009) in the context of the provision of environmental services. Rationing here refers to mechanisms of '*the allocation of scarce resources… where constrained budgets meet unconstrained demand for resources'* (Klein, et al. 1990, 9).

Hastings (2009, 2910) identifies three rationing processes by which resources are allocated and services are provided: 'institutional rationing', 'reactive rationing' and 'political rationing'. Each of these processes reinforce one another and operate at different levels. This paper focuses on the first kind of rationing: institutional rationing. There are two reasons for this: first, the constraints imposed by the available data on public expenditure discussed in the data section below, and second, because institutional rationing 'sets in train further processes [reactive and political rationing] which disadvantage the [deprived] neighbourhoods still further' (Hastings, 2009, 2924) and therefore provides important context for any observations of reactive or political rationing identified in street-level decision making (Lipsky [1980] 2010). Although the definition of institutional rationing refers to neighbourhood distribution, the limitations of the data available means we must apply the theoretical framework to local authority (LA) allocation of resources.

The concept of institutional rationing builds on the work of Judge (1978), and refers to national and local governance decisions which result in a distribution of available resources based on a given set of needs. Equal distribution in these resources, however, is not necessarily a desirable goal, as needs for different public services are geographically, temporally and demographically distinct (*for examples see:* Stafford and McCarthy 2006; Dorling and Ballas 2008). Therefore, a fair distribution of resources 'is *proportionate* to need' (Hastings 2009, 2911, emphasis in original). When the resources available for delivery of public services are not adequate this imposes constraints on what can be delivered, which can result reactive rationing, where service providers and workers ration access and provision based on cultural ideas of deserving and undeserving recipients. It also creates an environment where demands of service users who

have greater political capital to leverage can direct the rationing of public services and resources (Hastings 2009).

Provision and Need for Children's Services

Spending assessments for children's services have historically been based on specified correlates of need/service use, including labour market conditions and household compositions, as well as associated area costs and historic spending (Carr-Hill, et al. 1999). On the one hand, there are underlying demographic and market factors such as population growth, wages and salary agreements, and inflation (Hastings, et al. 2015). On the other, there are changes in service demand factors reflecting stressors that result in higher rates of referral to services (Hood, et al. 2016; Mason and Bywaters 2016). Poverty, in particular, is a strongly associated characteristic of children who are taken into care (Looked After Children) or have some kind of contact with children's services (Bramley and Watkins 2008; Bywaters, et al. 2014a, 2017a; Mason and Bywaters 2016). However, there has historically been a greater focus on individualised mediating factors: drug use, maternal mental health, domestic violence, that are often also strongly associated with poverty (Cleaver, et al. 2011; Bywaters, et al. 2016). The relationship between these individual problems and poverty goes beyond comorbidity, as low income is a well-evidenced causal factor in a range of children's outcomes (Cooper and Stewart 2013, 2017).

Poverty, however, is not a straightforward condition to define (Tomlinson, et al. 2008). It is not the aim of this review to provide an outline of the competing ontological and methodological justifications and problems in each measure, but we present a range of

indicators here to build the case to suggest children's quality of life has worsened over the period of time under investigation. In our LA-level analysis we use the DCLG's Index of Multiple Deprivation (IMD) rankings (DCLG 2015) but acknowledge that this is one of a number of alternative measures. We could have chosen the Income Deprivation Affecting Children Index (IDACI) but this only counts children up to the age of 15, not 17 as for children's services intereventions, and, more importantly, only uses measures of low income and not the wider range of deprivation factors including employment, health, housing, and the environment that form part of the IMD scores. We also could have used a measure of deprivation which weighted more heavily the most deprived neighbourhoods such as the proportion of neighbourhoods in the most deprived 10% nationally or the measure of Extent (DCLG 2015) but correlations between meaures are very strong ($r \geq 0.9$) and there is no clear evidence for using these alternative measures.

The Households Below Average Income (HBAI) poverty measure reports the proportion of the population, or subset of the population, that live in households with equivalised income less than 60 per cent of the median for that year (DWP 2016). Under this measure the claim is that child poverty remained relatively unchanged between 2010/11 and 2014/15, with a slight increase from 17 per cent of children to 19 per cent of children living below the HBAI line between 2013/14 and 2014/15 that is within the margin for error of the two years (DWP 2016, 7).

In contrast, the JRF's Minimum Income Standard (MIS) reports the number of households that fall below a certain income level, determined for different household types by a consensus based consultation between experts and a focus group from the public that determines the price of a basket of goods considered the 'moral minimum' in society (Walker 1987; Hirsch 2015).

This is then updated yearly for changes in inflation/wage growth and has been reviewed biannually and rebased every four years for families with children (Hirsch 2015). Comparing the proportion of households by employment status and family type that fall below the first MIS in 2008/9 with the proportion that fall below the 2014/15 MIS shows a different picture of child poverty. In 2008/9 40.9 per cent of couples with children where one of the household adults was in work fell below the JRF's minimum income standard. In 2014/15 this rose to 56.4%. For lone parents working full time the risk increased from 27.7 per cent in 2008/9 to 42.4 per cent in 2014/15. Overall, all families with children (except for self-employed lone parents) saw some increase in their risk of poverty as defined by the MIS, regardless of their employment situation (Padley, et al. 2017, 30).

One other widely reported indicator that suggests greater deprivation, has been the increase in the use of food banks, or rather, the number of emergency food supplies provided by food banks (Garthwaite and Bambra 2015; Dowler and Lambie-Mumford 2015). In 2010/11 the number of emergency food packages provided by Trussell Trust food banks was 61,468; in 2014/15 this number stood at 1,084,604, an increase of almost 1,765 per cent (Trussell Trust 2016). These various indicators, of course, tell us very little about the non-material, non-income, based dimensions of poverty – the social, psychological, political, and environmental aspects that are undoubtedly a feature of personal social services need (Lister, 2004; Tomlinson, et al. 2008).

