

PUBLIC HEALTH – FINALISATION OF FORMULA

INTRODUCTION AND ACTION FOR ACRA

1. This paper seeks decisions from ACRA for the 2013-14 public health formula on:
 - i. weights by SMR decile;
 - ii. non-resident populations;
 - iii. population data, mainly relating to the release of 2011 Census data for the calculation of the SMR.
2. A comparison is also provided of each local authority's percentage share of the available national resources (currently unknown) between ACRA's interim recommendations and the formula including the changes agreed up to ACRA's July meeting.

Action for ACRA

3. ACRA is asked for the 2013-14 formula:
 - whether it wishes to pursue further the two main options emerging from the engagement for alternative quantification of the SMR < 75 weights, both of which essentially involve a higher gearing than 3:1. The alternatives are both based on modelling the baseline spend estimates;
 - whether it agrees that the only basis for an adjustment for non-residents is for the City of London?
 - which option it prefers for the calculation of the SMR.
4. More specific questions on each of these are included in the relevant sections of the paper.

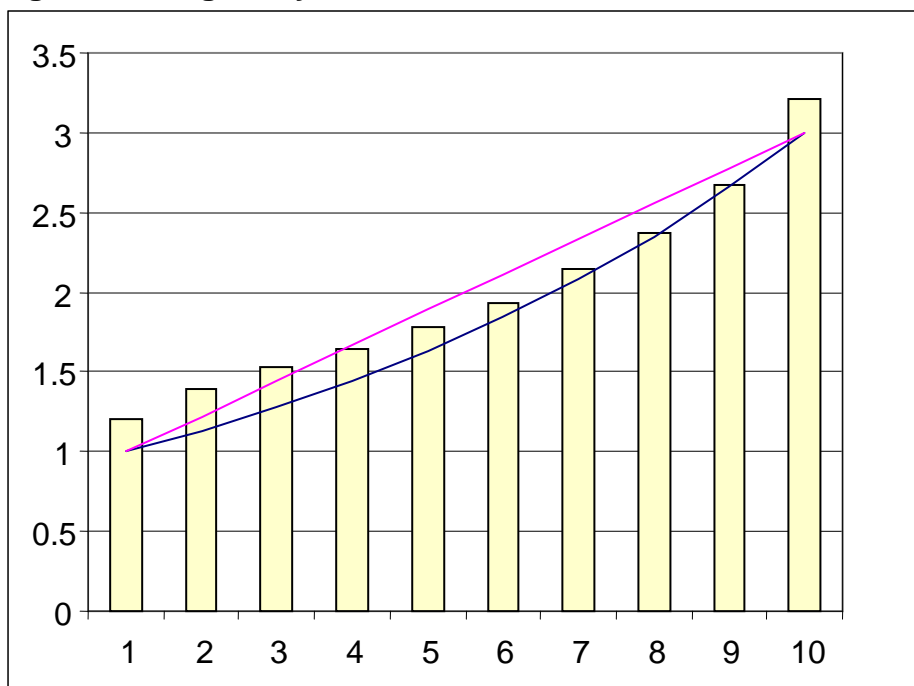
SECTION 1: WEIGHTS BY SMR < 75 DECILE

5. The SMR < 75 years is a major driver in the public health formula. It is applied at MSOA level in order to take account of inequality within local authorities as well as between local authorities.
6. There needs to be a non-linear difference between the SMR < 75 based weight per head for MSOAs in the formula from the actual SMR < 75 at MSOA level. If this is not the case, the average for MSOAs in a local

authority will be the same as the overall local authority figure, and no account is taken of inequality within local authorities.

7. For this reason ACRA recommended a ratio for the weight per head of 3 : 1 between the 10% of MSOAs with the highest SMR < 75 relative to the 10% of MSOAs with the lowest SMR < 75. The actual SMR < 75 between the 90th and 10th percentiles is 2.2 : 1 and between the medians of the 10th to 1st deciles is 2.7 : 1.
8. The weight per head was applied linearly for the intermediate deciles as shown by the straight line in Figure 1.

Figure 1: Weights by SMR < 75 decile



9. It has been argued in some of the responses to the engagement that the weights should be exponential (giving a curve as in Figure 1) and/or the ratio of 3:1 should be higher. The basis for both of these propositions is that the linear approach and 3:1 ratio are not sufficiently discriminatory to represent the cost of meeting the public health needs of different areas. Both a higher ratio than 3:1 and exponential weights would give higher allocations to areas with higher under 75 SMRs. ACRA has recognised that the ratio of 3:1 was a judgement.

Exponential weights

10. The principle for exponential weights is that it costs more to deliver public health services in a hypothetical area with two MSOAs in deciles 4 and 6 compared with both MSOAs in decile 5. ACRA has debated this type of issue in the past in different contexts and has not been clear that logically 6 and 4 is more costly than 5 and 5.

11. While there is evidence that SMRs and life style measures do follow an exponential shape, the basis to quantify the precise form of the exponential weights, ie the shape of the curve in Figure 1, is scarce.
12. The only specific proposal for the value of exponential weights received in the engagement was from the Faculty of Public Health. They proposed that the weights for each MSOA are proportional to $e^{0.02 \times \text{SMR}_{75}}$.
13. This proposal is founded on modelling the SMR against the public health baseline estimates published in February. London and the Isles of Scilly were excluded from this analysis as London has different needs and the Isles of Scilly have a very small population. This analysis was undertaken at upper tier and unitary local authority level. As noted in the paper *Public Health Formula – update on engagement*, the goodness of fit for an exponential curve using these data is only a little better than a linear fit (R^2 of 71% versus R^2 of 66%).
14. Basing the weights on modelling of the baseline spend estimates for 2010-11 requires confidence that differences in the baseline spend between areas reliably reflect differences in need rather than other factors.
15. There have also been views that under a linear approach, there should be a kink so that the line rises with a steeper gradient between deciles 9 and 10 than across the other deciles. However, there is a lack of evidence on which to quantify the change in gradient.

