



Methodology Guide for Children's Social Care Relative Needs Formula 2008/09, 2009/10 and 2010/11

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Children's Social Care

Authorities who provide Children's Social Care

1. Children's Social Care relative needs formula (RNF) is calculated for:
 - County councils;
 - Non-metropolitan districts which have the functions of county councils;
 - Metropolitan districts;
 - London boroughs;
 - City of London.

Relative Needs Formula

2. Relative Needs Formulae are designed to reflect the relative needs of individual authorities in providing services. They are not intended to measure the actual amount needed by any authority to provide local services, but to recognise the various factors which affect local authorities' costs locally.
3. The formula for each service area is built on a basic amount per client, plus additional top-ups to reflect local circumstances. The top ups take account of a number of local factors which affect service costs, but the biggest factors are deprivation and area costs.
4. Because RNF's are only intended to reflect the relative different cost requirements in different areas, they are expressed as a proportion - or ratio - of the total RNF. The actual amount of grant a council will receive from Government is dependent on the results of all four stages in the grant calculation. These stages are relative needs, relative resources, the central allocation and finally, the grant damping scheme.

The Children's Social Care RNF

5. The RNF formula has four components:
 - a basic amount;
 - a deprivation top-up;
 - a fostering cost top-up; and
 - an area cost adjustment.

Basic Amount

6. The basic amount is a common amount per resident child aged 0 to 17 that is the same for all authorities. For 2008/09 this is 26.3192, for 2009/10 this is 27.3482 and for 2010/11 this is 28.3003. It is calculated as the constant from *regression 1* in annex B (scaled by the scaling factor), plus the element of deprivation that is common to all authorities (i.e. the value of the deprivation top-up for the least deprived authority).

Deprivation top-Up

7. The deprivation top-up recognises that children in certain circumstances are more likely to be in need of social services. The top-up is calculated from the following factors:
 - the proportion of children living in households claiming income support, job seekers' allowance or the guarantee element of Pension Credit;
 - the proportion of income support claimants;
 - the proportion of children not in good health;
 - the proportion of children of black ethnicity.
8. These factors were identified in research carried out by the University of York in 2005. The research analysed the cost of children's social services per child aged 0-17 in each small area¹ in 141 local authorities. Information on costs and service use was taken from the 2003 Children in Need Survey.
9. The costs were then analysed using the multi-level modeling technique² that was used to identify the factors with a strong association with costs per child *within* each local authority. A benefit of using this technique was that the impact of differences in policies and levels of efficiency across local authorities were minimised. A large number of possible factors were considered for inclusion in the model and those listed above were found, when taken together, to perform best statistically.
10. Details of the research are contained in *reference 1*. The weights to be given to each factor were established using the multi-level modeling analysis given at *regression 1*.
11. As discussed above, the element of deprivation that is common to all authorities can be considered to be part of the basic amount. The value of the deprivation top-up for the least deprived authority is therefore subtracted and added to the constant. This is presentational, and does not affect the distribution in any way.

¹ Each small area comprised a post code district, or the part of a post code district contained in each of the 141 councils whose data was used in the analysis.

² This is a similar approach to ordinary least squares regression. It allows account to be taken in the analysis of the hierarchical structure of the data (i.e. the influence of local authorities on their small areas).

Fostering cost top-up

12. Multi-level modeling does not take account of variations in price levels between authorities. In recognition of unavoidable variations across the country in the costs associated with fostering children, an adjustment is applied to the 20% of the control total that is considered to relate to fostering.
13. The adjustment itself is based on research carried out by the Institute of Education at the University of London and Centre for Health Economics at the University of York. Details of the research are contained at *reference 2*, and the results are given at *regression 2*.³ The foster cost adjustment contains the following factors:
 - proportion of people 16-74: with qualification level 1/2;
 - proportion of people 16-74: with qualification level 4/5;
 - proportion of people of mixed ethnicity;
 - proportion of people in other ethnic group;
 - proportion of females 16-74: Looking after home/family.
14. Having applied the regression coefficients, the fostering cost adjustment is derived as follows. It is first divided by the population weighted average. It is then multiplied by the proportion of expenditure that is on foster care (0.20). The proportion of expenditure that is not on foster care (0.80) is then added to this amount, on the grounds that no variation in costs is assumed for services other than foster care. Finally, the result of the above calculation is divided by its minimum value so that the minimum value becomes 1.

Area cost adjustment

15. The result of the RNF calculations is subject to the area cost adjustment (ACA). Details of the ACA methodology are set out separately.

³ The weights used differ from those quoted in *reference 2* because the dependent variable was generated using an updated 2008/09 Area Cost Adjustment (ACA).

ANNEX A - References

- 1 Options for the formula for children's social services
<http://www.local.communities.gov.uk/finance/0607/swg0504/swg-05-24.pdf>

Report of further work on the children's social services formula
<http://www.local.communities.gov.uk/finance/0607/swg0505/swg-05-37a.pdf>

Revisions to the children's social services needs model
<http://www.local.communities.gov.uk/finance/0607/swg0508/swg-05-81.pdf>
- 2 Foster Cost Adjustment, by Charlie Owen, Institute of Education, University of London and Roy Carr Hill and Paul Dixon, Centre for Health Economics, University of York. SWG/05/37C
<http://www.local.communities.gov.uk/finance/0607/swg0505/swg-05-37c.pdf>

Foster Cost Adjustment, by Charlie Owen, Institute of Education, University of London and Roy Carr-Hill and Paul Dixon, Centre for Health Economics, University of York. Research Report No DCSF-RW006.
<http://www.local.communities.gov.uk/finance/0809/swg/DCSF-RW006.pdf>

ANNEX B - Regression statistics

REGRESSION 1 – Children’s Social Services: Deprivation

Dependent variable

The cost of children’s social services per head of total population aged 0 to 17 in 2003 in postcode districts in 141 local authority areas, divided by the 2006/7 area cost adjustment.

Fixed Coefficients

PARAMETER	ESTIMATE	S. ERROR(U)
C31 Constant	-61.66	393.4
C11 Children not in good health	1.608e+04	5513
C15 Children in income support households	1.136e+04	2243
C26 Children in black ethnic households	6129	1512
C17 Adults on income support or JSA	9109	3972

Application of the regression coefficients

To ensure that the scaling factor for the sub-block is as close to one as possible, the above coefficients are multiplied by 0.0151853122269309 in 2008/09 allocation; by 0.0157789854859779 in the 2009/10 allocation; by 0.0163283588095201 in the 2010/11 allocation. These coefficients are then rounded to four decimal places.

REGRESSION 2 – Children’s Social Services: Foster Care

Ordinary least squares estimation. The unit cost of foster care estimated from the 2003 Children in Need survey, divided by the 2008/9 area cost adjustment.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-4.8612	8.336		-58.316	.000
Proportion other ethnic group	14.8648	1.133	.100	13.123	.000
Proportion of people 16-74: with qualifications level 1/2	14.0199	.169	.455	82.734	.000
Proportion of people of mixed ethnicity	34.3436	.866	.253	39.653	.000
Proportion of females 16-74: Looking after home/family	20.0811	.374	.202	53.718	.000
Proportion of people 16-74: with qualification level 4/5	6.3347	.124	.323	51.196	.000