Public Health England

Protecting and improving the nation's health

Salt targets 2017: Progress report

A report on the food industry's progress towards meeting the 2017 salt targets

December 2018

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Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: @PHE_uk
Facebook: www.facebook.com/PublicHealthEngland

Prepared by: Dr Alison Tedstone, Jo Nicholas, Rachel Clark, Kate Sweeney, Dr Sarah Chisholm, Jacob Hamblin-Pyke, Vicki Coulton, Bethany Knowles, Brittney MacKinlay, Gabrielle Owtram

For queries relating to this document, please contact: dietary.improvement@phe.gov.uk

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Contents

Executive summary

Work on salt reduction began in the UK in 2004 following advice from the Scientific Advisory Committee on Nutrition (SACN) that recommended population average salt intakes should be reduced to 6g per day to reduce the risk of high blood pressure and hence cardiovascular disease (CVD).

The key to achieving salt reduction has been a structured food reformulation programme that was designed to achieve a gradual reduction in the salt content of food by setting the food industry a series of targets to meet. To date, 4 sets of voluntary salt reduction targets for individual categories of food have been published (in 2006, 2009, 2011 and 2014).

Seventy-six targets for the salt content of different foods were published in 2014 with the aim that they would be achieved by the food industry by the end of 2017. Both average and maximum targets were set. The foods covered by the salt targets are the main contributors to dietary salt intakes in adults in the UK and provide around 54% of salt in the diet. An additional 24 targets were set specifically for the eating out of home sector (eg quick service restaurants, takeaway and meal delivery businesses) on a maximum per serving basis. The eating out of home targets cover products including roast main meals, pies, pasta meals and children's main meals. These targets were set to take account of generally higher levels of salt in products than those bought to be eaten at home, reflecting slower acceptance and less initial progress on salt reduction in the out of home sector.

This report presents analysis of the salt/sodium content of in-home (retailer own label and manufacturer branded products) and eating out of home food products in 2017 and assesses the extent to which salt reduction targets have been met.

Headline results

In-home (retailer own label and manufacturer branded products)

Just over half (52%) of all the average salt reduction targets set were met by 2017. Retailers made more progress than manufacturers towards achieving average targets, meeting 73% of these compared with manufacturers meeting 37%.

Performance of individual food categories varied considerably. For manufacturers and retailers combined, all average targets were met for 9 product categories (breakfast cereals, fat spreads, baked beans, pizzas, cakes, pastries, fruit pies and other pastry-based desserts, pasta, quiche, processed potato products, stocks and gravies), and at

least 75% of products in these categories had salt levels at or below maximum targets with the exception of baked beans.

Meat products did not meet any average targets, and had 43% of products with salt levels above the maximum target.

Overall (for retailers and manufacturers combined), where maximum targets were set, 81% of products had salt levels at or below their target (retailers 86%, manufacturers 72%).

Eating out of home

For the specific out of home sector salt targets, only maximum targets were set. In 5 out of 11 categories (breaded/battered chicken, pizza, children's main meals, beef/chicken/roast main meals and sandwiches) at least 75% of products had salt levels below the maximum per serving target. Burgers in a bun and pasta meals had about half of products with salt levels above maximum targets (50% and 48% respectively).

Overall, 71% of products had salt levels at or below their maximum per serving target.

Comparison of in-home and eating out of home sectors

Where data was available to make an assessment, fewer products were at or below maximum targets (sodium per 100g) for the out of home sector compared with in-home (retailers and manufacturers) in 17 out of 20 sub-categories. For the 20 comparable sub-categories, 75% of all out of home products were at or below maximum targets compared with 84% of in-home products.

The available data suggests that salt levels are generally higher in foods in the out of home sector compared with in-home.

Top dietary sodium-contributing foods

Foods from 15 of the 76 salt target sub-categories contribute approximately 75% of all sodium from foods with salt reduction targets. In the in-home sector (retailers and manufacturers), 7 of the 14 average targets in these sub-categories were met, and the proportion of products at or below maximum targets ranged from 54% (sausages) to 99% (cheddar and other 'hard pressed' cheeses). For the out of home sector, the proportion of products at or below maximum targets ranged from 41% for bread to 91% for sweet biscuits.

Within these top sodium-contributing sub-categories the proportion of products with a sodium content above maximum targets was nearly always higher for the out of home sector, than for in-home.

Data and analysis methods

This report provides information on retailer own label products, manufacturer branded products and products sold by the eating out of home sector. The data used for analysis for the in-home sector (retailer own label and manufacturer branded products) was from food and drink purchase data and nutrition information provided by Kantar Worldpanel for the year ending September 2017. Nutrition information provided by businesses or collected from company websites and menus was used for the out of home sector analyses.

High level summary analysis examined the extent to which salt reduction targets had been met. Separate analyses were undertaken for each sub-category where a salt target had been set. Metrics were produced to reflect the type of target and the availability of data for analysis.

Two types of averages are used within the main 2017 salt reduction targets; a simple processing average (a simple average of sodium values) and a sales weighted average (calculated by weighting the sodium content of individual products by their volume sales). For most food sub-categories a maximum target was also set. All targets were set on a sodium per 100g basis. All of the out of home targets were set on a maximum sodium per serving basis; no average targets were set.

Average targets were considered to have been met if the average sodium content of foods was below or within 5% of the target. Achievement against maximum targets was assessed by calculating the proportion of products with sodium content at or below the maximum target.

All analyses were conducted using sodium values. Salt values were produced for summary tables using a standard conversion (sodium x 2.5 = salt).

Conclusions and next steps

Analysis shows that for foods consumed in-home (retailer own label and manufacturer branded products), just over half of average salt reduction targets have been met. Where maximum targets were set, 81% of products overall had sodium levels at or below their targets. For the out-of-home sector, 71% of products overall were at or below maximum per serving targets, although it should be noted that the out of home targets were generally set at a higher level than the main salt targets, reflecting the greater progress needing to be made. Comparison of sodium content per 100g showed

that a greater proportion of out of home products had sodium levels above maximum targets set for all sectors than for the in-home sector.

To date, there has been no systematic assessment of the impact of the salt reduction programme on the salt content of foods. However, the available evidence shows that since the programme began in 2004 there has been clear progress. Along with consumer campaigning and a range of other interventions, the stepwise lowering of salt targets for foods by up to 54% between 2006 (when targets were first set) and 2014 (when the 2017 targets were published) is linked to a reduction in average population salt intake of 11% between 2005-06 and 2014.

Average salt consumption for adults in 2014 was 8g per day, compared with the recommended 6g per day. Government has committed to putting forward realistic but ambitious goals to bring salt intakes down further, and PHE will work to achieve this.

PHE expects to publish an assessment of current salt intakes for adults in England by early 2020.

Introduction

This report is about the food industry's progress on salt reduction. The UK salt reduction programme has aimed to achieve reductions in the sodium content of foods. Sodium chloride is the main contributor to salt in the diet, and 1g sodium is equivalent to 2.5g salt. The term salt is used throughout the report but all analysis conducted is based on the sodium content of food.

Background to the UK salt reduction programme

In 2014, the Department of Health (now the Department of Health and Social Care) published salt reduction targets for foods for retailers, manufacturers and the out of home sector (eg quick service restaurants, takeaway and meal delivery businesses) which were set to be achieved by December 2017. These targets were originally developed under the Public Health Responsibility Deal, and were republished by Public Health England (PHE) in 2017 (1). These were the fourth set of published targets (2006, 2009, 2011 and 2014) (2-5) which have covered around 80 individual product categories.

Every update of the salt reduction targets was intended to achieve gradual stepwise reduction in the salt content of foods, contributing to reducing average dietary salt intakes towards the recommended population average of 6g per day. The targets have always been intended to be stretching but achievable, and to achieve incremental salt reduction without people noticing so that everyday foods remained acceptable.

The original salt reduction targets were devised as a result of advice from the Scientific Advisory Committee on Nutrition (SACN), published in the 2003 report on *Salt and Health*, that a reduction in average adult salt intakes to 6g per day, with lower levels set for children, would lower population blood pressure levels and consequently reduce the risk of cardiovascular disease (6). The UK Food Standards Agency and Department of Health committed at that time to a programme encouraging the reformulation of foods to reduce salt content. The targets provided guidance to the food industry on the levels of salt that they should be aiming to achieve, and were set based on evidence including the salt content of foods (from food label data), major contributors to dietary salt intakes (from dietary survey and market share data), and estimates of dietary intake (from urinary analysis) (2). Additional information that was considered included reductions achieved to date, the function of salt in some products, the timing of reformulation cycles and the costs associated with reformulation.

Initial work on the reformulation of foods was complemented by a public awareness campaign that aimed to raise awareness of the health issues associated with salt intakes. Initial campaigns were to improve consumers' knowledge of the link between

salt and health, and educate and encourage consumers to check labels and reduce the salt they added during cooking and at the table (7). Further supplementary messaging about reducing salt intakes has been included as part of the Change4Life campaign (8). This has all helped to deliver an 11% reduction in salt intakes between 2006 and 2014. In 2014 average salt intake was estimated to be 8g with 33% of the population estimated to be meeting the 6g target (9).

Dietary sodium intakes and sources

The majority of salt in the diet comes from sodium naturally present in foods or added to foods in the production processes (9). Salt added to foods by individuals during cooking or when eating (discretionary salt) is hard to measure, but has been estimated to make up approximately 15-20% of dietary salt intake (10-12). Using the year 7 and 8 (2014/15 to 2015/16) NDNS dataset (13) which was coded to the 2017 salt target sub-categories (for more information see Appendix 2), and assuming discretionary salt contributes 18% of total salt intake, it was estimated that for the remaining salt in the diet, about 21% comes from sodium naturally present in foods, and about 61% from sodium in processed foods (about 54% from foods for which 2017 salt targets were set and about 7% from foods not included in salt target categories).

Average salt consumption for adults in 2014, measured from urinary analysis, was 8.0 grams per day, a reduction from 8.5 grams in 2011 and 8.8 grams in 2005/06. Since the salt reduction programme was launched, overall salt intake has fallen by 11% (9) although it remains higher than the recommended 6 grams per day. A new assessment of current salt intakes for adults in England is underway and this is expected to be published by early 2020.

Table 1 below shows the main contributors to sodium in the diet for adults aged 19-64 years based on NDNS data (13). These reflect salt naturally occurring in foods and from processed foods, but not salt added by individuals at the table or during cooking, and have remained broadly consistent since 2008. Sources of sodium are broadly similar for children and adults, although children get more sodium from cereals, milk and savoury snacks compared with adults, and less sodium from fish and miscellaneous foods (including soups and savoury sauces, pickles, condiments and gravies).

Table 1: Percentage contribution of food groups to average daily sodium intake for adults aged 19-64 years (NDNS Years 7-8)

Food group	Contribution to dietary sodium intake (%)
Cereals and cereal products	29.5
Meat and meat products	27.3
Miscellaneous*	10.0
Milk and milk products	9.1
Vegetables and potatoes	8.1
Fish and fish dishes	5.2
Savoury snacks	2.4
Eggs and egg dishes	2.3
Fat spreads	2.1
Non-alcoholic beverages	1.6
Alcoholic beverages	0.8
Sugar, preserves and confectionery	0.6
Fruit	0.6
Nuts and seeds	0.5

* includes dry beverages, soup, savoury sauces, pickles and condiments, stocks and gravies
Source: National Diet and Nutrition Survey, Results from years 7 and 8 (combined) of the Rolling Programme (13)

2017 salt targets

Targets for levels of salt in food and drink products include both average and maximum targets:

- average targets aim to lower the overall salt levels in a sub-category, while maintaining flexibility to allow for variation between individual products
- maximum targets stimulate businesses to look at products that are high in salt, benchmark them against competitors and make reductions

The main 2017 salt reduction targets cover 28 broad product categories comprising 76 sub-categories that contribute most to people's salt intakes and were set to be achieved by December 2017. These targets apply across all sectors (retailers, manufacturers and the eating out of home sector). Average and maximum targets are set for sodium content per 100g of a food or drink.

The 28 groups of foods for which 2017 salt targets have been set are: meat products, bread, breakfast cereals, cheese, butter, fat spreads, baked beans, ready meals, soups, pizzas, crisps, cakes, sandwiches, table sauces, cook-in sauces, biscuits, pasta, rice, other cereals, puddings, quiche, scotch eggs, canned fish, canned vegetables, meat alternatives, processed potatoes, beverages and stocks and gravies. Details of the types of foods and drinks included in product categories and sub-categories, and the targets set can be found in Table 1, Appendix 1.

There are also separate 2017 salt reduction targets specifically for the out of home sector. These cover 11 product categories (24 sub-categories), based on the 10 most popular food groups purchased in the out of home sector: potato products, burgers, battered or breaded chicken, battered or breaded fish, pies, sauce-based main meals, meat-based main meals, sandwiches, pasta and pizza with the addition of a specific target for children's meals (see Table 2, Appendix 1). All out of home salt targets are set as a maximum per serving. These were set to reflect the generally higher levels of salt in products than those that are bought to be eaten at home, due to the lack of action on salt reduction in the eating out of home sector at that time, with many businesses not working towards achieving the 2017 targets despite a clear expectation that they should do so, and were intended to bring the salt content of products in that sector more in line with the wider food industry.

This report provides the first detailed analysis of the salt content of foods for which salt reduction targets have been set. It focuses on the following:

i) the extent to which average and maximum targets for all sectors have been met
ii) the extent to which targets set specifically for the out of home sector have been met
iii) the extent to which targets for foods contributing the most to dietary sodium intakes have been met

Methodology

This section briefly sets out descriptions of the data sources and analytical methods used to produce this report. A more detailed description of the methodology, including data preparation, coding and limitations to the data and analysis, can be found in Appendix 2.

Data sources

In-home sector (retailer own label and manufacturer branded products)

The analyses for retailer own label and manufacturer branded products use data from Kantar Worldpanel's take home consumer panel matched with nutrition information (derived from food labels) collected by Kantar Worldpanel fieldworkers and from Brandbank (14, 15). The dataset used in this analysis covers a 52 week period ending 10 September 2017.

Eating out of home sector

The analyses for the out of home sector use a combination of nutrition information collected directly from businesses by PHE, or obtained from company websites and menus by MCA from September to November 2017 (16). A list of the businesses that provided PHE with nutrition information for out of home products available in 2017 is included in Appendix 3.

National Diet and Nutrition Survey

Four-day diet diary data from the most recent NDNS dataset collected between 2014/15 and 2015/16 (years 7 and 8) (13) was used to identify the 15 salt target sub-categories contributing the most sodium to the diet (on the basis of their % contribution).

Data analysis

Analysis of in-home and out of home data

Data preparation and analysis was conducted in the R (2017) environment for statistical computing using package tidyverse (1.2.1) (17).

