

Who are the fuel poor?

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21 March 2023

Summary

In his Autumn budget the Chancellor announced that after April 2023 the Energy Price Guarantee (EPG) would be raised from £2,500 to £3,000 and the £400 rebate to all households would be ended. We produced an analysis of how fuel poverty would rise.¹ In his Spring budget he had changed his mind and announced the £2,500 Guarantee would remain until July 2023. This paper presents a revised analysis of who will be affected by fuel poverty after April, based on analysis of the ONS Living Costs and Food Survey. We use a threshold of households spending more than 20 per cent of their net income after housing costs on fuel. The analysis describes their characteristics, their fuel poverty rates, their fuel poverty gaps and which households in fuel poverty are not being helped by the mitigations for households receiving social security benefits.

There is clearly an association between fuel poverty and net income, with fuel poverty concentrated in the lower-income deciles, but some richer households also spend more than 20 per cent of their income on fuel and a quarter of households in fuel poverty are not income poor. Childless couple households are less likely than average to be fuel poor, and couples with two or more children and lone parent households are more likely to be fuel poor. Pensioner households are no more likely to be fuel poor.

If there had been no mitigations for social security recipient households, 20 per cent of households would be fuel poor from April 2023. The mitigations will reduce that by 5.2 percentage points or 26 per cent. 68 per cent of all fuel poor households are receiving cost of living payments but that leaves 32 per cent (or 1,768,000) of them not receiving the payments. Households with children are most likely to be at risk after mitigation. The social security mitigations reduce the fuel poverty gap by 26.1 per cent overall, but for those not eligible the mean fuel poverty gap is £31.61 per week.

Background

On 23 January 2023, Jonathan Brearley the Chief Executive of Ofgem said:²

That is why today, as part of the further work on price regulation announced by government in autumn last year, we are calling for a serious assessment of a social tariff. This is a tariff that is set at a different rate for vulnerable customers and protects against the impact of extremely high prices. If it can be made to work, this could tackle the root cause of this issue and the distress that many customers are in this Winter.

Since August 2022, we have been producing papers on household fuel poverty based on the secondary analysis of the ONS Living Costs and Food Survey (LCFS).³ Among these was a paper on social tariffs which compared the impact of a simple progressive social tariff (lower tariffs for smaller consumers paid for either by higher tariffs for larger consumers or by the taxpayer) with policies providing direct support by increasing the incomes of social security recipients. Broadly we concluded that enhancing social security incomes was a better strategy, though far from perfect.⁴

¹ <https://cpag.org.uk/policy-and-campaigns/briefing/who-are-fuel-poor>

² J Brearley, 'Tackling inappropriate energy supplier prepayment meter practices', Ofgem, 23 January 2023

³ See J Bradshaw and A Keung, 'Rising fuel poverty', *Poverty*, CPAG, 173, 2022, and A Keung and J Bradshaw, 'Fuel poverty estimates for April 2023 following the Autumn Statement, including social security mitigations', CPAG, 9 December 2022

⁴ J Bradshaw and A Keung, *Is a social tariff for energy feasible and effective?*, University of York, 2022