These trends are reflected in changes in rates of intervention and usage of children's services over the same time period (Mason and Bywaters 2016). Jütte et al.'s (2015) analysis of secondary data found rising numbers of children in need due to abuse or neglect, rising numbers of children on Child Protection Plans (CPPs), and rising rates of children starting placements

in care (LAC). In all, there is evidence to suggest that most indicators of demand for children's services have risen, and are substantially higher in more deprived LAs (Hood, et al. 2016).

Evidence around children's services expenditure is still sparse. As Mason and Bywaters (2016, 159) write: 'given that child protection is such a regular news item, and that both the human and financial costs of poverty and [child abuse and neglect] are so substantial, surely there should be better knowledge about what is being spent'. We present evidence below of declining overall children's services expenditure per child between 2010/11 and 2014/15. Our evidence appears to run counter to the assertion of the National Audit Office (NAO 2016) of an 11% increase in children's social work spend between 2012/13 and 2014/15, and we return to this disparity in the conclusion. It is also at odds with the argument made by the Department for Education (DfE) (2016a) that LAs responded to pressures on services by prioritising prevention.

Direct changes to funding policies and formulas have decreased the resources available to LAs, notably in the rapid reduction of central government area-based grants (Bailey, et al. 2015; Hastings, et al. 2015). There has also been a move away from absolute need components in children's services funding formulas expenditure in favour of a relative approach (DCLG 2010, 2013). A major initial drop in LA expenditure came in part from a £2,500 million cut in the total central grants to LAs soon after the formation of the coalition government in 2010, from £21,500 million down to £19,000 million, a nearly 11.7 per cent reduction, as documented in the 2010/11 and 2011/12 local government finance reports (DCLG 2010, 5, 2011, 5). These cuts did not fall evenly on all services or across all parts of the country, with more deprived LAs that rely on higher spending to meet greater or more complex needs experiencing the largest cuts (Hastings, et al. 2015). These LA expenditure cuts have been accompanied by welfare reforms that made benefits less generous, tightened elibility criteria and increased

sanctions, resulting in a reduction in cash transfers in real terms and greater income insecurity for many families with children, these changes being most punitive for lone parents and poorer households (Beatty and Fothergill 2013; Ridge 2013; Lupton, et al. 2015; Bradshaw 2016).

The specific children's services grant, that was intended for services for the LA population aged under 18, was replaced with an 'early intervention' grant, which distributes funding based on children under five years old and teenage entrants to the labour market (authors' comparison of DCLG 2010, 7-10 and DCLG 2013, 45-47). One of the most substantial changes for child-specific services allocation was a move away from allocating resources based on the proportion of families in need *within* the LA population, to allocating resources based on the proportion of families in need *relative* to the numbers of families in need in other LAs, further shifting resource distribution towards equality (at a lower base) and away from equity (DCLG 2010, 7-10, 2013, 45-47). There are differences in the extent that LAs can respond to these cuts. The poorest LAs have a smaller tax base from which to levy revenue through council tax and, furthermore, are limited to council tax rises of less than 2 per cent per year without a local referendum, making matching pre-cuts levels of funding a difficult task for poorer LAs (Bailey, et al. 2015).

Method

Data

Expenditure on children's services is found in the section 251 returns provided to the Department for Education (2016b). Children and young peoples' services expenditure categories include: Sure Start and early years, looked after children, safeguarding services, family support services, services for young people and youth justice, with the remainder

grouped together as ‘other children’s and family services’. These categories are constituted of various sub-categories, but these are not readily available by LA from the DfE published data. To some extent, the allocation of expenditure between these categories is at the discretion of LAs, making comparisons notoriously difficult (Freeman and Gill 2014). The City of London and the Isles of Scilly were excluded as outliers in the analysis, making the final sample size 150 LAs over five years.

Identifying longitudinal trends in this expenditure is made more difficult because the categories and subcategories in the section 251 returns change frequently. Falls in areas of spending may be the result of new categories being added, or increases could be the result of categories being merged. This is unfortunate as it prevents any confident identification of services where the largest cuts have fallen. As a compromise, we take the aggregate expenditure across three broadly stable meta-categories of spending: looked after children expenditure, safeguarding expenditure, and the residual non-LAC, non-safeguarding expenditure (which usually includes more support-orientated services such as the funding of Sure Start or Children’s Centres and the delivery of family support services).

Expenditure groupings example (2014-15 S251 Outturn LA Level Categories)

- LAC expenditure (42 per cent of expenditure)
    - Children looked after expenditure
- Safeguarding expenditure (23 per cent of expenditure)
    - Safeguarding children and young peoples’ services (including commissioning)
- Non-LAC, non-safeguarding expenditure (35 per cent of expenditure)
    - Sure Start and early years
    - Family support services

- Services for young people
- Youth justice
- Other children's and families services

After aggregating expenditure into groups, figures were adjusted to 2015-16 prices using a GDP deflator provided by the Institute for Fiscal Studies (IFS, private correspondence) based on the Consumer Price Index (CPI) measure of inflation by fiscal year, and were divided by local authority population aged 0 to 17 estimate for total expenditure, divided by number of children looked after for LAC expenditure, and divided by local authority population aged 0 to 17 that are not in care for spending excluding LAC and safeguarding expenditure, to create a comparable per-capita measure between LAs. The rationale for dividing expenditure between the most likely users of services is, primarily, to adjust for differing sizes of populations and levels of need in local authorities, and, secondly, an attempt to reflect in our analysis the level of service likely to be received by the primary beneficiaries in monetary terms. For LAC spending we were interested in two key issues: the proportion of total spend that was devoted to looked after children and whether any variations in the costs per LAC between LAs and over the time period studied were associated with LA deprivation. Therefore, for this latter purpose, we calculated the unit cost per LAC by dividing the total spend by the number of children looked after. Final figures adjusted using the HM Treasury Implied Price Deflator (IPD) produced near identical results, in part due to their close correlation between the two deflators in the five years in the study ($r = .99$). However, readers should be aware of divergence between these two measures over longer time scales, and some differences such as the IPD including prices of investment goods, government services and exports (HM Treasury, 2014).

