Public Health England

Protecting and improving the nation's health

Sugar reduction and wider reformulation programme: Report on progress towards the first 5% reduction and next steps

May 2018

About Public Heath England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

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, Vicki Coulton, Victoria Targett, Anita Bennett, Kate Sweeney, Kathryn Morgan, Emma Clegg, Mark Robinson, Leigh Dowd, Bethany Knowles, Gabrielle Owtram, Clare Perkins

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

Published May 2018
PHE publications
gateway number: 2018069

PHE supports the UN
Sustainable Development Goals

Contents

Executive summary

In August 2016 the Government published ‘Childhood obesity: A plan for action’. This included a commitment for Public Health England (PHE) to oversee a sugar reduction programme. This challenged all sectors of the food industry to reduce by 20% by 2020 the level of sugar in the categories that contribute most to the intakes of children up to 18 years. Industry was also challenged to achieve a 5% reduction in the first year of the programme.

In March 2017 PHE published guidelines for the total sugar levels per 100g, and for the calorie content of products likely to be consumed in a single occasion, for the food categories included in the programme. These were designed to help industry achieve the 20% reduction ambition.

Included in this report is an assessment of progress against these guidelines. This is based on analysis of data for the year ending August/September 2017, compared to the baseline year of 2015. The report also includes an assessment of changes in sugar levels in drinks covered by the soft drinks industry levy (SDIL) during the same period.

Headline results

- there have been reductions in sugar levels in 5 out of the 8 food categories where progress has been measured
- for retailers own brand and manufacturer branded products there has been a 2% reduction in total sugar per 100g
- there have been reductions in the calorie content of products likely to be consumed in a single occasion in 4 out of the 6 categories where calorie reduction guidelines were set and where progress has been measured
- for retailers own brand and manufacturer branded products there has been a 2% reduction in calories in products likely to be consumed in a single occasion
- for retailers own brand and manufacturer branded products for the drinks included in the SDIL there has been an 11% reduction in sugar levels per 100ml. The calorie content of SDIL drinks likely to be consumed on a single occasion also fell by 6%. There was, in addition, a shift in volume sales towards products with levels of sugar below 5g per 100g (these are not subject to the levy)
- for out of home, the average sugar content is generally the same and calories in products to be consumed in a single occasion are substantially larger, when compared to retailers own brand and manufacturer branded products

For all food and drink categories, due to data limitations it has not been possible to report on progress by the out of home sector (eg quick service restaurants, takeaway and meal delivery businesses) in the same way as for retailers and manufacturers, or for cakes and morning goods for retailer own brand and manufacturer branded products. This should be included in the next report in 2019.

These results are an early assessment of progress of sugar reduction by industry. It is recognised that reformulated products take time to appear in stores and in shopping baskets and that there are limitations in the data used to make the assessment. A clearer indication of progress across the whole industry will be available in 2019.

Data and analysis methods

This report provides information on retailers own brand products, manufacturer branded products and products sold by the eating out of home sector (eg puddings served in pubs, restaurants, cafes, takeaways etc).

Commercially produced datasets have been analysed to produce the results included in this report. Kantar Worldpanel data provides volume sales and nutrition information for retailers and manufacturers and runs for the year ending September 2017. MCA data is used for food purchased out of the home and runs to August 2017. MCA provides purchase data which is used to estimate volume sales. Nutrition information for this sector has been collected via websites and menus and some businesses have supplied PHE with their data.

Two main metrics were used to set guidelines for the sugar reduction programme and have also been used to measure progress: total sugar per 100g in all products and calories in products likely to be consumed on a single occasion. The latter has been estimated by PHE through analysis and consumption information – it is not always the same as information provided by retailers or manufactures for product portion sizes.

Progress for 8 out of the 10 food categories for retailers and manufacturers has been analysed. For cakes and morning goods, a large proportion of products had only estimated nutrition information (Kantar World Panel had calculated average values from similar products) and in addition, sugar per 100g could not be calculated as too few products had their accompanying weights available in both years, so these have been excluded. For these products, nutrition information is often not provided per 100g so the weight of the product is needed to calculate sugar per 100g. Data was also limited for some retail businesses meaning that it has not been possible to report on progress for all retailers. Work is ongoing with the data supplier and it is the intention that these issues will be addressed for the report due in 2019.

After the baseline for the out of home sector was set in the March 2017 guidelines report, PHE took the decision to change the data supplier to one that could deliver a more comprehensive dataset for future monitoring. This means it is not yet possible to measure progress for this sector in terms of changes in sugar levels or calorie content through a comparison with the baseline as too few products had nutrition information in both years. It is the intention that this will be addressed and included in the report due in 2019. In this first report it has been possible, however, to compare sugar levels and calories in products consumed on a single occasion in the out of home sector with retailers and manufacturers products, for all categories, although for this sector nutrition information is generally less available than for retailers or manufacturers products.

Analysis of SDIL products purchased through businesses in the out of home sector is not provided in this report. This is due to the complexity of distinguishing between manufacturers branded products and out of home businesses own label products, particularly where drinks are mixed or made up on the premises. This will be addressed and included in the 2019 report.

It is also important to note that the data used for the analysis is based on what people buy (‘shopping basket’ data). This information is at the end of the supply chain and companies may be in the process of improving products through their reformulation cycles or have commitments to change recipes later this year. Therefore, the datasets used may not yet reflect all the sugar reduction and product reformulation activity in progress or that has taken place to date. It is also important to recognise that businesses have different starting points and different opportunities for making changes to their products which has a bearing on the results presented at this early stage.

A sales weighted average (SWA) approach has been used to set guidelines for sugar levels in products and calories in products to be consumed in a single occasion. This approach is also used to monitor industry’s progress in this report. A SWA is calculated by weighting the sugar level of individual products and calorie levels in products to be consumed on a single occasion by their volume sales. This means that increasing sales of a top selling product with high sugar levels or large portion sizes drives the SWA upwards, whereas selling more of a top selling product with a low sugar level or small portion size drives it downwards.

Results

Across 8 of the 10 food categories (excluding cakes and morning goods), retailers and manufacturers have achieved a 2% reduction in total sugar (SWA g/100g) and a 2% reduction in calories in products consumed on a single occasion. The results are summarised in table 1 below.

Table 1 Summary of progress across categories by manufacturers and retailers combined (as a comparison between the baseline and year 1: 2015 and 2017)

Product Category	Sugar per 100g (% change)	Calories in products consumed on a single occasion (% change)
Biscuits	0%	-3%
Breakfast cereals	-5%	n/a*
Chocolate confectionery	0%	-3%
Ice cream, lollies and sorbets (g)	-2%	-7%
Puddings	1%	4%
Sweet spreads and sauces	-5%	n/a*
Sweet confectionery	-1%	0%
Yogurts and fromage frais	-6%	-6%

*n/a = not available as products generally not sold in single serve portions

Analysis of retailers own brand and manufacturer branded products also shows that, when looking across all categories:

Of the top 20 brands, ranked by total sugar sales in year 1 (this does not add up to 100 due to rounding):

- 33% showed a decrease in the sugar content
- 56% showed no change in the sugar content and
- 12% showed an increase in the sugar content

Out of the top 20 brands which showed a reduction in sugar:

- 37% did not change calorie or saturated fat levels
- 13% showed a decrease in both calories and the saturated fat content
- 6% showed an increase in both calories and the saturated fat content

Changes in calories and saturated fat which are not in the same direction have not been included in these calculations which is why the figures given above do not add up to 100.

For the out of home sector, comparisons have been made with retailer own brand and manufacturer branded products across all categories.

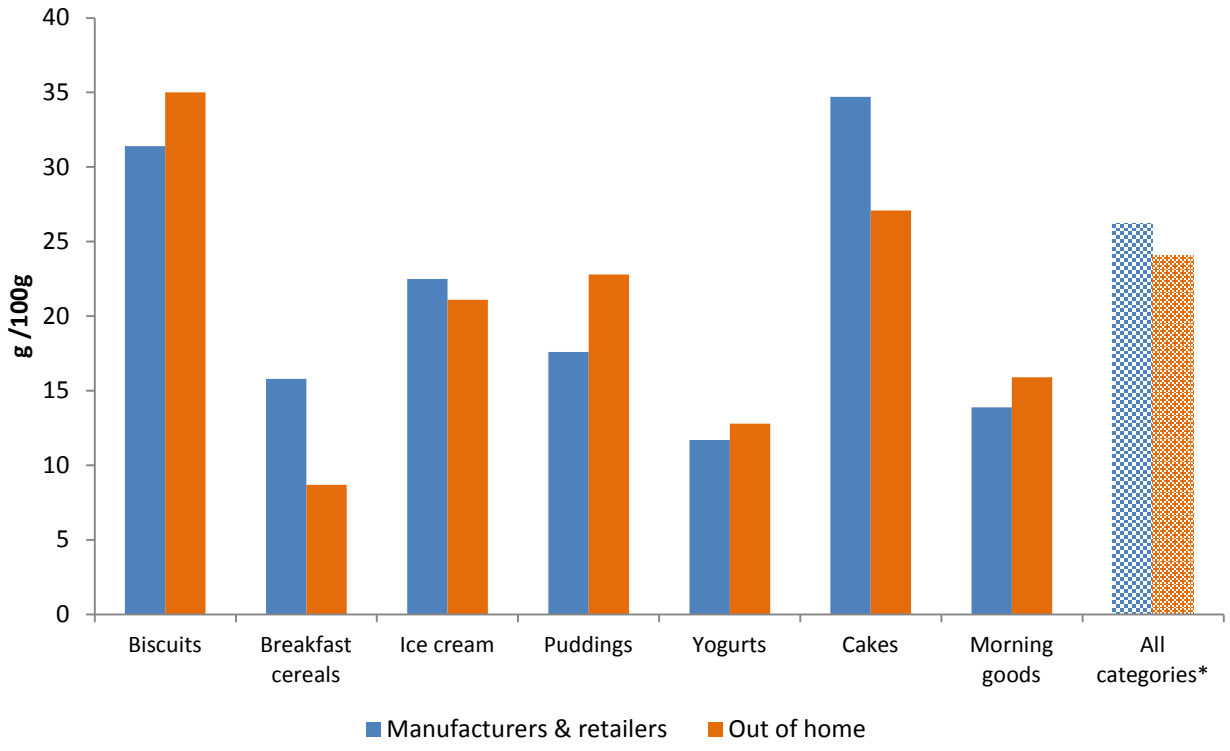
This shows that:

Average sugar content in grams per 100g is generally the same across all sectors. The exception is breakfast cereals where sugar levels are lower out of home because a high proportion of the cereal sold were porridge products. These products have relatively lower sugar levels when compared to other cereal-based products available out of home.

Average calorie content of products to be consumed in a single occasion for most categories are generally double in the out of home sector. The exception is yogurts where portion sizes are roughly the same across all sectors.

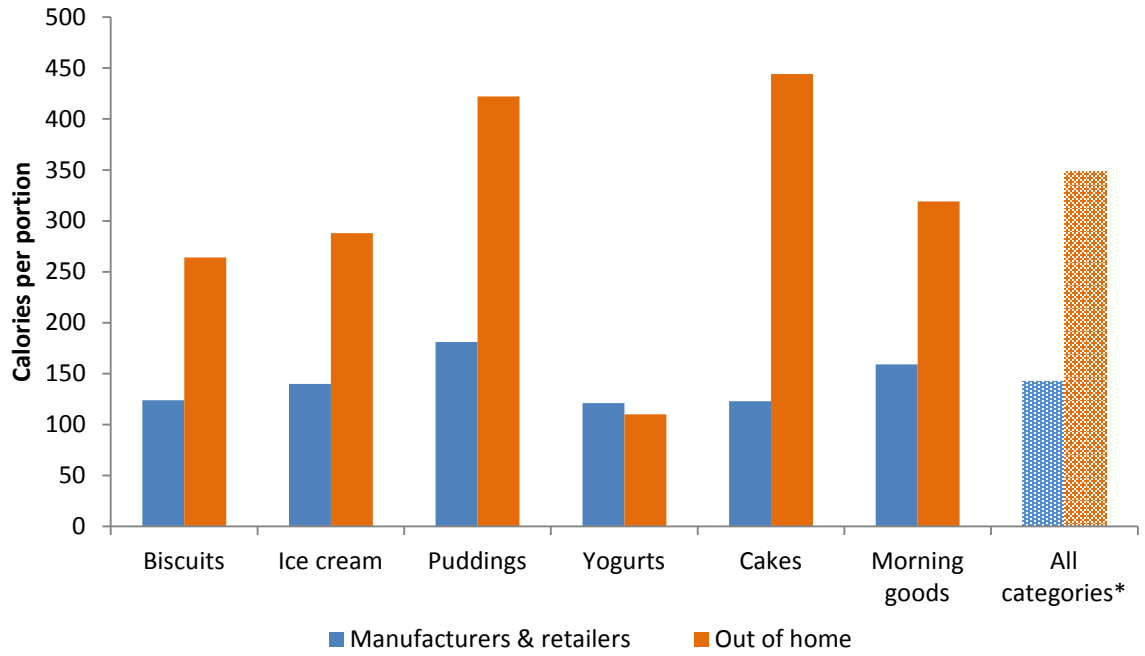
These results are summarised in figures 1 and 2 below.

Figure 1: Sales weighted average total sugar levels (g/100g) for manufacturers and retailers compared to the out of home sector



*For manufacturers and retailers this excludes cakes, morning goods and breakfast cereals but includes confectionery. For out of home, cakes, morning goods and breakfast cereals are included but confectionery is excluded.

Figure 2: Sales weighted average calories per portion for manufacturers and retailers compared to the out of home sector



*For manufacturers and retailers this excludes cakes, morning goods and breakfast cereals but includes confectionery. For out of home, cakes, morning goods and breakfast cereals are included but confectionery is excluded.

For the drinks included in the SDIL, for retailers own brand and manufacturer branded products only based on Kantar Worldpanel data:

- sugar levels per 100ml fell by 11%, and average calories in products consumed in a single occasion also fell by 6%, between 2015 and 2017
- there was a shift in volume sales towards products with sugar levels below 5g per 100ml (these are not subject to the levy)

Detailed assessments covering progress by individual businesses and in top selling products in each category are included in this report. This is alongside case studies provided by businesses on specific reformulation activity over 3 time periods (between baseline and year 1 as well pre- and post the measurement period).

Next steps

PHE is committed to transparent monitoring of the sugar reduction programme. The next progress report, due in Spring 2019, will provide a clearer indication of whether the rate of progress, direction of travel and momentum, indicated by these very early results, has continued, and is accelerating or decreasing. It is anticipated that an overall figure for the volume of sugar removed from the market will also be included in the 2019 report.