All products in the in-home and out of home datasets were coded into salt target categories and sub-categories. Both datasets were coded into the main salt target sub-categories set for all sectors, and the out of home dataset was also coded into the out of home specific salt sub-categories. A full data cleaning process was then undertaken, including removal of duplicates, handling of outliers and implausible values, standardisation of nutrition information, and exclusion of imputed data (for Kantar Worldpanel data only).

Once the data was ready for analysis, a descriptive analysis was conducted to examine the extent to which salt reduction targets had been met. High level summary results were produced to look at the proportions of average targets being met, and the proportions of products at or below maximum targets, within product categories. Separate analyses were then undertaken for each food sub-category where a salt target had been set. Metrics were produced to reflect data availability and the type of target, including average sodium content (mg/100g), ranges of total sodium content (mg/100g; mg/serving), and the proportion of products that were at or below maximum targets.

Targets had been set in a range of ways, using simple averages (a simple average of sodium values), sales weighted averages (calculated by weighting the sodium content of individual products by their volume sales) and maximums; and some product sub-categories had more than 1 type of target (for more information see Appendix 1). For the purpose of this analysis, simple averages and sales weighted averages were grouped together to examine the extent to which average targets had been met, and average targets were considered to have been met if the average sodium content of foods was **below or within 5%** of the target. Achievement against maximum targets was assessed by calculating the proportion of products with sodium content **at or below** the maximum target.

All analyses were conducted using sodium values. Salt values were produced for summary tables using a standard conversion (sodium x 2.5 = salt).

For the in-home sector, product sub-categories with fewer than 40 products were excluded from the analysis. For the out of home sector, product sub-categories with fewer than 20 products were excluded from the analysis.

Analysis of achievement of salt targets in the top sodium-contributing sub-categories

NDNS data was used to examine the progress towards meeting salt targets for products which contribute the most to dietary sodium intakes. NDNS food codes were mapped to the 2017 salt target sub-categories, and the percentage contribution to dietary sodium was calculated for each sub-category to identify the 15 food sub-categories contributing the most sodium to the diet. The proportions of average targets

being met, and the proportions of products at or below maximum targets within these sub-categories were examined.

Summary results

This section provides a high level summary of results, with full results provided in Appendices 4 – 6. The summary results report the extent to which the 2017 salt targets have been met. Summary results are presented for salt which is more typically used in relation to dietary intake; however detailed results present sodium values.

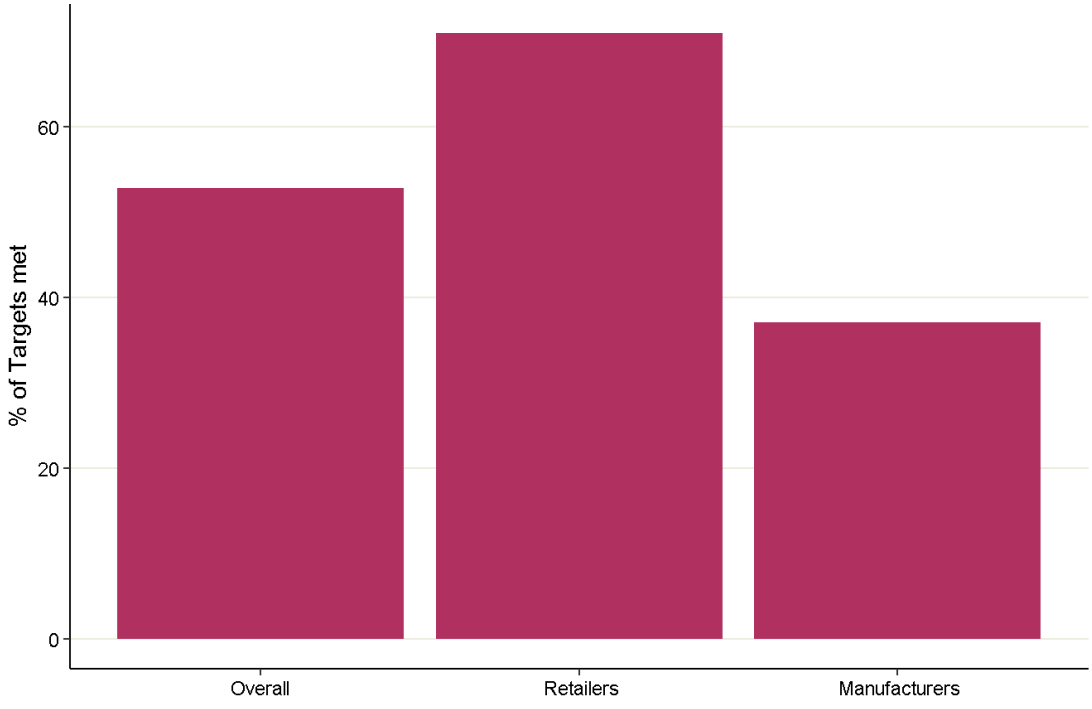
Analysis of salt content: achievement of 2017 targets

Achievement of average targets by retailer own label and manufacturer branded products

This section provides a summary of achievement of average targets by retailers and manufacturers. Full summary results are presented in Appendix 4 (Table 1) and detailed sub-category analyses are provided in Appendix 5. Average targets were considered to have been met if average salt values were below or within 5% of the target set.

Average targets were set for 57 of the 76 product sub-categories, of which 52 had sufficient data for inclusion in the analysis (see Appendix 5). Overall (manufacturers and retailers combined), 52% of average targets were met. Retailers met 73% of targets, compared with manufacturers who met 37% of targets (see Figure 1 below).

Figure 1: Proportion of average targets met for salt sub-categories



Achievement of average targets varied considerably by product category and sub-category. Table 2 provides an overview of where average targets were set and achieved at the product category level.

For the in-home sector overall (manufacturers and retailers combined), all average targets were met for 9 product categories – breakfast cereals, fat spreads, baked beans, pizzas, cakes, pastries, fruit pies and other pastry-based desserts, pasta, quiche, other processed potatoes and stocks and gravies.

Meat products did not meet any of the 9 average targets for which data was available for analysis, although retailer own label products met half of the targets. Ready meals and meal centres, soups, biscuits, rice, other cereals and meat alternatives did not meet any of the average targets set.

Table 2: Summary of achievement of average targets by product category for retailers and manufacturers, separately and combined

Product category	Number of sub-categories	Number of average targets	Number of sub-categories with average targets included in analysis	Number of average targets met		
				Manufacturers	Retailers	Manufacturers & retailers combined
1. Meat products	13	10	9	1	5	0
2. Bread	4	4	4	0	3	3
3. Breakfast cereals	1	1	1	1	1	1
4. Cheese	7	7	6	3	4	3
5. Butter	2	2	1	1	0	1
6. Fat spreads	1	1	1	1	0	1
7. Baked beans	2	1	1	1	1	1
8. Ready meals and meal centres	1	1	1	0	1	0
9. Soups	1	1	1	0	1	0
10.Pizzas	1	1	1	0	1	1
11. Crisps and snacks	4	4	4	4	3	3
12. Cakes, pastries, fruit pies, and other pastry-based desserts	3	3	3	0	3	3
13. Sandwiches	2	2	0	*	*	*
14. Table sauces	6	0	0	-	-	-
15. Cook-in and pasta sauces, thick sauces and pastes	3	3	3	0	3	1
16. Biscuits	2	2	2	0	0	0
17. Pasta	1	1	1	1	1	1
18. Rice	2	1	1	1	0	0
19. Other cereals	1	1	1	0	1	0
20. Processed puddings	4	3	3	0	3	2
21. Quiche	1	1	1	1	1	1

Product category	Number of sub-categories	Number of average targets	Number of sub-categories with average targets included in analysis	Number of average targets met		
				Manufacturers	Retailers	Manufacturers & retailers combined
22. Scotch eggs	1	0	0	-	-	-
23. Canned fish	3	3	3	1	2	2
24. Canned vegetables	2	0	0	-	-	-
25. Meat alternatives	3	1	1	0	1	0
26. Other processed potatoes	2	1	1	1	1	1
27. Beverages	1	0	0	-	-	-
28. Stocks and gravies	2	2	2	2	2	2
All	**76**	**57**	**52**	**19**	**38**	**27**

* means there was insufficient data available for analysis

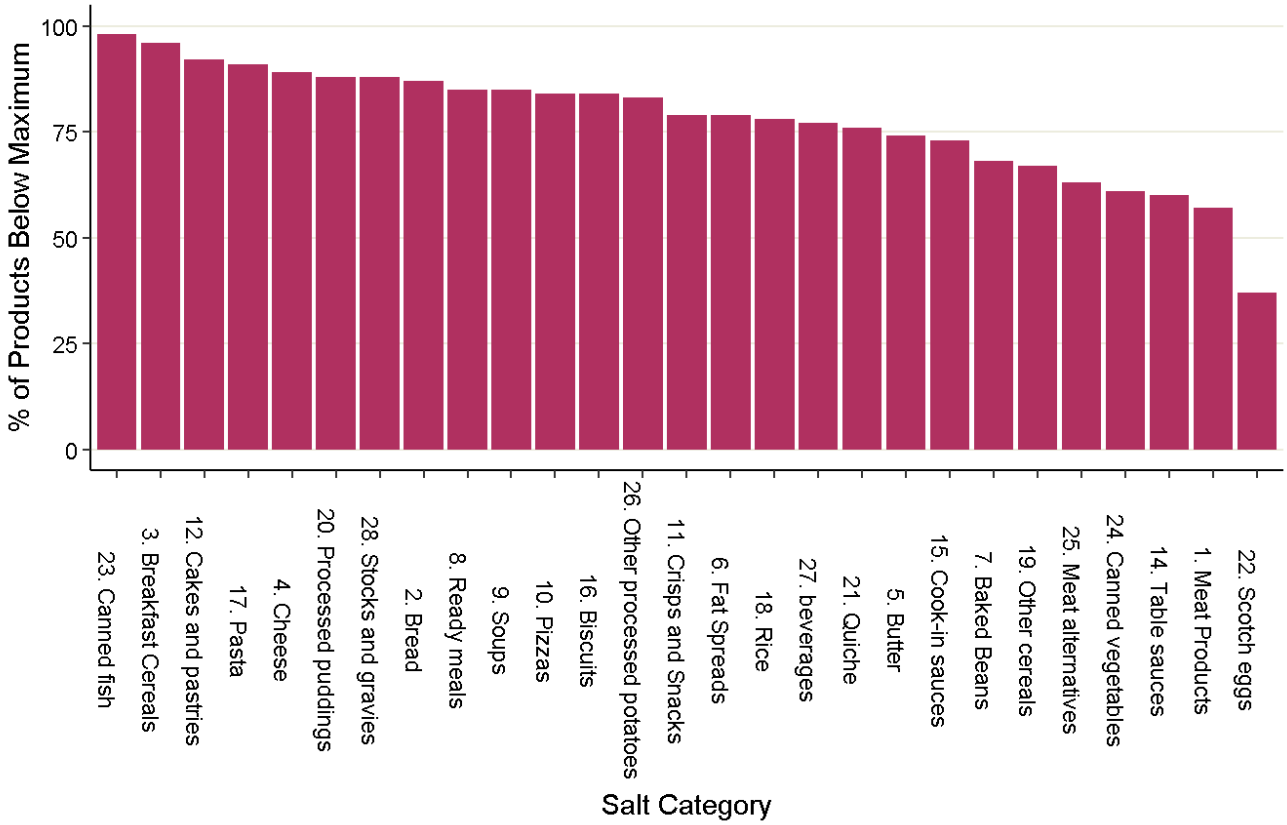
- means there was no average sub-category salt target set

Achievement of maximum targets by retailer own label and manufacturer branded products

This section provides a summary of achievement of maximum targets by retailers and manufacturers. Full summary results are presented in Appendix 4 (Table 1) and detailed sub-category analyses are provided in Appendix 5. Achievement against maximum targets was assessed by calculating the proportion of products with sodium content at or below the maximum target.

Maximum targets were set for 69 of the 76 product sub-categories, of which 63 were included in the analysis (see Appendix 5). For the in home sector (manufacturers and retailers combined) no category (or sub-category), had 100% of products below the maximum target although some had greater than 90%. The proportions of products at or below maximum targets are shown by category for manufacturers and retailers combined in Figure 2 and separately in Figure 3 (manufacturers) and Figure 4 (retailers).

Figure 2: Proportion of products at/below maximum salt targets, by category: in-home sector (manufacturers and retailers combined)



For the in-home sector overall (manufacturers and retailers combined), 4 product categories contained at least 90% of products at or below the maximum targets (canned fish, breakfast cereals, cakes, pastries, fruit pies and other pastry-based desserts, pasta; 98%, 96%, 92% and 91% respectively). For retailers, 100% of products within the breakfast cereals category were at or below the maximum target (94% for manufacturers). The 3 categories with the lowest number of products at or below the maximum targets were table sauces, meat products and scotch eggs (60%, 57% and 37% respectively).

For the in-home sector overall, 81% of products had salt levels at or below their maximum target.

As with the average targets, retailers performed better than manufacturers with nearly double the amount of categories containing 75% or more products at or below the maximum (see Figure 3 and Figure 4 below). Overall, 86% of retailer own label products were at or below their maximum targets, compared with 72% for manufacturer branded products.