3 : 1 ratio

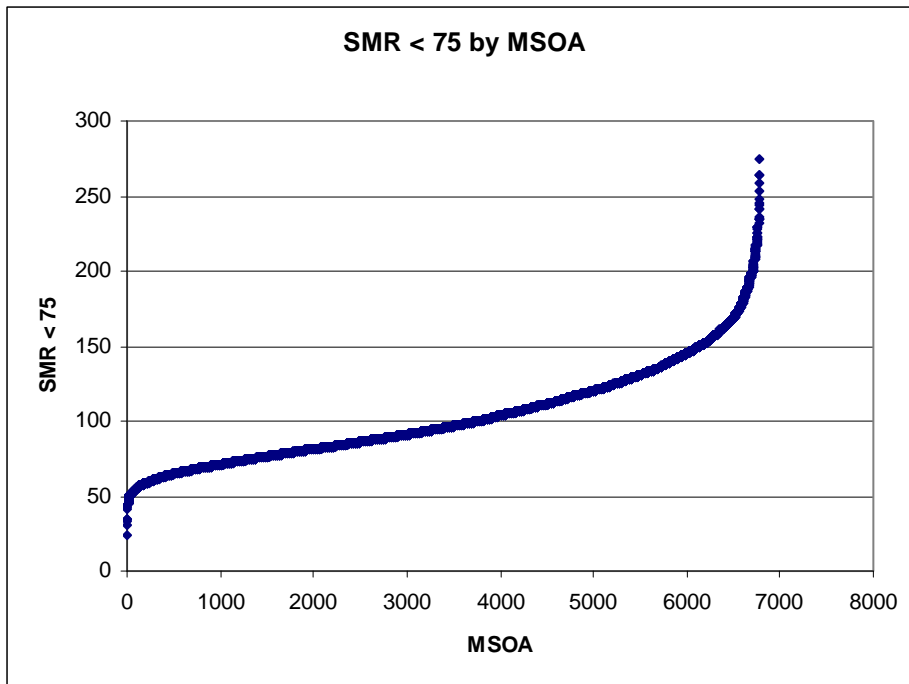
16. The evidence for a ratio across deciles greater than 3:1 is from work submitted by Manchester City Council. This sought to remove the MFF and age from the baseline spend data, and then modelled spend by upper tier and unitary authority against the $\text{SMR} < 75$. This showed a gradient of possibly around 4 :1 for local authorities and the paper proposed the gradient at MSOA level should as a minimum be as steep as their findings for local authority level. We have not so verified the analysis in this paper.
17. As noted above, basing the weights on modelling of baseline spend data requires confidence that relative spend reflects relative need.

Distribution of $\text{SMR} < 75$ by MSOA

18. The distribution of $\text{SMR} < 75$ is not linear at the tails, as shown in figure 2. Using the approach based on deciles may mean a dampening for some areas of their allocations where the $\text{SMR} < 75$ is very high or low for some of their MSOAs. However, very high and very low $\text{SMR} < 75$ s

may be at least partly due to random noise in the estimated SMR < 75s. We cannot tell if they are true outliers or whether it is a data issue.

Figure 2: SMR < 75 by MSOA



Questions for ACRA

19. There is little evidence for the weights by decile. The few alternatives proposed are based on data on actual spend.
20. ACRA is asked:
 - Q1: if it has confidence that spend data reflects relative need?
 - Q2: and if so, does it wish to investigate further the two options described in this paper that potentially allow quantification of alternative weights?

If the answer to both questions is yes, we can quickly further test and develop one or both of these options.

SECTION 2: NON-RESIDENT POPULATIONS

Sexual health services

21. The population base for public health allocations is to be the resident population projections produced by ONS. ACRA has recently considered whether there should be an adjustment for non-resident populations.

22. At its last meeting ACRA agreed that an adjustment for non-resident populations should only be considered for sexual health services. This is based on the policy advice from DH is that it is for local authorities to determine how best to discharge their new responsibilities, and with the emphasis on localism, it should not be for DH to imply whether local authorities should or should not provide certain services for non-residents. The exception to this is those sexual health services which are mandated as open access.
23. ACRA acknowledged that re-charging by local authorities for non-resident use of mandatory sexual health services is likely to be preferable to an adjustment to the formula. While PCTs currently recharge for GUM services using a mandatory tariff, PCTs do not recharge for contraceptive services which are funded by the host PCT. There is no requirement, however, on local authorities to recharge or use the mandatory tariff. It may be that a sensible form of recharging is introduced by local authorities themselves in due course, but we understand that local authorities do not intend to recharge for sexual health services in the near future.
24. We have investigated three data sources for sexual health services as a basis for an adjustment to the formula:
 - GUMAMM;
 - SHRAD; and
 - CASH.

However, it seems none of these provide a firm enough basis for an adjustment for cross-border flows.