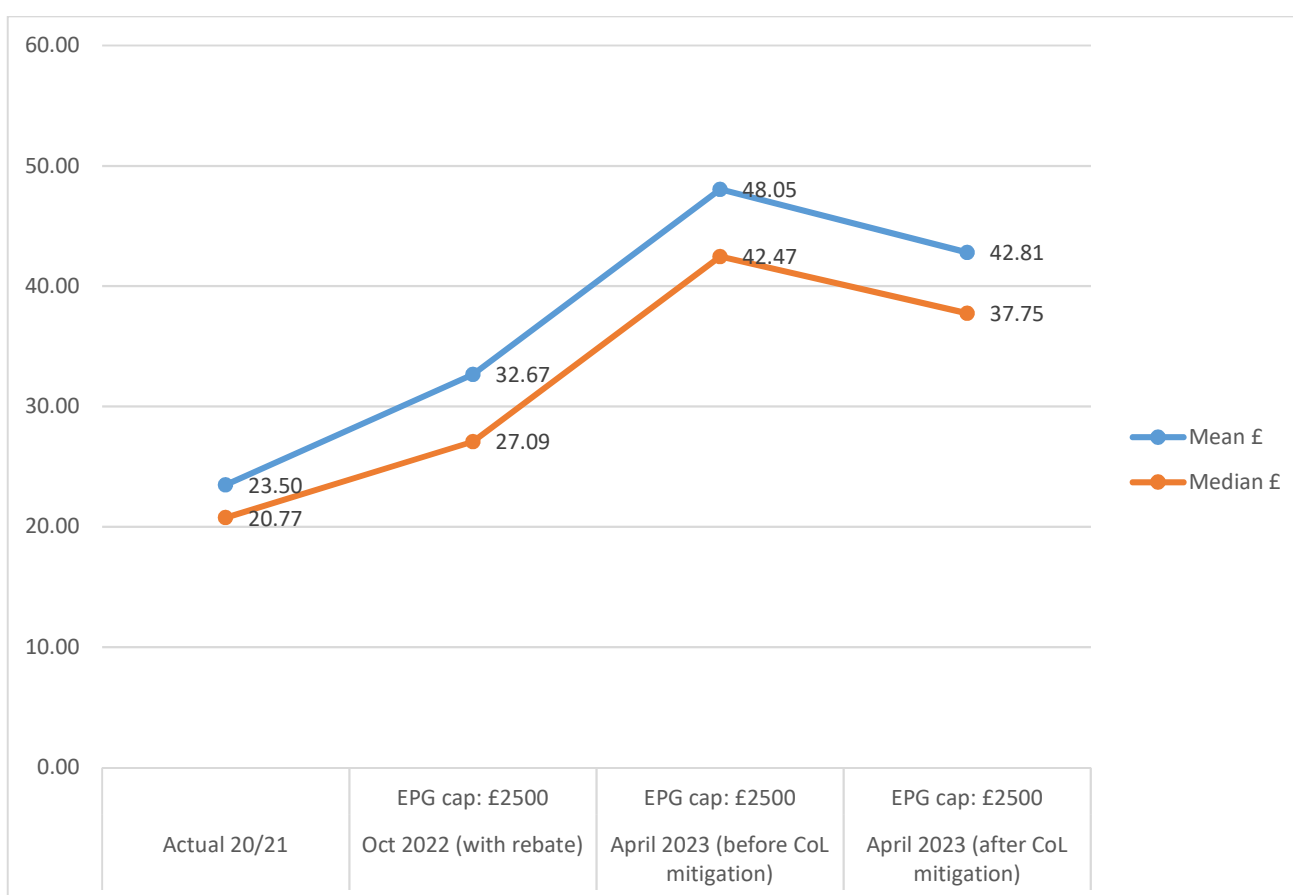
To summarise: the problems are that not all the fuel poor are small consumers; not all social security recipients are in fuel poverty; not all households in fuel poverty are social security recipients; and neither the government nor fuel providers know who the ‘vulnerable customers’ are.

In this paper we extend and update our previous analyses to identify who the fuel poor will be after April 2023.

Methods

Fuel poverty is driven by low income and high energy costs. The latter can be further attributed to high unit cost of energy and poor thermal efficiency of some dwellings. In order to identify which households are most affected by fuel poverty, we use the latest available household data from the ONS Living Costs and Food Survey 2020-21. Chart 1 below shows a significant upward trend of the average energy costs to UK households between 2020 and 2023.

Chart 1: Average weekly energy costs to UK households



Own analysis of LCFS 2020/21 weighted data

There is no single agreed measure of fuel poverty. Our earlier analyses used a variety of thresholds based on the percentage of net equivalent income spent on fuel (10 per cent, 20 per cent, 25 per cent and 30 per cent). Following convention, we tended to focus on those spending more than 10 per cent on fuel. The End Fuel Poverty Coalition has suggested that these households should be more accurately be referred to as living in ‘fuel stress’, and that fuel poverty should be limited to a higher threshold. In this paper we decided to adopt the 20 per cent definition, using this higher threshold to differentiate the relatively less impacted ‘fuel stress’ households from the more impacted ‘fuel poor’ households.