Figure 3: Proportion of products at/below maximum targets, by category: manufacturers

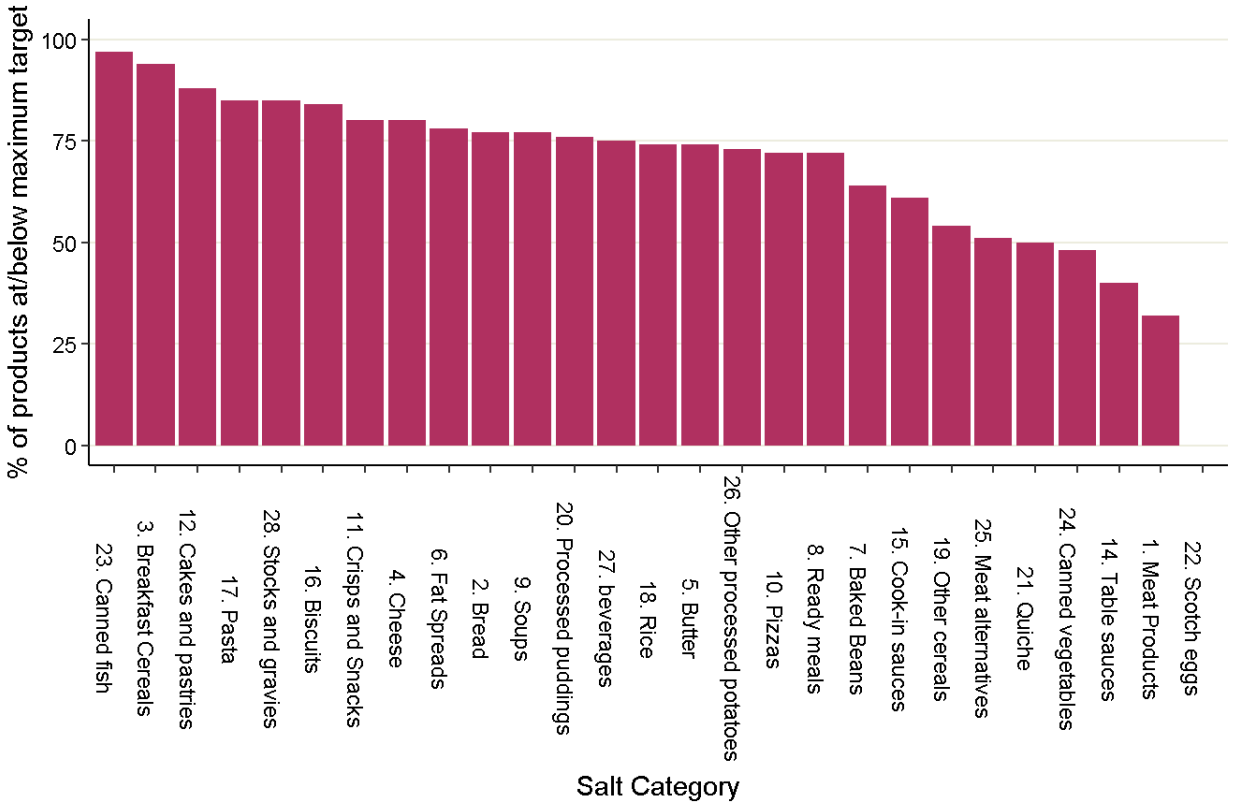
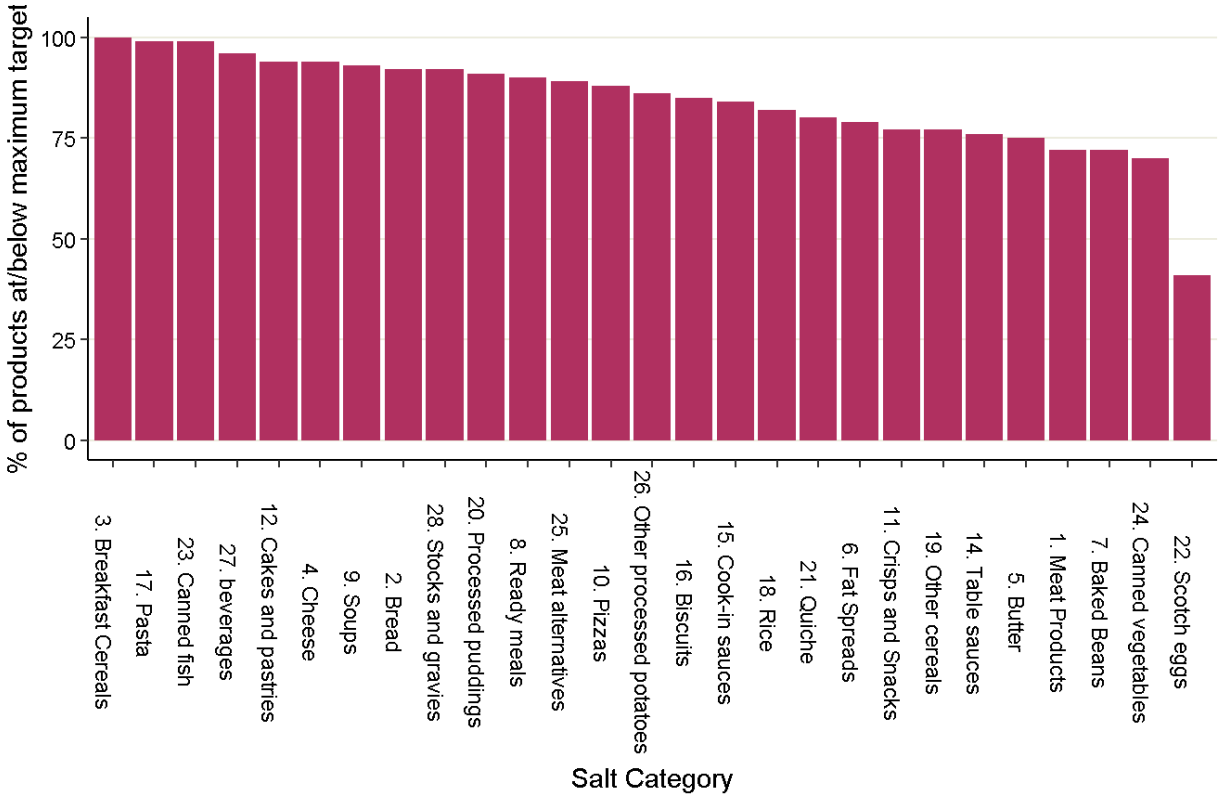


Figure 4: Proportion of products at/below maximum salt targets, by category: retailers



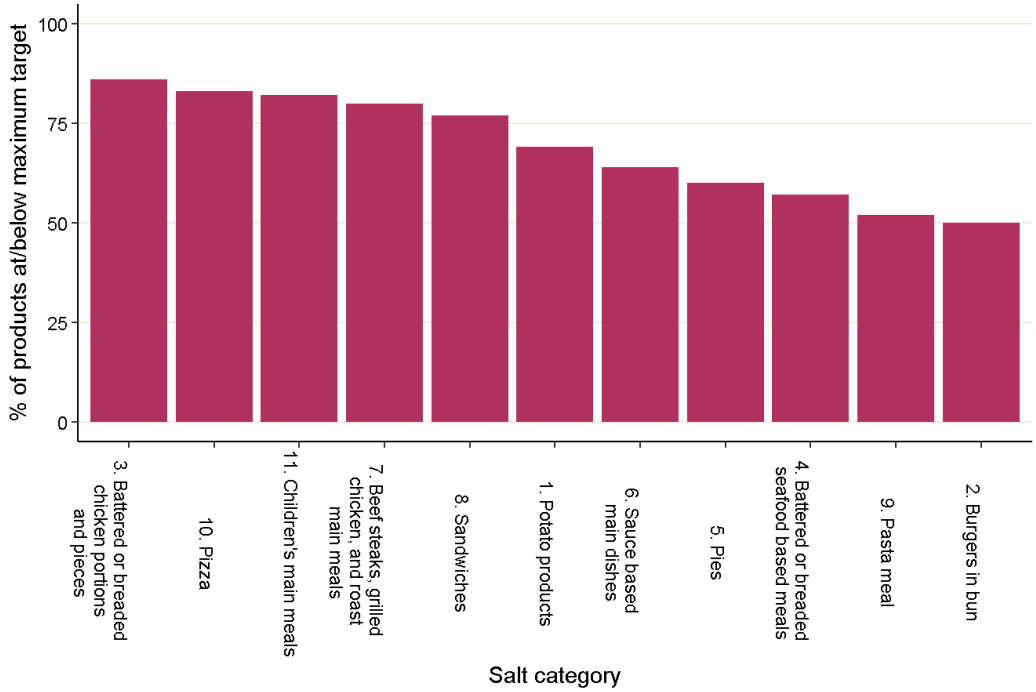
At the sub-category level (see Appendix 4), cheddar and other 'hard pressed' cheeses had the greatest number of products at or below the maximum target, at 99%, which increased to 100% when looking solely at retailer own label products. The sub-category with the lowest proportion of products at or below the maximum was reformed whole muscle cooked uncured meat at 4%.

Achievement of salt reduction targets specific to the eating out of home sector

This section provides a summary of achievement by the out of home sector of maximum targets set specifically for this sector for 2017. Full summary results are presented in Appendix 4 (Table 2) and detailed sub-category analyses are provided in Appendix 6. Achievement against maximum targets was assessed by calculating the proportion of products with sodium content at or below the maximum target.

Maximum per serving targets were set in 11 categories comprising 24 sub-categories, of which 21 were included in the analysis (see Appendix 6). The proportion of products at or below maximum targets at category level is shown in Figure 5 below.

Figure 5: Proportion of products at/below maximum salt targets, by category: out of home sector



No single category had 100% of products below the maximum target. The highest proportion was achieved for battered or breaded chicken portions and pieces, at 86%.

More than half of categories contained fewer than 75% of products at or below the maximum target, and burgers in a bun contained the lowest number of products at or below the maximum (50%).

Overall, 71% of products had salt levels at or below their maximum per serving target.

One sub-category (see Appendix 4), had more than 91% of products at or below the maximum (Italian style pizza with cured meat toppings), while 3 sub-categories contained fewer than half of products at or below the maximum target (burgers with cured meats, seasoned fries, and all other pasta dishes; 25%, 40% and 48% respectively).

Achievement of maximum salt reduction targets set for all sectors by the eating out of home sector

Due to data limitations it was not possible to examine the extent to which the out of home sector was achieving average targets (g sodium per 100g) set for all sectors (see Appendix 2), although it was possible to examine achievement of maximum targets (sodium per 100g). This section looks at the extent to which the out of home sector are

achieving the maximum targets set for all sectors and provides a comparison with retailers and manufacturers.

For the out of home sector, sufficient data was available for analysis for 22 of the 69 product sub-categories with maximum targets per 100g. Comparisons are possible with the in-home sector overall, and with retailers and manufacturers separately for 20 sub-categories. The results of this analysis should be interpreted with caution due to the limited amount of data available for the out of home sector as compared with retailers and manufacturers.

Typically the out of home sector had fewer products at or below the maximum targets than the in-home sector (manufacturers and retailers combined), with the exception of biscuits (sweet and savoury) and morning goods–powder raised (see Table 3). Overall, 75% of out of home products were at or below their maximum targets compared with 84% of in-home products.

The level of achievement of maximum targets for the out of home sector was closer to that of manufacturers than retailers – the proportions of products at or below the maximum target were consistently lower than that of retailers (with the exception of biscuits), but were higher than that of manufacturers in 7 out of 20 sub-categories.

Table 3: Proportion of products at or below maximum targets (sodium per 100g) for the out of home sector compared with manufacturers and retailers

Category	Sub-category	Proportion of products at or below maximum targets			
		Out of home	Manufacturers and retailers combined	Manufacturers	Retailers
1. Meat products	1.4.3 Other meat-based pastry products	26%	63%	35%	88%
	1.5.1 Whole muscle cooked uncured meat	39%	41%	19%	47%
2. Bread	2.1Bread and rolls	41%	89%	79%	94%
	2.2 Bread and rolls with additions	67%	86%	58%	89%
	2.3 Morning goods – yeast raised	65%	73%	62%	75%
	2.4 Morning goods – powder raised	93%	90%	72%	95%
3. Breakfast cereals	3.1 Breakfast cereals	86%	96%	94%	100%
8. Ready meals and meal centres	8.1 Ready meals and meal centres	74%	85%	72%	90%
9. Soups	9.1 Soups (as consumed)	68%	85%	77%	93%

Category	Sub-category	Proportion of products at or below maximum targets			
		Out of home	Manufacturers and retailers combined	Manufacturers	Retailers
10. Pizzas	10.1 Pizzas (as consumed)	53%	84%	72%	88%
11. Crisps and snacks	11.1 Standard potato crisps	68%	75%	74%	77%
12. Cakes, pastries, fruit pies and other pastry-based desserts	12.1 Cakes	87%	96%	91%	97%
	12.2 Pastries	42%	70%	56%	73%
	12.3 Sweet pies and other shortcrust or choux pastry-based desserts	67%	88%	76%	90%
13. Sandwiches	13.1 Sandwiches with high salt fillings	88%	*	*	*
	13.2 Sandwiches without high salt fillings	54%	*	*	*
16. Biscuits	16.1 Sweet biscuits	91%	91%	92%	89%
	16.2 Savoury biscuits	73%	62%	58%	71%
20. Processed puddings	20.2 Cheesecake	54%	81%	54%	88%
	20.3 Sponge-based processed puddings	76%	88%	77%	90%
	20.4 All other processed puddings	76%	91%	86%	93%
26. Other processed potatoes	26.2 Other processed potato products	68%	83%	73%	86%
Overall		75%[a]	84%	77%	89%

*means that insufficient data was available for analysis

[a] excludes sandwiches as comparable figures were not available for the in-home sector.

Analysis of salt content: achievement of 2017 targets for main contributors to sodium in the diet

NDNS data was used to examine progress towards meeting 2017 salt targets in products which contribute the most to sodium intakes (13). Table 4 below shows the extent to which targets were met for the top 15 sub-categories (these foods contribute about 75% of all salt from foods with salt reduction targets) for the in-home and out of home sectors. Of the 14 average targets, 7 (50%) were met by retailers and manufacturers. The proportion of products at or below maximum targets ranged from 54% for sausages to 99% for cheddar and other 'hard pressed' cheeses for the in-home sector (manufacturers and retailers combined), and from 41% for bread and rolls to 91% for sweet biscuits for the out of home sector. Within these top contributing sub-categories the proportion of products at or below maximum targets was nearly always lower for the out of home sector, than for in-home. For example for bread and rolls (the

top contributor of sodium to the diet), 89% of in-home products were at or below the maximum target compared with 41% of out of home products.

Table 4: Achievement of average and maximum targets for the top 15 dietary sodium contributing salt target sub-categories

Salt target sub-category	% sodium contribution to diet	Manufacturers and retailers combined		Out of home sector
		Average salt target for 2017 met (Yes or No)	Proportion of products at/below maximum target	Proportion of products at/below maximum target
2.1 Bread and rolls	14.24	No	89%	41%
1.1 Bacon	4.66	No	n/a	n/a
8.1 Ready meals and meal centres	4.54	No	85%	74%
4.1 Cheddar and other 'hard-pressed' cheeses	3.35	Yes	99%	*
10.1 Pizzas (as consumed)	2.83	Yes	84%	53%
9.1 Soups (as consumed)	2.47	No	85%	68%
1.2 Ham/other cured meats	2.33	No	n/a	n/a
5.1 Salted butters and buttery spreads	2.22	Yes	74%	*
1.3.1 Sausages	2.21	No	54%	*
7.1 Baked beans in tomato sauce without accompaniments	1.77	n/a	57%	*
3.1 Breakfast cereals	1.76	Yes	96%	86%
16.1 Sweet biscuits	1.49	No	91%	91%
11.1 Standard potato crisps	1.33	Yes	75%	68%
15.1 Cook in and pasta sauces (except pesto and other thick sauces and pastes)	1.20	Yes	77%	*
28.1 Stocks (as consumed)	0.96	Yes	91%	*

*means that insufficient data was available for analysis
n/a means there was no salt target set for the sub-category

Cells which are highlighted show where the average sodium content (mg/100g) is meeting (below or within 5% of) the 2017 salt target.