Indices of Multiple Deprivation (DCLG 2015) scores for 2015 were used to classify LAs into deprivation tertiles. As IMD scores are not able to provide indications of change over time there are limitations in the analysis; with a longitudinal measure it may be possible to identify if trends in LA deprivation are associated with trends in spending. However, it is difficult to identify an appropriate longitudinal proxy for deprivation at a LA level. Commonly, free school meal eligibility has been used as one indicator of child poverty, however, changes in free school meal eligibility for primary school students introduced by the coalition government make this an inappropriate indicator.

Methods

The objectives of this paper are to identify not only differences in expenditure at any two points in time, but whether associated trends are statistically significant, the extent to which they vary between LAs, and what factors might explain this variation. This is a departure from much commentary on expenditure cuts where the focus is typically on comparisons between years. To this end we use latent growth models (LGM) in order to model the change in time. These trends are commonly expressed in terms of an intercept (expenditure at the first time point, 2010-11), a slope (linear change over time for every subsequent time point), and a curve or series of curves (change over time as a function of one or more polynomials). There are two key benefits to this approach (Duncan and Duncan 2006, 2009):

- Due to the hierarchical structure of the data a pooled regression model will overestimate the number of independent cases in the sample. This means that the standard errors in estimates become artificially smaller than they should be and the autocorrelation between time points and group membership is not controlled for.

- Change over time expressed as latent variables can be allowed to vary for each case – effectively estimating a regression equation for each group of time points within some constraints. The researcher can then test for hypothesized associations between exogenous variables and the rate of change over time itself.

The number of growth factors and additional parameters specified in the model is decided by a process where the goodness of fit statistics are compared between first a baseline model (no change over time, no variance), and iteratively more complex models (given in online appendix 1.1 – 1.5). These fit statistics refer broadly to the ability of the model to reproduce the raw data characteristics (Bollen and Long 1993). We report several goodness of fit statistics and two information criterion for competing models (for an overview of each, see: Kenny 2014). We do not report the Root Mean Square Error of Approximation (RMSEA) as it is inflated by small sample sizes and low numbers of parameters (Kenny, et al. 2015). Model fit statistics for each model are presented in the appendices tables one through five.

We then regressed any random intercepts, slopes, and polynomial latent variables on IMD tertile group membership under the null hypothesis that the expected value for the most deprived or middle deprived LAs is not significantly different to the expected value for the least deprived LAs. More complex models were also produced that controlled for any confounding effects of LAC changes over time, Children in Need to Social Worker ratio, and changes in the rates of repeat Child Protection Plans. We also tried including IMD score as a continuous predictor of expenditure trends, as opposed to using dummy variables for tertile membership. The effect sizes of deprivation on trends in expenditure were not significantly different. For the sake of parsimony in the expenditure models, and for the focus of this article, these more complex models are not presented.

Findings

Descriptive statistics

Table 1 shows the median total, LAC, safeguarding, and non-LAC expenditure per child, as well as median LAC rates and median per cent of total expenditure that is made up by non-LAC, non-safeguarding spend, by deprivation tertile group. In all groups, total expenditure had decreased over the coalition years. The most deprived LAs have seen the largest decreases in expenditure in absolute £-per-head and in percentage terms, relative to their expenditure in 2010-11. In 2010-11, median total expenditure per child was 1.75 times higher in the most deprived third of LAs than in the least deprived third, it was only around 1.57 times higher in 2014-15. In context, the median LAC rate in the most deprived third of LAs was twice as high as in the least deprived third in 2010-11 and was 1.82 times higher in 2014-15. While looked after children are not the only recipients of children's services, the rates of LAC in a LA can be a good indicator of demand – albeit subject to the effects of rationing.

In contrast to total expenditure, LAC expenditure per LAC has increased in all groups over the five years, if erratically. The median LAC spend per LAC has increased most in the least deprived tertile of LAs, less in the centre tertile, and the least in the most deprived tertile. It appears that LAC expenditure has been largely prioritised for uprating to match persistent pressures identified earlier. Similarly, median safeguarding spending appears to have been relatively unchanged over the five years of the coalition government, with a small decrease over the years before reaching levels similar to their 2010-11 base by 2014-15. Therefore it is cuts to other services that likely explain reduced aggregate spending. A comparison of the median expenditure shows substantial cuts of on average 38.3 per cent between 2010-11 and 2014-15 to non-LAC, non-safeguarding expenditure. Furthermore, the resultant cuts in non-

LAC, non-safeguarding expenditure were far more pronounced in the most deprived third of LAs, with a reduction in the median between the two years of 45.6 per cent. Where this kind of expenditure, encompassing family support services and Sure Start/early years centres, made up on average 45.9 per cent of all spending in 2010/11 it fell sharply to only 33.5 per cent of spending on average in 2014/15, a substantial shift in resource allocation priorities.

Table 1: Total expenditure, LAC expenditure, non-LAC expenditure, and LAC rates between 2010 and 2015 by IMD deprivation group (N = 150)

	Median Total Expenditure per Child (2015-16 prices) in £100s						Median Expenditure per Looked After Child (2015-16 prices) in £1000s					
	2010-11	2011-12	2012-13	2013-14	2014-15	% Change	2010-11	2011-12	2012-13	2013-14	2014-15	% Change
Third Least Deprived	6.84	6.68	6.78	6.64	6.41	-6.29	53.30	53.14	58.85	60.92	60.88	+14.22
Third Middle Deprived	9.36	8.39	8.66	8.64	8.39	-10.36	48.23	44.98	52.73	55.20	52.49	+8.83
Third Most Deprived	12.02	10.06	10.11	10.05	10.07	-16.22	48.68	47.34	51.00	50.55	50.84	+4.44
All	9.25	8.35	8.37	8.29	8.20	-11.35	50.44	48.49	53.90	55.20	54.53	+8.11

Table 1 cont.