Work is continuing to move forward in other areas of the wider reformulation programme which will ultimately lead to a broader programme covering more areas of concern in relation to UK diets and the public's health. This work includes the setting of calorie reduction guidelines and reviewing progress on salt reduction.

Introduction

Public Health England (PHE) oversees the government's sugar reduction and wider reformulation programme, a commitment in Childhood obesity: A plan for action(1). The ambition of the programme is that all sectors of the food industry – retailers, manufacturers, and the eating out of home sector (eg restaurants, pubs, cafes, takeaways and delivery services) reduce the amount of sugar in the foods that contribute most to the intakes of children by 20% by 2020, with a 5% reduction in the first year (by August 2017). This is against a baseline of 2015 (year ending 31 January 2016). The reductions in sugar should also be accompanied by reductions in calories where possible, no increases in saturated fat and the achievement of current salt targets.

The 10 categories included in the programme are yogurts and fromage frais, biscuits, cakes, morning goods (eg pastries and buns), puddings, ice cream, lollies and sorbets, breakfast cereals, confectionery (sweet and chocolate) and sweet spreads and sauces. The programme covers children up to the age of 18. As children eat a wide range of foods and not just those that are manufactured for or marketed to children, all foods in each category are included.

Businesses have 3 options for taking action which are to lower the amount of sugar per 100g (reformulation), reduce portion size and to shift consumers' purchasing patterns towards lower/no added sugar products.

In March 2017 PHE published a technical report outlining guidelines for total sugar levels per 100g, and calories per single serve portion, for the categories included in the programme to help industry in achieving the overall ambition. This technical report also included the baseline analysis for each category(2). Both the sugar and calorie guidelines were set as sales weighted averages (SWA) which are also used to assess progress. A maximum calorie guideline was also set for the majority of categories. A SWA is calculated by weighting the sugar level of individual and single serve products by their volume sales. This means that a high selling product with high sugar levels or large portion sizes drives the SWA upwards, whereas a high selling product with a low sugar level or small portion size drives it downwards.

The government's commitment and PHE's work on reformulation also includes the recently announced calorie reduction programme as well as salt reduction programme, work to set guidelines for 2 categories of drinks excluded from the soft drinks industry levy (fruit and vegetable juices and milk-based drinks) and to address product ranges targeted at babies and young children. Saturated fat will be considered following publication of the final report (which is currently out for consultation) from the Scientific Advisory Committee on Nutrition (SACN).

PHE are committed to regular and transparent monitoring and reporting of progress for the sugar reduction programme. Two further detailed assessments will be published in 2019 and 2020. These reports will determine progress against delivering the 20% reduction and whether government need to consider alternative levers to ensure further action.

Scope of this document

This report covers industry progress (by August 2017) towards the first years ambition for a 5% reduction in sugar levels in products and calories in products likely to be consumed in a single occasion (hereafter may be referred to as a single serve portion or calories per portion). It also includes brief details of the data and methodology used in developing and producing the analysis included and a summary of progress across each category included in the programme set out on a like for like basis comparing 2015 and 2017 data.

It is important to note that the analyses included in this report are based on UK data on what people buy (so “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 to date. It should also be noted that data presented for retailers includes their own brand products only and not their sales of private label (manufacturer) products.

The appendices include a guide to the category tables and charts (appendix 1) and a more detailed methodology (appendix 2) and also covers:

- category level analysis covering total sugar (g/100g) and calories per portion at baseline (2015) and year 1 (2017) to show how these have changed over the first year of the programme (appendix 3)
- analyses to look at progress by individual businesses (based on total volume sales for products) and in top selling products (based on total volume sales of sugar) in each category (appendix 3)
- case studies provided by individual businesses to demonstrate progress pre-baseline; progress made during the reporting year (August 2016 to August 2017) that may not be captured in the datasets used; and future changes to products in the next few months (appendix 4)

At the request of HM Treasury progress in the products included in the soft drinks industry levy (SDIL) (3), in relation to reductions in sugar levels and portion size, and sales shifts towards lower and no added sugar products, is also included here using the same data and analysis. Details of revenues raised are not reported as these are not within PHE’s remit.

There is also an estimate of the tonnes of sugar purchased from each food category (appendix 5).

Appendix 6 and 7 provide an update on the reduction and reformulation work streams and our stakeholder engagement since the last progress report was published in September 2017 including in relation to these data.

Stakeholder engagement

PHE held a series of meetings to inform the metrics and analyses that would be used to review progress in this report. The meetings held in November 2017 involved all sectors of the food industry, non-governmental organisations (NGOs), other government departments and the devolved nations. Separate meetings were held for each sector because different datasets are used for the eating out of home sector versus food sold through retail; and to allow comments that were common across each sector to be heard together.

Detail was provided of how the summary statistics were likely to be presented and the analyses that would be used to demonstrate progress by individual businesses and for top selling products in each category. This was followed by a discussion covering:

- the data to be used to assess progress
- how data would be presented for categories, individual businesses and products
- how accurately the data would demonstrate progress made
- the categorisation of products
- whether there would be opportunities for businesses to check the data that would be included in the report

The slides used to demonstrate the proposed analyses were circulated together with a top line summary of the main points discussed. Recipients were asked to provide written comments within 2 weeks. A summary note of the meeting is included in appendix 7.

Obtaining permission to publish individual business data

Due to limitations placed on the use of individual business sales related data by Kantar Worldpanel, PHE were required to request written agreement from each business to include this data in the year 1 progress report. Permission was needed to include the percentage change in individual business' SWA and calorie levels in single serve products likely to be consumed by an individual at one time between baseline (2015) and year 1 (2017). This is presented in the analysis of progress by the top 10 businesses for each category included in the programme in appendix 3. MCA did not require PHE to ask the out of home businesses included in the same tables for that sector for permission.

Businesses covered by the Kantar Worldpanel dataset (retailers and manufacturers) were initially made aware of the need to ask for permission to publish this data at the November 2017 data meetings. Once the analysis for each category was complete, the top 10 businesses that would feature in the relevant table were asked to provide

permission. Of the 97 businesses that were contacted, 70 replied and gave permission; 8 replied and did not give permission; 15 did not reply. Data on the remaining 4 businesses were ultimately not included.

Where permission was not given, or no response was received, the relevant data is not included and the appropriate reason is given in the table next to the business name. When permission was requested businesses were made aware that this notification would be included in the report.

Case studies

Businesses were invited to submit case study information with supporting quantitative data for each of the sugar reduction categories included in their business portfolio. This information has been used to provide additional evidence of industry activity and progress to date where this may not be reflected by the analysis included in the report. Reformulation activity would be included if it had taken place in one of 3 time periods:

- pre-baseline (1st January 2013 to 31st December 2015)
- between baseline and end year 1 (1st January 2016 to 31st August 2017), and
- post-year 1 (1st September 2017 to 28th February 2018)

A total of 139 case studies across 44 businesses are included in appendix 4. Where appropriate case studies are also referenced in the tables where progress by individual businesses is included in each category summary (see appendix 3).

Methodology

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

Analysis has been undertaken to compare total sugar levels from the baseline year (2015) to year 1 (2017) in the food categories that are included in PHE's sugar reduction programme and the drinks included in the SDIL (table 2). SWA sugar levels and calories in products likely to be consumed in a single occasion have been calculated for each category where possible and these form the basis of the assessment of progress in year 1.

Table 2: Product categories included in the sugar reduction programme

Product Category	Category description
Biscuits	All types of sweet biscuits, cereal bars and toaster pastries; breakfast biscuits; rice cakes; gluten free biscuits; in-store bakery products
Breakfast cereals	All breakfast cereals, eg ready to eat cereals, granola, muesli, porridge oats, instant porridge, and other hot oat cereals
Cakes	All types of cakes, ambient and chilled, including cake bars and slices
Morning goods	Includes croissants, crumpets, English muffins, pancakes, buns, teacakes, scones, waffles, Danish pastries, fruit loaves, bagels.
Chocolate confectionery	Includes chocolate bars, filled bars, assortments, carob, diabetic and low calorie chocolate and seasonal products
Sweet confectionery	Includes boiled sweets, gums, pastilles, fudge, chews, mints, rock, liquorice, toffees, chewing gum, popcorn, nougat and halva, seasonal products
Ice cream, lollies and sorbets	All types of ice cream, dairy and non-dairy, choc ices, ice cream desserts, milk ice lollies, ice lollies; low fat/low calorie ice cream; sorbet; frozen yogurt
Puddings	All types of ambient, chilled and frozen large and individual pies, tarts and flans, cheesecake, gateaux, dairy desserts, sponge and rice puddings
Sweet spreads and sauces	Includes chocolate spread, peanut butter, ice cream and dessert sauces, dessert toppings and compotes, jam type spreads*
Yogurts and fromage frais	Includes all sweetened dairy yogurt and fromage frais products and all yogurts containing low/non-caloric sweeteners
Soft drinks	All drinks included in the Soft Drinks Industry Levy (SDIL)

Calories per portion were calculated for products likely to be consumed by an individual on a single occasion. This will not necessarily be the same as guidance provided by manufacturers as specific rules have been applied for each category (see Table 7 in appendix 2 for more details).

Two main metrics were used to set guidelines for the sugar reduction programme and have also been used to measure progress: total sugar per 100g in all products and calories in products likely to be consumed on a single occasion. The latter has been estimated by PHE through analysis and consumption information – it is not always the same as information provided by retailers or manufactures for product portion sizes.

Data sources

In-home (retailers and manufacturers)

The baseline and year 1 analyses for retailers own label and manufacturers branded products use data from Kantar Worldpanel's commercial consumer panel. The baseline year used data collected over 52 weeks ending 31 January 2016. The year 1 dataset covers the 52 weeks ending 10 September 2017.

Kantar Worldpanel collect nutrition data from food labels on individual products via fieldworkers who visit retail stores on a rolling 6 monthly basis. This information is supplemented by data from a third party supplier, Brandbank(4). Where nutrition data have not been collected for a product, Kantar Worldpanel imputes nutrition values based on similar products in their dataset. For the analyses presented in this report, with the exception of estimated sugar tonnes in appendix 5, only products with nutrition data collected from labels have been used. Products with imputed values have been excluded.

Kantar Worldpanel have improved their coverage of discount retailers between baseline and year 1. In particular, Aldi and Lidl are now included but were not included in the baseline so it has not been possible to report on progress for these 2 retailers.

Eating out of home sector

There is no single data source that provides both sales and nutrition data for the eating out of home sector.

Sales data for foods eaten out of home

For the baseline year (2015), food purchases collected by NPD from their Consumer Reports on Eating Share Trends (CREST) survey for the out of home sector were used. However, for this and subsequent reports, data from MCA will be used for out of home

purchases (eg quick service restaurants, pubs, high street chain restaurants, coffee shops takeaway and meal delivery businesses). The sales data (based on the reported volume of product consumed) provided by MCA is at individual business level which is essential for monitoring the progress of the programme. This level of detail was not available from the NPD data and so was missing for the baseline year. This change in data supplier means that it has not been possible to make comparisons between baseline and year 1 for the eating out of home sector in this first progress report.

Nutrition information for out of home

Nutrition information for the eating out of home sector has been collected by PHE from businesses and additionally by MCA from business websites. A list of businesses that provided PHE with data is included in appendix 2.

Updated baseline sugar and calorie values for out of home

As a result of the change in data supplier to MCA for the out of home sector, reporting of progress in this sector in subsequent reports will be measured against the updated baselines presented in table 3.

Table 3: Original and updated baseline SWA sugar and calories in products likely to be consumed in a single occasion (calories per portion) for out of home (OOH) sector

Product category	OOH original published baseline (2015) SWA sugar Source: NPD Crest	OOH updated baseline (2017) SWA sugar Source: MCA	OOH original published baseline (2015) SWA calories per portion Source: NPD Crest	OOH updated baseline (2017) SWA calories per portion Source: MCA
Biscuits	38.1	35.0	272	264
Breakfast cereals	9.8	8.7	246	250
Ice cream, lollies and sorbets	24.5	21.1	224	288
Puddings	24.1	22.8	447	422
Yogurts and fromage frais	14.3	12.8	191	110
Cakes	28.5	27.1	347	444
Morning goods	14.7	15.9	355	319

Cells shaded in grey are simple averages due to data limitations

Sweet spreads and sauces are not included because out of home data for this category are not collected.

Updated baselines for sweet confectionery and chocolate confectionery have not been produced because of insufficient nutrition information about confectionery products typically sold out of the home. Options for improving this will be considered over the coming year and, if possible, we will publish updated 2017 baselines for confectionery along with year 2 (2018) data in 2019.

Data analysis

The analysis has been divided into separate sections for each product category in the sugar reduction programme. An additional section has been produced for drinks which are subject to the SDIL.

There are 2 parts to the analysis for each product category – 1 covering retailers own label and manufacturers private label products, and another for the eating out of home sector. A summary table of the data and metrics that have been calculated for each sector is shown in table 4.

Table 4: Available analyses and metrics by product category

Category	Retailers and manufacturers		Out of home analysis
	SWA sugar	SWA calories per portion	
Biscuits	✓	✓	✓
Breakfast cereals	✓	x	✓
Cakes	Partial – limited category coverage	Partial – limited category coverage	✓
Chocolate confectionery	✓	✓	x
Ice cream, lollies and sorbets	✓	✓	✓
Morning goods	Partial – limited category coverage	Partial – limited category coverage	✓
Puddings	✓	✓	✓
Sweet spreads and sauces	✓	x	x
Sweet confectionery	✓	✓	x
Yogurts and fromage frais	✓	✓	✓

Retailer and manufacturer data analysis

For both baseline and year 1, the retailer and manufacturer analysis uses all products with real nutrition information and volume in grams to calculate SWA sugar and calorie values. For cakes and morning goods, a large proportion of products had only estimated nutrition information and in addition, sugar per 100g could not be calculated as too few products had their accompanying weights available in both years. As a result, there is more limited reporting for these categories.

To provide an overview of changes in sugar content and other nutrients in the top brands, the information in the category-specific top 20 brand tables was combined and analysed as a whole. This included both retailer own brand and manufacturer branded products for all categories except cakes and morning goods.

Definitions of the metrics produced for each category are outlined in table 5. For a full description of the analysis, please see appendix 2. A guide to the category tables and charts contained in the category level analysis (appendix 3) is included in appendix 1.

