

Estimating numbers and proportions of households with high likelihood of socially isolated occupants

Methodology

To deliver personalised services the public sector needs to understand citizens, and [mosaic public sector](#) provides a detailed and accurate understanding of people. It covers each citizen's location, their demographics, lifestyles and behaviours to help optimise the effective design and efficient delivery of public services.

It can be used to analyse and model geographic data to understand which locations are best to provide services, such as community hubs or GP surgeries and to help identify target audiences, where and how they live, behave and spend their money. Using more than 450 data elements, it classifies all UK citizens into 15 summary groups and 66 types.

For this current work, each Lancashire household was given a social isolation (SI) value, based on their MOSAIC (Public Sector) household type. These values provided the estimated (relative) risk of being socially isolated for each MOSAIC type, as an index figure (where the average is 1). In other words, the social isolation value shows how many more times a household type is likely to be socially isolated, compared with a household at average risk of being isolated.

These values were developed based on 14 risk factors, published by [Essex County Council](#):

- Single pensioners;
- Widowed;
- Retired;
- Unlikely to meet friends or family regularly;
- Unlikely to interact with neighbours;
- Poor health;
- Permanently sick;
- Suffering from depression;
- Suffering from poor mobility;
- Visually impaired;
- Hard of hearing;
- Struggling financially;
- Not employed;
- Less-educated (no further education, no degree).

See Table 3 (below) for a chart showing social isolation values for each MOSAIC type, with further details of the method.

Note that the work by Essex County Council, on which this current modelling for Lancashire is based, specifically examines social isolation. More recently, [Age UK](#) have produced a method to estimate loneliness specifically.

Note also that these estimated social isolation values all relate to characteristics and circumstances of individuals/households living in each area. There will also be potentially important place-based characteristics which are not captured in this model, such as:

- Existing amenities, activities, services and other assets;
- Deprivation
- Rurality;
- Lack of (or limited) public transport;
- Crime or fear of crime;
- Other elements of community (including social capital / community spirit).

Mosaic household types with high social isolation (SI) values

The Mosaic types with highest SI values are:

- **N58** (SI value of 6.5) – Aided elderly, living in specialist accommodation including retirement homes and complexes of small homes;
- **N60** (SI value of 6.0) – Dependent greys, ageing social renters with high levels of need, living in tiny homes within small centrally-located developments;
- **N59** (SI value of 5.0) – Pocket pensions, elderly singles of limited means renting in developments of compact social homes;
- **N57** (SI value of 4.21) - Seasoned survivors, deep-rooted single elderly owners of low value properties;
- **N61** (SI value of 4.21) - Estate veterans, longstanding elderly renters of social homes.

Two additional Mosaic types also have relatively high SI values:

- **F22** (SI value of 3.41) – Legacy elders, now mostly living alone in comfortable suburban homes;
- **F24** (SI value of 3.45) – Bungalow haven, appreciating the calm of bungalow estates designed for the elderly.

Across Lancashire there are a total of 69,662 households in these seven MOSAIC household types.

In addition, carers (in general) are considered to be at particular risk of social isolation.

Experian (the company who produce MOSAIC) provide 'index values' for each MOSAIC household type, based on likelihood of providing unpaid care for 50+ hours per week. Average likelihood is 100. MOSAIC types with index values above 150 for providing high levels of care per week are:

- **O62** (SI value of 1.1) – Low income workers, older social renters settled in low value homes in communities where employment is harder to find;
- **F24** (SI value of 3.45) – Bungalow haven, appreciating the calm of bungalow estates designed for the elderly;
- **N59** (SI value of 5.0) – Pocket pensions, elderly singles of limited means renting in developments of compact social homes;

Households in types N59 and F24 have already been counted due to their high social isolation value. The remaining type, O62, applies to 12,734 households in Lancashire. Adding these to the other households already counted gives a total number of households of 82,396.