	Median Safeguarding Expenditure per non-LAC (2015-16 prices) in £100s						Median Non-LAC, Non-SG Expenditure per Child (2015-16 prices) in £100s					
	2010-11	2011-12	2012-13	2013-14	2014-15	% Change	2010-11	2011-12	2012-13	2013-14	2014-15	% Change
Third Least Deprived	1.66	1.60	1.53	1.56	1.68	+1.21	3.11	2.80	2.53	2.41	2.23	-28.30
Third Middle Deprived	1.93	1.97	1.89	1.83	1.91	-1.04	4.44	3.48	3.34	3.07	3.02	-32.00
Third Most Deprived	2.37	2.23	2.17	2.20	2.23	-5.91	5.76	4.34	3.88	3.62	3.13	-45.66
All	1.96	1.92	1.87	1.91	1.94	-1.00	4.36	3.41	3.15	2.94	2.69	-38.30

Table 1 cont.

	Median LAC Rate per 10,000 Child Population						Median percentage of expenditure on non-LAC, non-SG services (%)					
	2010-11	2011-12	2012-13	2013-14	2014-15	% Change	2010-11	2011-12	2012-13	2013-14	2014-15	% Change
Third Least Deprived	39	40.5	41.5	44	44	+12.82	44.70	42.25	38.40	37.95	34.15	-23.60
Third Middle Deprived	61	64	66.5	66	67	+9.84	46.75	41.95	37.20	35.70	35.60	-23.85
Third Most Deprived	78.5	78	80	80	80	+1.91	47.10	41.25	36.90	35.65	31.85	-32.38
All	57.5	59.5	61	61	62	+7.83	45.9	41.9	37.9	35.9	33.5	-27.02

Latent Growth Models

LGM results are transcribed in table 2 and present a range of fit statistics, estimates, and bias-corrected bootstrapped confidence intervals. Mean trends with 95 per cent confidence intervals are graphed for each model with additional smoothed lines for the real data of each LA to show the variation between LAs. Lines and trends are colour coded by deprivation tertile (visible online). The thicker dashed lines refer to the mean trends for the most deprived third of LAs, the solid lines refer to the mean trends for the middle deprived third of local authorities, and the dotted lines refer to the mean trends for the least deprived third of local authorities.

The first LGM fits a trend for total expenditure per child across LAs and the resultant goodness of fit tests indicated a weak to mediocre fit (CFI = .93, SRMR = .087). There was a statistically significant negative trend in total expenditure between 2010-11 and 2014-15, at an average rate of -£16.40 per child per year ($B = -0.164$, $p < .01$). There was a strong negative correlation between the level of expenditure at the intercept point (2010-11) and the estimate of the slope: LAs with higher expenditure in 2010-11 had larger reductions in spend per child per year than LAs with lower expenditure in 2010-11 ($r = -0.597$, $p < .001$). This suggests that children living in LAs with higher expenditure at the beginning of the coalition government have seen more dramatic cuts. As implied by the comparisons of the funding formulas and median expenditure, many of the LAs with high spending per child were in the most deprived tertile, with spending in 2010-11 on average £45.87 per child higher than the least deprived tertile ($p < .001$). Therefore, it was high deprivation LAs that had steeper year on year cuts per child in totalled children's services expenditure. The mean decrease in expenditure for the most deprived tertile was -£32.60 per child per year, significantly larger than the average -£8.60 reduction per child

per year in the least deprived tertile ($p < .01$). More varied spending at 2010-11 began to converge towards a lower average over the five years, driven by bigger cuts to 'big spenders'.

The LAC expenditure model has good fit (CFI = .968, SRMR = .073) (Hooper, et al., 2008; Kenny, 2014), with a slope value is significantly non-zero at the 5% level, indicating that the average trend across LAs was positive: a mean yearly increase of approximately £1,172 per looked after child per year. This rate of increase was a fairly universal trend across LAs. Furthermore, LAs only differed slightly in their 2010-11 spending levels. LAs in the middle deprived and most deprived tertile spent less per LAC than the least deprived tertile (approximately £5,500 less, $p < .05$). This may be due to variation in estate or staff costs, and/or foster rates in less deprived LAs but this is not explored here.