Table 5: Definitions of the sugar sales weighted average and range statistics presented for retailers and manufacturers

Metric	Description
In-home retailer and manufacturer SWA total sugar content (g per 100g)	This reflects the average sugar content of all products in the category. Average total sugar in g per 100g of products across the category, where each product's sugar content per 100g (or 100ml) has been weighted by the volume of product sold in kg (or litres)
Range of total sugar content across products in category (min-max, g per 100g/ml)	The range of sugar (g/100g) across all products in the category. Zero sugar content has been considered implausible for food categories and hence any products with zero recorded have been excluded from the analysis
Range of total sugar content in top 20 products by volume sugar sales (min-max, g per 100g/ml)	The range of sugar (g/100g) across the top 20 products in the category, where products have been ranked by the volume of sugar sold in kg
SWA calories in products likely to be consumed in a single occasion (calories per portion)	This reflects the average calories in a single portion across all the products in the category. Average calories per portion of products identified as single serve* weighted by the number of portions of the product sold
Sugar sales, tonnes	Volume sales by average sugar content (proportion) for products with matched nutrition data

*Single serve products likely to be consumed in a single occasion were identified for each category to study the distribution of calories per portion. This, along with data on the weights of food eaten by individuals in the Years 5 to 6 NDNS survey, informed the suggested guideline maximum calories per portion for products. Breakfast cereals and the sweet spreads and sauces sub-categories were not included.

Eating out of home data analysis

SWA figures have been calculated for year 1 from the MCA dataset. Due to the change in data supplier and improved data collection it is not possible to compare the year 1 out of home metrics with the previously published baselines for 2015. Table 6 presents an outline of the analyses undertaken. For more details about the methodology applied see appendix 2.

Table 6: Definitions of the sales weighted average and range statistics presented for the eating out of home sector

Metric	Description
Sales weighted average (SWA) total sugar content (g per 100g/100ml)	This reflects the best estimate of average sugar content of all products in the category. Average total sugar in g per 100g of products across the category, estimated by weighting the average sugar (g/100g) value by volume sales (based on reported volume of product consumed) for products with matched nutrition data
Range of total sugar content across products in category (min-max, g per 100g/100ml)	The range of total sugar in g per 100g (or per 100ml) across products in the category, where nutrition information has been collected from websites or supplied by businesses
SWA calories in products likely to be consumed in a single occasion	This reflects the best estimate of average calories in a single portion across all the products in the category. Average calories per portion of products across the category, estimated by weighting the average calories per portion for products with matched nutrition data by the number of servings sold (based on reported volume of product consumed). Sharing products have been excluded

Data limitations

Retailer and manufacturer data

Kantar Worldpanel's fieldworkers go in to stores to collect nutrition information on a rolling 6 month basis but this 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.

Eating out of home data

The eating out of home data does not include sales data for individual products at the same level of detail as the Kantar Worldpanel data so SWAs for sugar and calories cannot be calculated in the same way. Furthermore, nutrition data are not available for all products and all businesses. As a result the SWA calculations for out of home rely on a number of assumptions. For more information see appendix 2.

Reformulation changes may be harder to detect and monitor in the eating out of home sector given the current lack of granular sales data and the use of average sugar, calorie and portion weight values.

Analysis of SDIL products purchased through businesses in the out of home sector is not provided in this report. This is due to the complexity of distinguishing between manufacturers branded products and out of home businesses own label products, particularly where drinks are mixed or made up on the premises. This will be addressed and included in the 2019 report.

Quality assurance

The data sources and methodology used in this report have been presented to external stakeholders (including retailers, manufacturers, eating out of home businesses, trade bodies and non-governmental organisations). Feedback was used to check that PHE's proposals, the category definitions, analytical methods and data sources used were appropriate.

The commercial datasets used from Kantar Worldpanel and MCA have quality control measures built into their production process. These companies have also reviewed this report. In addition, PHE has carried out its own quality control checks of all data used and all analyses.

These include:

- checking datasets for implausible values, and excluding those from the analysis
- checking the consistency of variables across a product line
- cross-referencing to other datasets
- replicating analyses as a quality control measure
- examining data behind business-specific results to ensure they are plausible and comparable (otherwise excluded) and
- checking data against information supplied by businesses

Specific data checks and questions were sent to data suppliers as and when they arose where there were anomalies or other queries over the collection of certain variables or the viability of data collection from certain outlets.

Topline results

Analysis of sugar content

Retailers and manufacturers

SWA sugar levels have reduced by 2% over the programme as a whole between baseline and year 1 (excluding cakes and morning goods). Three categories – yogurts and fromage frais, breakfast cereals and sweet spreads and sauces – have met or exceeded the year 1 reduction guideline of 5%. Ice cream, lollies and sorbets (g) and sweet confectionery have made smaller reductions of 2% and 1% respectively. No change has been seen for biscuits or chocolate confectionery and there has been an increase of 1% for puddings (see category specific analyses in appendix 3).

Manufacturers have made greater progress in reducing SWA sugar levels across most categories compared to retailers. However, manufacturers generally had higher sugar levels across products in 2015, and this remains the case for some products, such as biscuits and chocolate confectionery.

The proportion of volume sales in each category from manufacturers rather than retailers is shown in table 7 to illustrate the relative importance of the manufacturing sector to the category and any changes between baseline and year 1.

Analysis of retailers own brand and manufacturer branded products also shows that, when looking across all categories:

Of the top 20 brands, ranked by total sugar sales in year 1 (this does not add up to 100 due to rounding):

- 33% showed a decrease in the sugar content
- 56% showed no change in the sugar content and
- 12% showed an increase in the sugar content

Out of the top 20 brands which showed a reduction in sugar:

- 37% did not change calorie or saturated fat levels
- 13% showed a decrease in both calories and the saturated fat content
- 6% showed an increase in both calories and the saturated fat content

Retailers and manufacturers combined, compared to the out of home sector

The year 1 levels for the out of home sector have been included in table 7 as a comparator against manufacturers and retailers. The average sugar content in grams per 100g is higher in the out of home sector for biscuits and puddings. For ice cream, lollies and sorbets and yogurts and fromage frais, figures are comparable between the different sectors. For breakfast cereals, sugar content is lower on average in the out of the home sector due to a greater predominance of porridge.

Table 7: Baseline and year 1 SWA total sugar levels (g/100g) for all manufacturers and retailers and the out of home sector SWA in year 1

Product Category	Manufacturers Baseline	Manufacturers % volume sales 2015	2017	Manufacturers Year 1	% change	Retailers Baseline	Retailers Year 1	% change	Manufacturers & retailers Baseline	Manufacturers & retailers Year 1	% change	Out of home Year 1**
Biscuits	33.0	60%	59%	32.8	-1%	29.1	29.2	0%	31.5	31.4	0%	35.0
Breakfast cereals	17.4	63%	59%	16.6	-5%	15.5	14.8	-5%	16.7	15.8	-5%	8.7
Chocolate confectionery	54.9	85%	84%	54.9	0%	51.4	51.0	-1%	54.4	54.3	0%	n/a
Ice cream, lollies and sorbets (g)	22.9	52%	52%	22.0	-4%	22.9	22.9	0%	22.9	22.5	-2%	21.1
Puddings	15.5	49%	44%	15.3	-1%	19.1	19.4	2%	17.5	17.6	1%	22.8
Sweet spreads and sauces	39.7	60%	58%	37.9	-5%	18.8	19.0	1%	31.4	29.9	-5%	n/a
Sweet confectionery	61.3	66%	66%	60.6	-1%	61.2	60.8	-1%	61.3	60.7	-1%	n/a
Yogurts and fromage frais	12.2	78%	79%	11.3	-7%	13.1	13.2	1%	12.4	11.7	-6%	12.8
All categories*	**28.1**	**Not applicable**		**27.5**	**-2%**	**24.2**	**23.9**	**-1%**	**26.7**	**26.2**	**-2%**	**24.1****

n/a – Not available
*Excluding cakes & morning goods
** Including cakes & morning goods, excluding confectionery and sweet spreads & sauces

Analysis of calories in products likely to be consumed in a single occasion (calories per portion)

Retailers and manufacturers

Single serve products, which are likely to be consumed in a single occasion, have been identified for each category (except breakfast cereals and sweet spreads and sauces) to assess the distribution of calories per portion. A description of the types of products included in the portion size analysis is provided in table 7 in appendix 2.

One of the 2 main metrics used to set guidelines for the sugar reduction programme, which has also been used to measure progress, is calories in products likely to be consumed on a single occasion. This has been estimated by PHE through analysis and consumption information – it is not always the same as information provided by retailers or manufactures for product portion sizes.

Table 8 shows original and revised baseline SWA calories in products likely to be consumed in a single occasion for each category (see appendix 2 for more information about the revisions made). Cakes and morning goods have not been revised due to the limited data available for these categories.

The 2 baseline figures are generally similar for manufacturers and retailers both separately and when combined. The biggest changes are for ice cream and confectionery.

Table 8: Baseline SWA calories in products likely to be consumed in a single occasion (calories per portion) – original published baseline and revised baseline

	Calories (kcal) per portion					
Product Category	**Manufacturers Baseline original (2015)**	**Manufacturers Baseline new(2017)**	**Retailers Baseline original (2015)**	**Retailers Baseline new (2017)**	**Manufacturers & retailers Baseline original (2015)**	**Manufacturers & retailers Baseline new (2017)**
Biscuits	129	128	128	125	129	128
Chocolate confectionery	178	174	180	176	178	174
Ice cream	147	147	144	155	145	151
Puddings	149	149	202	201	174	174
Sweet confectionery	134	128	209	212	149	146
Yogurts	127	127	133	133	129	129
All categories*, **	**144**	**142**	**161**	**156**	**149**	**145**

*Original baseline as published including cakes and morning goods
**New baseline calculated excluding cakes and morning goods

Table 9 shows the baseline (2015) and year 1 (2017) SWA calories per portion for products likely to be consumed in a single occasion for all retailers own label and manufacturers branded products in scope of the sugar reduction programme. Separate figures are provided for manufacturers, retailers and the combined in-home sector. Where available, the comparable figure for year 1 from the out of home sector is also presented.

Across the whole programme, average calories in products likely to be consumed in a single occasion reduced by 2% between the baseline and year 1 for manufacturers and retailers (excluding cakes and morning goods). There have been reductions greater than the 5% ambition for the first year of the programme for ice cream, lollies and sorbets and yogurts and fromage frais and which have reduced by 7% and 6% respectively. There have also been reductions of 3% for biscuits and chocolate confectionery. Average calories in products likely to be consumed in a single occasion increased by 4% for puddings and there was no change seen in the calories in products likely to be consumed in a single occasion for sweet confectionery products.

Manufacturers appear to have made greater progress compared to retailers in reducing SWA calories in products likely to be consumed in a single occasion for chocolate confectionery and yogurts and fromage frais. Calories in products likely to be consumed in a single occasion for biscuits reduced by the same proportion for both manufacturers and retailers; whereas for sweet confectionery increased for retailers but didn't change for manufacturers. Manufacturers mostly had fewer calories in products likely to be consumed in a single occasion in 2015 compared to retailers and this remains.

The proportion of volume sales in each category from manufacturers rather than retailers is shown to illustrate the relative weighting of the manufacturer sector and any changes in this weighting between the baseline and year 1.

Retailers and manufacturers combined, compared to the out of home sector

The year 1 levels for the out of home sector have been included in table 9 for comparison with manufacturers and retailers. When comparing the year 1 data for the OOH sector against the year 1 data for retailers and manufacturers combined, SWA calories in products likely to be consumed in a single occasion for biscuits, ice cream, lollies and sorbets and puddings in the out of home sector are approximately double the equivalent figures for retailers and manufacturers. For cakes and morning goods it is difficult to make a robust assessment because of the limitations of the available data for the in-home sector, but indications are that portion sizes of products likely to be consumed in a single occasion are also substantially higher in the out of home sector for these food categories. For yogurts and fromage frais, average portion sizes of products likely to be consumed in a single occasion are comparable between in-home and out of home. This is a similar picture to the analyses presented in 'Sugar Reduction: Achieving the 20%'(2).

Table 9: Baseline (revised) and year 1 SWA calories in products likely to be consumed in a single occasion (calories per portion) for all manufacturers and retailers and the out of home sector SWA for year 1

Product Category	Manufacturers Baseline	Manufacturers % volume sales 2015	2017	Manufacturers Year 1	% change	Retailers Baseline	Retailers Year 1	% change	Manufacturers & retailers Baseline	Manufacturers & retailers Year 1	% change	Out of home Year 1**
Biscuits	128	83%	81%	125	-2%	125	123	-2%	128	124	-3%	264
Chocolate confectionery	174	90%	90%	167	-4%	176	178	1%	174	168	-3%	n/a
Ice cream, lollies and sorbets	147	46%	46%	136	-7%	155	143	-8%	151	140	-7%	288
Puddings	149	51%	50%	153	3%	201	208	3%	174	181	4%	422
Sweet confectionery	128	68%	69%	128	0%	212	219	3%	146	146	0%	n/a
Yogurts and fromage frais	127	76%	81%	118	-7%	133	135	2%	129	121	-6%	110
All categories*	**142**	**Not applicable**		**137**	**-3%**	**156**	**156**	**0%**	**145**	**142**	**-2%**	**349****

n/a – Not available
*Excluding cakes & morning goods
** Including cakes & morning goods, excluding confectionery and sweet spreads & sauces

Retailer and manufacturer analysis of the soft drinks industry levy

Table 10 shows the SWA total sugar (g/100ml) and SWA calories for products likely to be consumed in a single occasion for drinks subject to the SDIL for retailers own label and manufacturers branded products from the Kantar World Panel data set. Data are provided separately for products in the high (over 8 grams per 100ml), medium (between 5 and 8 grams of sugar per 100ml) and no levy (below 5 grams per 100ml) groups.

For products included in the SDIL as a whole, SWA sugar levels per 100ml fell by 11% between 2015 and 2017 and there was a shift in volume sales towards products with sugar levels below 5g per 100ml.