On 17 November 2022, the Chancellor announced that the Energy Price Guarantee (EPG) would be raised from £2,500 to £3,000 from April 2023 (a decision reversed in the Spring budget) when the £400 per household energy rebate would also end. He also announced that social security benefits and pensions would be uprated by 10.1 per cent and there would be a new set of cost of living (CoL) payments: £300 for all pensioner households, £150 for disability benefit recipients and £900 for recipients of means-tested working-age benefits.

For this analysis we have increased net household income by 10 per cent. This is an attempt to adjust for improvements in net income between September 2020 and April 2023. We have to acknowledge it is only an estimate. Household incomes will have been affected by Covid during 2020/21, especially the £20 per week uplift in Universal Credit (UC). There were upratings of benefits in April 2021 (by 0.5 per cent) and 2022 (by 3.2 per cent), and they will increase again in April 2023 (by 10.1 per cent). Also the minimum wage has been increased faster over this period than general increases in earnings. ONS estimates show that nominal earnings grew by 1 per cent in the year ending April 2020, 5.5 per cent in the year ending April 2021 and 6.9 per cent in the year ending April 2022. But all those increases will have been offset by the £20 per week reduction in UC and/or increases in taxation. Remember we are dealing with net household income.

In this analysis, we have also taken account of the cost of living payments that will be paid through the social security system in 2023-24, though we should acknowledge some limitations: there is a well-known underreporting of benefit receipt in survey data; only around 5 million households received the means-tested benefits eligible for the cost of living payment in the LCFS 2020-21 dataset and the government predicts 8 million will be eligible in 2023-24; there were only around 3 million people in receipt of disability benefits in LCFS 2020/21 and the government predicts 6 million people will be eligible in 2023-24. This discrepancy can also partly be explained by the lack of data in the LCFS on the following eligible disability benefits: Scottish disability benefits, armed forces independence payment, constant attendance allowance, and war pension mobility supplement. However, there does not seem to be any difference between the LCFS and government estimates for pensioner households. The social security mitigations are going to increase income rather than reduce expenditure for those eligible, but for analytical reasons, in order to see their impact on fuel poverty we have adjusted fuel expenditure in the following analysis.

The results show that 20 per cent of households (5.6 million) in the UK in April 2023 will be classified as fuel poor as they will spend more than 20 per cent of their net income after housing costs on their energy bills (before any mitigations).

Results

The first analysis is an exploration of the household characteristics of the fuel poor – what is the composition of households spending more than 20 per cent of net income on fuel? Table 1 shows the composition if there had been no social security mitigations, and after the mitigations.

Table 1: Frequencies distribution of the fuel poor households on key variables, April 2023

Key variables		Fuel poor before mitigations		Fuel poor after mitigations		All households	
		Count (000s)	%	Count (000s)	%	Count (000s)	%
Income decile							
	1	2229	40.1	1740	42.4	2,810	10.0
	2	1336	24.0	864	21.1	2,810	10.0
	3	732	13.2	570	13.9	2,797	10.0
	4	504	9.1	342	8.4	2,813	10.0
	5	274	4.9	178	4.3	2,812	10.0
	6	207	3.7	174	4.2	2,799	10.0