For purposes of comparison, and where sufficient data was available, supplementary analysis was undertaken to calculate the average sodium content of in-home and out of home food products for the top 15 dietary sodium contributing salt target sub-

categories (see Appendix 7). This shows that the sodium content of foods in the out of home sector is generally higher than for in-home.

Conclusion

Salt reduction remains a public health priority (18). Reducing dietary salt intakes lowers average blood pressure and results in significant public health benefits by contributing to a decrease in the burden of CVD (6).

This is the first time that a detailed assessment of salt levels in foods against reformulation targets has been published in the UK. Previously progress has only been measured in terms of changes in total dietary salt intake (9). Although assessments of progress were made between 2006 and 2014 to inform the resetting of salt reduction targets, these were not published. Some businesses reported progress towards meeting salt reduction targets as part of their commitment to Public Health Responsibility Deal pledges.

Analysis shows a mixed picture in relation to achievement of 2017 salt reduction targets for foods. Due to the different types or targets set (average and maximum targets), the 2 sets of targets (main targets set for sodium per 100g of food; out of home targets set for maximum sodium per serving), and the number of food categories and sub-categories, there is no single measure of progress.

For foods purchased for consumption in-home (retailer own label and manufacturer branded products), just over half of average salt reduction targets have been met. Where maximum targets were set, 81% of products overall met these targets. For the out of home sector, 71% of products overall were at or below maximum per serving targets, although it should be noted that the out of home targets were generally set at a higher level than the main salt targets. Only half of average targets are being met for foods in the 15 sub-categories contributing the most sodium to the diet.

There has been clear progress in reducing the salt content of foods since salt targets were first set in 2006. For example, the average salt content of bread reduced by about 20% from 2001 to 2011 (19), with reductions of more than 40% seen in other types of products (10). Breakfast cereals are meeting 2017 targets which were set more than 25% lower compared with 2006 when they were first set. The stepwise lowering of salt targets for foods by up to 54% between 2006 and 2014 is linked to a reduction in population salt intake of 11% between 2005-06 and 2014. Results from the next urinary sodium survey, due for publication by early 2020 will show whether this progress has been sustained.

With average salt consumption for adults in 2014 at 8g per day, compared with the recommended 6g per day, further work is needed to reduce population salt intakes. The government has committed to putting forward a realistic ambition to bring salt intakes down further (18) and PHE will work to support this.

Acknowledgements

PHE would like to thank food businesses in the out of home sector for providing nutrition information.

Appendix 1: 2017 salt targets

Table 1 and Table 2 are reproduced as published by PHE in *Salt reduction targets for 2017*

Table 1: Salt reduction targets 2017

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
The salt targets have been set for products 'as sold' unless otherwise stated within the category name and description. The targets have been set according to mg sodium that should be present and include all sources of sodium. The sodium figures have been multiplied by 2.5 to give the salt equivalent figure. The targets should therefore be met for both sodium and salt.		
There are 2 types of average used within the targets table. The first is a processing average (average p) and is used to account for ranges of salt levels that occur in a single product eg bacon and tuna. The second is a range average (average r) which is used to take account of a range of different flavours (eg standard potato crisps) or products (eg morning goods) covered by a single target. All range averages should be calculated on a sales weighted basis.		
1. Meat Products	**1.1 Bacon** Includes all types of injection cured bacon, eg sliced back, streaky, smoked and unsmoked bacon, bacon joints. Excludes all dry and immersion cured bacon.	2.88g salt or 1150mg sodium (average p)
	1.2 Ham/other cured meats Includes hams, cured pork loin and shoulder, corned beef etc. Excludes 'Protected Designation of Origin' and traditional speciality guaranteed products, eg Parma ham. Also excludes speciality products produced using traditional methods such as immersion and dry cured processes including cured tongue.	1.63g salt or 650mg sodium (average p)
	1.3 Sausages 1.3.1 Sausages Includes all fresh, chilled and frozen meat sausages, eg pork, beef, chicken, turkey, etc.	1.13g salt or 450mg sodium (average r) 1.38g salt or 550mg sodium (maximum)
	1.3.2 Cooked sausages and sausage meat products Includes all cooked sausages and sausage meat products eg stuffing, turkey roll with stuffing etc. Excludes Scotch eggs (see category 22.1).	1.38g salt or 550mg sodium (average r) 1.7g salt or 680mg sodium (maximum)

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
	1.4 Meat Pies 1.4.1 Delicatessen, pork pies and sausage rolls Includes all delicatessen pies, pork pies and sausage rolls eg game pie, cranberry topped pork pie, Melton Mowbray pork pie etc.	0.98g salt or 390mg sodium (average r) 1.13g salt or 450mg sodium (maximum)
	1.4.2 Cornish and meat-based pasties Includes all Cornish and meat-based pasties only.	0.9g salt or 360mg sodium (average r) 1.0g salt or 400mg sodium (maximum)
	1.4.3 Other meat-based pastry products including pies and slices, canned and frozen products Includes all meat-based pastry products, pies, slices etc whether chilled, canned, frozen etc. Excludes pork pies and sausage rolls (see category 1.4.1) and Cornish and meat-based pasties (see category 1.4.2)	0.68g salt or 270mg sodium (average r) 0.75g salt or 300mg sodium (maximum)
	1.5 Cooked uncured meat **Includes all roast meat, sliced meat etc.** **Excludes ham (see category 1.2)** 1.5.1 Whole muscle Includes all chilled, frozen and canned whole muscle eg beef, lamb, chicken, turkey etc. Also includes rotisserie and roasted products.	0.68g salt or 270mg sodium (maximum)
	1.5.2 Reformed whole muscle Includes all reformed whole muscle eg beef, lamb, chicken, turkey etc	0.9g salt or 360mg sodium (maximum)
	1.5.3 Comminuted or chopped reformed meat Includes all comminuted or chopped reformed and shaped uncured meats eg beef, lamb, chicken, turkey etc.	1.35g salt or 540mg sodium (maximum)
	1.6 Burgers and Grill Steaks Includes all standard, speciality and topped burgers and grill steaks eg fresh and frozen burgers and grillsteak, beef burgers, hamburgers, pork/bacon burgers, chicken burgers, turkey burgers and all kebabs. Excludes canned burgers (see category 1.7.1)	0.75g salt or 300mg sodium (average r) 0.88g salt or 350mg sodium (maximum)
	1.7 Frankfurters, hotdogs, and burgers 1.7.1 Canned frankfurters, canned hotdogs and canned burgers only. Excludes fresh and frozen burgers (see category 1.6), sausages (see category 1.3) and chilled frankfurters (see category 1.7.2).	1.38g salt or 550mg sodium (average r) 1.75g salt or 700mg sodium (maximum)
	1.7.2 Fresh chilled frankfurters	1.5g salt or 600mg sodium (average r) 1.88g salt or 750mg sodium (maximum)

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
2. Bread	**2.1 Bread and rolls** Includes all bread and rolls: pre-packed, part-baked and freshly baked (including retailer in-store bakery) white, brown, malted grain, wholemeal and 50:50 bread or rolls including seeded products, French bread, ciabatta, focaccia, pitta, naan, chapattis, tortillas etc without "high salt" additions (eg cheese, olives, sundried tomatoes etc, for these products see category 2.2)	0.9g salt or 360mg sodium (average r) 1.13g salt or 450mg sodium (maximum)
	2.2 Bread and rolls with additions Includes all bread and rolls (as listed at category 2.1 above) with "high salt" additions eg cheese, olives, sundried tomatoes etc.	1g salt or 400mg sodium (average r) 1.13g salt or 450mg sodium (maximum)
	2.3 Morning goods - yeast raised Includes all yeast raised morning goods such as bagels, croissants, fruited and non-fruited buns, hot cross buns, pain au chocolat, teacakes, brioche etc.	0.73g salt or 290mg sodium (average r) 0.88g salt or 350mg sodium (maximum)
	2.4 Morning goods - powder raised Includes all powder raised morning goods such as waffles, pancakes, English muffins, crumpets, soda farls, scones, potato farls, wheaten bread.	1.13g salt or 450mg sodium (average r) 1.25g salt or 500mg sodium (maximum)
3. Breakfast Cereals	**3.1 Breakfast cereals** Includes all breakfast cereals, eg muesli, cornflakes, hot oat cereals etc.	0.59g salt or 235mg sodium (average r) 1.0g salt or 400mg sodium (maximum)
4.Cheese	**4.1 Cheddar and other similar "hard pressed" cheeses** Includes Cheddar, Cheshire, Lancashire, Wensleydale, Caerphilly, Double Gloucester, Leicester, Derby etc, including mild, medium or mature and those products where levels of fat have been reduced. Also includes 'string type' cheese that contain no emulsifiers.	1.75g salt or 700mg sodium (average r) 2g salt or 800mg sodium (maximum)
	4.2 “Fresh” cheeses 4.2.1 Soft white cheese eg Philadelphia - Includes all soft white cheese, flavoured or unflavoured, including reduced fat products. Excludes cottage cheese (see category 4.2.2). Also excludes fromage frais as no salt is added to this product; and Brie, Camembert and other similar soft rinded cheeses.	0.5g salt or 200mg sodium (average r) 0.68g salt or 270mg sodium (maximum)
	4.2.2 Cottage cheese - plain and flavoured Includes all plain and flavoured cottage cheese.	0.5g salt or 200mg sodium (average r) 0.53g salt or 210mg

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
		sodium (maximum)
	4.3 Mozzarella Includes mozzarella products for food industry use and grated mozzarella sold in retail outlets. Excludes fresh mozzarella sold in retail outlets.	1.35g salt or 540mg sodium (average p)
	4.4 Blue cheese UK produced blue cheeses only	2.0g salt or 800mg sodium (average p)
	4.5 Processed Cheese 4.5.1 Cheese spreads	1.63g salt or 650mg sodium (average r) 1.8g salt or 720mg sodium (maximum)
	4.5.2 Other processed cheese Includes all sliced cheese and 'string' type cheese with emulsifiers. Excludes stringed cheese without emulsifiers (see category 4.1 Cheddar).	1.7g salt or 680 mg sodium (average r) 2.0g salt or 800 mg sodium (maximum)
5. Butter	**5.1 Salted butters and buttery spreads** Includes all regional and salted butter and buttermilk-enriched spreads	1.48g salt or 590mg sodium (average r) 1.68g salt or 670mg sodium (maximum)
	5.2 Lightly salted butter Includes all lightly salted butters (made using different processes to that used for salted butters at 5.1.2 eg Lurpak)	1.13g salt or 450mg sodium (average p)
6. Fat spreads	**6.1 Margarines/other spreads** Includes all margarines, spreads and spreadable butters which include an oil element and spreads, eg sunflower, olive oil, sterol/stanol etc. Excludes buttermilk-enriched spreads (see category 5.1).	1.06g salt or 425mg sodium (average r) 1.38g salt or 550mg sodium (maximum)
7. Baked Beans	**7.1 Baked beans in tomato sauce without accompaniments**	0.56g salt or 225mg sodium (maximum)
	7.2 Baked beans and canned pasta with accompaniments Includes baked beans or canned pasta in tomato sauce with sausages, meatballs, other meats and cheese, spaghetti bolognese, macaroni cheese etc.	0.68g salt or 270mg sodium (average r) 0.73g salt or 290mg sodium (maximum)

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
8. Ready meals and meal centres	**8.1 Ready Meals and Meal Centres** Includes all Chinese, Thai, Italian, traditional and other ready meals and meal centres with or without accompaniment (potato, rice, noodles, pasta, etc) made from meat, poultry, fish, Quorn or vegetables. Also includes side dishes such as vegetable curries, dhal and other dishes that can be consumed as a meal. This category also includes products such as cheese pies/rolls, breaded fish and chicken, dressed salad with protein, marinated meats etc.	0.63g salt or 250mg sodium (average r) 0.95g salt or 380mg sodium (maximum)
9. Soups	**9.1 Soups (as consumed)** Includes all wet soups (canned, condensed, ambient and fresh) and dried soups as consumed.	0.53g salt or 210mg sodium (average r) 0.63g salt or 250mg sodium (maximum)
10. Pizzas	**10.1 All Pizzas (as consumed)** Includes all fresh and frozen pizza, as consumed (following cooking according to manufacturers instructions)	1.0g salt or 400mg sodium (average r) 1.25g salt or 500mg sodium (maximum)
11.Crisps and snacks	**11.1 Standard potato crisps** All standard potato crisps (sliced potato only), all flavours except salt and vinegar (see category 11.4). Includes crisps aimed at a more adult market.	1.31g salt or 525mg sodium (average r) 1.45g salt or 580mg sodium (maximum)
	11.2 Extruded and sheeted snacks All extruded or sheeted snacks eg cheese flavour corn puffs, potato hoops, pretzels, formed crisps, sheeted crisps, tortillas, all flavours except salt and vinegar (see category 11.4).	1.7g salt or 680mg sodium (average r) 2g salt or 800mg sodium (maximum)
	11.3 Pelleted snacks All snacks made from pellets eg prawn cocktail flavour shells, crispy bacon flavour corn snacks, curly cheese snacks, and mini poppadoms, all flavours except salt and vinegar (see category 11.4).	2.13g salt or 850mg sodium (average r) 2.88g salt or 1150mg sodium (maximum)
	11.4 Salt and Vinegar products All crisps, snacks etc salt and vinegar flavour only.	1.88g salt or 750mg sodium (average r) 2.5g salt or 1000mg sodium (maximum)
12. Cakes, pastries, fruit pies and other pastry-based desserts.	**12.1 Cakes** Includes all sponge cakes, cake bars, malt loaf, American muffins, doughnuts, flapjacks, brownies etc. Also includes iced finger buns. All other buns are included in Morning goods - yeast raised (category 2.3).	0.43g salt or 170mg sodium (average r) 0.7g salt or 280mg sodium (maximum)