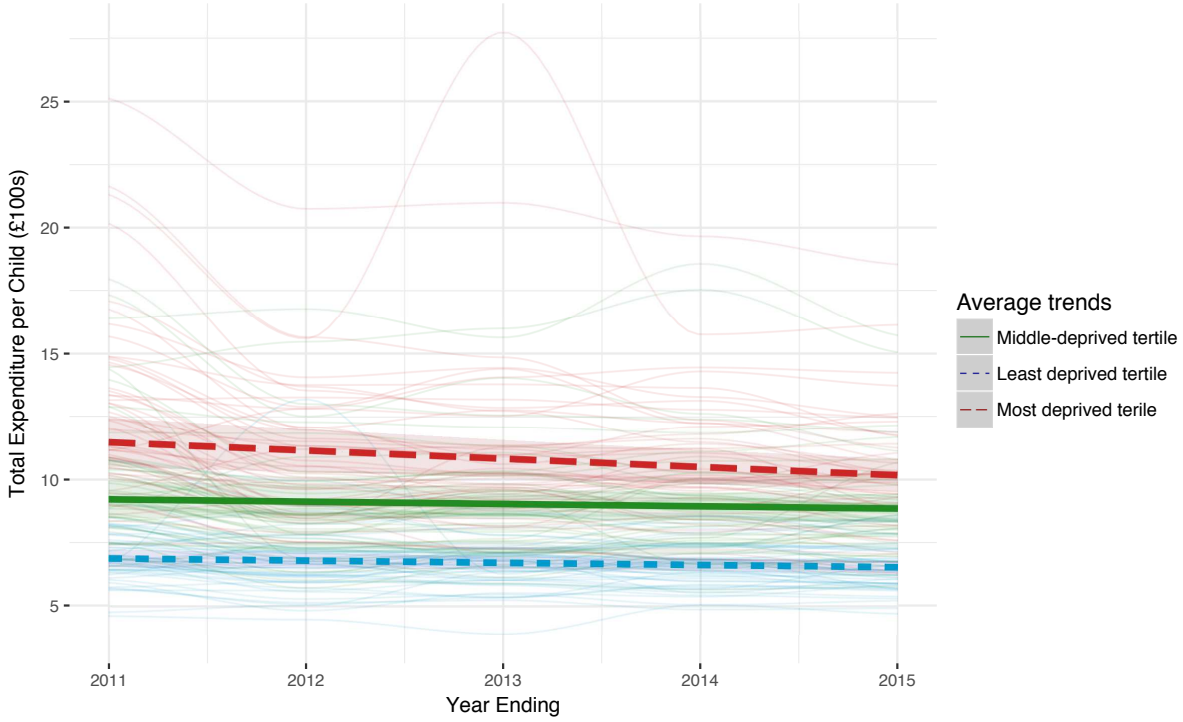

Figure 1a

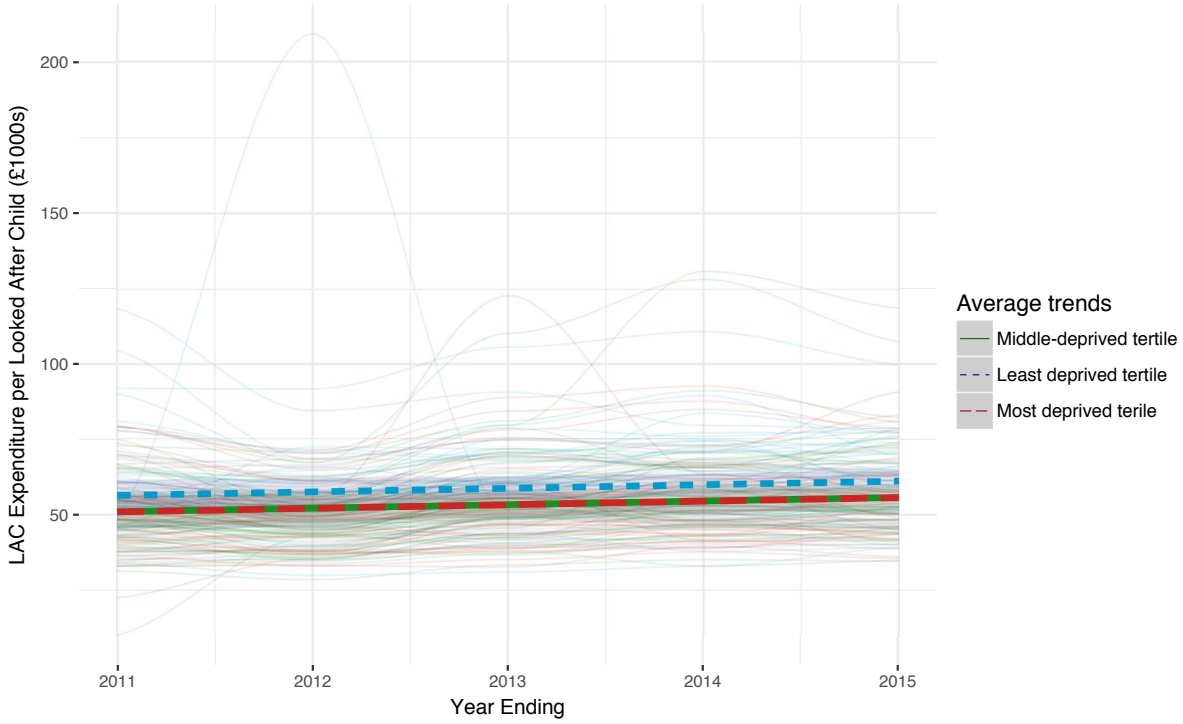

Figure 1b

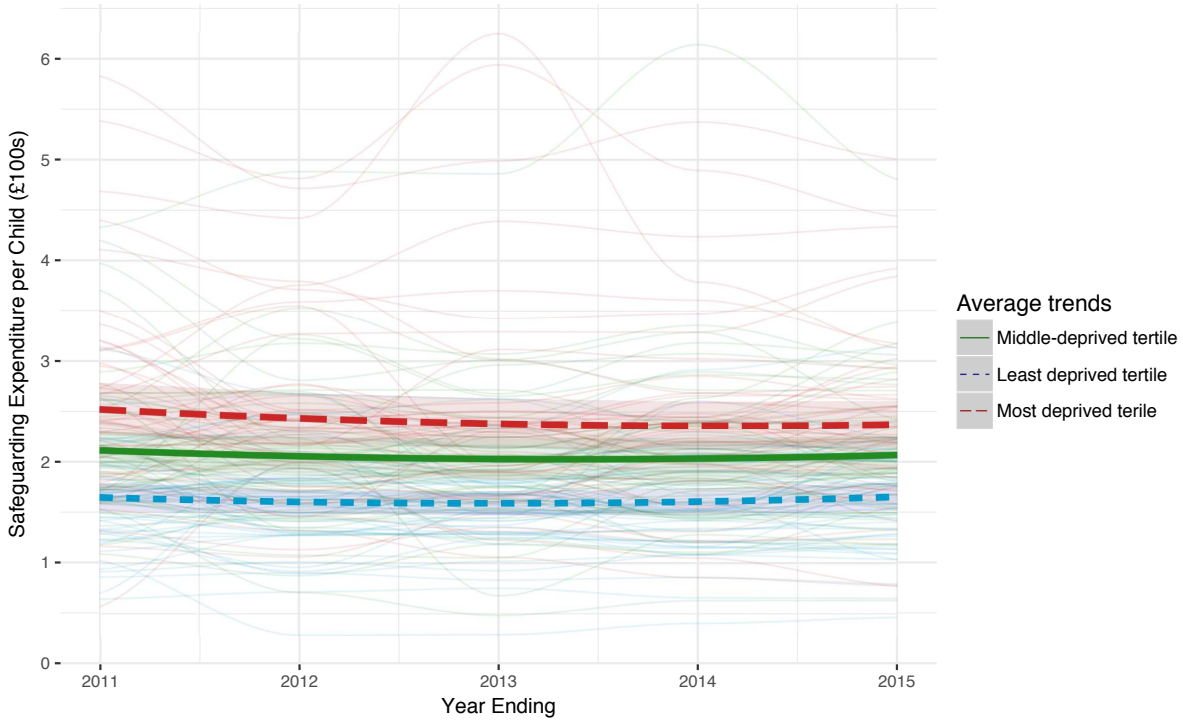

Figure 1c

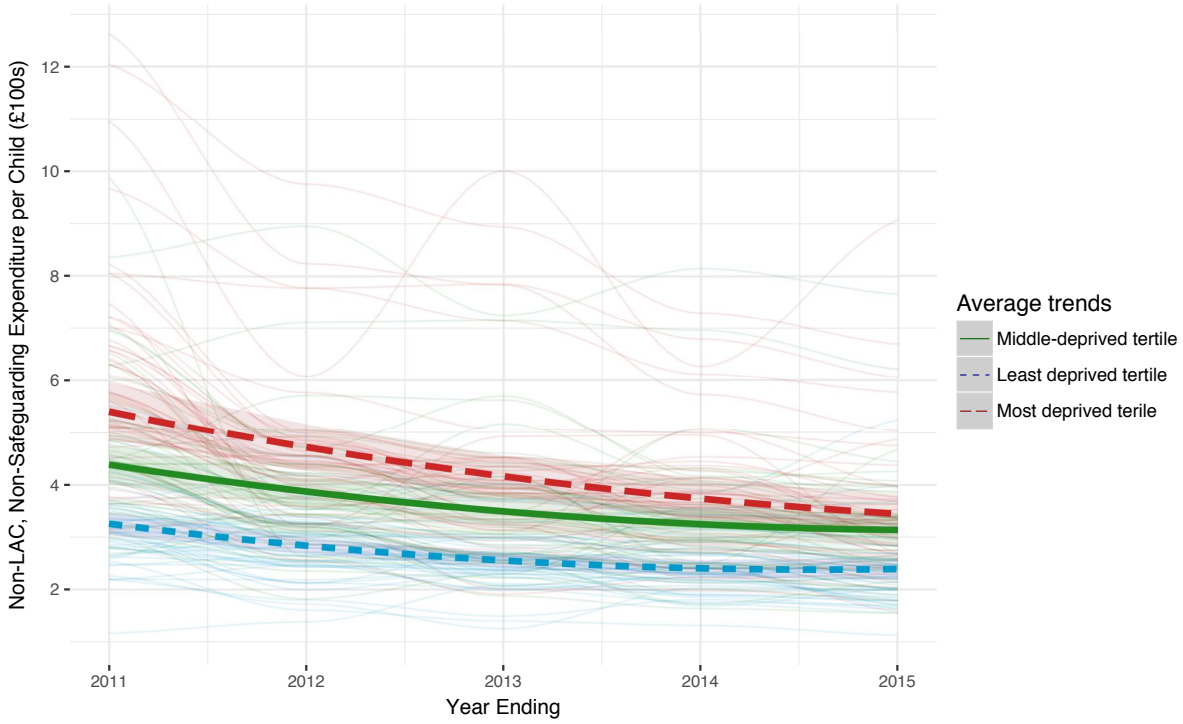

Figure 1d

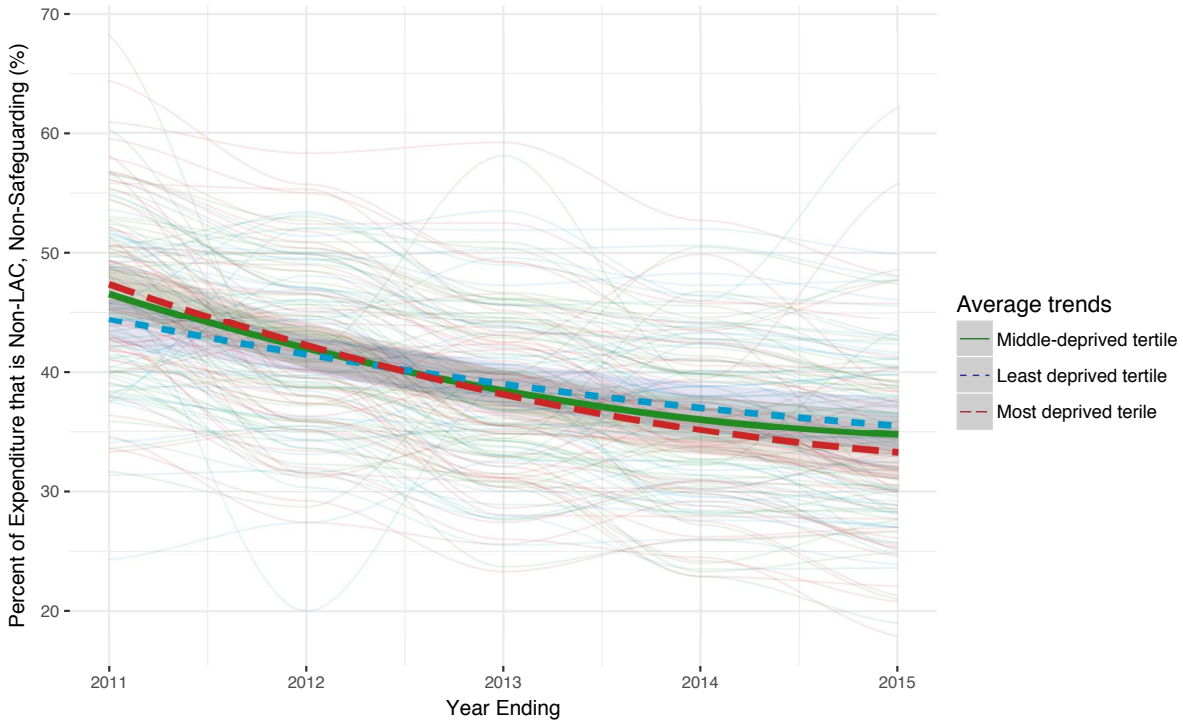

Figure 1e

Figure 1: LA spending and mean LGM trends for (a) total expenditure, (b) LAC expenditure, (c) safeguarding expenditure, (d) non-LAC, non-safeguarding expenditure, and (e) per cent of expenditure non-LAC/non-safeguarding

Similarly, the model for safeguarding expenditure also has very good fit (CFI = .996, SRMR = .026), but this is largely due to the complexity of the growth function fit to the LA data over time to match the variability of each LAs individual growth curve. This is best visualised in the accompanying graphics. Although these fluctuations are undoubtedly important for LAs' services, as a trend they show relative stability: a small but significant dip, followed by positive growth to put safeguarding expenditure at approximately the same level in 2014-15 as it was in 2010-11. LAs in the most deprived and middle deprivation tertile spent significantly more per child than the least deprived LAs, perhaps to meet greater need (in 2010-11 approximately £90 more per child and £50 more per child on average respectively, $p < .01$).