	7	100	1.8	73	1.8	2,810	10.0
	8	88	1.6	72	1.7	2,811	10.0
	9	70	1.3	70	1.7	2,808	10.0
	10	19	0.3	17	0.4	2,808	10.0
Total		5560	100.0	4100	100.0	28,079	100.0
Household type (brief)							
	Single	938	16.9	665	16.2	4,426	15.7
	Couple	556	10.0	476	11.6	5,312	18.8
	Households with dependent children	1879	33.8	1388	33.9	6,743	23.9
	Pensioners	1585	28.5	1071	26.1	8,878	31.5
	Other multi-unit	601	10.8	499	12.2	2,839	10.1
Total		5560	100.0	4100	100.0	28,198	100.0
Household type (detailed)							
	Single	938	16.9	665	16.2	4,426	15.7
	Couple	556	10.0	476	11.6	5,312	18.8
	Couple with 1 child	405	7.3	330	8.0	2,029	7.2
	Couple with 2 children	545	9.8	429	10.5	2,524	9.0
	Couple with 3 children	303	5.5	225	5.5	843	3.0
	Couple with 4 or more children	113	2.0	69	1.7	186	0.7
	Lone parent with 1 child	206	3.7	144	3.5	532	1.9
	Lone parent with 2 or more children	307	5.5	191	4.7	629	2.2
	Pensioner, single	720	13.0	482	11.7	3,860	13.7
	Pensioner couple	695	12.5	488	11.9	4,268	15.1
	Other pensioner (i.e. pensioner only with children or pensioners living in multi-unit)	169	3.0	102	2.5	750	2.7
	Other (multi-unit)	601	10.8	499	12.2	2,839	10.1
Total		5560	100.0	4100	100.0	28,198	100.0
Region							
	North East	307	5.5	192	4.7	1,238	4.4
	North West and Merseyside	533	9.6	353	8.6	3,132	11.1
	Yorkshire and the Humber	557	10.0	397	9.7	2,503	8.9
	East Midlands	338	6.1	287	7.0	2,255	8.0
	West Midlands	453	8.1	314	7.6	2,444	8.7
	Eastern	543	9.8	427	10.4	2,594	9.2
	London	783	14.1	574	14.0	3,363	11.9
	South East	551	9.9	432	10.5	3,739	13.3
	South West	487	8.8	354	8.6	2,433	8.6
	Wales	290	5.2	210	5.1	1,260	4.5
	Scotland	520	9.4	405	9.9	2,505	8.9
	Northern Ireland	197	3.6	156	3.8	734	2.6
Total		5560	100.0	4100	100.0	28,198	100.0
Ethnic origin of head of household							
	White	3203	87.0	2383	86.6	17,013	90.9
	Mixed race	79	2.2	63	2.3	254	1.4
	Asian or Asian British	181	4.9	119	4.3	855	4.6
	Black or Black British	107	2.9	83	3.0	300	1.6
	Other ethnic group	110	3.0	105	3.8	303	1.6
Total		3680	100	2752	100	18,726	100.0
Tenure type							
	Local authority	731	13.2	486	11.9	1,831	6.5
	Housing association	838	15.1	555	13.5	2,189	7.8

	Private rented	1382	24.9	1008	24.6	5,063	18
	Owned/ mortgaged/ outright	2521	45.3	1980	48.3	18,770	66.6
	Rent free	86	1.6	71	1.7	345	1.2
Total		5560	100.0	4100	100.0	28,198	100.0
Income poverty							
	No (i.e. >=60% median income)	1368	24.6	1012	24.7	20,208	72
	Yes (i.e. < 60% median income)	4192	75.4	3088	75.3	7,871	28
Total		5560	100.0	4100	100.0	28,079	100.0
COL payment recipient group							
	Means-tested CoL* only	1683	30.3	948	23.1	3,035	10.8
	Disability CoL only	144	2.6	131	3.2	599	2.1
	Pensioner CoL only	1097	19.7	887	21.6	6,789	24.1
	Means-tested + disability CoL	381	6.9	181	4.4	1,018	3.6
	Means-tested + pensioner CoL	217	3.9	85	2.1	587	2.1
	Disability + pensioner CoL	209	3.8	85	2.1	1,083	3.8
	Means-tested + disability + pensioner CoL	62	1.1	14	0.3	419	1.5
	Not receiving mitigations	1768	31.8	1768	43.1	14,668	52
Total		5560	100	4100	100.0	28,198	100.0

*Cost of living payment

Table 2 presents fuel poverty rates for each household type before and after the social security mitigations. There is clearly an association between fuel poverty and net income, with fuel poverty concentrated in the lower-income deciles, but some richer households also spend more than 20 per cent of their income on fuel and a quarter of households in fuel poverty are not income poor. Childless couple households are less likely than average to be fuel poor, and couples with two or more children and lone parent households are more likely to be fuel poor. Pensioner households are no more likely to be fuel poor. Fuel poverty is more common than average in the North East, Yorkshire and Humberside, Eastern Region, London, Wales, Scotland and Northern Ireland. It is also more common in all non-white ethnic groups and in all rented tenures.

If there had been no mitigations for social security recipient households, 20 per cent of households (i.e. 5.6 million households, involving 14.6 million people) would be fuel poor from April 2023. The mitigations will reduce that by 5.2 percentage points or 26 per cent, but still 4.1 million households or 10.9 million people remain affected.