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
	12.2 Pastries Includes all puff pastry based and laminated pastries such as Danish pastries, maple and pecan plait etc. Includes strudels and other products made with filo pastry. Excludes all sweet shortcrust and choux pastry-based products (see category 12.3).	0.35g salt or 140mg sodium (average r) 0.45g salt or 180mg sodium (maximum)
	12.3 Sweet Pies and other shortcrust or choux pastry based desserts Includes all fruit pies and other desserts made with shortcrust and choux pastry eg apple pie, jam tarts, tarte au citron, tarte au chocolate, treacle tart, lemon meringue pie, custard tart, banoffee pie, éclairs, profiteroles, choux buns etc. Excludes all puff pastry and laminated pastries (see category 12.2).	0.25g salt or 100mg sodium (average r) 0.33g salt or 130mg sodium (maximum)
13. Bought Sandwiches	**13.1 Sandwiches with high salt fillings** Includes sandwiches and wraps where the filling includes cured meat (eg ham, bacon, pastrami, chorizo, salt beef etc), olives, anchovies and smoked fish, hard cheese, prawns, crayfish, crab and tuna.	0.9g salt or 360mg sodium (average r) 1.5g salt or 600mg sodium (maximum)
	13.2 Sandwiches without high salt fillings Includes all sandwiches and wraps with lower salt fillings eg chicken, vegetables, egg etc eg where ingredients are other than those specified in category 13.1 (see above).	0.68g salt or 270mg sodium (average r) 0.88g salt or 350mg sodium (maximum)
14. Table Sauces	**14.1 Tomato ketchup** Includes standard and reduced salt and sugar varieties.	1.7g salt or 680mg sodium (maximum)
	14.2 Brown sauce Includes all standard and reduced salt and sugar brown, BBQ, curry-flavoured etc sauces.	1.2g salt or 480mg sodium (maximum)
	14.3 Salad cream Includes reduced fat varieties.	1.58g salt or 630mg sodium (maximum)
	14.4.1 Mayonnaise (not reduced fat/calorie)	1.25g salt or 500mg sodium (maximum)
	14.4.2 Mayonnaise (reduced fat/calorie only)	1.7g salt or 680mg sodium (maximum)
	14.5 Salad dressing Includes all oil and vinegar based dressings, including reduced fat varieties.	1.5g salt or 600mg sodium (maximum)

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
15. Cook-in and Pasta Sauces, thick sauces and pastes	**15.1 All cook in and pasta sauces (except Pesto and other thick sauces and pastes)** Includes all cooking sauces, eg pasta sauce, curry, Mexican, Chinese etc. Excludes thick varieties - for Pesto and other thick sauces see category 15.2; for thick pastes see category 15.3.	0.75g salt or 300mg sodium (average r) 0.93g salt or 370mg sodium (maximum)
	15.2 Pesto and other thick sauces Includes thick cooking sauces intended to be used in smaller quantities, eg pesto, stir fry sauces, etc. (eg a portion size of under 90g).	1.38g salt or 550mg sodium (average r) 1.63g salt or 650mg sodium (maximum)
	15.3 Thick pastes Includes all thick pastes used in very small quantities (eg15-20g) such as curry and Thai.	3.25g salt or 1300mg sodium (average r) 3.75g salt or 1500mg sodium (maximum)
16. Biscuits	**16.1 Sweet Biscuits** Includes all filled and unfilled sweet biscuits, whether coated (full or half) or not, breakfast biscuits and cereal bars.	0.55g salt or 220mg sodium (average r) 0.95g salt or 380mg sodium (maximum)
	16.2 Savoury biscuits Includes all filled and unfilled savoury biscuits	1.3g salt or 520mg sodium (average r) 1.75g salt or 700mg sodium (maximum)
17. Pasta	**17.1 Pasta and noodles, plain and flavoured** Includes fresh, canned, frozen pasta (including spaghetti/hoops in tomato sauce) and noodles. Also includes dry flavoured noodles and pasta with flavour or sauce sold as a snack or meal - in these circumstances, the target is for the products as consumed (made up according to manufacturers instructions) and not as sold. Excludes stuffed pasta and pasta ready meals (see category 8) and canned pasta in tomato sauce with accompaniments (see category 7.2). Also excludes dried pasta.	0.5g salt or 200mg sodium (average r) 0.88g salt or 350mg sodium (maximum)
18. Rice	**18.1 Rice (unflavoured), as consumed**Includes all unflavoured rice and cous cous, dried, cooked (made up according to manufacturers instructions, where appropriate).	0.18g salt or 70mg sodium (maximum)
	18.2 Flavoured rice, as consumed Includes all pouched, flavoured rice and cous cous, including ambient and dried products, as consumed (made up according to manufacturers instructions, where appropriate).	0.45g salt or 180mg sodium (average r) 0.58g salt or 230mg sodium (maximum)

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
19. Other cereals	**19.1 Other cereals** Includes ready made pastry – puff, short crust, filo etc (fresh and frozen); Yorkshire puddings, dumplings, batter and crumble mix, taco shells, flan cases, vol au vent cases, tempura batter, Chinese pancakes and pizza bases (fresh and frozen). Excludes flavoured and unflavoured cous cous (see category 18) and mini poppadums (see category 11.3). Also excludes large poppadums.	0.55g salt or 220mg sodium (average r) 0.63g salt or 250mg sodium (maximum)
20. Processed puddings Excludes mousses, crème caramel, jelly, rice pudding, ready to eat custard and custard powder as these contain no added salt (the sodium present is that naturally occurring in the ingredients only) Jelly crystals are also excluded for technical reasons.	**20.1 Dessert mixes, as consumed** Includes dehydrated dessert mixes (made up according to manufacturers instructions). Excludes custard powder and jelly crystals.	0.45g salt or 180mg sodium (maximum)
	20.2 Cheesecake Includes ambient, chilled, frozen and dehydrated (as consumed, made up according to manufacturers instructions).	0.28g salt or 110mg sodium (average r) 0.35g salt or 140mg sodium (maximum)
	20.3 Sponge-based processed puddings Includes jam roly-poly, spotted dick, sticky toffee pudding etc. Excludes canned versions.	0.43g salt or 170mg sodium (average r) 0.63g salt or 250mg sodium (maximum)
	20.4 All other processed puddings Includes all other processed and pre-prepared puddings eg bread and butter pudding, brownie desserts, crumbles, trifle etc. Excludes sweet pies and all other desserts made with shortcrust and choux pastry (see category 12.4).	0.18g salt or 70mg sodium (average r) 0.28g salt or 110mg sodium (maximum)
21. Quiche	**21.1 Quiches** Includes all quiches and flans.	0.55g salt or 220mg sodium (average r) 0.68g salt or 270mg sodium (maximum)
22. Scotch Eggs	**22.1 Scotch eggs**	0.78g salt or 310mg sodium (maximum)
23. Canned Fish	**23.1 Canned tuna** Includes all tuna canned in oil, brine, spring water etc. Excludes canned fish with sauce or other additions (see category 23.3).	0.9g salt or 360mg sodium (average p)
	23.2 Canned salmon Includes all standard canned salmon. Excludes canned fish with sauce or other additions (see category 23.3).	0.8g salt or 320mg sodium (average p)

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
	23.3 Other canned fish Includes sardines, mackerel, pilchards in brine, oil etc and canned fish with sauces or other additions eg tomato, barbeque, mustard etc. Also includes canned shellfish eg prawns, crab, mussels etc. Excludes anchovies, smoked fish, lumpfish caviar and fish roe.	0.85g salt or 340mg sodium (average r) 1.5g salt or 600mg sodium (maximum)
24. Canned vegetables	**24.1 Canned and bottled vegetables** Includes all vegetables, pulses and passata in cans, jars, cartons and tetra-packs etc. Excludes processed, marrowfat and mushy peas (see category 24.2) and sauerkraut.	0.13g salt or 50mg sodium (maximum)
	24.2 Canned processed, marrowfat and mushy peas Includes these products only.	0.45g salt or 180mg sodium (maximum)
25. Meat alternatives	**25.1 Plain meat alternatives** Includes plain tofu, Quorn ingredients (eg mince, plain pieces and fillets), meat free mince and other similar products.	0.63g salt or 250mg sodium (maximum)
	25.2 Meat free products Includes all meat and fish alternative products eg sausages, burgers, bites, pies, en croute products, sausage rolls, nut cutlets, falafel, flavoured “meat” pieces eg chicken fillets, “meatballs”, all meat-free “meats” eg ham, turkey etc, including “beanburgers”, “veggieburgers” and other similar products. Excludes bacon (see category 25.3), baked beans (category 7), canned vegetables (category 24), ready meals and meal centres (category 8).	0.9g salt or 360mg sodium (average r) 1.25g salt or 500mg sodium (maximum)
	25.3 Meat-free bacon Includes all meat-free bacon type products, whether made from soya, Quorn or other ingredients.	1.88g salt or 750mg sodium (maximum)
26. Other processed potatoes	**26.1 Dehydrated instant mashed potato, as consumed** Includes all instant mashed potato products, plain and flavoured, as consumed (as made up according to manufacturers instructions).	0.15g salt or 60mg sodium (maximum)

Main Product Category	Sub categories (where relevant)	SALT TARGET FOR 2017 (g salt or mg sodium per 100g)
	26.2 Other processed potato products Includes all other processed potato products, including frozen and chilled chips with coatings, potato waffles, shaped potato, wedges, mash, potato dauphinoise etc. Excludes oven chips or other processed potato products with no added salt.	0.46g salt or 185mg sodium (average r) 0.69g salt or 275mg sodium (maximum)
27. Beverages	**27.1 Dried Beverages, as consumed** Includes drinking chocolate, instant chocolate drinks, instant malted drinks, instant cappuccino drinks etc, as consumed (made up according to manufacturers instructions). Excludes tea and coffee.	0.15g salt or 60mg sodium (maximum)
28. Stocks and gravies	**28.1 Stocks, as consumed** Includes all flavours of stocks and bouillons including granules, powder, pastes, cubes, reduction jellies and ready to use products, as consumed (made up according to manufacturers instructions).	0.75g salt or 300mg sodium (average r) 0.95g salt or 380mg sodium (maximum)
	28.2 Gravy, as consumed Includes all flavours of gravy including granules, powder, pastes, cubes, reduction jellies and ready to use products, as consumed (made up according to manufacturers instructions).	0.95g salt or 380mg sodium (average r) 1.13g salt or 450mg sodium (maximum)

Table 2: Salt reduction targets for the out of home sector 2017

Main product category	Sub category	Maximum per serving targets	Additional information
DISH TARGET **1. Potato products**	**1.1 Seasoned fries** Includes all chips below 8mm thickness	**0.88g salt or 350mg sodium**	Chips served unseasoned (ie without being pre-salted) are excluded from this target.
	1.2 Seasoned chips and other potato products Includes chips with an 8mm or bigger width that have been pre seasoned before serving. Also includes other potato based products eg wedges, potato skins and roast potatoes. Excludes potato products cooked in a sauce such as Bombay potatoes, gratin dauphinoise etc.	**1.5g salt or 600mg sodium**	
DISH TARGET **2. Burgers in bun**	**2.1 Small burgers without cheese or other cured meats** Includes single beef/pork patty burgers and chicken burgers. Excludes burgers with cheese or cured meat (eg bacon) additions. Also excludes single beef patties at or above 6oz in weight.	**2.4g salt or 960mg sodium**	Theses target cover burger patties, additions and sauces within a bun. Accompaniments served outside of the bun are consider as side dishes and are not covered by the burger target. The targets include sauce and topping options where these are served in the bun and are included in the fixed price of the burger.
	2.2 Burgers with cured meats Includes single or multiple beef/pork patty burgers and chicken burgers with cured meat additions such as bacon or chorizo (eg bacon and cheese).	**4g salt or 1600mg sodium**	
	2.3 All other burgers Includes single patties with cheese, multiple patties with or without cheese and vegetarian/bean or fish alternatives. Also includes single beef patties at or above 6oz in weight.	**3.5g salt or 1400mg sodium**	
DISH TARGET **3. Battered or breaded chicken portions and pieces**	**3.1 Under 200kcal** Includes all breaded chicken portions and pieces with a calorie level below 200kcal	**1g salt or 400mg sodium**	For larger sharing type products over 750kcal the targets should be applied on a suggested serving basis.
	3.2 200-400kcal Includes all breaded chicken portions and pieces with a calorie range from 200-400kcal	**2g salt or 800mg sodium**	
	3.3 Over 400kcal Includes all breaded chicken portions and pieces with a calorie level above 400kcal	**3.5g salt or 1400mg sodium**	

Main product category	Sub category	Maximum per serving targets	Additional information
MEAL TARGET **4. Battered or breaded seafood based meals**	**4.1 Fish fillet meals** Includes all battered or breaded fish fillet based meals, such as cod, haddock, coley etc	**2.75g salt or 1100mg sodium**	Meal target includes sides and accompaniments (eg served with chips, mushy peas, tartar sauce).
	4.2 Bitesize seafood meals Includes all battered or breaded seafood meals eg fish nuggets, scampi and tempura prawns etc.	**3.75g salt or 1500mg sodium**	
MEAL & DISH TARGET **5. Pies**	**5.1 Pie based meals** Includes all pies, pasties, slices, suet pudding and sausage rolls served with side dishes and accompaniments.	**4.25g salt or 1700mg sodium**	Meal target includes sides and accompaniments (eg served with mashed potato and gravy).
	5.2 Pies only Includes all pies, pasties, slices, suet pudding and sausage rolls. For pies intended for sharing, the targets should be applied on a suggested serving basis.	**1.9g salt or 760mg sodium**	
MEAL TARGET **6. Sauce based main dishes**	**6.1 Curry main meals** Includes all curries of South/ Southeast Asian origin (eg Indian, Thai etc) served with side dishes and accompaniments.	**4g salt or 1600mg sodium**	Meal target includes sides and accompaniments (eg served with side dishes such as rice, naan).
	6.2 All other sauce based main meals Includes all dishes cooked in a sauce (eg chilli con carne, sweet and sour chicken). Excludes sauce based pasta dishes and dishes with a gravy or sauce topping added after cooking.	**3.2g salt or 1300mg sodium**	
MEAL TARGET **7. Beef steaks, grilled chicken and roast main meals**	**7.1 Beef steaks, grilled chicken and roast main meals** Includes beef roast dinners, carvery, steak, pork chops and vegetarian equivalents served with sides and toppings and gravy.	**4.5g salt or 1800mg sodium**	Meal target includes sides and accompaniments (eg roast potatoes, vegetables, steak sauces). Vegetarian alternatives include meals such as Vegetarian nut roast. The targets include sauce options where this is part of the fixed price.