25. The GUMAMM data set appeared the most promising as it includes a breakdown of activity¹ by commissioner for each provider and thus allows a calculation of cross-border flows.
26. There are a number of concerns about the GUMAMM data for a non-resident adjustment:
 - a the data set does not cover all sexual health services and data on cross-border flows are not available for the excluded services, eg for community sexual health clinics;
 - b the date set cannot provide cross-border flows for many local authorities. The data set is based on PCTs and thus yields cross-border flows between PCTs. These cross-border flows would be appropriate for a formula for local authorities where PCTs and local

¹ GUM clinics typically provide testing and treatment of sexually transmitted diseases, contraception, HIV testing, PEP (post-exposure prophylaxis) and hepatitis B vaccination.

authorities are coterminous, but not where a local authority covers only part of a PCT's area. For example, no data are available for cross border flows between York local authority and North Yorkshire local authority as they are both in North Yorkshire and York PCT. And four different local authorities are at least partly within Berkshire East PCT. There are 39 local authorities which cover only part of a PCT's area;

- c the GUMAMM data collection was mandatory up until November 2011, when it became a voluntary collection and the data submitted after November 2011 are incomplete and are not validated. Data up to November 2011 may be usable for 2013-14 but may soon become dated.
27. SHRAD (Sexual and Reproductive Health Activity) is a mandatory collection introduced from 2010-11 which mainly covers contraception and sexual health services provided in family planning clinics. The data set was intended to complement GUMAMM to provide a fuller coverage of sexual health services. The SHRAD activity data do not provide a breakdown by responsible commissioner for providers, and are unlikely to do so in the future due to anonymity issues. Cross border flows can therefore not be identified from this data set.
28. Contraceptive and sexual health services (CASH) data were also identified as providing data on contraceptive services not covered by GUMAMM. However CASH data are not published nationally, and may not be collected in a comparable way by Trusts.

Number of workers relative to the number of residents

29. ACRA advised that unless the above datasets provide robust information on cross-border flows, an adjustment based on the number of people who work in each local authority area relative to the number of people who live in the area. This clearly does not capture all cross boundary flows, but would give higher allocations to city centres where many sexual health services tend to be based.
30. There are data on the number of employees in each local authority area from the Annual Survey of Hours and Earnings (ASHE), which is a 1% sample of employees. We can construct from this an index of employees to residents of working age. Having classed working age as 20 to 65 years, there are only six local authorities where this index has a value above one. The six areas where this index has a value above one are: the City of London (34.8), Westminster (2.59), Camden (1.38), Tower Hamlets (1.30), Islington (1.11) and Peterborough (1.02). The five areas where the index is lowest are Lewisham, Waltham Forest, Redbridge, Haringey and Barnet.

31. We could potentially make an adjustment to the population for those areas where this index exceeds the value of one. There are a number of issues with this approach:
- it assumes that areas where the index has a value of under one do not have a large inflow of workers;
 - it does not provide a basis for a deduction to the population of areas where work commuters reside (this may be less material if the places of residence are fairly dispersed across local authorities);
 - we need to know the proportion of commuters who use sexual health services near their place of work.
32. The only data we are aware of on the use of sexual health services by commuters near their place of work is a study by the City of London. This suggested that some 2% of city workers use sexual health services near their workplace. The study also asked 'Thinking of your work colleagues are there any services that you think should be provided for them within the Square Mile?' Around 10% said sexual health services. While it is understandable why this question was asked, it is difficult to interpret the responses.
33. While City of London workers may not be representative, these are the only data we believe are available.
34. A possible adjustment for non-residents on this basis is
- 2% x the amount by which the index exceeds the value of one x the proportion of spend on sexual health services.
35. This approach would give a material adjustment only for the City of London, of around 15%. It is insignificant for other areas.

School children

36. At an earlier ACRA meeting, it was suggested we investigate the number of school pupils who attend a school in a different local authority area to that in which they live. This is relevant to the local authority responsibility 'children aged 5 to 19', which currently covers for example the healthy child programme and school nursing services.
37. Data on net flows are available from the annual schools survey. Net flows are children attending school in local authority A and residing in local authority B (inflows) less children resident in local authority A attending school in local authority B (outflows).
38. Net flows are very small for primary school children – a range of under +/- 1%.

39. The range for secondary age children is -1.9% to +2.4%. As children aged 5-19 only accounts for around 10% of baseline spend, the spend weighted range is -0.2% to +0.2%. This appears not sufficiently material to warrant an adjustment in the formula.

Questions for ACRA

40. ACRA is asked:

Q3: if ACRA agrees that the GUMAMM data do not provide a sufficiently robust basis for a non-resident adjustment for sexual health services?

Q4: if ACRA wishes to recommend an adjustment for the City of London as described above?

Q5: if ACRA agrees that an adjustment for school children is not warranted?

SECTION 3: POPULATION DATA

41. The three issues covered are:

- a timing of availability of 2011 Census population based projections for local authorities;
- b timing of availability of 2011 Census based population data for MSOAs. MSOA populations are used in the calculation of SMRs;
- c travellers and seasonal workers.

2011 Census based population data for local authorities

42. ONS will issue sub-national population projections for local authorities in mid-October 2012. This should just be in time for the inclusion of the projections for 2013 in the formula for 2013-14 allocations.
43. In the unlikely event that they are delayed, we plan to use the already published 2011 Census populations for 2011, probably rolled forward to 2013 using the existing projections for growth between 2011 and 2013. This appears preferable to using the currently available projections for 2013 on their own which are derived from the 2001 Census. The data already issued from the 2011 Census show large changes at local authority level from the rolled forward 2001 Census based population estimates for 2011².