Table 2: Fuel poverty rates before and after mitigations, April 2023

Key variables		Fuel poor before mitigations		Fuel poor after mitigations	
		Count (000s)	%	Count (000s)	%
Income decile					
	1	2229	82.6	1740	64.4
	2	1336	48.1	864	31.1
	3	732	26.5	570	20.7
	4	504	18.1	342	12.2
	5	274	9.9	178	6.4
	6	207	7.4	174	6.3
	7	100	3.6	73	2.6
	8	88	3.2	72	2.6
	9	70	2.5	70	2.5
	10	19	0.7	17	0.6
Total		5559	20.0	4100	14.8
Household type (brief)					

	Single	938	22.2	665	15.7
	Couple	556	10.6	476	9.0
	Households with dependent children	1879	28.2	1388	20.8
	Pensioners	1585	18.0	1071	12.2
	Other multi-unit	601	21.7	499	18.0
Total		5559	20.0	4099	14.8
Household type (detailed)					
	Single	938	22.2	665	15.7
	Couple	556	10.6	476	9.0
	Couple with 1 child	405	20.1	330	16.3
	Couple with 2 children	545	21.7	429	17.1
	Couple with 3 children	303	36.9	225	27.4
	Couple with 4 or more children	113	61.1	69	37.1
	Lone parent with 1 child	206	39.2	144	27.4
	Lone parent with 2 or more children	307	50.7	191	31.6
	Pensioner, single	720	18.9	482	12.6
	Pensioner couple	695	16.3	488	11.5
	Other pensioner (i.e. pensioner only with children or pensioners living in multi-unit)	169	23.1	102	13.9
	Other (multi-unit)	601	21.7	499	18.0
Total		5558	20.0	4100	14.8
Region					
	North East	307	25.6	192	16.0
	North West and Merseyside	533	17.1	353	11.3
	Yorkshire and the Humber	557	22.4	397	16.0
	East Midlands	338	15.2	287	12.9
	West Midlands	453	19.3	314	13.4
	Eastern	543	21.0	427	16.5
	London	783	23.9	574	17.5
	South East	551	15.0	432	11.7
	South West	487	20.5	354	14.9
	Wales	290	23.0	210	16.7
	Scotland	520	21.1	405	16.4
	Northern Ireland	197	27.3	156	21.6
Total		5559	20.0	4101	14.8
Ethnic origin of head of household					
	White	3203	19.1	2383	14.2
	Mixed race	79	32.4	63	25.7
	Asian or Asian British	181	21.4	119	14.1
	Black or Black British	107	35.5	83	27.7
	Other ethnic group	110	40.0	105	38.2
Total		3680	20.0	2753	14.9
Tenure type					
	Local authority	731	40.7	486	27.0
	Housing association	838	39.3	555	26.0
	Private rented	1382	28.5	1008	20.8
	Owned/ mortgaged/ outright	2521	13.5	1980	10.6
	Rent free	86	29.9	71	24.7
Total		5558	20.0	4100	14.8
Income poverty					
	No (i.e. >=60% median income)	1368	6.8	1012	5.0

	Yes (i.e. < 60% median income)	4192	54.5	3088	40.1
Total		5560	20.0	4100	14.8
COL payment recipient group					
	Means-tested CoL only	1683	56.3	948	31.7
	Disability CoL only	144	24.5	131	22.3
	Pensioner CoL only	1097	16.2	887	13.1
	Means-tested + disability CoL	381	39.5	181	18.8
	Means-tested + pensioner CoL	217	38.1	85	14.9
	Disability + pensioner CoL	209	19.3	85	7.9
	Means-tested + disability + pensioner CoL	62	15.5	14	3.5
	Not receiving mitigation	1768	12.3	1768	12.3
Total		5561	20.0	4099	14.8

Who is not eligible for cost of living payments but is fuel poor?

This is an important question because it is an indication of the limits of using the receipt of social security benefits to mitigate fuel poverty, and suggests which might be the types of household that need to be targeted in other ways, including by some kind of social tariff.

48 per cent of all households receive some mitigation of their fuel costs via the social security system. It can be seen in Table 3 that most of these (66 per cent) are pensioners.