Only a proportion of households in these MOSAIC types will have occupants who are socially isolated. A proportion of 45% of the MOSAIC type with the highest likelihood of social isolation (N58) is used (see below for more detailed method), with proportions calculated for the other MOSAIC types based on their relative social isolation values.

Converting the number of household to resident numbers was considered. Average household size data is available from the 2011 Census of Population. However, these figures are based on residents of all ages and, as such, include couples and families. Supporting documentation from MOSAIC Public Sector indicates that most of the MOSAIC types used in this analysis (with the exception of types F24 and O62) are around twice as likely as average to be single person households. Therefore the number of households is a more robust figure to use. We would expect the actual number of people socially isolated to be higher than the number of households presented here, as not all will be single occupant households, and more than one person in a household may be socially isolated. For example, some households may contain a carer who needs to care full-time for a family member with dementia or other long-term condition, and both may be socially isolated and/or lonely (potentially for different reasons).

Results for Lancashire

Estimates are given below for the numbers and proportions of households containing one or more socially isolated occupants. Figures are given for both Districts (Table 1) and Service Planning Areas (Table 2), including rankings from highest to lowest number and proportion of isolated households. Note that these are modelled estimates, and true figures on the ground will depend also on a range of other factors as outlined above.

Estimation of the number and proportion of households with socially isolated occupants, by MOSAIC type and District

Applying the estimated relative risk ratios (SI values) to the MOSAIC types gives the following numbers and proportions of households estimated to be socially isolated, for the 12 Districts of Lancashire, as shown in Table 1.

Table 1 Estimated number and proportion of households with one or more socially isolated occupants, by MOSAIC type (see key below) and District

Districts ranked by % and by total no. of estimated isolated households (high to low)		Isolated households by MOSAIC type	MOSAIC type	N58	N60	N59	N57	N61	F22	F24	O62	Isolated households (by District)	Total households (by District)	% of households isolated (by District)
By % isolated	By total isolated	District												
1	3	Fylde		869	147	214	87	48	361	651	9	2,384	35,865	6.6
2	1	Wyre		381	283	231	307	67	173	1,531	64	3,037	49,620	6.1
3	5	Burnley		14	485	230	635	142	50	196	128	1,879	40,362	4.7
4	7	Hyndburn		0	562	192	527	80	28	181	87	1,657	36,518	4.5
5	6	Pendle		23	361	308	638	80	64	151	82	1,707	40,047	4.3
6	2	Lancaster		378	349	332	345	142	163	707	60	2,476	60,625	4.1
7	4	Preston		144	820	153	398	253	207	147	182	2,305	60,625	3.8
8	11	Rossendale		9	126	395	300	106	83	54	65	1,138	31,262	3.6
9=	8	South Ribble		99	117	327	189	151	227	487	49	1,646	47,883	3.4
9=	9	Chorley		95	331	160	292	171	171	303	88	1,611	47,887	3.4
11	10	West Lancashire		144	120	334	189	142	177	296	152	1,554	48,014	3.2
12	12	Ribble Valley		129	26	199	63	22	144	186	5	774	25,083	3.1
-	-	Total h'hlds by MOSAIC type (all-Lancs)		2,285	3,728	3,074	3,970	1,404	1,847	4,889	970	22,166	523,791	4.2

Source: Mosaic Public Sector 2014

N.B. Districts listed in order of proportion (%) of households estimated to be socially isolated (high to low), rather than by absolute numbers of isolated households. See Table 3 (below) for key to MOSAIC types

Estimation of the number and proportion of households with socially isolated occupants, by MOSAIC type and Service Planning Area (SPA)

There are 34 Service Planning Areas (SPAs) across the County. Using the same MOSAIC categories as above, and applying the same relative risk ratios, the numbers and proportions of households estimated to be socially isolated are shown in Table 2.