2011 Census based population data for MSOAs

² <http://www.ons.gov.uk/ons/rel/census/2011-census/population-and-household-estimates-for-england-and-wales/stb-e-w.html>

44. The SMR<75 is used in the formula at MSOA level. A key part of the calculation of the SMR<75 is the death rate by age group for which the population by age group is required for each MSOA. Usually the SMR<75 is calculated over five years to reduce the confidence intervals.
45. The SMR<75 presently used in the formula uses deaths between 2006-10 and MSOA populations for these years derived from the 2001 Census. At best ONS will publish 2011 MSOA populations based on the 2011 Census just in time for use in the formula, but this is far from certain. ONS plan to publish in late 2013 the revised backdated series for MSOA populations for 2007 to 2010 reflecting the 2011 Census results, which we also need to calculate a five year based SMR < 75.
46. In areas where the current MSOA population is underestimated, the SMR<75 will be overestimated. Conversely, where the current MSOA population is overestimated, the SMR<75 will be underestimated. There may also be errors in the current SMRs where the demographic structure of MSA populations is incorrectly estimated in the pre-2011 census data.
47. The options are:
 - a if available in time, use the 2011 Census based MSOA populations for 2011 as the denominator for calculating death rates, and use only three years' of deaths (2009-11) to avoid the data for deaths and populations being for years too far apart. This has the disadvantage of reducing the precision of the SMRs due to small numbers of deaths;
 - b use the current SMRs based on the pre-Census MSA populations. This is likely to be subject to criticism for using SMRs which are not statistically reliable.
48. There are no clear answer on this issue. We do not know how large the impact of 2011 Census based populations will be. ONS have published that the 2011 England and Wales population from the 2011 Census is 476,000 higher than previously estimated, with significant differences at local authority level. There are also some large differences in the demographic profiles for local authorities between the Census and previous estimates. These differences are likely to be even greater at MSA level.
49. Concerns have already been raised about the confidence intervals for 5 year based SMRs; these concerns will be magnified for 3 year based SMRs.

Travellers and seasonal workers

Travellers

50. Whether there should be an adjustment to the population base for travellers has been raised a number of times in the past as it was felt the numbers vary across local areas, they were not sufficiently captured in ONS population data, and may have high health needs.
51. ONS undertook work to ensure that the 2011 Census captured all travellers living in the UK for three months or more. For the 2011 Census, the ONS have confirmed that:
 - much community liaison work was undertaken to ensure that travellers were enumerated; and
 - the 2011 Census results include an estimate to account for any travellers that may have been missed in this process
52. It is therefore expected that travellers are appropriately accounted for in the ONS 2011 Census-based population estimates used in the public health formula and no further adjustment is required.
53. Additionally, we have undertaken some simple analysis which showed that the traveller population was insignificant as a proportion of population by local authority, and variation across local authority was also insignificant.³

Seasonal workers

54. Seasonal workers can be both migrants and non-migrants. We are not aware of comprehensive estimates of non-migrant seasonal workers by local authority being available.
55. The ONS mid-year estimates and population projections for local authorities are on the basis of usually resident, which include long-term migrants (those coming into England for one year or more) but not short-term migrants.
56. The ONS publish estimates of short-term migrants which supplement the mid-year population estimates. These define short-term migrants as those coming into England for 3-12 months for work or study reasons, and are classified by ONS as experimental statistics⁴.
57. These data may provide a basis for an adjustment for seasonal workers. The short-term migrant data are based on the International Passenger

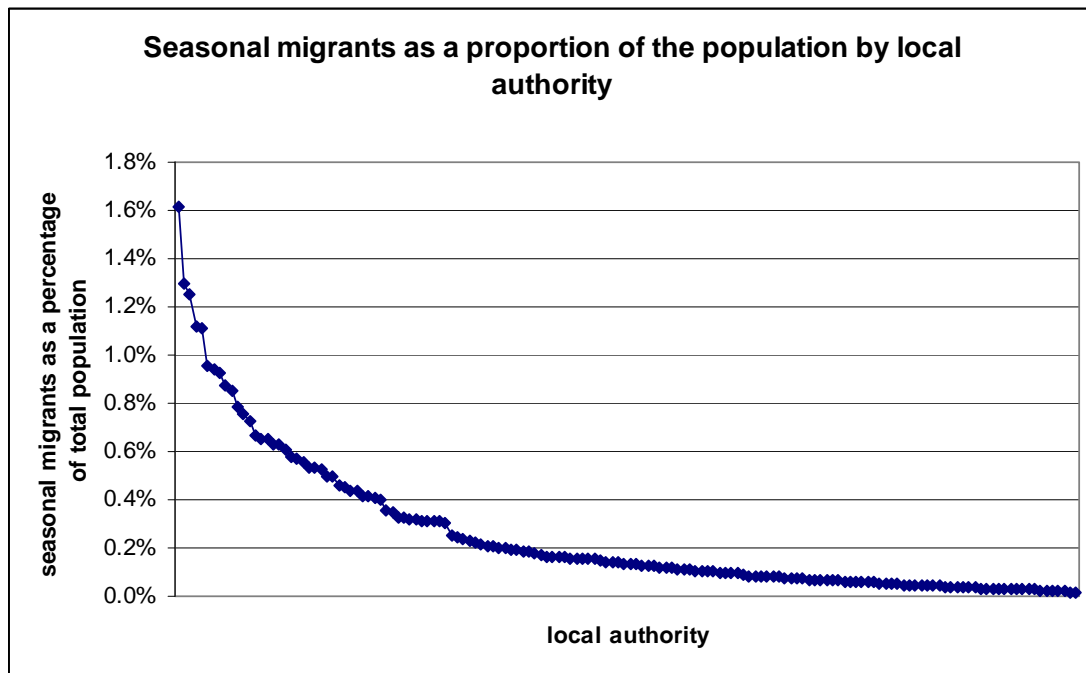
³ This analysis used three data sources: 1. the number of pitches provided by local authorities or private providers for caravans in England (as at January 2012), 2. count of all gypsy and traveller caravans in England (as at January 2012), data on both available at <http://www.communities.gov.uk/publications/corporate/statistics/caravancountjan2012>, and 3. 2011 Census population estimates available at <http://www.ons.gov.uk/ons/publications/reference-tables.html?edition=tcm%3A77-257414>. Residential caravan pitches were excluded from the analysis, and it was assumed an average of 4 people per caravan.