Table 2: Latent Growth Model fits and estimates, average and by deprivation tertile (* = p < .05, ** = p < .01, *** p < .001)

	Model				
	Total Expenditure (Model iv) N=150	**LAC Expenditure** (Model iii) N=150	**Safeguarding Expenditure** (Model vi) N=150	**Non-LAC, Non-SG Expenditure** (Model v) N=150	**Non-LAC, Non-SG Expenditure %** (Model vi) N=150
Fit Statistics					
χ^2, df	93.517, 10 ***	27.844, 8 ***	9.946, 6	52.954, 9 ***	12.739, 6 *
CFI	.930	.968	.996	.951	.988
TLI	.930	.960	.993	.946	.981
SRMR	.087	.073	.026	.068	.071

	All Local Authorities (H_0 = Estimate = 0)			**All Local Authorities** (H_0 = Estimate = 0)			**All Local Authorities** (H_0 = Estimate = 0)			**All Local Authorities** (H_0 = Estimate = 0)			**All Local Authorities** (H_0 = Estimate = 0)		
		95% Bootstrap			**95% Bootstrap**			**95% Bootstrap**			**95% Bootstrap**			**95% Bootstrap**	
Mean Estimates	**Estimate**	**LB**	**UB**	**Estimate**	**LB**	**UB**	**Estimate**	**LB**	**UB**	**Estimate**	**LB**	**UB**	**Estimate**	**LB**	**UB**
Intercept	9.187 ***	8.736	9.788	52.715***	47.58	56.47	2.097***	1.978	2.236	4.310***	4.007	4.638	46.124***	45.0	47.26
Slope	-0.164 **	-0.271	-0.076	1.172*	0.419	2.216	-0.079*	-.149	-.007	-0.583***	-.729	-.447	-4.710***	-5.47	-3.92
Quadratic							0.016*	0.001	0.030	0.063***	0.035	0.092	0.452***	0.287	0.620
Correlations															
Corr(I, S)	-0.597 ***	-0.751	-0.420				-0.078	-.416	0.533	-0.648***	-.791	-.348	-0.433	-.602	-.098
Corr(I, Q)							-0.085	-.612	0.296				0.287	-.133	.520
Corr(S, Q)							-0.900***	-.940	-.808				-0.892*	-.948	-.774

	All Local Authorities (H_0 = Estimate = 0)	**All Local Authorities** (H_0 = Estimate = 0)	**All Local Authorities** (H_0 = Estimate = 0)	**All Local Authorities** (H_0 = Estimate = 0)	**All Local Authorities** (H_0 = Estimate = 0)
Variance Estimates					
Intercept	8.465 ***	147.94 ***	0.556***	2.004***	40.911***
Slope	0.116 ***	0	0.099**	0.047***	14.810***
Quadratic			0.005***	0	0.552**

	Deprivation tertile (H_0 = Tertile = Least)			**Deprivation tertile** (H_0 = Tertile = Least)			**Deprivation tertile** (H_0 = Tertile = Least)			**Deprivation tertile** (H_0 = Tertile = Least)			**Deprivation tertile** (H_0 = Tertile = Least)		
Mean Estimates	**Most**	**Middle**	**Least**	**Most**	**Middle**	**Least**	**Most**	**Middle**	**Least**	**Most**	**Middle**	**Least**	**Most**	**Middle**	**Least**
Intercept	11.48***	9.226***	6.893	50.833*	50.894*	56.274	2.53***	2.11***	1.65	5.41***	4.38***	3.25	47.395*	46.593	44.394
Slope	-0.326**	-0.091	-0.086				-0.104	-.074	-.060	-.760***	-.579*	-0.484	-5.742**	-5.195[1]	-3.195
Quadratic							0.016	0.015	.015				.553	.559	0.244
R^2															
Intercept			.413***			.044			.231***			.384***			.039
Slope			.108						.003			.279**			.079
Quadratic									<.000						.038

[1] P = .051

The non-LAC, non-safeguarding model met the criteria for good fit (CFI = .951, SRMR = .068), which could be improved if some of the LAs with very high non-LAC, non-safeguarding expenditure were treated as outliers (mostly Inner London LAs). LAs had different linear rates of change over time but these 'flattened off' at approximately the same rate over time. The mean expenditure in 2010-11 was £431 per child, being £541 per child on average in the most deprived tertile, £438 per child in the central deprivation tertile, and £325 per child in the least deprived tertile. The mean rate of linear change over time for LAs was -£58.30 per child per year ($p < .001$). For the least deprived tertile reference group this was -£48.40 per child per year. The middle deprived tertile had a significantly larger negative linear growth trend of -£57.90 per child per year ($p < .05$) and the most deprived tertile of LAs had a trend of -£76.00 per child per year ($p < .001$). Those LAs with higher expenditure in 2010-11 had steeper linear falls over time ($r = -.648$, $p < .001$).