Main product category	Sub category	Maximum per serving targets	Additional information
DISH TARGET **8. Sandwiches**	**8.1 Cured meat sandwiches** Includes rolls, baguettes, paninis, ciabattas, 6" subs and wraps with cured meat fillings eg bacon, ham, salami etc.	**3.75g salt or 1500mg sodium**	Uncured salami and pepperoni are included in cured. Brined meats fall into all other sandwiches.
	8.2 All other sandwiches Includes rolls, baguettes, paninis, ciabattas, 6" subs and wraps with fillings that do not contain cured meat eg tuna, cheese, vegetables.	**2.75g salt or 1100mg sodium**	
MEAL TARGET **9. Pasta meal**	**9.1 Lasagne, risotto, gnocchi and pasta with cured meat additions** Includes all meat and vegetarian lasagne, risotto and gnocchi based dishes. Also includes all pasta dishes with cured meat as a main ingredient eg carbonara.	**3.75g salt or 1500mg sodium**	Side dishes such as garlic bread and salad are included in the target if they are included in the price as a complete main meal.
	9.2 All other pasta dishes Includes pasta based dishes without cured meat as a main ingredient eg Spaghetti Bolognese, pasta in a tomato, cheese or cream sauce etc.	**2.75g salt or 1100mg sodium**	
DISH TARGET **10. Pizza**	**10.1 Take away style pizza with cured meat toppings (per slice)** Includes all takeaway pizza toppings with cured meat eg ham, pepperoni etc.	**1.25g salt or 500mg sodium**	Take away style pizza is defined as any pizza that does not meet the definition of an Italian style pizza. Generally these pizzas are served in a variety of sizes and base options, have a thicker layer of topping and are pre-sliced. Excludes speciality base (eg stuffed crust) combinations, although reformulation of dough and topping should extend to all base options. Uncured salami and pepperoni are included in cured meat.
	10.2 Take away style pizza with all other toppings (per slice) Includes all takeaway pizza toppings without cured meat eg chicken, beef, fish, margherita etc.	**0.88g salt or 350mg sodium**	

Main product category	Sub category	Maximum per serving targets	Additional information
			Brined meats fall into all other toppings. The following slice guide applies: Personal ≤7" = 4 slices Small >7" ≤9.5" = 6 slices Medium > 9.5" ≤12.5" = 8 slices Large >12.5" = 10 slices or more
	10.3 Traditional Italian style pizza with cured meat toppings (per pizza) Includes all Italian style pizza, calzone and stromboli with cured meat eg ham, pepperoni etc.	**6g salt or 2400mg sodium**	Traditional Italian style pizza is defined as any pizza that is based on the tradition Neapolitan or Lazio (Roman) style. Generally these have a thin base, thin layer of topping, are below 12" in size, served unsliced and eaten by 1 person.
	10.4 Traditional Italian style pizza with all other toppings (per pizza) Includes all Italian style pizza, calzone and stromboli without cured meat eg Chicken, beef, fish, margherita etc.	**5g salt or 2000mg sodium**	
MEAL TARGET **11. Children's main meals**	**All children's main meals** Includes all main meals aimed primarily at children.	**1.8g salt or 720mg sodium**	Does not include starters, desserts or drinks which may be included in some children's meal deals. Excludes school foods.

Appendix 2: Detailed methodology

Introduction

This appendix provides detailed information about data sources and methodology, including data preparation, coding and analysis.

All data preparation and analysis was conducted in the R (2017) environment for statistical computing using package tidyverse (1.2.1).

2017 salt targets

Analysis was undertaken to compare the salt content in foods in 2017 with the 2017 salt reduction targets (set in 2014), for 28 categories, covering 76 sub-categories, of food and drinks for all sectors of the food industry. In addition, the salt content of food and drinks sold in the out of home sector was compared against specific eating out of home targets for 11 categories, covering 24 sub-categories. Two sources of data were used to assess the salt content of food in 2017: i) commercial consumer panel data with matched nutrition information provided by Kantar Worldpanel for take home purchases of retailer own label and manufacturer branded products, and ii) nutrition data collected from individual businesses, websites and menus for the out of home sector.

The 2017 salt targets have been set in a range of ways, using simple averages, sales weighted averages and maximums; and some product sub-categories had more than 1 type of target. Average targets aim to lower the overall salt levels in a sub-category, while maintaining flexibility to allow for variation between individual products. Maximum targets stimulate businesses to look at products that are high in sodium, benchmark them against competitors and make reductions.

For the purpose of this analysis, simple averages and sales weighted averages (SWAs) were grouped together to examine the extent to which average targets had been met, and average targets were considered to have been met if the average sodium level was **below or within 5%** of the target value. Achievement against maximum targets was assessed by calculating the proportion of products with sodium content at or below the maximum target.

There are 3 different types of salt reduction targets within the 2017 salt targets set for all sectors:

- a simple average of sodium values (mg/100g) across all products in the sub-category: ***average p (processing average)***
- a sales weighted average of sodium values (mg/100g) across all products in the sub-category: ***average r (range average)***:
- a maximum sodium value (mg/100g) that no product in the sub-category should be exceeding: ***maximum***

Sales weighted averages are calculated by weighting the sodium content of individual products by their volume sales.

The salt reduction targets specific to the out of home sector were set on a maximum per serving basis:

- a maximum sodium value (mg/serving) that no product in the sub-category should be exceeding: ***maximum***

National Diet and Nutrition Survey: main contributors to sodium in the diet

Four-day diet diary data from the most recent NDNS dataset collected between 2014/15 and 2015/16 (years 7 and 8) was used to identify the15 salt target sub-categories contributing the most sodium to the diet (on the basis of their % contribution).

Data sources

In-home sector (retailer own label and manufacturer branded products)

The analysis of salt content for retailer own label and manufacturer branded products used data from Kantar Worldpanel's take home consumer panel. Kantar Worldpanel is a global market research business which runs a continuous reporting panel of 30,000 households across Great Britain, recording details of all food and drink purchases brought in to the home, including volumes bought.

Kantar Worldpanel's sample of households reflects the demographic makeup of the British population. Demographic targets for the sample are based on region, social class, age of main shopper, household composition and household size. The data collected is weighted to provide a representative picture of total food and drink purchasing in Great Britain over the time period for which data is provided.

For the 2017 dataset, Kantar Worldpanel aimed to collect all nutrition information from food labels on individual products via the use of fieldworkers who visited key retail stores and captured the information provided on packaging on a rolling 6 monthly basis. Some nutrition information was also collected from a third party, Brandbank(15).

Where nutrition information has been collected via these methods, usually for the majority of products in a category, this is termed ‘real’ data. Where it has not been possible to gather nutrition information for a product, nutrition values are either copied across from similar products (‘cloned’ data) or an average value for the category or product type is calculated and used instead (‘imputed’ data). For the analyses presented in this report, only real and cloned data have been used.

Kantar Worldpanel typically collects nutrition information for products as they are sold. However there are a number of products where the information available on packaging is for the product as it is consumed. Kantar Worldpanel provide a flag on their dataset to indicate if the nutrition information is for the product ‘as consumed’ as opposed to ‘as sold’.

The 2017 Kantar Worldpanel dataset covers the 52 weeks ending 10 September 2017.

Eating out of home sector

The analysis of salt content for the out of home sector used nutrition data for products available within the sector. Whilst PHE does hold purchase data (used to estimate volume sales) collected from MCA (received in November 2017), this was not used for the purpose of this analysis due to there being insufficient nutrition information available to be directly mapped to the volume sales information collected. In addition, the salt targets which were set specifically for the out of home sector were based on the maximum salt content per serving as opposed to sales weighted averages; so only nutrition data was required.

Nutrition information was collected in 2 stages. First, nutrition information was scraped from company websites and menus by MCA from September to November 2017. This was supplemented by data collection by PHE directly from businesses. All out of home businesses who had previously engaged with PHE were contacted and asked to provide nutrition information for all of their products available in 2017 using a template provided by PHE. Businesses were given the opportunity to provide nutrition information per serving, per 100g, or both, and the weight or volume of servings. Data returns were received following requests for nutrition information for out of home food products in October 2017, November 2017 and June 2018 (for more information on data received see Appendix 3). Where incomplete or non-standardised data had been provided, PHE liaised with businesses to improve this.

All nutrition information obtained from businesses and MCA was collated by PHE to create a nutrition information dataset for the out of home sector. Where data collection was duplicated from PHE and MCA, the data provided from businesses was used.

Data preparation: coding

Prior to analysis, the NDNS dataset and both the in-home and out of home datasets were coded into salt reduction categories and sub-categories. Clarification on coding was provided by third parties where required.

In-home sector (retailer own label and manufacturer branded products)

A review of Kantar Worldpanel categories and sub-categories was conducted to identify and exclude those that were not included in the salt reduction programme (for example, alcohol and plain fruit and vegetables). Key word searches were conducted on excluded data to check no relevant products had been excluded.

The remaining Kantar Worldpanel categories and sub-categories were reviewed to identify those where products could be mapped directly across to the 76 main salt target sub-categories.

Where a Kantar Worldpanel category or sub-category included a mix of products from more than 1 salt target sub-category or products that were not included in the salt reduction programme, the products were allocated to a salt target sub-category or excluded either using a rule or a product-specific allocation.

Once rules and product-specific allocations had been applied, the resulting salt target sub-category groupings and excluded products were checked by reviewing the included products and using further key word searches. Where similar products were found to be coded in 2 different sub-categories, or had been incorrectly categorised, the coding rules or product-specific allocations were amended and re-applied.

The coding rules were developed by a PHE nutritionist. Each stage of the process was checked by a second nutritionist, and any discrepancies or disagreements on coding were discussed with a third nutritionist until agreement could be reached. The rules were written as script in the tidyverse R package by an analyst and this script was checked by a second analyst.

All coding decisions were informed by salt target sub-category definitions and descriptions (see Table 1, Appendix 1), and the Kantar Worldpanel product name, description and brand. Parts of the process were iterative, and a coding log was maintained to document decisions and to ensure similar products sold across different businesses and across the in-home and out of home sectors were coded consistently.

Eating out of home sector

Products were coded into i) the 76 main salt target sub-categories, ii) into the 24 sub-categories for which specific out of home sector targets had been set, or iii) coded as excluded if they did not fit in a salt target sub-category (eg soft drinks).

Coding was completed using combinations of product name, product description, nutrition information and any other supporting information which had been received from businesses. Where possible, publically available product information was also used to help identify the appropriate salt target sub-category.

Coding was completed by a PHE nutritionist, and checked by a second nutritionist. Any issues regarding sub-category coding were raised and discussed with a third nutritionist. A coding log was used to ensure similar products sold across different businesses and across the in-home and out of home sectors were coded consistently. Where product level information was considered too limited the product was excluded from analysis.

National Diet and Nutrition Survey: main contributors to sodium in the diet

NDNS data was used to identify the 15 salt target sub-categories contributing the most sodium to the diet (on the basis of their % contribution).

The NDNS dataset was coded into the 76 main salt target sub-categories and into the 24 sub-categories for which specific out of home sector targets had been set.

NDNS food codes were allocated to the 2017 salt target sub-categories or excluded, if they were considered not applicable to the targets (eg homemade codes and foods with naturally occurring sodium) manually by a PHE nutritionist, and checked by a second nutritionist. Any issues regarding sub-category coding were raised and discussed with a third nutritionist. The coding log was used to ensure similar products in the NDNS dataset were coded consistently with products in the in-home and out of home sector datasets.

Data preparation

In-home sector (retailer own label and manufacturer branded products)

Adjustments to data for ‘as consumed’ targets

A number of salt reduction targets for retailers and manufacturers were set for food and drink products ‘as consumed’ as opposed to ‘as sold’, for example, soups, stocks and

gravies and dried beverages. These products were identified in the Kantar Worldpanel dataset using key word searches and through scanning relevant sub-categories for key words and unusual nutrition values (for example, particularly high sodium content per 100g). In some cases, the 'as consumed' nutrition information was available within the Kantar Worldpanel dataset. Where nutrition information was only available as 'as sold' values, efforts were made to source the 'as consumed' values via web searches, and where possible a standardised/individual dilution factor was applied to the sodium and sales values. Where no data could be located, products were excluded from the analysis.

Dealing with outliers and implausible values

The 2017 salt targets are a mix of simple and sales weighted average values and, as a result, outliers or errors in the data can have a large impact on a sub-category and the assessment of progress made. To minimise this impact of outliers, products with sodium values more than 2.58 standard deviations from the sub-category mean were removed from the analysis. This cut-off was applied after data adjustments accounting for 'as consumed' had been made.

After adjusting for 'as consumed' and removing outliers, the ranges of each sub-category were checked by a nutritionist and products with implausibly low or high sodium values were excluded from the analysis.

Conversions from sodium to salt

Kantar Worldpanel record all salt information in terms of sodium (g/100g), however as salt targets were set in mg this was converted to mg for the purpose of analysis. In order to produce summary statistics using salt, a standard conversion was applied (sodium x 2.5 = salt).

Eating out of home sector

Any product items considered to be duplicates were removed. Duplicates had either been provided by businesses via different product menus, or had been provided by both MCA and individual businesses at different times. Duplicate products were identified through searches for a perfect or partial match on product name, portion size and nutrition information.

Missing values were calculated where possible, for example i) sodium values were calculated from salt values, ii) sodium values per 100g were calculated using per portion values and portion size, and iii) sodium values per portion were calculated using per 100g values and portion size. Further adjustments were made as necessary to

ensure that nutrition information was in the most appropriate format required for analysing progress towards meeting the salt targets.

The ranges of sodium values in each sub-category were checked by a nutritionist and products with implausibly low or high sodium values were excluded from the analysis.

Where necessary, sodium values were converted to salt using a standard conversion (sodium x 2.5 = salt).

Data analysis

In-home sector (retailer own label and manufacturer branded products)

Once the data had been coded and cleaned the following metrics were calculated for each product sub-category included in the main 2017 salt targets for which sufficient data (more than 40 products per sub-category) was available for analysis (68 sub-categories).

- number of products in the sub-category included in analysis
- proportion of all products in the sub-category included in analysis
- proportion of volume sales of all products in the sub-category included in analysis (where possible)
- the range of sodium content across products in the sub-category (min to max)
- the range of sodium content in the top 10 products by volume sales (min to max)
- proportion of volume sales from manufacturer branded vs retailer own label products
- average sodium content (for sub-categories with an average target) – manufacturers and retailers combined, manufacturers only, retailers only
- proportion of products at or below maximum target (for sub-categories with a maximum target) – manufacturers and retailers combined, manufacturers only, retailers only
- proportion of volume sales for products at or below maximum target (for sub-categories with a maximum target) – manufacturers and retailers combined, manufacturers only, retailers only

For sub-categories where the target was a processing average (average p), simple averages were calculated and presented. For sub-categories where the target was a range average (average r), sales weighted averages were calculated and presented. Average targets were considered to have been met if they were below or within 5% of the average target.

Achievement against maximum targets was assessed by calculating the proportion of products with sodium content at or below the maximum target.

The number and proportion of products included in the analysis varies across sub-categories. For some sub-categories it was not possible to calculate the proportion of volume sales from products included in the analysis as the data was not available.