⁴ 'Short-term Migrant Estimates for England and Wales, Mid-2010 Estimates' available at <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Short-term+Migrants>

Survey (IPS). The IPS data are mapped to administrative sources provided by other government departments in order accurately to allocate short-term migrants to local authorities. For example, the Migrant Workers Scan (MWS) produced by DWP for all migrants who have registered and been provided with a national insurance number, and Student Records data provided by Higher Education Statistics Agency (HESA).

58. Figure 3 shows the number of short term-migrants as a proportion of local authorities' usually resident populations.

Figure 3: Short –term migrants as a percentage of usual residents



59. For the large majority of local authorities, the number of short-term migrants is very small relative to the usually resident. Those local authorities with a seasonal migrant population that is 0.5% or higher of the usually resident population are shown in Table 1. They are predominantly London local authorities.

Table 1: LAs where short-term migrants are more than 0.5% of usually resident population

ONS LA Name	%
Newham	1.6%
City of London	1.3%
Westminster	1.3%
Camden	1.1%
Tower Hamlets	1.1%
Islington	1.0%
Haringey	0.9%
Brent	0.9%
Southwark	0.9%

Hammersmith and Fulham	0.9%
Waltham Forest	0.8%
Kensington and Chelsea	0.8%
Bournemouth	0.7%
Hounslow	0.7%
Nottingham	0.7%
Lambeth	0.6%
Greenwich	0.6%
Hackney	0.6%
Wandsworth	0.6%
Ealing	0.6%
Brighton and Hove	0.6%
Reading	0.6%
Barnet	0.5%
Lewisham	0.5%
Manchester	0.5%
Luton	0.5%
Newcastle upon Tyne	0.5%
Merton	0.5%
Harrow	0.5%

60. The short-term migrant data are based on reported intentions for length of stay in England. It is not known how long they actually stay in England and therefore for how long they may need public health services.

Questions for ACRA

61. ACRA is asked:

Q6: which option for calculating SMR<75 for MSOA does it prefer? Use the pre-Census data or seek to incorporate 2011 Census data but with likely large confidence intervals.

Q7: does it wish to make adjustment for short-term migrants?

SECTION 4: SHARES OF AVAILABLE RESOURCES

62. The tables in Annex B show for information each local authority's share of the available national resources (currently unknown) on the basis of:

- a ACRA's interim recommendations
- b with the changes in the formula agreed up to ACRA's July meeting.

63. The changes are

- a incorporating local authority populations from the 2011 Census published on 16 July, which have been extrapolated forward to 2013 using the pre-Census sub-national population projections

(range of % changes to share of +10% to - 27%). City of London is the outlier at -27%. As noted above, MSOA populations are not yet available from the 2011 Census;

- b including the age-gender adjustment agreed at ACRA's last meeting (range of % changes to share of +11% to -8%). Cities and some London Boroughs have the largest increases due to the age-gender adjustment;
- c using more recent data for SMRs by MSOA: 2006-10 in place of 2005-09 (range of % change to share of +7% to -3%). Rutland is the outlier at +7%. All others are in the range -2.9% to 3.5%.
- d updating the component of the formula which is based on the current Pooled Treatment Budget allocations formula for 2011-12 activity data and for the performance element (range of % change to share of +4% to -3%).

64. The table in B includes a break down of the overall change by these individual components.

Department of Health
August 2012

Annex A: Spend by function

Table A below shows for information the 2010-11 spend by PCTs on future local authority public health responsibilities by function. PCTs have been submitting corrections to these spend data, which are currently being processed, but are not likely to significantly change national spend by function.

Table A: Estimated 2010-11 spend by PCTs on future LA public health responsibilities

LA Public Health Function	£m
Drug misuse	530
Sexual health	460
Children 5-19	210
Public health leadership	200
Miscellaneous health improvement and wellbeing	170
Nutrition, obesity & physical activity	150
Alcohol misuse	140
Tobacco	140
NHS Health Checks	36
Information and intelligence	33
PCT support for surveillance and control of infectious diseases	12
Dental public health	12
Preparedness resilience and response for health protection incidents and emergencies	12
Fluoridation	2
Total	2,100