Table 3: Recipients of cost of living payments

	Count (000s)	%
Means-tested CoL only	3,035	22.4
Disability CoL only	599	4.4
Pensioner CoL only	6,789	50.2
Means-tested + disability CoL	1,018	7.5
Means-tested + pensioner CoL	587	4.3
Disability + pensioner CoL	1,083	8.0
Means-tested + disability + pensioner CoL	419	3.1
Total	13,530	100.0

68 per cent of all fuel poor households are receiving cost of living payments but that leaves 32 cent (or 1,768,000) of them not receiving the payments. Who are they? Table 4 provides an analysis of their composition.

- 69 per cent are from the bottom 3 income deciles
- 39 per cent are families with children
- 59 per cent are living in owned/ mortgaged houses
- 66 per cent are income poor

Table 4: In fuel poverty but not eligible for cost of living payments, April 2023

		Not eligible for CoL		Fuel poor total	
		Count (000s)	%	Count (000s)	%
Income decile					
	1	620	35.1	2229	40.1
	2	297	16.8	1336	24.0
	3	294	16.6	732	13.2
	4	206	11.7	504	9.1

	5	81	4.6	274	4.9
	6	111	6.3	207	3.7
	7	59	3.3	100	1.8
	8	50	2.9	88	1.6
	9	33	1.8	70	1.3
	10	17	0.9	19	0.3
Total		1768	100.0	5560	100.0
Household type (brief)					
	Single	422	23.9	938	16.9
	Couple	366	20.7	556	10.0
	Households with dependent children	688	38.9	1879	33.8
	Pensioners			1585	28.5
	Other multi-unit	292	16.5	601	10.8
Total		1768	100.0	5560	100.0
Household type (detailed)					
	Single	422	23.9	938	16.9
	Couple	366	20.7	556	10.0
	Couple with 1 child	204	11.5	405	7.3
	Couple with 2 children	281	15.9	545	9.8
	Couple with 3 children	118	6.7	303	5.5
	Couple with 4 or more children	6	0.4	113	2.0
	Lone parent with 1 child	53	3.0	206	3.7
	Lone parent with 2 or more children	26	1.5	307	5.5
	Pensioner, single	0	0.0	720	13.0
	Pensioner couple	0	0.0	695	12.5
	Other pensioner (i.e. pensioner only with children or pensioners living in multi-unit)	0	0.0	169	3.0
	Other (multi-unit)	292	16.5	601	10.8
Total		1768	100.0	5560	100.0
Region					
	North East	67	3.8	307	5.5
	North West and Merseyside	200	11.3	533	9.6
	Yorkshire and the Humber	124	7.0	557	10.0
	East Midlands	118	6.7	338	6.1
	West Midlands	108	6.1	453	8.1
	Eastern	183	10.4	543	9.8
	London	294	16.6	783	14.1
	South East	208	11.7	551	9.9
	South West	155	8.8	487	8.8
	Wales	90	5.1	290	5.2
	Scotland	163	9.2	520	9.4
	Northern Ireland	59	3.3	197	3.6
Total		1768	100.0	5560	100.0
Ethnic origin of head of household					
	White	1028	86.3	3203	87.0
	Mixed race	20	1.7	79	2.2
	Asian or Asian British	46	3.9	181	4.9
	Black or Black British	38	3.2	107	2.9
	Other ethnic group	59	4.9	110	3.0
Total		1192	100.0	3680	100.0
Tenure type					

	Local authority	100	5.7	731	13.2
	Housing association	108	6.1	838	15.1
	Private rented	505	28.6	1382	24.9
	Owned/ mortgaged/ outright	1041	58.9	2521	45.3
	Rent free	14	0.8	86	1.6
Total		1768	100.0	5560	100.0
Income poverty					
	No (i.e. >=60% median income)	603	34.1	1368	24.6
	Yes (i.e. < 60% median income)	1165	65.9	4192	75.4
Total		1768	100.0	5560	100.0

What happens to the fuel poverty gap?

The fuel poverty gap is an indication of how far below the fuel poverty threshold among those who are in fuel poverty. It is an indicator of the severity of their fuel poverty. Table 5 presents the fuel poverty gap after April 2023, both before and after mitigations. The social security mitigations reduce fuel poverty by 26 per cent on average and of course are of greater value for those eligible. For those not eligible the mean fuel poverty gap is £31.61 (or median £17.85).