Table 2 Estimated number and proportion of households with one or more socially isolated occupants, by MOSAIC type (see key below) and Service Planning Area (SPA)

SPAs ranked by % and by total no. of estimated isolated households (high to low)		Isolated households by MOSAIC type	MOSAIC type	N58	N60	N59	N57	N61	F22	F24	O62	Isolated households (by SPA)	Total households (by SPA)	% of households isolated (by SPA)
By % isolated	By total isolated													
1	1	Lytham St Annes	850	144	126	42	18	331	419	2	1,932	21,579	9.0	
2	6	Fleetwood	20	192	71	215	48	8	225	59	836	12,591	6.6	
3	2	Thornton Cleveleys	270	86	90	85	16	144	749	5	1,444	23,302	6.2	
4	3	Morecambe and Heysham	248	212	117	226	57	37	506	36	1,437	25,885	5.6	
5	9	Wyre Rural	92	6	70	7	3	21	557	0	758	13,727	5.5	
6	16	Burnley Central	14	187	66	201	59	17	16	67	627	11,856	5.3	
7	14	Burnley North	0	277	29	242	35	9	45	24	661	13,220	5.0	
8	8	Preston East	0	321	11	175	122	2	8	118	758	15,564	4.9	
9	23	Hyndburn West	0	116	80	140	14	15	116	18	499	10,955	4.6	
10	4	Hyndburn East	0	446	112	387	66	13	64	69	1,158	25,563	4.5	
11	5	Chorley Central	94	276	67	242	90	69	111	51	1,000	22,105	4.5	
12	7	Nelson and Brierfield	0	210	92	329	37	14	34	43	759	16,889	4.5	
13	32	Barnoldswick	0	1	60	104	8	2	44	5	224	5,046	4.4	
14	26	Preston North	98	89	42	4	6	136	61	2	439	10,264	4.3	
15	18	Colne	5	149	102	190	34	9	45	34	567	13,473	4.2	
16	12	Rawtenstall and Bacup	1	54	268	228	76	31	12	52	722	17,843	4.0	
17	10	Skelmersdale	0	114	152	169	104	13	44	148	746	18,454	4.0	

SPAs ranked by % and by total no. of estimated isolated households (high to low)		Isolated households by MOSAIC type	MOSAIC type	N58	N60	N59	N57	N61	F22	F24	O62	Isolated households (by SPA)	Total households (by SPA)	% of households isolated (by SPA)
By % isolated	By total isolated													
18	19	Preston West	30	104	77	69	104	38	60	54	536	13,486	4.0	
19	17	Burnley Outer	0	21	134	191	48	24	135	37	591	15,286	3.9	
20	13	Lancaster Central	122	137	169	103	78	58	30	24	720	18,990	3.8	
21	25	Ormskirk and Newburgh	122	0	83	14	26	128	107	3	482	12,933	3.7	
22	20	Leyland	27	84	102	87	75	42	79	36	532	14,351	3.7	
23	22	South Ribble West	47	6	69	13	4	136	232	0	507	14,067	3.6	
24	15	Pendle Hill	112	25	200	64	19	119	86	4	629	17,838	3.5	
25	11	South Ribble East	25	82	157	95	109	51	181	39	739	21,947	3.4	
26	31	Lancaster Coast	8	0	35	17	7	49	139	1	256	7,928	3.2	
27	21	Preston Central	17	305	13	150	21	0	0	8	514	16,301	3.2	
28	27	Rossendale West	7	73	127	72	30	52	42	12	416	13,419	3.1	
29	24	Fylde East and Broughton	18	3	96	44	30	54	242	7	494	16,906	2.9	
30	28	Chorley East	1	0	51	35	29	68	146	8	338	13,963	2.4	
31	29	Bowland	36	2	53	13	4	71	135	1	317	14,274	2.2	
32	30	W Lancashire West	5	6	93	6	11	24	139	1	286	13,710	2.1	
33	33	Chorley West	15	0	47	8	16	44	46	1	178	12,254	1.5	
34	34	Lancaster Rural	0	0	11	0	0	19	32	0	63	7,822	0.8	
-	-	Lancashire	2,285	3,728	3,074	3,970	1,404	1,847	4,889	970	22,166	523,791	4.2	