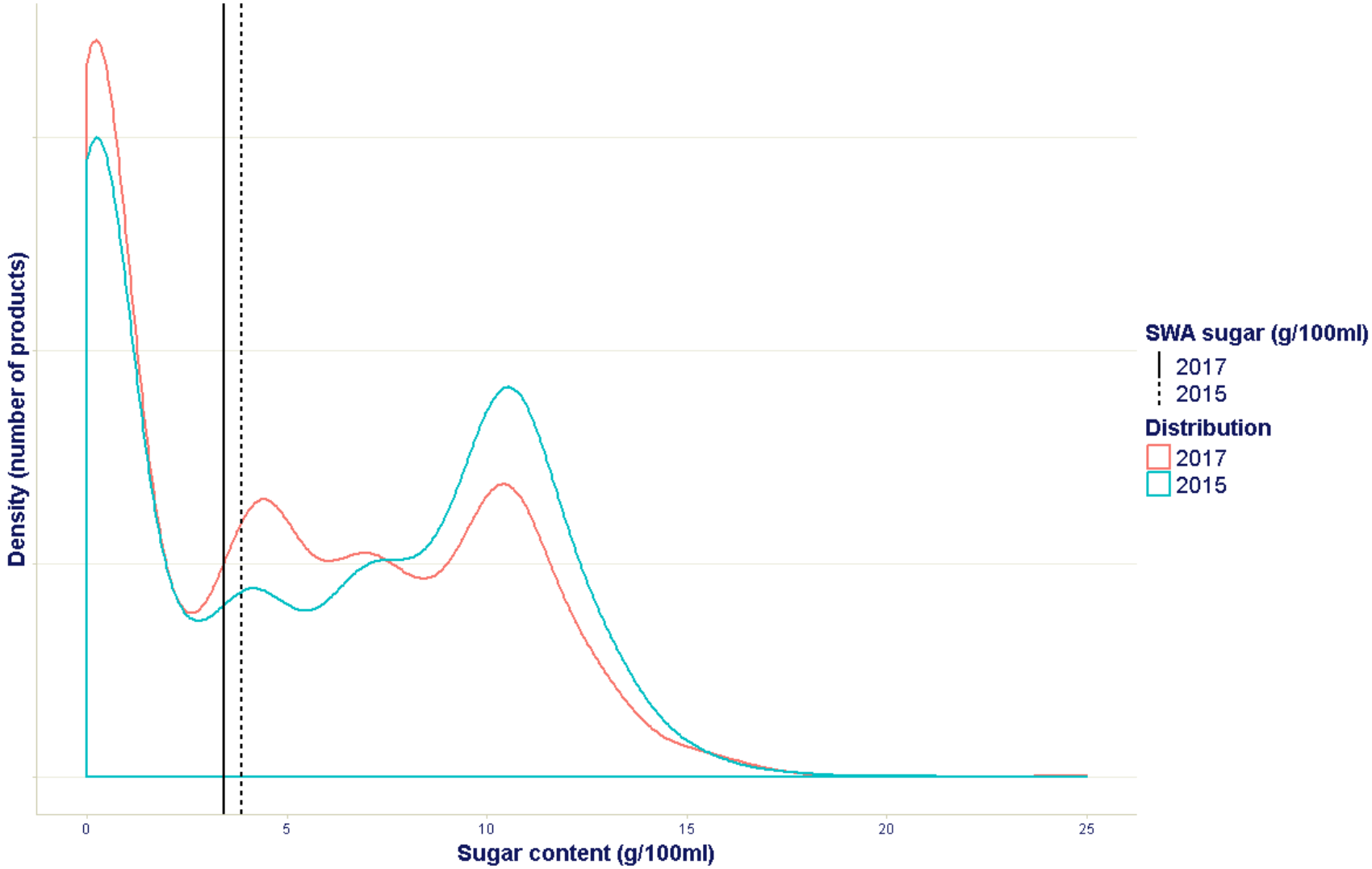
The average calories in products likely to be consumed in a single occasion also fell by 6% between 2015 and 2017. Average calories in products likely to be consumed in a single occasion in the highest levy group fell by 7% but increased in the other 2 groups as products were reformulated to move from the highest levy group to the lower or no levy groups.

Table 10: Total sales, sales weighted average (SWA) sugar levels (g/100ml) and average calories to be consumed in a single occasion (kcal per portion) by levy group in 2015 and 2017 for retailers and manufacturers

Levy group (sugar content/100ml)	2015			2017		
	Total volume sales (thousand litres)	SWA sugar (g/100ml)	SWA kcal per portion	Total volume sales (thousand litres)	SWA sugar (g/100ml)	SWA kcal per portion
Less than 5g	2,357,796	0.7	13	2,681,252	0.8	24
5 to 8g	278,570	6.6	91	242,767	6.6	109
Over 8g	969,376	10.8	146	868,484	10.7	135
Total	**3,605,742**	**3.9**	**65**	**3,792,503**	**3.4**	**61**

Figure 3 shows the distribution of soft drinks on the market in 2015 and 2017 by total sugar content per 100ml. This illustrates the shift towards products with sugar content below 5g per 100ml since 2015.

Figure 3: Distribution of soft drink products on the market in 2015 and 2017 by total sugar (g/100ml) for retailers and manufacturers



Conclusions and next steps

The results presented in this report represent an early assessment of progress for the sugar reduction programme. A clearer assessment of reformulation activity by industry will be available in 2019. At this point, sufficient time will have passed from the inception of the programme to allow for time lags for product development, production, stocking in stores etc. The assessment of progress at that point should capture momentum and the likelihood of achieving the 20% reduction ambition for the programme by 2020.

Reductions have been seen in SWA total sugar levels per 100g and SWA calories in products likely to be consumed in a single occasion, both overall and in some individual product categories for retailers own brand products and manufacturer branded products. These reductions have been accompanied by a decrease, or no change, in both the calorie and saturated fat content in a greater proportion of products than where an increase has been identified.

For the out of home sector, sugar levels are generally the same as those found in retailer own brand and manufacturer branded products. For calories in products likely to be consumed in a single occasion, these are substantially higher in the out of home sector than in the foods provided by retailers and manufacturers.

The average reductions in sugar levels and calories for retailer and manufacturer products does not tell the whole story. Individual businesses have different starting points from which to make reductions and reformulation changes. There is a great deal of variation in reductions achieved to date in both sugar levels per 100g and calories in products likely to be consumed in a single occasion; and across individual businesses and sectors. While sugar levels per 100g are lower for retailers, the percentage change is greater for manufacturers. It is also worth considering that there is greater scope for large percentage reductions where the starting point is higher; and less scope for change where the starting point is lower. In addition, calories in products likely to be consumed in a single occasion are greater in the out of home sector at baseline and in 2017 than in retailer own-brand and manufacturer branded products.

Changes to the drinks that are subject to the SDIL have also been seen as a result of reductions in sugar levels, reductions in portion size and shifts in sales towards lower sugar products. It should be noted, however, that reducing sugar in drinks is easier than for some food categories included in the sugar reduction programme. This is because sugar is not providing much functionality beyond taste to soft drinks (ie it does not often to contribute to colour, structure etc).

All sectors of industry can also use the same 3 mechanisms for action for the products included in the sugar reduction programme. In this progress report, however, only the reductions in sugar levels and in calories in products likely to be consumed in a single occasion have been explored in detail. While the third mechanism – shifting sales towards lower sugar products – is reported in appendix 3 it is recognised that these data need further consideration before firm conclusions can be drawn. It is the aim to complete this for the 2019 report.

The data used for this analysis has its limitations. Comparable data on cakes and morning goods is limited as are the analyses on these products. These categories are excluded from overall assessments of progress across the programme. The data for 2 retailers is also limited (Aldi and Lidl) – data is available for year 1 but not for the baseline so it is not possible to make comparisons to demonstrate progress for these retailers. The out of home dataset, whilst providing improved data, also does not allow the calculation of the same metrics as those produced for food available in-home.

The dataset covering in-home food provides data on what people buy. This data is at the end of the supply chain and will likely not reflect all the changes that have been made in the first year of the programme or those that are still going through reformulation cycles and/or where commitments to change recipes have been made but not yet completed. This is what prompted the request for businesses to provide case studies to demonstrate work that had been, or would soon be completed either prior to, or within, the first year time frame for the programme. The next update, due in Spring 2019, should however provide a clearer assessment of progress by industry across all sectors and categories.

Changes in nutrient intakes and levels of obesity will also continue to be monitored via other surveys and datasets. The recently published results from the National Diet and Nutrition Survey showed that sugar intakes have fallen slightly for some age groups (children aged 4-10 and 11-18 years; adults aged 19-64 years)(5). Monitoring of the incidence of obesity in both children and adults takes place regularly through the National Child Measurement Programme(6) and Health Survey for England(7). However, it is not expected that changes will be seen in these data for some time as there is likely to be a significant lag between reductions in intakes and any change in obesity levels.

Publication of this report is part of PHE’s commitment to openness and transparency for the sugar reduction programme. It should be noted that this is the first time a report of this kind, with this level of analysis and data, has been published. PHE is already considering how to improve on the metrics and analyses included in subsequent progress reports. This will include working with data suppliers on improvements that can be made to the raw data used for the analysis; as well as considering the analyses

included and how these can best reflect the progress made across categories, by businesses and in top selling products within each category.

Next steps for the other parts of the wider reformulation programme are set out below. PHE will discuss and engage extensively with stakeholders on all these areas:

- working towards setting guidelines for the foods included in the calorie reduction programme with the aim of publishing these in mid-2019
- progress towards the 2017 salt targets will be assessed and published by the end of 2018. This will be followed by consideration of the next stage for the salt reduction programme
- the wider reformulation programme will begin to consider product ranges targeted explicitly at babies and young children
- the next phase of engagement with specific parts of the out of home sector will now begin to move forward to help participation in the reformulation programme

Acknowledgements

PHE would like to thank the food businesses across all sectors, trade bodies and non-governmental organisations for their engagement in the development of the data and metrics for this report. PHE would also like to thank food businesses for provision of case studies and/or data and for giving permission for their data to be published, where applicable.

References

1. HM Government. Childhood obesity: A plan for action 2016 [Available from: https://www.gov.uk/government/publications/childhood-obesity-aplan-for-action.
2. Public Health England. Sugar Reduction: Achieving the 20%: A technical report outlining progress to date, guidelines for industry, 2015 baseline levels in key foods and next steps 2017 [Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/604336/Sugar_reduction_achieving_the_20_.pdf.
3. HM Revenue & Customs. Soft Drinks Industry Levy Guidance 2017 [Available from: https://www.gov.uk/guidance/soft-drinks-industry-levy.
4. Brandbank. [Available from: https://www.brandbank.com/.
5. Public Health England. National Diet and Nutrition Survey. Results from years 7 and 8 (combined) 2018 [Available from: https://www.gov.uk/government/statistics/ndns-results-from-years-7-and-8-combined.
6. NHS Digital. National Child Measurement Programme England 2016-2017 2017 [Available from: http://content.digital.nhs.uk/ncmp.
7. Health and Social Care Information Centre. Health Survey for England 2016– Adult overweight and obesity: National Statistics 2016 [Available from: https://digital.nhs.uk/catalogue/PUB30169.

Appendices

Appendix 1: Guide to the category tables and charts

Appendix 2: Details of the data sources and methods used to assess progress of the sugar reduction programme

Appendix 3: Detailed assessment of progress by category (separate document)

Appendix 4: Case studies

Appendix 5: Estimated tonnes of sugar purchased

Appendix 6: Update on other workstreams that form the wider reformulation programme and general stakeholder engagement

Appendix 7: Summary of the November 2017 data meetings

Appendix 1: Guide to the category tables and charts

A range of statistical tables and charts highlighting progress between the baseline year and year 1 are provided for each of the categories included in the PHE sugar reduction programme in appendix 3. This guide explains how these tables have been constructed and how to interpret them. For further information about the data sources used see appendix 2.

For all tables, percentage changes have been calculated on unrounded figures. Calculating percentage change using the rounded figures presented in the tables may give a different figure.

Data for the retail and manufacturer sector

Note: For morning goods and cakes a more limited range of information is available for retailers and manufacturers than for other categories.

Table 1: summary table
This table provides sales weighted average (SWA) total sugar content (g/100g) and calories per portion (kcal) for baseline and year 1. All analyses of Kantar Worldpanel data are only based on products where we have real nutrition data available. For further information on this see appendix 2. This table shows how many products have real data for the category in each year and what proportion of all the products in the Kantar Worldpanel dataset this represents. Ranges of sugar content across products in the category are also shown.

Table 2: summary table for retailers and manufacturers separately
This table provides headline measures for SWA total sugar content (g/100g) and calories per portion (kcal) split between retailers (own brand products) and manufacturers (branded products). It also shows what proportion of volume sales (based on products with real nutrition data) fall into each sector.

Analysis by company and product within the manufacturing sector

Table 3: top 10 manufacturers
This table shows the top 10 manufacturers based on total volume sales in year 1 along with the change in their SWA total sugar levels (g/100g) compared to the baseline. Businesses are listed alphabetically and not in order of market share. Businesses have been asked to give permission for their SWA data to be shown. Where permission has

not been given or a business has not responded to the permission request this is indicated in the table.

SWA sugar levels by business have been calculated based on the products available in the Kantar Worldpanel dataset in the baseline year and year 1 with real nutrition information. It is therefore possible for the mix of products to be different in different years for an individual business. The table indicates where there is no comparable data between the baseline and year 1 datasets to calculate a change in SWA. This will either be because data for the baseline year are not available; or because the mix of products with real nutrition data for a particular business or brand is sufficiently different between the baseline and year 1 to mean that any comparison would not be meaningful.

Table 4: case study information
This table presents the case study information for businesses included in table 3. The information in the case studies has been provided by the businesses and PHE has not made an assessment of this.

Table 5: top 10 manufacturers (top sugar brand)
For the top 10 manufacturers in year 1 based on total volume sales of products, the brand in their range with the highest sugar sales is shown. The simple average total sugar content (g/100g) for the products included in this brand is shown. Arrows indicate a change of 2% or more in the total sugar content (g/100g) in year 1 compared to the baseline. Businesses are listed in alphabetical order.

Table 6: top 20 brands
The top 20 brands in the category, based on total volume sales of sugar, are shown alphabetically. In most cases these brands will include a number of different products and the sugar value shown is the simple average of all the products in the brand where real nutrition data is available. For sugar and calories, arrows indicate changes of 2% or more since the baseline. For saturated fat and salt, arrows indicate changes of 10% or more since the baseline.

Analysis by retailer and product within the retail sector

Table 7: top retailers
The top retailers based on total volume sales of products are shown along with the change in their SWA total sugar levels (g/100g) in year 1 compared to the baseline. Businesses are listed alphabetically and not in order of market share. Businesses have been asked to give permission for their SWA data to be shown. Where permission has not been given or a business has not responded to the permission request this is indicated in the table. The table also indicates where there is no comparable data between the 2 datasets to calculate a change in a SWA. For Aldi and Lidl there is no

comparable data for the baseline year as these retailers were not fully represented in the Kantar Worldpanel datasets in 2015.

SWA sugar levels by retailer have been calculated based on the products available in the Kantar Worldpanel dataset in each year with real nutrition information. For more information on this see appendix 2. Hence it is possible for the mix of products to be different in different years.

Table 8: case study information
This table presents the case study information for businesses included in table 7. The information in the case studies has been provided by the businesses and PHE has not made an assessment of this.