Table 5: Mean and median fuel poverty gaps before and after mitigations

Key variables		Fuel poverty gap before mitigations		Fuel poverty gap after mitigations	
		Mean £ per week	Median £ per week	Mean £ per week	Median £ per week
Income decile					
	1	29.25	22.05	20.66	11.50
	2	24.17	16.09	15.98	5.40
	3	22.00	15.31	16.28	7.91
	4	18.60	11.27	15.19	8.74
	5	32.59	11.33	26.19	7.14
	6	24.82	16.09	20.17	13.88
	7	53.76	15.08	50.73	13.41
	8	57.07	41.33	54.19	41.33
	9	48.15	30.71	45.34	30.71
	10	17.53	6.50	16.91	6.50
Household type (brief)					
	Single	25.58	17.65	19.22	8.72
	Couple	22.08	14.52	18.09	10.42
	Households with dependent children	32.71	20.69	24.27	11.44
	Pensioners	23.55	15.08	16.41	7.84
	Other multi-unit	26.70	19.01	19.90	14.35
Household type (detailed)					
	Single	25.58	17.65	19.22	8.72
	Couple	22.08	14.52	18.09	10.42
	Couple with 1 child	36.05	20.62	29.61	13.71
	Couple with 2 children	32.41	18.32	25.86	11.61
	Couple with 3 children	36.53	27.01	28.51	21.17
	Couple with 4 or more children	52.07	33.25	39.17	20.63
	Lone parent with 1 child	20.38	15.21	10.94	3.37
	Lone parent with 2 or more children	26.19	23.91	13.63	7.61
	Pensioner, single	20.58	13.52	13.41	5.41

	Pensioner couple	24.94	16.65	18.83	9.44
	Other pensioner (i.e. pensioner only with children or pensioners living in multi-unit)	30.47	15.34	19.23	3.50
	Other (multi-unit)	26.70	19.01	19.90	14.35
Region					
	North East	23.95	16.97	16.11	6.05
	North West and Merseyside	23.33	13.03	16.68	7.36
	Yorkshire and the Humber	24.43	17.24	16.66	11.02
	East Midlands	33.00	16.58	27.74	8.72
	West Midlands	26.98	19.15	19.25	13.71
	Eastern	27.42	23.91	21.15	15.19
	London	30.29	19.15	23.16	11.11
	South East	28.19	18.12	21.94	11.63
	South West	24.49	17.62	17.05	9.05
	Wales	22.86	15.24	15.13	5.05
	Scotland	28.32	19.41	20.76	10.56
	Northern Ireland	35.13	19.11	26.61	12.64
Ethnic origin of head of household					
	White	27.41	18.53	20.35	10.40
	Mixed race	30.74	30.13	21.70	25.42
	Asian or Asian British	27.23	23.36	16.78	20.38
	Black or Black British	24.51	20.69	16.07	13.71
	Other ethnic group	26.02	22.59	19.74	17.69
Tenure type					
	Local authority	25.94	20.96	15.34	5.17
	Housing association	25.07	19.38	14.59	6.32
	Private rented	24.33	14.80	16.61	9.34
	Owned/ mortgaged/ outright	29.48	17.92	24.92	12.83
	Rent free	36.66	24.41	28.03	8.32
Income poverty					
	No (i.e. >=60% median income)	29.87	14.91	25.75	11.11
	Yes (i.e. < 60% median income)	26.31	19.17	18.23	9.10
COL payment recipient group					
	Means-tested CoL only	25.05	19.59	11.87	2.28
	Disability CoL only	26.11	18.92	23.41	16.04
	Pensioner CoL only	25.08	16.79	19.81	11.02
	Means-tested + disability CoL	31.58	20.00	16.95	0.0
	Means-tested + pensioner CoL	22.74	15.96	7.27	0.0
	Disability + pensioner CoL	14.07	7.66	8.38	0.0
	Means-tested + disability + pensioner CoL	31.20	15.08	15.28	0.0
	Not receiving mitigation	31.61	17.85	31.61	17.85
All		27.18	18.04	20.08	10.27