Annex B: Shares of available national resources

Table B1: Local Authorities

Local Authority	As per ACRA's interim recommendations	Following changes agreed to July ACRA meeting	% change in share	Of which			
	% share of resources	% share of resources		% change due to new population data	% change due to age-gender adjustment	% change due to SMR data for 06-10	% change due to drug treatment formula
Hartlepool	0.24%	0.24%	-1.0%	-0.6%	0.9%	-1.1%	-0.3%
Middlesbrough	0.38%	0.38%	-0.3%	-2.3%	2.6%	0.4%	-1.0%
Redcar and Cleveland	0.30%	0.28%	-8.3%	-2.6%	-2.9%	-2.2%	-0.8%
Stockton-on-Tees	0.42%	0.41%	-3.9%	-1.6%	-0.5%	0.7%	-2.6%
Darlington	0.21%	0.21%	-3.5%	2.5%	-2.9%	-2.2%	-0.8%
County Durham	1.04%	1.01%	-3.2%	-0.5%	-1.6%	-0.8%	-0.3%
Northumberland	0.54%	0.51%	-5.2%	-0.4%	-5.6%	1.3%	-0.6%
Gateshead	0.44%	0.44%	-1.5%	2.0%	-1.9%	-1.5%	-0.1%
Newcastle upon Tyne	0.65%	0.67%	2.8%	-2.3%	7.8%	-1.2%	-1.2%
North Tyneside	0.40%	0.39%	-1.4%	-0.4%	-3.1%	2.1%	0.1%
South Tyneside	0.34%	0.32%	-5.5%	-3.2%	-1.6%	-1.0%	0.2%
Sunderland	0.61%	0.58%	-4.7%	-3.5%	-0.3%	-0.9%	-0.1%
Halton	0.28%	0.28%	1.8%	2.9%	-0.6%	-0.2%	-0.4%
Warrington	0.40%	0.39%	-2.5%	-1.1%	-2.0%	0.0%	0.6%
Blackburn with Darwen	0.36%	0.37%	3.1%	1.9%	2.7%	-0.6%	-0.9%
Blackpool	0.39%	0.39%	-1.6%	-0.9%	-2.3%	1.1%	0.6%
Cheshire East	0.62%	0.58%	-5.6%	-0.4%	-4.6%	-0.5%	-0.1%
Cheshire West and Chester	0.57%	0.55%	-3.9%	-0.9%	-2.8%	0.0%	-0.2%
Bolton	0.64%	0.64%	-1.0%	0.7%	-0.4%	-1.1%	-0.2%
Bury	0.37%	0.36%	-0.8%	-1.4%	-1.3%	1.6%	0.4%
Manchester	1.32%	1.50%	14.1%	4.0%	11.4%	-0.3%	-1.3%
Oldham	0.53%	0.52%	-1.4%	0.3%	0.3%	-0.7%	-1.3%
Rochdale	0.51%	0.51%	-0.1%	1.1%	0.0%	-0.6%	-0.6%
Salford	0.57%	0.59%	3.2%	-0.1%	3.2%	0.2%	-0.1%
Stockport	0.53%	0.49%	-6.9%	-1.9%	-3.1%	-1.4%	-0.7%
Tameside	0.53%	0.52%	-1.4%	-0.8%	-0.8%	-0.4%	0.7%
Trafford	0.40%	0.40%	1.3%	2.5%	-2.1%	0.1%	0.9%
Wigan	0.69%	0.70%	0.4%	0.7%	-1.8%	1.8%	-0.3%
Knowsley	0.37%	0.37%	-1.6%	-3.3%	0.6%	0.9%	0.2%
Liverpool	1.22%	1.31%	7.9%	3.0%	4.6%	0.3%	-0.1%
St. Helens	0.40%	0.38%	-6.9%	-2.8%	-1.9%	-1.3%	-1.2%
Sefton	0.58%	0.56%	-3.5%	-1.7%	-3.4%	-0.3%	1.9%
Wirral	0.72%	0.72%	-0.7%	1.1%	-2.8%	0.0%	1.1%
Cumbria	0.92%	0.85%	-7.6%	-1.1%	-5.3%	-0.9%	-0.5%
Lancashire	2.36%	2.27%	-3.9%	-2.1%	-1.5%	0.4%	-0.8%
Kingston upon Hull, City of	0.68%	0.67%	-1.8%	-1.9%	3.8%	-0.9%	-2.6%
East Riding of	0.51%	0.47%	-7.9%	-2.7%	-5.6%	-0.9%	1.2%

Local Authority	As per ACRA's interim recommendations	Following changes agreed to July ACRA meeting	% change in share	Of which			
	% share of resources	% share of resources		% change due to new population data	% change due to age-gender adjustment	% change due to SMR data for 06-10	% change due to drug treatment formula
Yorkshire							
North East Lincolnshire	0.36%	0.36%	-0.9%	-0.1%	-1.2%	0.9%	-0.4%
North Lincolnshire	0.34%	0.33%	-4.2%	0.9%	-3.8%	0.2%	-1.5%
York	0.33%	0.33%	0.6%	-1.2%	3.3%	-1.7%	0.3%
Barnsley	0.53%	0.51%	-3.1%	-0.2%	-2.0%	0.0%	-0.9%
Doncaster	0.67%	0.67%	-0.8%	1.5%	-1.9%	0.4%	-0.8%
Rotherham	0.55%	0.54%	-2.5%	-0.7%	-1.7%	-0.1%	-0.1%
Sheffield	1.11%	1.14%	3.0%	0.0%	4.3%	-1.1%	-0.1%
Bradford	1.19%	1.22%	2.7%	1.4%	2.8%	0.8%	-2.2%
Calderdale	0.41%	0.42%	1.5%	-0.6%	-1.8%	3.5%	0.4%
Kirklees	0.85%	0.89%	3.6%	1.7%	0.8%	0.7%	0.4%
Leeds	1.55%	1.57%	1.1%	-4.7%	5.8%	0.5%	-0.3%
Wakefield	0.74%	0.70%	-5.6%	-1.9%	-1.8%	-0.1%	-1.8%
North Yorkshire	0.91%	0.85%	-6.4%	-0.8%	-5.0%	-1.0%	0.3%
Derby	0.54%	0.55%	2.2%	-0.8%	1.8%	0.5%	0.7%
Leicester	0.72%	0.83%	14.2%	6.7%	6.5%	1.1%	-0.6%
Rutland	0.04%	0.04%	0.0%	-3.3%	-2.3%	6.8%	-0.9%
Nottingham	0.76%	0.83%	9.8%	-0.3%	11.1%	-1.5%	0.7%
Derbyshire	1.34%	1.28%	-4.5%	-0.9%	-4.1%	0.0%	0.5%
Leicestershire	0.96%	0.93%	-3.8%	-1.9%	-1.9%	0.6%	-0.6%
Lincolnshire	1.27%	1.21%	-4.4%	-1.6%	-4.4%	1.1%	0.6%
Northamptonshire	1.22%	1.18%	-3.2%	-0.9%	-1.5%	-0.3%	-0.5%
Nottinghamshire	1.44%	1.39%	-3.2%	-1.1%	-2.9%	1.1%	-0.4%
Herefordshire, County of	0.30%	0.27%	-7.2%	-1.0%	-6.5%	0.1%	0.1%
Telford and Wrekin	0.33%	0.33%	1.4%	-0.4%	-0.2%	2.0%	0.0%
Stoke-on-Trent	0.62%	0.61%	-1.3%	0.6%	0.0%	0.1%	-1.9%
Shropshire	0.48%	0.46%	-3.7%	1.8%	-5.6%	0.5%	-0.3%
Birmingham	2.50%	2.67%	6.7%	1.8%	5.2%	-0.4%	0.1%
Coventry	0.71%	0.73%	3.1%	-2.3%	4.3%	0.2%	1.0%
Dudley	0.58%	0.56%	-3.1%	0.0%	-2.7%	-1.0%	0.5%
Sandwell	0.71%	0.73%	2.8%	1.9%	0.2%	0.6%	0.1%
Solihull	0.33%	0.31%	-5.6%	-1.1%	-2.6%	-2.0%	0.1%
Walsall	0.57%	0.58%	1.2%	2.3%	-0.8%	-0.2%	-0.1%
Wolverhampton	0.58%	0.59%	2.6%	1.8%	0.2%	0.1%	0.4%
Staffordshire	1.45%	1.38%	-4.7%	-0.1%	-3.3%	-1.4%	0.0%
Warwickshire	0.91%	0.87%	-4.8%	-0.7%	-3.3%	-1.4%	0.5%
Worcestershire	0.91%	0.85%	-6.2%	-0.3%	-4.4%	-0.6%	-1.0%
Peterborough	0.40%	0.41%	2.7%	2.4%	0.6%	-0.9%	0.6%
Luton	0.46%	0.48%	4.6%	1.6%	4.9%	-2.3%	0.4%
Southend-on-Sea	0.33%	0.34%	1.8%	4.2%	-2.4%	0.1%	-0.1%
Thurrock	0.29%	0.30%	1.4%	-0.8%	1.0%	0.0%	1.2%