Table 9: top retailers (top sugar brand)
For the top retailers, the brand in their range with the highest sugar sales is shown. Each brand will usually include a number of different products and the average sugar content (g/100g) of this brand's products is shown. Arrows indicate a change of 2% or more in the sugar content per 100g since the baseline. Businesses are listed in alphabetical order. For Aldi and Lidl the top brand in year 1 is shown but without an indication of change compared to the baseline as this information is not available.

Table 10: top 20 brands
The top 20 retailer brands in the category, based on total volume sales of sugar, are shown alphabetically. In many cases these brands will include a number of different products and the sugar value shown is the simple average (g/100g) of the total sugar levels of all the products in the brand where real nutrition data is available. For sugar and calories, arrows indicate changes of 2% or more since the baseline. For saturated fat and salt, arrows indicate changes of 10% or more since the baseline.

Table 11: top 20 single serve products
This table is provided for biscuits, chocolate confectionery, sweet confectionery, puddings and yoghurts.

The top 20 single serve products in terms of total volume sales of products in year 1 across manufacturers and retailers are shown. Calories per portion (kcal) in year 1 and the baseline are presented with a percentage change.

Data for the out of home sector

Note: Out of home data tables are not available for chocolate confectionery, sweet confectionery or sweet spreads and sauces due to limited or no data being available on these products.

Table 12: summary table
This table shows updated baseline metrics for year 1. Due to a change in data supplier for the out of home sector and improved data collection it is not possible to compare the current out of home data with previously published baselines. Nutrition data on a greater number of businesses and products, and sales data (based on the reported volume of product consumed) at individual business level, have been collected for year 1 which means the analysis for future reporting of the programme should better reflect the full range of products that are available. These updated baseline figures will be used to monitor change in future years.

Table 13: top 10 out of home businesses
The top 10 out of home businesses in year 1 in terms of category sales (based on the reported volume of product consumed) have been identified and are listed alphabetically. For each of these businesses the table shows SWA total sugar (g/100g) and calories per portion (kcal) for baseline and year 1 where sales and nutrition data are available. Note that simple averages will be displayed if the business has sales for only one product type within the wider product category (eg cookies within biscuits).

The number of products used to calculate the sales weighted average sugar levels and calories per portion (or simple averages where there is limited product sales breakdown or nutrition information) are shown in the table.

Where data are available for sub-categories within a product category (for example cookies within biscuits) a simple average for the sub-category has been calculated from the available products and then applied to estimated volume sales, producing a sales weighted average figure for the category. This same process has been applied for SWA sugar calculations and SWA calories per portion.

Table 14: case study information
This table presents the case study information for businesses included in table 13. The information in the case studies has been provided by the businesses and PHE has not made an assessment of this.

Table 15: sugar levels for Top 10 product types
The top 10 product types in the category by estimated sugar sales in year 1 (based on the reported volume of product consumed) are listed alphabetically by business. Average sugar levels in year 1 based on a simple average of the products in the category where nutrition data are available is shown.

Table 16: calorie levels for Top 10 product types
The top 10 product types in the category by estimated calorie sales in year 1 (based on the reported volume of product consumed) are listed alphabetically. Average calories

per portion in year 1 based on a simple average of the products where nutrition data are available is shown.

Category distribution charts

Charts showing the distribution of total sugar content (g/100g) and calories per portion (kcal) for products available in home in baseline and year 1 have been produced for all categories except cakes and morning goods.

Charts showing the distribution of total sugar content (g/100g) and calories per portion (kcal) for products available out of home in year 1 have been produced for all categories except confectionery and sweet spreads and sauces.

Figure 1: the distribution of total sugar (g/100g) for all retailer and manufacturer products with real nutrition information in the Kantar Worldpanel datasets.
Each products' sugar content has been weighted by the volume of product sold in the year concerned. Vertical lines show the SWAs for each year, alongside the guideline 5% reduction in baseline SWA (sugar g/100g). A density curve which shows the probability distribution of the data is also overlaid. This curve provides a visual summary of how the data are clustered and the likelihood of a product being above or below a particular value.

Figure 2: the distribution of calories per portion (kcal) for single serve retailer and manufacturer products with real nutrition information in the Kantar Worldpanel datasets.
Each products' calorie content per serving is weighted by the number of portions of product sold in the year concerned. The SWA calories per portion (kcal), guideline maximum calories per portion (kcal), and a density curve are also shown.

Figure 3: the distribution of total sugar (g/100g) for products sold out of home.
This is based on the available out of home nutrition data for year 1 (2017), with no weighting by sales. Figure 3 shows the year 1 SWA sugar (g/100g) with a density curve of the distribution overlaid.

Figure 4: the distribution of calories per portion (kcal) for products sold out of home.
This is based on the available out of home nutrition data for year 1 (2017), with no weighting by sales. Figure 4 shows the guideline maximum calories per portion (kcal), the year 1 SWA calories per portion (kcal), and a density curve.

Appendix 2: Details of the data sources and methods used to assess progress of the sugar reduction programme

Estimated sugar content and average calories per portion for food categories covered by PHE's sugar reduction programme

Introduction

Analysis has been undertaken to compare total sugar levels from the baseline year (2015) to year 1 (2017) in the food categories that are included in PHE's sugar reduction programme. The programme is working to reduce the levels of total sugar in products. Information on total sugar has been used to set baselines and track industry's progress in reducing total sugar content.

This document sets out detailed estimates for year 1 of the programme and comparisons with baseline estimates for each of the categories included in the sugar reduction programme. This includes descriptions of the underlying data sources, analytical methods, limitations to the data and analysis, and the analytical decisions made.

Methods

Data sources

PHE has used data from 2 sources to assess progress in year 1 of the sugar reduction programme: commercial consumer panel data from Kantar Worldpanel for purchases of retailers own brand and manufacturers branded products and data from MCA for out of home purchases (eg from quick service restaurants, pubs, coffee and sandwich shops, takeaway and meal delivery businesses). Purchases (volume sales) for the out of home sector are based on the reported volume of product consumed. Nutrition information for the out of home sector has additionally been obtained from individual businesses and websites.

None of the figures presented in the report include confidence intervals since neither Kantar Worldpanel nor MCA provide confidence intervals with their data. However, both Kantar Worldpanel and MCA use panel surveys to collect sales data and hence there will be statistical variability in the estimates presented. Without confidence intervals it's not possible to say whether the changes observed

between baseline and year 1 are statistically significant. Over the next year PHE will consider whether it is possible to estimate statistical variability in the Kantar Worldpanel and MCA estimates and incorporate this into the year 2 assessment.

Retailers and manufacturers

The baseline and year 1 estimates of sugar content by food group for retailers and manufacturers use 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 are weighted to provide a representative picture of total food and drink purchasing in Great Britain over the time period for which data are provided. The 2017 dataset used for monitoring progress in year 1 of the sugar reduction programme covers the 52 weeks ending 10 September 2017, and includes total volume sales in kilograms/litres/servings and nutrition data for individual food products per 100g/100ml/serving as well as details of pack size, number of products included in multipacks etc. The baseline dataset covered the 52 weeks ending 31 January 2016.

Kantar Worldpanel aims to collect all nutrition data from food labels on individual products via the use of fieldworkers who visit key retail stores and capture the information provided on packaging on a rolling 6 monthly basis. Some nutrition information is also collected from a third party, Brandbank(4). Where Kantar Worldpanel is able to do this, usually for the majority of products in a category, this is termed 'real' (real and found) data. Where this is not possible, nutrition values are either copied across from similar products (known as cloned) or an average value for the category or product type is calculated and used instead. This is known as 'imputed' data. For the analyses presented in this report, only 'real' data have been used, except for the total sugar tonnes analysis presented in appendix 5.

Eating out of home sector

Unlike the retail and manufacturing sectors, there is no single data source that provides both sales and 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.

Sales data for foods eaten out of home

For the baseline data presented for 2015, PHE used data on food purchases collected by NPD from their Consumer Reports on Eating Share Trends (CREST) survey. Following a competitive tender process, the contract for providing out of home sales data for 2017 and subsequent years was awarded to MCA. Unlike the sales data available for the 2015 baseline analysis, MCA's sales data (based on the reported volume of product consumed) is provided at individual business level which is invaluable to PHE in its monitoring of the programme. However, this level of data was not available from the NPD data and so was missing from the baseline year.

MCA's Eating Out Panel is a monthly tracker of consumer behaviour in relation to eating and drinking out of home. Respondents are recruited from a panel of over 600,000 UK consumers and 72,000 in-depth online interviews are conducted each year (6,000 per month). The panel is representative of the adult population in the UK in terms of age, gender and region. It's a continuous tracker with interviewing every day of the year but not a continuous set of the same panel members.

Eating Out Panel interviewees provide the following information:

- frequency of eating and drinking out generally and at different times of the day (breakfast, lunch, dinner and snacking)
- full detail of the most recent eating and drinking out occasions:
    - most recent breakfast, lunch and dinner visits within the last 2 weeks and snack visit on the previous day
    - details requested include: channel and brand of purchase, reason for eating out, what was eaten and how much money was spent

In addition to providing data from their existing Eating Out panel, MCA also conducted 2 bespoke data collections:

- a nationally representative survey of 5,000 UK parents to gather information about children's eating and drinking out and
- a survey of 2,000 adults to collect information about drinking out occasions where food is not consumed

Table 1 shows the channels covered by the MCA Eating Out Panel and table 2 shows how the product items collected via the panel have been mapped to the PHE sugar categories.

Table 1: Channels and outlet types covered by the MCA Eating Out Panel

Channel	Types of business included
Chain restaurants	Sit-down chain restaurants with table service
Coffee shops/cafes	Chain and independent coffee shops
Department stores/garden centres/supermarket cafes	In-store cafes and restaurants
Fast food outlets	Chain and independent fast food retailers
Fine dining restaurants	Premium dining
Hotels	Independent and group managed hotels
Leisure facilities	Cinemas, leisure centres, gyms etc.
Local independent restaurants	Local sit-down restaurants
Pub restaurants	Pubs
Sandwich retailers	Chain and independent sandwich retailers
Street food vendors	Food courts, markets, festivals
Supermarkets to-go	Food-to-go sections of supermarkets
Vending machines	Standard and gourmet vending machines
Workplaces	Offices, schools, on-site canteens etc.

Table 2: Description of how MCA product items have been matched to those covered by PHE's programme

PHE programme category	MCA product item categories
Biscuits	Biscuit; biscuit & cookie; cookie; gingerbread; shortbread; fruit bar cereal bar; cereal bar/flapjack; confectionery/biscuit; granola
Breakfast cereals	Cereal; muesli bircher; porridge; cereal/porridge
Cakes	Brownie; bakewell bar slice; almond bar slice; caramel millionaires billionaires bar slice; coughnut - total; churros; rocky road bar slice; cake - total; tiffin; traybake cake/caramel bar/rocky road/flapjack/almond slice. etc.; traybake/slice/bar/bite;energy slice bar bite; muffin sweet; muffin; flapjack; cake/muffin/tart
Chocolate confectionery	Chocolate; chocolate/chocolate bar
Ice cream, lollies and sorbets	Frozen yogurt; ice cream - ice cream; sorbet; ice cream – sundae

Morning goods	Bagel - sweet; Belgian bun; breakfast loaf; bun, bread, pancake, scone & waffle; cinnamon bun roll swirl; croissant; croissant sweet - total inc pain au and twist; crepe; crumpet; Danish pastry; Danish pastry/doughnut; fruit bread fruit toast; iced bun; pancakes; scone; teacake; teacake Welsh cake; waffle; toasted muffin
Puddings	Cheesecake - total; crème brulee; crème caramel; crumble; eclair choux or profiterole; Eton mess; meringue-based dessert; mousse; panna cotta; pie sweet - total; posset; rice pudding; soufflé; sticky toffee pudding; tart sweet - total; tiramisu; trifle; cold dessert; hot dessert; other dessert; pie/tart; jelly; fondant
Sweet confectionery	Sweets; popcorn
Yogurts and fromage frais	Yogurt

Nutrition information for out of home

Nutrition information for the eating out of home sector has been collected by PHE from businesses and additionally by MCA from websites. For 2017 a far more comprehensive range of information has been collected providing a more representative picture of the eating out of home sector compared to 2015.

Table 3 shows the out of home businesses and contract caterers who provided PHE with nutrition information and the number of products that information was provided for.

Table 3: Number of products within the sugar programme where nutrition data were provided for out of home, by business

Business name	No. of products data provided for
Asda Stores Ltd	102
ASK Italian Restaurants	22
Beefeater	13
Benugo	35
Brewers Fayre	19
Caffè Nero	156
Caterlink	87
Chartwells	147
Churchill Services	40
Costa Coffee	594
Crownhouse	15
Elior UK	333

ESS Defence	191
ESS Government Services	228
Fairway Foodservice PLC	26
Greene King PLC.	294
Greggs PLC	48
Harvester	13
Jamie's Italian	8
KFC	20
Marks and Spencer - Café	11
Marks and Spencer - ISB	48
Marston's PLC	179
McDonald's	17
Merlin Entertainments (Bidfood)	632
Mitchell & Butlers - Suburban	10
Nando's	45
Pret A Manger	62
Sodexo	1964
Starbucks	37
Toby Carvery	10
Waitrose	96
Zizzi	14

Table 4 compares the number and type of products with sugar information available in 2015 and 2017. This demonstrates the larger number and wider coverage of the data in 2017 with the exception of confectionery where there are fewer products. However, the out of home confectionery data for 2015 was primarily sourced from 3 cinema chains and as such it is not fully representative of the whole category.

Table 4: Number of products in the out of home sector where sugar values are available in the baseline and year 1, by food category

	Baseline		Year 1	
SUGAR CATEGORY	No. products with sugar values	Types of product (where a breakdown is available)	No. products with sugar values	Types of product (where a breakdown is available)
Biscuits	176	Cookie (16)	863	Cookie (117), shortbread (60), fruit bar cereal bar (66), biscuits (607)
Breakfast cereal	68	Cereal (35), Porridge (19)	222	Cereal(111), granola (23), Bircher muesli (18), porridge (70)
Ice cream, lollies and sorbet	312		294	Ice cream (247), frozen yoghurt (7), sundae (13), sorbet (27)
Puddings	682	Cheesecake (66), pie (68), crumble (57), tart (94)	1038	Cheesecake (132), meringue-based dessert (182), pie sweet - total (106), crumble (128), tart sweet - total (212)
Morning goods	150	Croissant (28), muffin (6), scone (18)	379	Croissant sweet - total inc pain au and twist (71), Danish pastry (46), scone (29)
Yogurts and fromage frais	28		363	
Cakes	487	Cake (177), muffin (74), doughnut (34)	1120	Cake - total (589), muffin sweet (186), doughnut total (70), brownie (109)
Chocolate confectionery	194	Pick and mix (18), impulse (70), sharing (21)	146	Chocolate bars and sharing bags
Sweet confectionery	218	Pick and mix (137), Popcorn (9), sharing (14)	40	Popcorn (15), sweets (25)

Method used to combine nutrition data with sales data for out of home

For the majority of out of home products, there is no one-to-one mapping between the nutrition data that was collected and the sales data per item. For example, a panellist may say that they had an ice cream in JD Wetherspoon but JD Weatherspoon has several flavours of ice cream all of which have different nutrition data, and therefore it's not possible to say which ice cream was consumed. On other occasions nutrition data isn't available for a particular outlet but may be available for the same product type at similar outlets.