Eating out of home sector

Once the data had been coded and cleaned 2 sets of analyses were undertaken: i) an analysis of achievement against targets set specifically for the out of home sector, and ii) an analysis of achievement against the main maximum targets which were set for all sectors. For the latter analysis, this was only possible for sub-categories where sufficient data had been provided for, or it was possible to calculate, sodium per 100g of a product. Achievement of average targets was not examined as the required data (nutrition information matched to sales volumes) was not available.

Achievement of salt reduction targets specific to the out of home sector

The following metrics were calculated for each product sub-category included in the 2017 salt targets set specifically for the out of home sector for which sufficient data (more than 20 products per sub-category) were available for analysis (21 sub-categories):

- number of products in the sub-category included in analysis
- proportion of all products in the sub-category included in analysis
- the range of sodium content per serving in the sub-category (min to max)
- proportion of products at or below the maximum target

Achievement of maximum salt reduction targets set for all sectors by the out of home sector

The following metrics were calculated for each product sub-category included in the main 2017 salt targets for which a maximum target was set and where sufficient data (more than 20 products per sub-category) were available for analysis (22 sub-categories):

- number of products in the sub-category included in analysis
- proportion of all products in the sub-category included in analysis
- the range of sodium values per 100g in the sub-category (min to max)
- proportion of products at or below the maximum target

Data limitations

In-home sector (retailer own label and manufacturer branded products)

For the 2017 dataset, Kantar Worldpanel's fieldworkers collected nutrition information from retail stores on a rolling 6 month basis; however this process does not update all products in the dataset each time. This means that some reformulation changes may not be picked up and reported on in the year that they occur. In addition, as the Kantar Worldpanel data provided to us included purchases up until 10th September 2017, reformulation occurring after this date would not have been captured.

Nutrition information and volume sales of some bakery items such as bread, morning goods, cakes, biscuits and puddings in the Kantar Worldpanel dataset are generally presented in terms of servings, and not per 100g of product, and information on serving size is not routinely available. In order to calculate SWA sodium levels for these sub-categories the portion size is needed and has to be collected through fieldwork in retail stores. A 20-25% sample of all available products was weighed in 2017 and this is the data which has been used to inform progress against the 2017 salt targets. For the sub-categories which include these products it is not possible to calculate the proportion of volume sales of all products included in the analysis due to the combination of per 100g and per serving data.

None of the figures presented in the report include confidence intervals since Kantar Worldpanel do not provide confidence intervals with their data. However, as the data have been collected via a panel survey there will be some statistical variability in the estimates presented.

The analyses included in this report are based on UK data on what people buy ("shopping basket" data). As there are time lags between when a product is reformulated and when this is available to buy, the nutrient data used may not reflect all product reformulation changes made during the data collection period. It should also be noted that data presented for retailers includes their own label products only and not their sales of private label (manufacturer) products.

The number of products included in sub-categories varied and for a small number of sub-categories the amount of data excluded was high. This has implications for the reliability of the analysis, and the results should be treated with caution.

Eating out of home sector

The analyses for the out of home sector use a combination of nutrition information collected directly from businesses by PHE or obtained from company websites and menus by MCA from September to November 2017. A list of the businesses that

provided PHE with data is included in Appendix 3. However, data is not available for all products and all businesses within the out of home sector. The data used within our analysis may not therefore be representative of all businesses and products on the market.

As with the data for retailers and manufacturers the number of products included in the analysis within sub-categories varied. Where the number of products included in the analysis are low the results should be interpreted with caution.

Quality assurance

Quality assurance measures were designed into the analysis plan, including standard processes to adjust and check the nutrition data before analysis was undertaken. As described above, this work focused primarily on ‘as consumed’ products, dealing with outliers and implausible values, and appropriate conversions from sodium to salt.

Kantar Worldpanel have quality control measures built into their production process. In addition, PHE has carried out its own quality control checks of all data used and all analyses.

This has included:

- checking datasets for implausible values, and excluding those from the analysis
- independent quality assurance of sub-category coding rules applied
- exploratory analyses of salt content ranges and distributions
- contacting business data suppliers for updated information where systematic errors are discovered in their data returns

Appendix 3: Businesses supplying data for the eating out of home sector

Unlike the retail and manufacturing sectors, there is no single data source that provides nutrition data for the eating out of home sector. There is currently no legal obligation to provide nutrition information for foods consumed out of home although some businesses do provide this on their websites, leaflets or menus.

Nutrition information for the eating out of home sector has been collected by PHE from businesses and additionally by MCA from company websites and menus. For more information on data sources and data collection see Appendix 2.

Table 1 shows the businesses who provided PHE with nutrition information for products available in 2017 in the out of home sector.

Table 1: Businesses providing nutrition information for products available in 2017 in the out of home sector.

Business
AMT Coffee
Asda Stores Ltd
Azzurri Group Ltd
Benugo
Bidfood
Boots
Caffé Nero
Casual Dining Group
Caterlink
Churchill Services
Compass Group
Costa Coffee
Crownhouse
CSM Bakery Solutions
Domino’s
Elior UK
Fairway Foodservice PLC
Greene King PLC
Greggs PLC
Jamie's Italian
KFC
Marstons PLC
McDonalds

Business
Mitchell & Butlers
Nando’s
Pizza Hut
Pret a Manger
Sodexo
SPAR UK
Starbucks
Tesco PLC
The Restaurant Group PLC
Waitrose
Whitbread
Wimpy

Appendix 4: Summary results tables for the in-home and eating out of home sectors

Achievement of 2017 salt targets for manufacturers and retailers

Table 1 provides summary results for each of the 76 sub-categories which form the 2017 salt targets set for all sectors (for more information see Table 1, Appendix 1). The table provides the number of products in each sub-category included in the analysis, the average and maximum 2017 salt targets (salt g/100g), the average salt content of foods and the proportion of products at or below the maximum targets. Data are shown for manufacturers and retailers separately and combined.

Key to table:

- * means there was insufficient data available for analysis
- n/a means there was no salt target set for the sub-category
- - means no analysis has been conducted as there was no salt target set

Cells which are highlighted show where the average salt content of foods (g/100g) is meeting (below or within 5% of) the 2017 salt target.

Achievement of 2017 salt targets specific to the eating out of home sector

Table 2 provides summary results for each of the 24 sub-categories which form the 2017 salt targets specific to the eating out of home sector (for more information see Table 2, Appendix 1). The table provides the number of products in each sub-category included in the analysis, the maximum 2017 salt targets (salt g/per serving) and the proportion of products at or below the maximum targets.

Table 3 provides summary results for the out of home sector for each of the 69 sub-categories from the main 2017 salt targets, which were set for all sectors, with maximum salt targets per 100g (for more information see Table 1, Appendix 1).The table provides the number of products in each sub-category included in the analysis, the maximum 2017 salt target (salt g/100g) and the proportion of products at or below the maximum targets.

Key to tables:

- * means there was insufficient data available for analysis
- n/a means there was no salt target set for the sub-category
- - means no analysis has been conducted as there was no salt target set

Table 1: Sub-category results for manufacturers and retailers against the 2017 salt targets set for all sectors

Category	Sub-category	Number of products in the sub-category included in the analysis	Average salt target (g/100g)	Average salt content (g/100g)			Maximum salt target (g/100g)	Proportion of products at/below maximum target		
				Manufacturers	Retailers	Manufacturers and retailers combined		Manufacturers	Retailers	Manufactures and retailers combined
1. Meat products	1.1 Bacon	761	2.88	3.01	3.17	3.14	n/a	-	-	-
	1.2 Ham/other cured meats	832	1.63	2.17	2.02	2.07	n/a	-	-	-
	1.3 Sausages									
	1.3.1 Sausages	629	1.13	1.98	1.25	1.50	1.38	23%	75%	54%
	1.3.2 Cooked sausages and sausage meat products	172	1.38	1.65	1.43	1.45	1.70	68%	91%	86%
	1.4 Meat pies									
	1.4.1 Delicatessen, pork pies, and sausage rolls	417	0.98	1.16	1.01	1.05	1.13	64%	92%	85%
	1.4.2 Cornish and meat-based pasties	71	0.90	1.11	0.80	0.99	1.00	56%	86%	75%
	1.4.3 Other meat-based pastry products	656	0.68	0.87	0.64	0.76	0.75	35%	88%	63%
	1.5 Cooked uncured meat, includes all roast meat, sliced meat etc									
	1.5.1 Whole muscle cooked uncured meat	476	n/a	-	-	-	0.68	19%	47%	41%

Category	Sub-category	Number of products in the sub-category included in the analysis	Average salt target (g/100g)	Average salt content (g/100g)			Maximum salt target (g/100g)	Proportion of products at/below maximum target		
				Manufacturers	Retailers	Manufacturers and retailers combined		Manufacturers	Retailers	Manufactures and retailers combined
	1.5.2 Reformed whole muscle cooked uncured meat	89	n/a	-	-	-	0.90	6%	4%	4%
	1.5.3 Comminuted or chopped reformed cooked uncured meat	70	n/a	-	-	-	1.35	8%	55%	23%
	1.6 Burgers and grill steaks	241	0.75	1.01	0.85	0.90	0.88	22%	54%	44%
	1.7 Frankfurters, hotdogs, and burgers									
	1.7.1 Canned frankfurters, canned hotdogs, and canned burgers	51	1.38	1.76	1.36	1.7	1.75	30%	50%	33%
	1.7.2 Fresh chilled frankfurters	31	1.50	*	*	*	1.88	*	*	*
2. Bread	2.1 Bread and rolls	1245	0.90	0.95	0.96	0.95	1.13	79%	94%	89%
	2.2 Bread and rolls with additions	160	1.00	1.25	0.91	0.93	1.13	58%	89%	86%
	2.3 Morning goods – yeast raised	141	0.73	0.83	0.66	0.71	0.88	62%	75%	73%

Category	Sub-category	Number of products in the sub-category included in the analysis	Average salt target (g/100g)	Average salt content (g/100g)			Maximum salt target (g/100g)	Proportion of products at/below maximum target		
				Manufacturers	Retailers	Manufacturers and retailers combined		Manufacturers	Retailers	Manufactures and retailers combined
	2.4 Morning goods – powder raised	134	1.13	1.39	0.96	1.15	1.25	72%	95%	90%
3. Breakfast cereals	3.1 Breakfast cereals	1492	0.59	0.50	0.36	0.44	1.00	94%	100%	96%
4. Cheese	4.1 Cheddar and other 'hard-pressed' cheeses	1199	1.75	1.80	1.77	1.78	2.00	99%	100%	99%
	4.2 'Fresh cheeses'									
	4.2.1 Soft white cheese	170	0.50	0.84	0.6	0.74	0.68	32%	64%	50%
	4.2.2 Cottage cheese, plain and flavoured	72	0.50	0.74	0.46	0.51	0.53	54%	81%	76%
	4.3 Mozzarella	25	1.35	*	*	*	n/a	*	*	*
	4.4 Blue cheese	101	2.00	1.80	1.88	1.86	n/a	-	-	-
	4.5 Processed cheese									
	4.5.1 Cheese spreads	72	1.63	1.95	1.55	1.90	1.80	39%	31%	38%
	4.5.2 Other processed cheese	46	1.70	1.72	2.11	2.00	2.00	46%	67%	61%
5. Butter	5.1 Salted butters and buttery spreads	189	1.48	1.42	1.55	1.45	1.68	74%	75%	74%
	5.2 Lightly salted butter	19	1.13	*	*	*	n/a	*	*	*

Category	Sub-category	Number of products in the sub-category included in the analysis	Average salt target (g/100g)	Average salt content (g/100g)			Maximum salt target (g/100g)	Proportion of products at/below maximum target		
				Manufacturers	Retailers	Manufacturers and retailers combined		Manufacturers	Retailers	Manufactures and retailers combined
6. Fat spreads	6.1 Margarines/ other spreads	119	1.06	1.06	1.16	1.08	1.38	78%	79%	79%
7. Baked beans	7.1 Baked beans in tomato sauce without accompaniments	118	n/a	-	-	-	0.56	47%	66%	57%
	7.2 Baked beans and canned pasta with accompaniments	105	0.68	0.68	0.62	0.65	0.73	87%	77%	81%
8. Ready meals and meal centres	8.1 Ready meals and meal centres	6235	0.63	0.82	0.61	0.66	0.95	72%	90%	85%
9. Soups	9.1 Soups (as consumed)	940	0.53	0.58	0.50	0.56	0.63	77%	93%	85%
10. Pizzas	10.1 Pizzas (as consumed)	792	1.00	1.12	1.01	1.05	1.25	72%	88%	84%
11. Crisps and snacks	11.1 Standard potato crisps	750	1.31	1.36	1.35	1.36	1.45	74%	77%	75%
	11.2 Extruded and sheeted snacks	611	1.70	1.57	1.53	1.56	2.00	79%	75%	78%
	11.3 Pelleted snacks	347	2.13	2.16	2.19	2.17	2.88	86%	86%	86%
	11.4 Salt and vinegar products	189	1.88	1.90	2.25	1.98	2.50	96%	62%	85%
12. Cakes,	12.1 Cakes	805	0.43	0.55	0.40	0.44	0.70	91%	97%	96%

Category	Sub-category	Number of products in the sub-category included in the analysis	Average salt target (g/100g)	Average salt content (g/100g)			Maximum salt target (g/100g)	Proportion of products at/below maximum target		
				Manufacturers	Retailers	Manufacturers and retailers combined		Manufacturers	Retailers	Manufactures and retailers combined
pastries, fruit pies, and other pastry-based desserts	12.2 Pastries	64	0.35	0.37	0.34	0.34	0.45	56%	73%	70%
	12.3 Sweet pies and other shortcrust or choux pastry-based desserts	311	0.25	0.31	0.22	0.24	0.33	76%	90%	88%
13. Sandwiches	13.1 Sandwiches with high salt fillings	0	0.90	*	*	*	1.50	*	*	*
	13.2 Sandwiches without high salt fillings	0	0.68	*	*	*	0.88	*	*	*
14. Table sauces	14.1 Tomato ketchup	112	n/a	-	-	-	1.70	38%	96%	62%
	14.2 Brown sauce	92	n/a	-	-	-	1.20	26%	71%	42%
	14.3 Salad cream	46	n/a	-	-	-	1.58	11%	75%	50%
	14.4 Mayonnaise									
	14.4.1 Mayonnaise, not reduced fat/calorie	116	n/a	-	-	-	1.25	48%	66%	57%
	14.4.2 Mayonnaise, reduced fat/calorie only	62	n/a	-	-	-	1.70	68%	70%	69%
	14.5 Salad dressing	200	n/a	-	-	-	1.50	46%	77%	67%