Local Authority	As per ACRA's interim recommendations	Following changes agreed to July ACRA meeting	% change in share	Of which			
	% share of resources	% share of resources		% change due to new population data	% change due to age-gender adjustment	% change due to SMR data for 06-10	% change due to drug treatment formula
Bedford	0.28%	0.28%	-1.4%	-3.4%	-0.4%	2.1%	0.3%
Central Bedfordshire	0.43%	0.40%	-6.8%	-2.7%	-2.3%	-2.4%	0.5%
Cambridgeshire	0.90%	0.91%	1.1%	1.4%	0.0%	0.2%	-0.5%
Essex	2.12%	2.06%	-2.6%	-1.7%	-2.6%	0.8%	0.9%
Hertfordshire	1.78%	1.77%	-0.5%	-0.2%	-1.1%	0.2%	0.6%
Norfolk	1.33%	1.28%	-4.1%	-0.8%	-4.2%	0.3%	0.6%
Suffolk	1.00%	0.96%	-4.1%	0.1%	-4.1%	1.0%	-1.1%
City of London	0.01%	0.01%	-25.5%	-26.8%	3.7%	0.0%	-1.8%
Barking and Dagenham	0.44%	0.47%	5.9%	-0.2%	3.6%	0.7%	1.7%
Barnet	0.55%	0.55%	0.1%	-0.5%	0.3%	0.1%	0.2%
Bexley	0.38%	0.37%	-2.5%	-0.6%	-0.8%	-0.5%	-0.6%
Brent	0.61%	0.70%	15.9%	10.3%	1.3%	2.4%	1.3%
Bromley	0.47%	0.44%	-6.1%	-3.0%	-2.6%	-0.3%	-0.2%
Camden	0.64%	0.63%	-1.5%	-5.2%	6.8%	-1.2%	-1.5%
Croydon	0.65%	0.68%	3.5%	2.7%	0.4%	-0.2%	0.6%
Ealing	0.70%	0.76%	8.5%	3.5%	2.0%	0.7%	2.2%
Enfield	0.57%	0.57%	-0.2%	1.4%	0.6%	-1.1%	-1.0%
Greenwich	0.64%	0.69%	8.3%	7.4%	2.7%	-1.9%	0.2%
Hackney	0.68%	0.77%	13.0%	6.9%	5.3%	0.9%	-0.5%
Hammersmith and Fulham	0.44%	0.47%	6.6%	3.8%	4.3%	-0.6%	-0.9%
Haringey	0.55%	0.61%	10.4%	4.1%	3.1%	1.7%	1.2%
Harrow	0.35%	0.37%	5.1%	1.4%	0.0%	2.5%	1.2%
Havering	0.41%	0.41%	-1.1%	-1.3%	-1.9%	0.8%	1.2%
Hillingdon	0.55%	0.56%	2.7%	-0.2%	2.6%	-0.5%	0.8%
Hounslow	0.54%	0.57%	5.8%	2.8%	2.8%	-1.4%	1.5%
Islington	0.64%	0.68%	6.2%	-0.1%	6.9%	1.7%	-2.3%
Kensington and Chelsea	0.31%	0.29%	-6.1%	-3.5%	-0.3%	-2.3%	0.0%
Kingston upon Thames	0.27%	0.26%	-5.7%	-7.2%	3.7%	-2.2%	0.2%
Lambeth	0.89%	0.95%	6.5%	2.6%	5.3%	-0.8%	-0.6%
Lewisham	0.75%	0.76%	0.5%	0.2%	3.1%	-2.4%	-0.3%
Merton	0.35%	0.34%	-4.5%	-5.3%	1.3%	-2.9%	2.5%
Newham	0.71%	0.82%	14.9%	10.0%	6.4%	-1.4%	-0.4%
Redbridge	0.48%	0.51%	6.4%	0.5%	2.0%	0.6%	3.0%
Richmond upon Thames	0.27%	0.25%	-6.2%	-3.8%	-1.9%	-0.7%	0.1%
Southwark	0.82%	0.84%	2.0%	-2.6%	5.4%	0.6%	-1.2%
Sutton	0.35%	0.34%	-2.7%	-3.9%	-0.5%	-0.8%	2.6%
Tower Hamlets	0.82%	0.90%	9.2%	0.2%	9.3%	0.2%	-0.5%
Waltham Forest	0.55%	0.61%	11.8%	7.8%	3.0%	0.1%	0.5%
Wandsworth	0.69%	0.71%	3.7%	3.0%	4.1%	-2.5%	-0.7%