The following process was applied to align sales and nutrition data for out of home.

Three different datasets were created from the collected nutrition information:

Set 1: brand matched: for each product type, MCA calculated a simple average of the nutrition information for each available product from that specific brand/business.

Set 2: channel match: for each product type, MCA calculated a simple average of the nutrition information for each available product from that channel.

Set 3: general match: for each product type, MCA calculated a simple average of the nutrition information for each available product on the market (all channels).

These 3 sets of nutrition averages were then matched to the sales data and ranks were calculated to indicate what level of matching was possible for each individual record on the sales dataset. Products which matched at the brand and product level were given a rank of 1 (set 1 averages), products which matched at the channel but not brand level were given rank 2 (set 2 averages) and products which only matched at the whole market level were given a rank of 3 (set 3 averages).

Only sales data (based on the reported volume of product consumed) with a match at brand or channel level in the volume sales analysis is presented in this report. Any data or calculations presented on individual businesses or products uses brand matched data only.

For products which have matched at the channel but not brand level there is an underlying assumption that the nutrition content of that product is the same as the average for other similar products in the same channel (eg cookies in coffee shops).

Baselines for out of home

As a result of the change in data supplier to MCA for the out of home sector, future reporting of progress in this sector will be measured against updated baselines which include more product lines (table 2).

Table 2. Original and updated baselines for the out of home sector

Product category	OOH original Baseline (2015) SWA sugar Source: NPD Crest	OOH updated Baseline (2017) SWA sugar Source: MCA	OOH original Baseline (2015) SWA calories per portion Source: NPD Crest	OOH updated Baseline (2017) SWA calories per portion Source: MCA
Biscuits	38.1	35.0	272	264
Breakfast cereals	9.8	8.7	246	250
Ice cream	24.5	21.1	224	288
Puddings	24.1	22.8	447	422
Yogurts	14.3	12.8	191	110
Cakes	28.5	27.1	347	444
Morning goods	14.7	15.9	355	319

Cells shaded in grey are simple averages due to data limitations

Sweet spreads and sauces are not included because out of home data are is not collected through the MCA panel.

Data analysis

The analysis undertaken for this report has been divided into separate sections for each product category in the sugar reduction programme. An additional section has been produced for drinks which are subject to the soft drinks industry levy (SDIL).

There are 2 parts to the analysis for each product category, one covering retailers own brand and manufacturers branded products and another for the eating out of home sector. It was not possible to combine the data for the 2 sectors because of differences between the 2 datasets and limitations of the data available, particularly for the eating out of home sector. For the same reason it has not been possible to produce exactly the same metrics and analyses for each sector. A summary table of the data and metrics that have been calculated for each sector is shown in table 5. A guide to the category tables and charts is also provided in appendix 1.

Table 5: Available analyses and metrics by product category

Category	Retailers and manufacturers		Out of home analysis
	SWA sugar	SWA portion size	
Biscuits	✓	✓	✓
Breakfast cereals	✓	x	✓
Cakes	Partial – limited category coverage	Partial – limited category coverage	✓
Chocolate confectionery	✓	✓	x
Ice cream, lollies and sauces	✓	✓	✓
Morning goods	Partial – limited category coverage	Partial – limited category coverage	✓
Puddings	✓	✓	✓
Sweet spreads and sauces	✓	x	x
Sweet confectionery	✓	✓	x
Yogurts and fromage frais	✓	✓	✓

Retailer and manufacturer data analysis

Sales weighted average (SWA) figures and associated measures have been calculated at food category and business level for the baseline year (2015) and year 1 (2017).

For ice cream, lollies and sorbet, Kantar Worldpanel have undertaken fieldwork looking at the reporting units for nutrition information. They found that there is a mix across the market in reporting per 100g, per 100mls or on both bases. Most large manufacturers and retailers report per 100g. To be consistent with the approach taken for the baseline, PHE analyses have assumed that nutrition information is presented per 100g for all ice cream businesses except for Asda and Morrisons. PHE intend to test this assumption working with manufacturers to cross-match product information over the coming months. If our working assumption proves to be overly simplistic we will publish revised baseline and year 1 estimates in 2019.

Table 6: Definitions of the sugar sales weighted average and range statistics presented for retailers and manufacturers

Metric	Description
In-home retailer and manufacturer SWA total sugar content (g per 100g)	Average total sugar in g per 100g of products across the category, where each products' sugar content per 100g (or 100ml) has been weighted by the volume of product sold in kg (or litres)
Range of total sugar content across products in category (min-max, g per 100g/ml)	The range of sugar (g/100g) across all products in the category. Zero sugar content has been considered implausible for food categories and hence any products with zero recorded have been excluded from the analysis
Range of total sugar content in top 20 products by volume sugar sales (min-max, g per 100g/ml)	The range of sugar (g/100g) across the top 20 products in the category, where products have been ranked by the volume of sugar sold in kg
SWA calories per portion (for single serve products)	Average calories per portion of products identified as single serve (likely to be consumed by an individual at one time), weighted by the number of portions of the product sold

Portion size analysis

Single serve products, which are likely to be consumed by an individual at one time, have been identified for each category (except breakfast cereals and sweet spreads and sauces) to study the distribution of calories per portion. A description of the types of products included in the portion size analysis is provided in table 7. Both items sold individually and in multi-packs in the Kantar Worldpanel dataset have been taken into account.

Table 7: Descriptions of products considered to be single serve items within each food category

Product category	Single serve items
Biscuits	**Includes:** • biscuit/cereal bars, including two-finger Kit Kats, Penguin bars, etc • mini bags (≤80g) of biscuits/chocolate mallows/rice cakes • large biscuits (eg giant custard cream) and individual cookies up to 80g • packets of three biscuits (eg short bread, bourbons), toaster pastries **Excludes:** all products below 10g or above 80g (eg roll packs, packet biscuits, large packs of rice cakes); selection/assortment boxes; boxes of cookies
Cakes	**Includes:** • single portions/slices of cake products, and single serve items in multipacks **Excludes:** all products below 10g (eg 'bitesize' products) or above 150g (eg large whole cakes, pies, tarts, Swiss rolls.), small whole cakes marketed for sharing occasions
Chocolate confectionery	**Includes**: • individual chocolate bars (sold as single items or part of multi packs) (≤80g) • mini and treat size bags (≤80g) • duo, trio and bar and half chocolate • chocolate lollipops • single festive items (≤80g) eg chocolate bunnies, Santa's or eggs **Excludes:** all products below 10g or above 80g (eg moulded chocolate bars/slabs, sharing bags); boxes/tins of chocolate; seasonal products sold as multiple miniature items (eg chocolate coins, Christmas tree decorations, advent calendars)
Ice cream, lollies and sorbets	**Includes:** • miniature ice creams • ice cream in a cone or on a stick • lollies, choc ices • cups/tubs (≤120g) **Excludes:** all products exceeding 120g
Morning goods	**Includes:** • morning goods sold as single items or single serve items in multipacks **Excludes:** all products below 10g (eg 'bitesize' products) or above 150g; all pancakes and small waffles (people generally consume more than one); finger buns

Puddings	**Includes:** • individually wrapped puddings, puddings in multipacks (eg 2 pack sticky toffee puddings) **Excludes:** all products below 35g (eg 'bitesize' products) or above 200g; patisserie/party selections
Sweet confectionery	**Includes:** • lollipops, tubes and packs of sweets (≤100g) • multipacks where individual items are less than or equal to 100g. **Excludes**: all products below 10g or above 100g; products sold in pellets or pieces; wafers/cones
Yogurts and fromage frais	**Includes:** • yogurts weighing 100-200g **Excludes:** all products below 100g (typically only marketed to children) or above 200g

For the baseline year (2015), a number of pragmatic judgements were made to include or exclude certain products based on assumptions about how likely they were to be consumed in one sitting. In order to ensure consistency when measuring change over time, for year 1 we have attempted to replicate these manual decisions using prescribed criteria and information recorded in the Kantar Worldpanel datasets. The intention is to use this same automated process to identify single serve products in future years.

When the automated process was applied to the baseline dataset there were some small differences in average calories per portion for some categories compared to the published baselines. As a result it was decided to revise the baseline estimates to be consistent with the new methodology. The resulting revised baseline figures for the programme are presented in the top line results in the main report.

Overview of nutritional changes for top brands

To provide an overview of changes in sugar content and other nutrients in the top brands, the information in the category-specific top 20 brand tables was combined and analysed as a whole. This included both manufacturer brands and retailer private label brands for all categories except cakes and morning goods.

Product category-specific considerations and exceptions

Cakes and morning goods

Volume sales of cakes and morning goods in the Kantar Worldpanel dataset are generally presented in terms of portions or servings and information on portion size is not routinely available. There is also a high proportion of imputed nutrition values for these categories in the Kantar Worldpanel dataset. In order to estimate SWA total sugar levels (g/100g) for the category the portion size is needed and has to be collected through fieldwork in retail stores. For the baseline estimates, a sample of products was

weighed in 2014 and these products were used to calculate estimated SWA sugar (g/100g) and calories per portion. A separate sample of products was weighed in 2017 in order to estimate year 1 sugar levels. In both cases, the sample covered between a fifth and a quarter of all the available products. A different set of products were sampled in each year making it more difficult to make direct comparisons.

PHE also asked businesses to supply weight and nutrition data for cakes and morning goods items to supplement the data set. This information was received from Waitrose, Co-op Food, Lidl UK and Premier Foods. As a result of these limitations, coverage of the cake and morning goods sectors is significantly less complete than other food categories. Furthermore, there is very little overlap in specific products included in the baseline analysis and year 1.

Ice creams, lollies and sorbets

Average conversion factors have been applied to ice cream products to convert volume sales in litres to kilograms, and nutrition information provided per 100ml to per 100g. Products were grouped into the eight sub-categories provided below, each with its own conversion factor (see table 8). These were derived from information provided by Froneri on their top-selling products. These conversion factors are to divide by when converting litres into kilograms.

Table 8 List of product groups and conversion factors used for ice creams, lollies and sorbets

Product group	Conversion factor used
Tubs/Soft Scoop	2.2
Premium	1.5
Lollies	1.0
Sorbet	1.4
Frozen yogurt	1.5
Gelato	1.3
Cornish	1.9
Other	1.5

Puddings

Quick-set jellies, powdered desserts and custards have been excluded from the analysis as nutritional information is predominantly provided ‘as sold’, which skews sugar levels in the category towards the higher end.

Soft drinks

Where nutrition information for dilutable fruit squashes has been provided ‘as sold’ (assumed for squash products with more than 12.5g sugar per 100g), this has been converted to nutritional information ‘as consumed’ by dividing by a factor of 5 to account

for dilution. The cut-off of 12.5g and dilution factor were agreed by inspection, looking at the nutrition information and dilution instructions for a sample of products online.

Yogurts and fromage frais

An allowance has been made for the lactose and galactose content in yogurts. The SWA total sugar guideline is based on a 20% reduction of the added sugar content, rather than a 20% reduction of the total sugar content. This adjustment uses a figure of 3.8% for lactose and galactose content in yogurts.

In this year 1 progress report, sugar levels, sugar SWAs and simple averages for yogurts are presented without any adjustment for lactose. However, for comparison of the year 1 SWA for the category against the 5% reduction guideline an allowance has been made of 3.8g lactose per 100g.

Eating out of home data analysis

SWA figures have been calculated at food level for year 1 from the MCA dataset. As described earlier, due to the change in data supplier and improved data collection it is not possible to compare the year 1 out of home metrics with the previously published baselines for 2015. Table 9 sets out the definitions of the SWA and range statistics presented for the eating out of home sector.

Table 9: Definitions of the sales weighted average and range statistics presented for the eating out of home sector

Metric	Description
Sales weighted average (SWA) total sugar content (g per 100g/100ml)	Average total sugar in g per 100g of products across the category, estimated by weighting the average sugar (g/100g) value for products with matched nutrition data by volume sales (based on the reported volume of product consumed)
Range of total sugar content across products in category (min-max, g per 100g/100ml)	The range of total sugar in g per 100g (or per 100ml) across products in the category, where nutrition information has been collected from websites or supplied by businesses
SWA calories per portion	Average calories per portion of products across the category, estimated by weighting the average calories per portion for products with matched nutrition data by the number of servings sold (based on the reported volume of product consumed)

Portion size analysis

All products sold in the out of home sector containing 2000 calories or less per portion have been considered to be single serve and are included in the portion size analysis. The few products with more than 2000 calories are assumed to be designed for sharing (eg sharing ice-cream sundaes). Products sold loose, such as pick n' mix, are not included in the portion size analysis.

Data limitations

Retailer and manufacturer data

Kantar Worldpanel's fieldworkers go into stores to collect nutrition information on a rolling 6 month basis but this 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.

To address this issue, we gave businesses the opportunity to provide us with nutrition and weight information on products reformulated and on the shelf between 1 March 2017 – 31 August 2017. We received data from Kellogg's, Mars, Nestle Confectionery and Lactalis Nestle UK. Having matched the product data to that in the Kantar Worldpanel dataset, PHE found that Kantar Worldpanel's latest round of data collection had captured any changes made.

Kantar Worldpanel collects standard nutrient data for products as sold rather than as they are consumed. There are also a number of products where the information available on packaging is for the product as made up/as consumed, which have been included in the analysis. This is the case for some dilutables and pudding/cake mixes.

Products such as jellies, powdered dessert mixes and custards, which are normally diluted before use, have been excluded from the analysis as the nutrition information provided 'as sold' would inflate sugar levels across the category. Where nutrition information for dilutable juice drinks and pudding/cake mixes is available 'as made up/as consumed' these products have been included in the analyses.

Some errors are known to be present in the nutritional information for certain products eg implausible sugar content. Yogurts is the only category where a minimum sugar content of 3.8g (rounded to 4g) per 100g was agreed due to the naturally occurring lactose; all products with a sugar content lower than this had it replaced to equal 4g/100g in the dataset. For the remaining food categories, all products with zero sugar have been excluded from the analysis as they are considered errors. No further adjustments have been made for these categories due to the difficulty of setting a

minimally acceptable sugar content for the products involved. No changes have been made to the Kantar Worldpanel soft drinks data.