It is important to keep in mind the flattening of these reductions given by the quadratic curve, for example, across all authorities the change between 2010-11 and 2011-12 was -£58.30, but was less between 2011-12 and 2012-13 at -£52.00, and less still between 2012-13 and 2013-14 at -£33.10. For this reason it is best to inspect the curves visually, where it can be seen that expenditure on these services decreased at a decreasing rate differentially for each deprivation tertile. This also suggests that by 2014-15 the mean spending had begun to converge and, for example, the most deprived tertile had mean expenditure not significantly different from the central deprivation tertile. This sharp decline in expenditure is reflected in the changing proportion of expenditure spent on non-LAC, non-safeguarding services. Although there was a lot of variation year on year the general and statistically significant trend has been towards LAs spending a lower proportion of their available resources on these support services and

more on their LAC/safeguarding services, with the year-on-year reductions in the per cent of all expenditure spent on non-LAC, non-safeguarding services being most extreme in the most deprived third of LAs (-5.742 per cent per year, $p < .01$).

This disparity in trends based on service provision may be connected to Hastings et al.'s (2015) observations that cuts have been managed based on a set of priorities set by LAs: with front-line services more likely to be protected and administrative or 'less-essential' services facing the brunt of the cuts. However, these cuts can have substantial knock-on effects, straining front-line staff and managers' ability to cope with levels of demand. The findings also raise questions on how 'premiums' are distributed; in some areas, such as LAC expenditure, there is no apparently premium in more deprived areas. In safeguarding, there seems to be some consistent premium, for family support and early years services, what was once a marked premium for LAs in the most deprived tertile in 2010/11 has begun to coalesce towards a point where mean expenditure is not significantly different to that in the middle deprivation tertile.

Discussion & Conclusions

During the five years under investigation our analysis finds that looked after children expenditure (both per looked after child and as a proportion of total spend) has tended to increase, safeguarding expenditure has remained relatively stable, and non-LAC, non-safeguarding expenditure, that includes mainly prevention, early intervention and family support services, has consistently decreased. This evidence reflects at an institutional level, a fiscal policy shift away from family support and towards a focus on child protection and permanent alternative placements, including adoption, for children away from birth parents

(Featherstone, et al. 2014; Hood, et al. 2016). Although the DfE (2016a) reported that an increased emphasis on early help and early intervention is perceived as the best response to financial pressures, in practice it is the resources for early help and intervention that have seen the greatest cuts. The 2010-2015 period has been characterised by growing numbers of families in need of support in the wake of the global economic crisis, however, under austerity the focus on spending at an institutional level has shifted away from supporting families and towards identifying and acting on risk.

Existing literature on the subject of public spending has found that, at the LA level, the most deprived areas have experienced the deepest cuts under austerity policies (Bailey, et al. 2015; Hastings, et al. 2015). At the household level, families with children, and especially lone parents, have been 'maleficiaries' of resources as a result of welfare reform under the coalition government (Beatty and Fothergill 2013; Bradshaw 2016). Rationing mechanisms can help explain why resources have been directed away from the poorest neighbourhoods (Hastings 2009). Children are both at greater risk of poverty and have little political leverage to demand a greater share of resources to meet their risks (Ridge 2013). There is a case to be made that young people have been triply disadvantaged: firstly, at an institutional level by public spending reforms, secondly, at home, through diminishing family welfare benefits, including in-work benefits, stagnating wages and increased job insecurity (Lupton, et al. 2015; Tinson, et al. 2016), and thirdly, as members of society, with funding cuts disproportionately affecting services targeted towards supporting them.

A powerful and pervasive counter narrative to this picture of austerity policies has been presented by public and governmental bodies. For example, the National Audit Office (2016) stated that expenditure on children in need had increased by 11% between 2012/3 and 2014/15

with no relationship between demand (expressed in terms of the proportion of children who were in need) and expenditure at the LA level or, by implication, between inspection judgements and expenditure. This position has been repeated in subsequent reports by the Public Accounts Committee (2016) and the All Party Parliamentary Group (2017). These conclusions appear to be radically at odds with the findings presented here. There are a number of reasons for this. On expenditure, three key factors are important. First, the years for which data is presented by the NAO exclude the two year period 2010/11 to 2011/12 when the largest cuts took place. Second, the NAO analysis focuses only on a narrow dimension of expenditure, around 20 per cent of total children's services spend. It is difficult to precisely replicate the choices made by the NAO in calculating this element of the total spend, but it largely overlaps with the category of 'safeguarding' used here. LAs may have 'protected' safeguarding spending by the (arguably counter-productive but understandable) mechanism of cutting family support and early help despite rhetoric to the contrary. Third, in presenting the data at a per child level, the NAO used children in need (CIN) rather than all children as the denominator; furthermore, the aggregate yearly comparisons used ignore the variation in funding trends between local authorities. The numbers of children in need may reflect rationing by LAs as much as levels of demand, LAs under pressure can raise the thresholds for designating a child as in need; CIN rates remained unchanged during this period, while LAC rates increased by 3.5%, child protection plan rates by 13% and Section 47 investigations by 40%.

Our evidence supports the claim that, in the case of children services, there is and has been an 'unintentional, systemic bias against fully addressing the needs of deprived neighbourhoods in service planning and resource allocation' (Hastings, 2009, 2910). Unintentional, insofar as there is an argument that uneven trends in expenditure may have been the result of

indiscriminate proportional cuts in central government grants. Systemic, in that at no time point between 2010 and 2015 do the premiums for the most deprived third of LAs appear to be commensurate with the increased need for children's services, any 'premium' appears inconsistent.

However, this is only a single layer of the rationing that is employed in children's services: further research is required to understand whether institutional rationing is employed at the neighbourhood level, and how such national and neighbourhood rationing might manifest reactive rationing, a coping mechanism among front-line staff that has been identified to some extent in related research (Bywaters, et al. 2016b), and political rationing within communities. To investigate this there needs to be a stronger commitment to improving the accessibility, comparability, accuracy and depth of data on expenditure that is available. Most importantly, this commitment would facilitate the production of better contextual understanding of the pressures faced by, and responses of, service providers. What is clear from investigating trends in subcategories of expenditure is that a different story can be presented based on how categories are excluded, aggregated, or denominated. A consistent and more detailed approach is needed to understand the nuance of changes in expenditure trends and the consequences of such changes for children's services practitioners, managers and, crucially, the children and families accessing such services.

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