Local Authority	As per ACRA's interim recommendations	Following changes agreed to July ACRA meeting	% change in share	Of which			
	% share of resources	% share of resources		% change due to new population data	% change due to age-gender adjustment	% change due to SMR data for 06-10	% change due to drug treatment formula
Westminster	0.52%	0.48%	-8.2%	-7.9%	4.2%	-2.5%	-1.8%
Medway	0.51%	0.53%	2.8%	-0.2%	1.0%	0.9%	1.1%
Bracknell Forest	0.19%	0.18%	-5.0%	-4.5%	0.9%	-1.1%	-0.4%
West Berkshire	0.23%	0.22%	-3.7%	-1.5%	-1.9%	0.0%	-0.3%
Reading	0.33%	0.36%	10.1%	5.0%	6.9%	-0.4%	-1.6%
Slough	0.30%	0.34%	11.9%	5.2%	2.5%	3.4%	0.3%
Windsor and Maidenhead	0.23%	0.22%	-3.7%	-0.7%	-2.1%	-0.2%	-0.7%
Wokingham	0.19%	0.18%	-5.5%	-6.5%	-0.5%	1.5%	0.1%
Milton Keynes	0.45%	0.46%	2.8%	2.0%	0.5%	1.1%	-0.9%
Brighton and Hove	0.57%	0.62%	7.9%	3.8%	4.0%	0.2%	-0.3%
Portsmouth	0.43%	0.46%	7.6%	-0.1%	7.0%	0.1%	0.5%
Southampton	0.49%	0.53%	6.8%	-0.6%	8.8%	-0.6%	-0.6%
Isle of Wight	0.24%	0.22%	-8.0%	-2.4%	-6.9%	1.5%	-0.3%
Buckinghamshire	0.74%	0.71%	-3.6%	-0.6%	-2.6%	-1.2%	0.8%
East Sussex	0.78%	0.74%	-5.1%	0.0%	-6.8%	1.1%	0.7%
Hampshire	1.80%	1.73%	-3.8%	-0.2%	-3.6%	1.1%	-1.1%
Kent	2.33%	2.34%	0.2%	0.3%	-2.4%	0.6%	1.7%
Oxfordshire	1.02%	1.04%	1.8%	0.0%	0.6%	1.6%	-0.4%
Surrey	1.63%	1.58%	-2.9%	-1.0%	-2.6%	0.2%	0.5%
West Sussex	1.16%	1.10%	-5.0%	-0.9%	-5.2%	1.0%	0.1%
Bath and North East Somerset	0.28%	0.29%	2.7%	-2.1%	2.4%	2.3%	0.2%
Bristol, City of	1.03%	1.09%	5.7%	-1.1%	5.7%	0.4%	0.8%
North Somerset	0.33%	0.30%	-9.3%	-4.4%	-4.8%	-1.1%	0.8%
South Gloucestershire	0.37%	0.36%	-1.7%	-2.6%	-0.5%	-0.1%	1.6%
Plymouth	0.54%	0.55%	0.5%	-0.7%	3.7%	-0.8%	-1.5%
Torbay	0.25%	0.23%	-9.8%	-2.9%	-5.9%	-1.8%	0.4%
Bournemouth	0.37%	0.40%	7.4%	5.6%	1.8%	0.8%	-0.9%
Poole	0.22%	0.21%	-2.2%	1.0%	-4.4%	0.0%	1.4%
Swindon	0.37%	0.37%	1.0%	2.3%	-0.5%	-2.0%	1.2%
Cornwall	0.89%	0.81%	-8.4%	-2.2%	-5.2%	-1.3%	0.1%
Isles of Scilly	0.00%	0.00%	3.2%	8.5%	-7.7%	0.0%	3.1%
Wiltshire	0.64%	0.64%	0.7%	0.4%	-3.5%	3.1%	0.8%
Devon	1.04%	0.97%	-7.4%	-1.9%	-5.5%	-0.6%	0.6%
Dorset	0.54%	0.51%	-5.1%	-0.1%	-8.2%	-0.6%	4.2%
Gloucestershire	0.92%	0.91%	-1.4%	-0.8%	-3.0%	1.3%	1.1%
Somerset	0.77%	0.72%	-5.8%	-1.4%	-5.4%	0.7%	0.3%

Note: The sum of the component changes may not exactly equal the overall change due to the different bases for the calculation of the former.

Table B2: By region

	As per ACRA's interim recommendations	Following changes agreed to July ACRA meeting	
Region	% share of resources	% share of resources	% change in share
North East	5.6%	5.4%	-2.8%
North West	15.3%	15.3%	-0.2%
Yorkshire and Humber	10.7%	10.7%	-0.8%
East Midlands	8.3%	8.2%	-0.6%
West Midlands	11.0%	11.0%	-0.1%
East of England	9.3%	9.2%	-1.5%
London	17.6%	18.4%	4.2%
South East	13.6%	13.6%	-0.5%
South West	8.6%	8.4%	-2.3%