For ice cream, lollies and sorbet, Kantar Worldpanel have undertaken fieldwork and found that there is a mix across the market in reporting nutrition information per 100g, per 100mls or on both bases. Most large manufacturers and retailers report per 100g. To be consistent with the approach taken for the baseline, PHE analyses have assumed that nutrition information is presented per 100g for all ice cream businesses except for Asda and Morrisons.

Presentation of data by business for manufacturers and retailers is based on the data as received from Kantar Worldpanel. PHE are aware of some mergers and acquisitions and have attempted to reflect these as far as possible in the report tables. However, there may be some mergers which have not been reflected.

Eating out of home data

The eating out of home data does not include sales data for individual products at the same level of detail as the Kantar Worldpanel data, meaning SWAs for sugar and calories cannot be calculated in the same way. Furthermore, nutrition data are not available for all products and all businesses. As a result the SWA calculations for out of home rely on a number of assumptions. In particular there is an assumption that the available nutrition data is representative of similar products across the same sales channel. An assumption has also been made that average nutrition composition for a product type is representative of all the products in that group. For example, that the average sugar content of cookies in a particular outlet is a reasonable estimate of the sugar content of any particular cookie in that outlet.

The SWA calculations for the out of home sector are based on the volume of products consumed rather than product sales information relating to purchases at the point of sale.

Reformulation changes may be harder to detect and monitor in the eating out of home sector given the current lack of granular sales data and the use of average sugar, calorie and portion weight values. There is also the risk that businesses that have provided PHE with nutrition data to inform the 2017 analyses may not necessarily supply the same data each year to inform annual progress reporting. This could skew the average values used for SWA estimates and impact on the comparability of results. However, many businesses have a commitment to transparency and making nutrition information available to customers through websites which will allow average changes in sugar content over time to be detected.

Analysis of SDIL products purchased through businesses in the out of home sector is not provided in this report. This is due to the complexity of distinguishing between manufacturers branded products and out of home businesses own label products, particularly where drinks are mixed or made up on the premises.

Quality assurance

Adjustments to the nutrition data were made for some products in the Kantar Worldpanel dataset before analysis was undertaken. This included where data is presented on the label for products as sold and/or as consumed; decisions around minimum sugar levels in each category and conversion factors being applied to some foods (eg ice cream).

The data sources and methodology used in this report have been presented to external stakeholders including retailers, manufacturers, eating out of home businesses, trade bodies and non-governmental organisations. Feedback was requested from attendees and the responses received were used to check that PHE's proposals, the category definitions, analytical methods and data sources used were appropriate.

The commercial datasets used from Kantar Worldpanel and MCA have quality control measures built into their production processes. In addition, PHE has carried out its own quality control checks of all data used and all analyses.

These include:

- checking datasets for implausible values, and excluding those from the analysis
- checking the quality of certain variables by cross checking against other variables that show product detail in the datasets, or cross-referencing to other datasets
- replicating analyses as a quality control measure
- examining data behind business-specific results to ensure plausible and comparable (otherwise excluded)
- checking data against information supplied by businesses
- specific data checks and questions sent to data suppliers as and when they arise where there are anomalies or other queries over the collection of certain variables or the viability of data collection from certain outlets

Appendix 4: Case studies

In considering the data that it would use for this progress report, and how this would be presented, PHE acknowledged that not all reformulation progress would be captured. Businesses were therefore invited to submit case study data to illustrate the reformulation changes made and successes achieved in businesses' top selling products.

Data request

Case study information was requested from all businesses in a series of industry and stakeholder data meetings, held in November 2017, and again in the corresponding data request email (November 2017). Case study information was also separately requested from the eating out of home sector via an earlier email in October 2017 and through previous requests for data from the sector.

Through the case studies PHE was aiming to highlight the success of any reformulation activity which may not have been captured in the datasets used to assess progress, but which could be used as evidence to show progress towards the 5% (and ultimately 20%) sugar reduction ambitions.

This reformulation activity was to be included if it had taken place in one of three time periods:

- pre baseline (1 January 2013 to 31 December 2015)
- between baseline and end year 1 (1 January 2016 to 31 August 2017), and
- post year 1 (1 September 2017 to 28 February 2018)

Businesses were invited to submit one 50 word case study with supporting quantitative data for each of the sugar reduction categories included in their portfolio across the three time periods specified. The quantitative information supporting the corresponding narrative was required to include portion size changes (in grams) and the sugar content of products (g/100g) before and after the reformulation process. As explained at the November 2017 data meetings, and in the subsequent email correspondence, if the case study information exceeded the 50 word limit revisions would be made by PHE.

Data received

Following the requests made, information was received from 54 businesses (24 OOH businesses, 10 retailers and 20 manufacturers).

Evaluation and revisions to case studies

The narrative and supporting quantitative data for each of the case studies was reviewed by 2 PHE nutritionists. The narrative was revised and edited by PHE only so that the information submitted from all businesses would be presented in a standard format. No calculations were performed by PHE on the supporting data received. All sales weighted averages, simple averages, percentages and sugar tonnage figures used in the case studies were provided by the relevant business.

Some case studies referenced products that were scheduled to launch either as new products, or as a relaunch of an existing product following reformulation, in 2018. While these actions may now have been completed, it was agreed that the narrative for both these instances would continue to be described as being achieved in the future as this is how the data was presented when first submitted to PHE ie “In 2018, xx products will be reformulated” and “In 2018, xx products are scheduled to launch”.

For the different product categories, the sugar content of products before and after reformulation was declared as ranges eg “the sugar content ranging from 8g to 10g sugar/100g before reduction, compared with 6g to 8g sugar/100g after reduction”

Excluded case studies

Case studies where the reformulation was not confirmed ie where the reformulated recipe had not been finalised, or where reformulation resulted in a significant increase in other nutrients, were not included in the progress report. In addition, case studies which were mainly narrative and there was limited or no data supplied to support the case study information were also not included. Seven case studies were not included on this basis.

Case study information that was submitted for products that fall outside of the 9 categories which form the PHE sugar reduction programme were not included in the year one progress report; case studies submitted from 2 businesses were not included on this basis. Also excluded from the report were case studies submitted for drinks that will be included in the PHE sugar reduction programme for juice and milk based drinks. Case studies submitted by 6 businesses were not included on this basis. As part of the monitoring of the progress for juice and milk based drinks, businesses will be invited to submit case studies for these products when appropriate and this reformulation activity will be captured at that point. PHE is responsible for monitoring the reformulation progress for products which are included in the SDIL, as such case study information that relates to reformulation of soft drinks were included in the report (6 case studies).

Case study checks by businesses

As the information to be presented in the report was revised from what was submitted, 47 businesses were invited to review their case studies ahead of its inclusion in the report. They were asked to respond only if they no longer wished for the information to be included. A non-response was considered as approval for the information to continue to be included in the report.

Three businesses confirmed they were happy for the revised information to be included in the report. An additional 26 businesses did not respond so these case studies were included unchanged.

Fifteen businesses confirmed the information they submitted was no longer correct and asked for revisions to be made. Where information was no longer accurate this was updated. General updates or other changes requested were not actioned.

Three businesses confirmed they would no longer like their information included in the report and were therefore removed.

Summary of data presented

A total of 138 case studies across 44 businesses are included below. Where appropriate case studies are referenced in the tables where progress by individual businesses is included in each category summary (see appendix 3). However, all case studies submitted and approved for publication are presented below.

1. Asda Stores Ltd

Category	Timeframe	
Biscuits	Pre-Baseline	Pre-baseline the recipes of six cereal bars were reformulated; the sugar content of 4 fruit and grain flavours ranged from 30.8g to 40.8g sugar/100g before reduction, compared with 29.4g to 30.7g sugar/100g after reduction; Smart Price Choc and Nut bars reduced from 23.2g to 20.9g sugar/100g and Good and Counted Chocolate bars reduced from 21.1g to 18.4g sugar/100g.
	Post-Year 1	In September 2017 reformulation of five Premium cookies achieved a 6% reduction in SWA for sugar/100g; the sugar content ranged from 32g to 45g sugar/100g before reduction, compared with 28.1g to 36g sugar/100g after reduction.
Breakfast cereals	Pre-Baseline	In 2014 reformulation of Choco Snaps, Frosted Flakes, High Bran and Smart Price Cornflakes was achieved, sugar content ranged from 9.3g to 37g sugar/100g before reduction, compared with 3.9g to 35g sugar/100g after reduction. In 2015 reformulation was achieved in thirty-one products, the sugar content ranged from 8.1g to 36.8g sugar/100g before reduction, compared with 7.7g to 32.7g sugar/100g after reduction.
Cakes	Baseline to Year 1	Reformulated the recipes of five in-store bakery doughnuts, reducing the sugar in the base dough recipe by up to 50% without any technical issues or changes to processing which achieved a 4% reduction in SWA for sugar/100g. The sugar content ranged from 11.2g to 18.6g sugar/100g before reduction compared with 2.9g to 14.6g sugar/100g after reduction.
Ice cream, lollies and sorbets	Pre-Baseline	In 2015 the recipes of six ice creams were reformulated, a small reduction in added sugar resulted in a 2% reduction in SWA for sugar/100g. Calorie content across the six recipes ranged from 182 kcal to 214 kcal/100g before reduction, compared with 170 kcal to 196 kcal/100g after reduction.
Puddings	Pre-Baseline	In 2015 the recipes of nine puddings were reformulated, the sugar content ranged from 22.5g to 48.4g sugar/100g before reduction, compared with 18.6g to 40g sugar/100g after reduction. Reformulation included the sugar content of two twin-pack puddings (Spotted Dick and Chocolate Sponge) reducing from 25.8g to 25g sugar/100g and from 26.6g to 25.3g sugar/100g respectively.
Soft drinks	Pre-Baseline	Sixty-eight soft drinks were reformulated, with the sugar content ranging from 3.5g to 12.5g sugar/100g before reformulation, compared with 0g to 11.2g sugar/100g after reformulation.
Yogurts and fromage frais	Pre-Baseline	In 2015 the recipes of seven flavours of low fat yogurts were reformulated by reducing the sugar content of the yogurt base by 10%. Sugar content ranged from 12.5g to 17.2g sugar/100g before reduction, compared with 10.1g to 17g sugar/100g after reduction. Reformulation included the sugar content of Mango and Passionfruit Yogurt reducing from 12.9g to 10.1g sugar/100g.

2. Benugo

Category	Timeframe	
Cakes	Post-Year 1	Portion size reduction will be completed in eight products; portion sizes ranged from 70g to 170g/serving before reduction, compared with 60g to 150g/serving after reduction. This reduction, together with recipe reformulation will result in the sugar content ranging from 20.6g to 37.9g sugar/serving before reformulation, compared with 16.4g to 30.4g sugar/serving after reformulation. In 2018, a further two products will be reformulated.
Puddings	Post-Year 1	The portion size of Blackberry and Apple Tart is being reduced from 130g to 103g/serving, contributing to a reduction in the sugar content from 25.8g to 16.5g sugar/serving (36% sugar reduction). In 2018 Pecan Plus Pie is scheduled to be reformulated with the aim of reducing the sugar content from 25.3g to 20.2g sugar/serving (20.2% sugar reduction).
Biscuits	Post-Year 1	In 2018, Double Chocolate Cookies and Oat and Raisin Cookies will be reformulated with the aim of reducing the sugar content per serving by 20%.

3. Bidfood

Category	Timeframe	
Cakes	Post-Year 1	As one of the biggest contributors to the category's SWA, five tray cakes have been reformulated (Victoria Sponge, Carrot, Lemon Drizzle, Coffee and Waltnut, Chocolate Fudge); for example the sugar content of Lemon Drizzle cake was reduced from 35.5g to 24g sugar/100g. These products are scheduled to launch early 2018. Seven products in the Everyday Favourites baking range have also been reformulated.
Ice cream, lollies and sorbets	Post-Year 1	The recipe of four ice creams have been reformulated (Strawberry, Chocolate, Vanilla, White Vanilla) achieving at least a 20% reduction in sugar in each product; these product are schued to launch early 2018. Reformulatoin included Strawberry Flavour Ice Cream reducing from 20.5g to 15.4g sugar/100g.

4. Britvic

Category	Timeframe	
Soft drinks	Pre-Baseline	In 2014 and 2015 respectively, added sugar variants of Fruit Shoot and Robinson's products were removed from the market. Meaning since 2013, through reformulation, innovation and marketing Britvic has removed 20 billion calories annually.

5. Caterlink

Category	Timeframe	
Puddings	Baseline to Year 1	Caterlink ensure schools offer a 50% fruit dessert two days/week and encourage schools to have a fruit only dessert at least one day/week with some schools adopting this two days/week. In addition they have removed fruit flavoured yogurts, replacing them with natural yogurt and reduced their portion sizes in line with School Food Standards.

6. Casual Dining Group

Category	Timeframe	
Ice cream, lollies and sorbets	Post-Year 1	In November 2017 reformulation of the Bella Italia gelato range resulted in an average reduction of 18.3% sugar/100g (32.6kg of sugar removed from the supply chain annually). The sugar content of Vanilla, Chocolate and Strawberry Gelato ranged from 23g to 27g sugar/100g before reduction, compared with 16.9g to 19.4g sugar/100g after reduction.

7. Cereal Partners Worldwide

Category	Timeframe	
Breakfast cereals	Pre-Baseline	Pre-baseline six Nestlé products were reformulated; the sugar content of Cookie Crisp reduced from 24.5g to 24.2g sugar/100g, Multigrain Cheerios reduced from 21.4g to 20.9g sugar/100g, Honey Cheerios reduced from 24.5g to 24g sugar/100g, Honey Nut Shredded Wheat reduced from 16.1g to 15.1g sugar/100g, Coco Shreddies reduced from 28.9g to 28.5g sugar/100g and Frosted Shreddies reduced from 28.8g to 28.4g sugar/100g.
	Post-Year 1	Reformulation of Nestlé Multigrain Cheerios is expected to reduce the SWA for sugar/100g of Nestlé breakfast cereals by 2.9%, removing 250 tonnes sugar annually. Reformulation includes wholegrain increasing from 77.9% to 81.3% resulting in an increase in the fibre content from 7.8g to 8.9g fibre/100g; this increase is accompanied by a sugar reduction from 20.8g to 18.0g sugar/100g.