Category	Sub-category	Number of products in the sub-category included in the analysis	Average salt target (g/100g)	Average salt content (g/100g)			Maximum salt target (g/100g)	Proportion of products at/below maximum target		
				Manufacturers	Retailers	Manufacturers and retailers combined		Manufacturers	Retailers	Manufactures and retailers combined
15. Cook-in and pasta sauces, thick sauces, and pastes	15.1 Cook-in and pasta sauces (except pesto and other thick sauces and pastes)	1126	0.75	0.82	0.75	0.78	0.93	70%	84%	77%
	15.2 Pesto and other thick sauces	414	1.38	2.17	1.32	1.67	1.63	49%	86%	69%
	15.3 Thick pastes	168	3.25	4.69	2.46	3.97	3.75	35%	83%	55%
16. Biscuits	16.1 Sweet biscuits	2477	0.55	0.64	0.65	0.64	0.95	92%	89%	91%
	16.2 Savoury biscuits	794	1.30	1.57	1.42	1.53	1.75	58%	71%	62%
17. Pasta	17.1 Pasta and noodles, plain and flavoured	734	0.50	0.44	0.14	0.27	0.88	85%	99%	91%
18. Rice	18.1 Rice unflavoured (as consumed)	419	n/a	-	-	-	0.18	85%	89%	87%
	18.2 Flavoured rice (as consumed)	399	0.45	0.46	0.52	0.48	0.58	64%	72%	68%
19. Other cereals	19.1 Other cereals	237	0.55	0.67	0.49	0.59	0.63	54%	77%	67%
20. Processed puddings	20.1 Dessert mixes (as consumed)	34	n/a	*	*	*	0.45	*	*	*

Category	Sub-category	Number of products in the sub-category included in the analysis	Average salt target (g/100g)	Average salt content (g/100g)			Maximum salt target (g/100g)	Proportion of products at/below maximum target		
				Manufacturers	Retailers	Manufacturers and retailers combined		Manufacturers	Retailers	Manufactures and retailers combined
	20.2 Cheesecake	229	0.28	0.41	0.27	0.30	0.35	54%	88%	81%
	20.3 Sponge-based processed puddings	345	0.43	0.54	0.39	0.44	0.63	77%	90%	88%
	20.4 All other processed puddings	437	0.18	0.19	0.17	0.18	0.28	86%	93%	91%
21. Quiche	21.1 Quiches	202	0.55	0.57	0.58	0.58	0.68	50%	80%	76%
22. Scotch Eggs	22.1 Scotch eggs	75	n/a	-	-	-	0.78	0%	41%	37%
23. Canned fish	23.1 Canned tuna	263	0.90	0.93	0.81	0.87	n/a	-	-	-
	23.2 Canned salmon	84	0.80	0.92	0.97	0.95	n/a	-	-	-
	23.3 Other canned fish	308	0.85	1.05	0.76	0.87	1.50	97%	99%	98%
24. Canned vegetables	24.1 Canned and bottled vegetables	815	n/a	-	-	-	0.13	49%	70%	62%
	24.2 Canned processed, marrowfat, and mushy peas	54	n/a	-	-	-	0.45	30%	74%	56%
25. Meat alternatives	25.1 Plain meat alternatives	59	n/a	-	-	-	0.63	21%	33%	24%
	25.2 Meat-free products	293	0.90	1.23	0.79	1.12	1.25	58%	95%	71%

Category	Sub-category	Number of products in the sub-category included in the analysis	Average salt target (g/100g)	Average salt content (g/100g)			Maximum salt target (g/100g)	Proportion of products at/below maximum target		
				Manufacturers	Retailers	Manufacturers and retailers combined		Manufacturers	Retailers	Manufactures and retailers combined
	25.3 Meat-free bacon	6	n/a	*	*	*	1.88	*	*	*
26. Other processed potatoes	26.1 Dehydrated instant mashed potato (as consumed)	27	n/a	*	*	*	0.15	*	*	*
	26.2 Other processed potato products	406	0.46	0.40	0.40	0.40	0.69	73%	86%	83%
27. Beverages	27.1 Dried beverages (as consumed)	204	n/a	-	-	-	0.15	75%	96%	77%
28. Stocks and gravies	28.1 Stocks (as consumed)	108	0.75	0.78	0.49	0.57	0.95	91%	91%	91%
	28.2 Gravy (as consumed)	119	0.95	0.91	0.86	0.88	1.13	81%	93%	85%

Table 2: Sub-category results for the eating out of home sector against the 2017 salt targets set specifically for the out of home sector

Category	Sub-category	Number of products in the sub-category included in the analysis	Maximum salt target (g salt/serving)	Proportion of products at/below maximum target
1. Potato products	1.1 Seasoned fries	52	0.88	40%
	1.2 Seasoned chips and other potato products	107	1.50	83%
2. Burgers in a bun	2.1 Small burgers without cheese or other cured meats	32	2.40	81%
	2.2 Burgers with cured meats	71	4.00	25%
	2.3 All other burgers	264	3.50	53%
3. Battered or breaded chicken portions and pieces	3.1 Battered or breaded chicken portions and pieces under 200kcal	12	1.00	*
	3.2 Battered or breaded chicken portions and pieces between 200-400kcal	13	2.00	*
	3.3 Battered or breaded chicken portions and pieces over 400kcal	28	3.50	86%
4. Battered or breaded seafood based meals	4.1 Fish fillet meals	49	2.75	57%
	4.2 Bitesize seafood meals	17	3.75	*
5. Pies	5.1 Pie based meals	32	4.25	78%
	5.2 Pies only	76	1.90	53%
6. Sauce based main dishes	6.1 Curry main meals	78	4.00	77%
	6.2 All other sauce based main meals	84	3.20	51%
7. Beef steaks, grilled chicken, and roast main meals	7.1 Beef steaks, grilled chicken, and roast main meals	257	4.50	80%
8. Sandwiches	8.1 Cured meat sandwiches	253	3.75	88%
	8.2 All other sandwiches	571	2.75	72%
9. Pasta meal	9.1 Lasagne, risotto, gnocchi, and	65	3.75	65%

Category	Sub-category	Number of products in the sub-category included in the analysis	Maximum salt target (g salt/serving)	Proportion of products at/below maximum target
	pasta with cured meat additions			
	9.2 All other pasta dishes	228	2.75	48%
10. Pizza	10.1 Take away style pizza with cured meat toppings (per slice)	229	1.25	88%
	10.2 Take away style pizza with all other toppings (per slice)	116	0.88	64%
	10.3 Traditional Italian style pizza with cured meat toppings (per pizza)	109	6.00	91%
	10.4 Traditional Italian style pizza with all other toppings (per pizza)	94	5.00	85%
11. Children's main meals	11.1 Children's main meals	131	1.80	82%

Table 3: Sub-category results for the eating out of home sector against the maximum 2017 salt targets set for all sectors

Category	Sub-category	Number of products in the sub-category included in the analysis	Maximum salt target (g/100g)	Proportion of products at/below maximum target
1. Meat products	1.3 Sausages			
	1.3.1 Sausages	0	1.38	*
	1.3.2 Cooked sausages and sausage meat products	5	1.70	*
	1.4 Meat Pies			
	1.4.1 Delicatessen, pork pies, and sausage rolls	10	1.13	*
	1.4.2 Cornish and meat-based pasties	0	1.00	*
	1.4.3 Other meat-based pastry products	27	0.75	26%
	1.5 Cooked uncured meat, includes all roast meat, sliced meat etc.			
	1.5.1 Whole muscle cooked uncured meat	36	0.68	39%
	1.5.2 Reformed whole muscle cooked uncured meat	0	0.90	*
	1.5.3 Comminuted or chopped reformed cooked uncured meat	4	1.35	*
	1.6 Burgers and grill steaks	6	0.88	*
	1.7 Frankfurters, hotdogs, and burgers			
	1.7.1 Canned frankfurters, canned hotdogs, and canned burgers	0	1.75	*
	1.7.2 Fresh chilled frankfurters	0	1.88	*
2. Bread	2.1 Bread and rolls	54	1.13	41%
	2.2 Bread and rolls with additions	58	1.13	67%
	2.3 Morning goods – yeast raised	178	0.88	65%
	2.4 Morning goods - powder raised	148	1.25	93%
3. Breakfast cereals	3.1 Breakfast cereals	120	1.00	86%
4. Cheese	4.1 Cheddar and other ‘hard-pressed’ cheeses	5	2.00	*
	4.2 ‘Fresh cheeses’			
	4.2.1 Soft white cheese	0	0.68	*

Category	Sub-category	Number of products in the sub-category included in the analysis	Maximum salt target (g/100g)	Proportion of products at/below maximum target
	4.2.2 Cottage cheese, plain and flavoured	0	0.53	*
	4.5 Processed cheese			
	4.5.1 Cheese spreads	0	1.80	*
	4.5.2 Other processed cheese	0	2.00	*
5. Butter	5.1 Salted butters and buttery spreads	5	1.68	*
6. Fat spreads	6.1 Margarines/other spreads	0	1.38	*
7. Baked beans	7.1 Baked beans in tomato sauce without accompaniments	6	0.56	*
	7.2 Baked beans and canned pasta with accompaniments	0	0.73	*
8. Ready meals and meal centres	8.1 Ready meals and meal centres	1138	0.95	74%
9. Soups	9.1 Soups (as consumed)	132	0.63	68%
10. Pizzas	10.1 Pizzas (as consumed)	920	1.25	53%
11. Crisps and snacks	11.1 Standard potato crisps	31	1.45	68%
	11.2 Extruded and sheeted snacks	12	2.00	*
	11.3 Pelleted snacks	7	2.88	*
	11.4 Salt and vinegar products	11	2.50	*
12. Cakes, pastries, fruit pies, and other pastry-based desserts	12.1 Cakes	1495	0.70	87%
	12.2 Pastries	109	0.45	42%
	12.3 Sweet pies and other shortcrust or choux pastry-based desserts	376	0.33	67%
13. Sandwiches	13.1 Sandwiches with high salt fillings	408	1.50	88%
	13.2 Sandwiches without high salt fillings	380	0.88	54%
14. Table sauces	14.1 Tomato ketchup	8	1.70	*
	14.2 Brown sauce	7	1.20	*
	14.3 Salad cream	0	1.58	*
	14.4 Mayonnaise			
	14.4.1 Mayonnaise, not reduced fat/calorie	16	1.25	*
	14.4.2 Mayonnaise, reduced fat/calorie only	1	1.70	*

Category	Sub-category	Number of products in the sub-category included in the analysis	Maximum salt target (g/100g)	Proportion of products at/below maximum target
	14.5 Salad dressing	17	1.50	*
15. Cook-in and pasta sauces, thick sauces, and pastes	15.1 Cook-in and pasta sauces (except pesto and other thick sauces and pastes)	11	0.93	*
	15.2 Pesto and other thick sauces	7	1.63	*
	15.3 Thick pastes	0	3.75	*
16. Biscuits	16.1 Sweet biscuits	869	0.95	91%
	16.2 Savoury biscuits	66	1.75	73%
17. Pasta	17.1 Pasta and noodles, plain and flavoured	0	0.88	*
18. Rice	18.1 Rice unflavoured (as consumed)	0	0.18	*
	18.2 Flavoured rice (as consumed)	2	0.58	*
19. Other cereals	19.1 Other cereals	4	0.63	*
20. Processed puddings	20.1 Dessert mixes (as consumed)	0	0.45	*
	20.2 Cheesecake	158	0.35	54%
	20.3 Sponge-based processed puddings	264	0.63	76%
	20.4 All other processed puddings	334	0.28	76%
21. Quiche	21.1 Quiches	5	0.68	*
22. Scotch Eggs	22.1 Scotch eggs	3	0.78	*
23. Canned fish	23.3 Other canned fish	0	1.50	*
24. Canned vegetables	24.1 Canned and bottled vegetables	1	0.13	*
	24.2 Canned processed, marrowfat, and mushy peas	0	0.45	*
25. Meat alternatives	25.1 Plain meat alternatives	0	0.63	*
	25.2 Meat-free products	4	1.25	*
	25.3 Meat-free bacon	0	1.88	*
26. Other processed potatoes	26.1 Dehydrated instant mashed potato (as consumed)	0	0.15	*
	26.2 Other processed potato products	63	0.69	68%
27. Beverages	27.1 Dried beverages (as consumed)	6	0.15	*

Category	Sub-category	Number of products in the sub-category included in the analysis	Maximum salt target (g/100g)	Proportion of products at/below maximum target
28. Stocks and gravies	28.1 Stocks (as consumed)	0	0.95	*
	28.2 Gravy (as consumed)	7	1.13	*

Appendix 7: Supplementary analysis

Average salt content of products in the 15 top sodium-contributing salt target sub-categories

For purposes of comparison, and where sufficient data was available, supplementary analysis was undertaken to calculate the average sodium content of in-home and out of home food products for the sub-categories contributing most to dietary salt intakes, based on NDNS data.

Table 1 below shows average salt content (g/100g) for the 15 sub-categories which provide the biggest contribution to dietary salt intakes (these foods contribute about 75% of all salt from foods with salt reduction targets) for the in-home and out of home sectors.

The results of this analysis should be interpreted with caution due to the limited amount of data available for the out of home sector as compared with the in-home sector (manufacturers and retailers combined).

For the out of home sector only maximum salt reduction targets were set therefore the averages presented below are for information only and have not been used to assess progress towards meeting the 2017 salt targets. For more information on the sub-categories and the 2017 salt targets see Table 1 and Table 2, Appendix 1.

It was not possible to calculate sales weighted averages for the out of home sector therefore all averages presented are simple averages. For more information on metrics and methodology see Appendix 2.

Table 1: Average salt content for the top 15 dietary sodium contributing salt target sub-categories

Salt target sub-category	Manufacturers and retailers combined		Out of home sector	
	Number of products included in analysis	Average salt content (g/100g)	Number of products included in analysis	Average salt content (g/100g)
2.1 Bread and rolls	1245	0.96	54	1.15
1.1 Bacon	761	3.14	12	*
8.1 Ready meals and meal centres	6235	0.64	1138	0.75
4.1 Cheddar and other 'hard-pressed' cheeses	1199	1.75	5	*
10.1 Pizzas (as consumed)	792	1.03	920	1.25
9.1 Soups (as consumed)	940	0.54	132	0.58
1.2 Ham/other cured meats	832	2.07	11	*
5.1 Salted butters and buttery spreads	189	1.47	5	*
1.3.1 Sausages	629	1.42	0	*
7.1 Baked beans in tomato sauce without accompaniments	118	0.6	6	*
3.1 Breakfast cereals	1492	0.35	120	0.64
16.1 Sweet biscuits	2477	0.55	869	0.59
11.1 Standard potato crisps	750	1.28	31	1.32
15.1 Cook in and pasta sauces (except pesto and other thick sauces and pastes)	1126	0.81	11	*
28.1 Stocks (as consumed)	108	0.71	0	*

*means that insufficient data was available for analysis

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