Source: Mosaic Public Sector 2014

N.B. SPAs listed in order of proportion (%) of households estimated to be socially isolated (high to low), rather than by absolute numbers of isolated households. See Table 3 (below) for key to MOSAIC types

[Note: Column 1, SPA rank by % isolated, corresponds to the numbered SPAs on the map in Chapter 2]

Key to [MOSAIC types](#)

Table 3 Social isolation values and proportions at risk by MOSAIC household types

MOSAIC household type	'SI Value': How likely this type is to be socially isolated compared with average (of 1)	'Proportion': Estimated % isolated for this MOSAIC type	MOSAIC household type description	More likely to be a Carer?
N58	x 6.5	45%	Aided elderly - living in specialist accommodation including retirement homes and complexes of small homes	
N60	x 6.0	42%	Dependent greys - ageing social renters high levels of need, living in tiny homes within small centrally-located developments	
N59	x 5.0	35%	Pocket pensions - elderly singles of limited means renting in developments of compact social homes	Yes
N57	x 4.2	29%	Seasoned survivors - deep-rooted single elderly owners of low value properties	
N61	x 4.2	29%	Estate veterans - longstanding elderly renters of social homes	
F22	x 3.4	24%	Legacy elders - now mostly living alone in comfortable suburban homes	
F24	x 3.5	24%	Bungalow haven - appreciating the calm of bungalow estates designed for the elderly	Yes
O62	x 1.1	8%	Low income workers - older social renters settled in low value homes in communities where employment is harder to find	Yes

The 'SI value' refers to how much more likely each type of household is estimated to (on average) have one or more socially isolated residents, compared with an average household (in Lancashire). So, for example, MOSAIC household type N58 ('Aided elderly') are considered the most likely of any MOSAIC type to be socially isolated - almost seven times as likely as the average household. They are closely followed by MOSAIC type N60 ('Dependent greys') – six times as likely to be socially isolated as the average household.

To help further estimate how many households in each MOSAIC type actually contain one or more socially isolated residents, we have used a second figure, the 'proportion'. This is the percentage of households within each MOSAIC type who are estimated to be socially isolated. So, for example, 29% (or just under one-third) of all households in MOSAIC type N61 ('Estate veterans') are estimated to be socially isolated.

The estimated 'proportion' is based on previous work carried out in Blackpool, to inform a 2013 Big Lottery funding bid to tackle social isolation. As part of this work, a survey was carried out of frontline health and social care workers in Blackpool, to estimate the proportion of their clients who were socially isolated (about 50% of clients were found to be isolated). The results were calibrated with the most appropriate MOSAIC household type which, using the 2009 MOSAIC data available at that time, was: 'M58: Less mobile older people requiring a degree of care'. Estimates for the other MOSAIC types were then assigned in proportion to their 'SI values', relative to the SI value for type M58.

A similar method has been used to assign the 'proportion' for this current work in Lancashire. We have used more up-to-date 2013 MOSAIC Public Sector data, and the MOSAIC types have changed from the 2009 data. So we have mapped 2009 MOSAIC types to the most relevant 2013 types, and made slight adjustments where appropriate due to the updated descriptions. The closest new (2013) MOSAIC type to M58 is N58, ('Aided elderly') – we have estimated that, for this most 'at-risk' group of being socially isolated, 45% of these households may actually be isolated. We have then assigned estimates for the other MOSAIC types in proportion to their SI values.

Of course, whether or not a particular individual in an 'N58' (or other) household is actually socially isolated can depend on a whole range of factors, including the nature of their accommodation and support provided, as well as personal characteristics and circumstances.