8. Compass (Chartlwells)

Category	Timeframe	
Puddings	Pre-Baseline	Primary and secondary school menus adhere to the school food standards ensuring a minimum of two fruit based desserts are available across the week with yogurt and fruit promoted as an alternative dessert. Independent schools follow internal nutrition guidelines ensuring a variety of chopped and whole fruits are available at each service.
Cakes	Post-Year 1	Higher sugar desserts have been reformulated or removed from the menu and reductions in portion size have been made in line with the school food standards portion guidelines. For example, in secondary schools the portion size of Almond and Orange Cake was reduced from 171g to

		80g/serving resulting in a 40% reduction in the sugar content of a single portion.
Puddings	Post-Year 1	In secondary schools the portion size of Pineapple Upside Down Pudding has been reduced from 135g to 100g/serving resulting in a 10% reduction in the sugar content of a single portion. The portion size of Apple and Blackberry Charlotte has also reduced from 185g to 100g/serving resulting in a 44% reduction in the sugar content of a single portion.

9. Compass (ESS)

Category	Timeframe	
Cakes	Post-Year 1	The approach to sugar reduction has been to reformulate all scratch cook recipes. To date 16.8% sugar reduction has been achieved reducing the average sugar content of cakes from 32.8g to 27.3g sugar/100g.
Puddings	Post-Year 1	The approach to sugar reduction has been to reformulate all scratch cook recipes. To date 9% sugar reduction has been achieved, reducing the average sugar content of puddings from 20.54g to 18.7g sugar/100g.

10. Co-operative food

Category	Timeframe	
Breakfast cereals	Pre-Baseline	In January 2015 two breakfast cereals were reformulated, the sugar content of Frosted Flakes was reduced from 37g to 34.3g sugar/100g and Choco Rice Crispies was reduced from 35g to 32.7g sugar/100g.
	Baseline to Year 1	In January 2017 fourteen breakfast cereals were reformulated, the sugar content ranged from 7.7g to 32.7g sugar/100g before reduction, compared with 7.1g to 32.1g sugar/100g after reduction. Reformulations included the sugar content of Cornflakes reducing from 7.7g to 7.1g sugar/100g, Frosted Flakes reducing from 29.6g to 28.5g sugar/100g, and Choco Rice Crispies reducing from 32.7g to 32.1 g sugar/100g.
	Post-Year 1	Reformulation includes the sugar content of Multigrain Hoops reducing from 19g to 17g sugar/100g (November 2017) and the sugar content of Cornflakes reducing from 7.1g to 6.6g sugar/100g (January 2018). Since 2015, reformulation of the breakfast cereal range has led to a total sugar reduction of 10.9million teaspoons (based on annual sales).
Ice cream, lollies and sorbets	Baseline to Year 1	Reformulation of two frozen yogurts included reducing the sugar content of Mango and Passionfruit from 27.3g to 19.3g sugar/100g and Mixed Berry reducing from 26.3g to 19g sugar/100g. Reformulation was also completed in Lemon Sorbet which reduced from 24.3g to 20.3g sugar/100g and Raspberry Sorbet which reduced from 28.9g to 18.3g sugar/100g.
Puddings	Baseline to Year 1	Reformulated the recipes of two cheesecakes; the sugar content of Vanilla Cheesecake (530g and 2x90g) reduced from 20.7g to 20.1g sugar/100g and Chocolate Dunk Cheesecake reduced from 24.1g to 23.4g sugar/100g.

	Post-Year 1	Between September and December 2017 thirteen desserts were reformulated (four twin-pack cheesecakes, five trifles, two mousses, a Chocolate Chaos Pot and Chocolate Sundae); the sugar content ranged from 14 .4g to 24g sugar/100g before reduction, compared with 12.8g to 22.9g sugar/100g after reduction.
Sweet confectionery	Baseline to Year 1	In May 2017 nine products were reformulated, the sugar content ranged from 49.2g to 70g sugar/100g before reduction, compared with 47g to 68g sugar/100g after reduction. Reformulation and a reduction in portion size in four products has resulted in over 43 million teaspoons of sugar being removed from the confectionery range (based on annual sales).
Yogurts and fromage frais	Pre-Baseline	In September 2015 sugar was reduced in the recipes of two low fat red fruit yogurts (sold as a multipack 4x100g). The sugar content of the Strawberry Flavour Yogurt reduced from 13.9g to 11.9g sugar/100g and the Raspberry Flavour reduced from 14.9g to 11.2g sugar/100g.
	Baseline to Year 1	Reformulation of Irresistible Champagne Vanilla, Lemon Curd and Black Cherry Yogurts resulted in the sugar content reducing from 16.3g to 15.4g sugar/100g, 22.6g to 20g sugar/100g and 14.7g to 13.6g sugar/100g respectively. Mango & Passionfruit Top Hat Yogurt was also reformulated reducing from 13g to 11.5g sugar/100g accompanied by the portion size reducing from 210g to 190g.

11. Costa Coffee

Category	Timeframe	
Cakes	Baseline to Year 1	Since July 2017 the recipes of Raspberry Almond Finger and Blueberry Muffin have been reformulated, reducing the sugar content by 6.9% and 9.1% sugar/serving respectively. Chocolate Tiffin was also reformulated, reducing the sugar content by 7.8% sugar/serving and resulting in the removal of nearly three tonnes of total sugar.
Morning goods	Baseline to Year 1	A combination of reformulation and portion size reduction of the Teacake reduced the sugar content by 12.6% sugar/serving.

12. Dunhills PLC (Haribo UK)

Category	Timeframe	
Sweet confectionery	Baseline to Year 1	HARIBO's best-selling mini-bags have been standardised to 16g (55kcal/serving) and 25g (86kcal/serving), meaning that all mini-bags are within PHE's target for single serve items being less than 150kcal. HARIBO has also made a number of on-pack labelling changes in order to provide further portion guidance.
Sweet confectionery	Post-Year 1	In 2018 HARIBO will launch a new Fruitilicious product that is 30% lower in sugar than the category average, containing 33g sugar/100g. Fruitilicious will launch in the UK market with the lowest sugar content per 100g when compared with other recently launched reduced sugar products.

13. Fage (UK) Ltd

Category	Timeframe	
Yogurts and fromage frais	Post Year 1	Reformulation of yogurts in February 2018; the sugar content ranged from 11.7g to 18.8g sugar/100g before reformulation, compared with 7.6g to 18g sugar/100g after reformulation.

14. Froneri

Category	Timeframe	
Ice cream, lollies and sorbets	Pre-Baseline	Nestlé: In January 2015 the fruit content of FAB Strawberry Lollies was increased and sugar content was reduced from 22.2g to 18.2g sugar/100g (18% sugar reduction).
	Post-Year 1	Kelly's of Cornwall Clotted Cream Cornish and Dairy Vanilla Cornish Ice Creams were both reformulated reducing the total sugar content by 8% to 12% approximately.
	Post-Year 1	Nestlé: Reducing the total sugar in the base of Fruit Pastilles by 10% will result in an annual reduction of 638 tonnes of sugar. Further reformulation of FAB Strawberry Lollies is expected to achieve a reduction of 212 tonnes of sugar/year.
	Post-Year 1	Reducing the amount of sugar in the coating and mix of Nobbly Bobbly Lollies will reduce the sugar content from 22.7g to 20.5g sugar/100g and result in an annual reduction of 179 tonnes of sugar.

15. Gather & Gather

Category	Timeframe	
Sweet spreads and sauces	Baseline to Year 1	In May 2016 Gather & Gather replaced Sun-Pat peanut butter in one of its largest contracts (22,000 customers); with Whole Earth no added sugars peanut butter, reducing the amount of sugars by 3g sugar/100g or 0.9g sugar/30g serving.

16. Greggs PLC

Category	Timeframe	
Breakfast cereals	Post-Year 1	In early 2017 two porridge pots were reformulated with gluten free oats. The reformulated recipes included a reduction in sugar, skimmed milk powder and dried glucose syrup contributing to a reduced sugar content of both products (Simply Creamy reducing from 6 to 4.3g sugar/100g and Golden Syrup reducing form 6.5g to 4.4g sugar/100g) and 17% reduction in the breakfast cereal category.

17. Iceland Foods Ltd

Category	Timeframe	
Ice cream, lollies and sorbets	Post-Year 1	Sugar reduction was achieved in six ice creams, with the sugar content ranging from 18.7g to 23.7g sugar/100g before reduction, compared with 15.5g to 21.2g sugar/100g after reduction. Reformulation included reducing added sugars (eg glucose syrups), replacing the sweetness through more effective use of sugars (synergies), and using sweetness modulating flavours where needed.

18. J Sainsbury's

Category	Timeframe	
Puddings	Post-Year 1	In November 2017 eleven reformulated single-serve chilled pot desserts were relaunched. Reformulation achieved a 10% reduction in sugar/100g, with average sugar content across the desserts reducing from 19.4g to 17.5g sugar/100g following reformulation.
Yogurts and fromage frais	Baseline to Year 1	The recipes of thirty-three Sainsbury's own brand yogurts (including Taste the Difference and core products) were reformulated, removing more than 37 tonnes of sugar across the range. Sugar reduction was achieved through altering both the fruit compotes and yogurt bases. Following reformulation average sugar content across the range reduced from 15.3g to 12.8g sugar/100g.

19. Kellogg Co. of G B Ltd

Category	Timeframe	
Biscuits	Pre-Baseline	Reformulation of three Special K bars included reducing sugar and increasing fibre; the sugar content ranged from 34g to 36g sugar/100g before reformulation, compared with 30g to 31g sugar/100g after reformulation.
Breakfast cereals	Pre-Baseline	Reformulation of Honey Loops (2013) and Bran Flakes (2015) reduced the sugar content from 29g to 21g sugar/100g and from 20g to 14g sugar/100g respectively. In 2015, sugar reduction of between 4% and 71% was achieved across the Special K range; sugar content ranged from 14g to 28g sugar/100g before reformulation, compared with 4g to 27g sugar/100g after reformulation.
Breakfast cereals	Post-Year 1	Reformulation of three breakfast cereals in 2018, two of which were best-selling cereals, included reductions in sugar and salt. The sugar content of Rice Krispies has reduced from 10g to 7.9g sugar/100g (20% sugar reduction); Rice Krispies Multi-grain Shapes has been reduced from 21g to 15g sugar/100g (30% sugar reduction); Coco Pops Original has been reduced from 30g to 17g sugar/100g (43% sugar reduction).

20. Kinnerton Confectionery

Category	Timeframe	
Chocolate confectionery	Pre-Baseline	In 2014 the portion size of Milk Chocolate Easter Egg was reduced from 50g to 45g.

21. Lactalis Nestlé UK

Category	Timeframe	
Puddings	Post-Year 1	Nestlé Rolo Dessert: Reformulation of the recipe removed 5% of added sugar and 5% of saturated fat, achieving a 5% reduction in sugar/100g (reducing from 24.5g to 24.2g) and a 10% reduction in calories/serving (reducing from 170kcal to 154 kcal).
Yogurts and fromage frais	Post-Year 1	Munch Bunch Double Up: Reformulation in 2017 of the base used across the fromage frais range (Strawberry Vanilla, Strawberry Raspberry, Strawberry Banana, Strawberry Peach) removed 10% of added sugar, achieving a 7% reduction in sugar/100g and a 3% reduction in calories/serving. The sugar content of the fromage frais ranged from 13.4g to 13.5g sugar/100g before reduction compared with 12.5g sugar/100g after reduction.
	Post-Year 1	Ski Yogurt: Reformulation in 2017 of the yogurt range (three products 4x120g) removed added sugar, achieving a 10% reduction in sugar/100g and a 7% reduction in calories/serving. The sugar content of the yogurts ranged from 12.4g to 12.8g sugar/100g before reduction, compared with 11.3 to 11.4g sugar/100g after reduction.
	Post-Year 1	Rachel's Yogurt: Reformulation in 2017 of the yogurt range (four products) removed added sugar, achieving a 5% reduction in sugar/100g and a 2% reduction in calories/serving. The sugar content of the yogurts ranged from 13.1g to 14.4g sugar/100g before reduction, compared with 12.5g to 13.7g sugar/100g after reduction.

22. Lidl UK

Category	Timeframe	
Biscuits	Baseline to Year 1	Ginger Nuts were reformulated in 2017, reducing the sugar content from 34g to 31.1g sugar/100g (8.5% sugar/100g reduction).
	Post-Year 1	In 2018 seven reformulated biscuits will be launched with sugar content ranging from 19.7g to 52.7g sugar/100g before reduction, compared with 16.3g to 48.3g sugar/100g after reduction (percentage sugar reduction achieved ranging from 5.9% to 18.4% sugar/100g).
Breakfast cereals	Pre-Baseline	Lidl have been reformulating their Crownfield Cornflakes since 2012. Between 2013 and 2016 the sugar content was reduced from 6g to 1.3g sugar/100g (78% reduction), and the product now contains no added sugar. This was achieved as part of a reduction across thirteen 'kids' cereals prior to 2016.
	Baseline to Year 1	Reformulation of ten breakfast cereals resulted in the sugar content ranging from 6g to 29g sugar/100g before reduction,

		compared with 1.3g to 24.9g /100g after reduction (percentage sugar reduction achieved ranging from 1.4% to 78.3% sugar/100g).
	Post-Year 1	In 2018 ten reformulated breakfast cereals are scheduled to launch, with sugar content ranging from 12.4g to 36g sugar/100g before reduction, compared with 10.9g to 28.9g sugar/100g after reduction (percentage sugar reduction achieved ranging from 5% to 19.7% sugar/100g).
Chocolate confectionery	Baseline to Year 1	The pack size of Mini Chocolate Bars has been reduced from 350g to 242g for the Caramel variant, from 350g to 256g for Candy Cream, and from 350g to 252g for the Coconut variant. This reduction has resulted in a 0.2% reduction in the category SWA for sugar/100g.
Morning goods	Post-Year 1	Scheduled to launch in 2018, the recipes for three in-store bakery sweet buns (Belgian, Cinnamon, Lemon Drizzle) have been reformulated to contain 20% less sugar. Together these products contribute 7.1% sugar to the category so the reformulation will result in a 1% reduction in the category SWA for sugar/100g.
Sweet confectionery	Baseline to Year 1	In October 2016 the pack size of Jelly Beans (Sweet and Sour variants) was reduced from 250g to 200g. This reduction resulted in a 0.2% reduction in the category SWA for sugar/100g.
Sweet spreads and sauces	Post-Year 1	Reformulated the recipes of both variants of Mister Choc Peanut Butter (launched in January 2018), reducing the sugar content by 6.85g sugar/100g in the crunchy variety and by 35.85g sugar/100g in the smooth variety. This reformulation will result in a 21.8% reduction in the category SWA for sugar/100g.

23. Mars Chocolate UK

Category	Timeframe	
Chocolate confectionery	Pre-Baseline	In 2013 the portion sizes of four standard size chocolate bars were reduced, Mars from 58g to 51g, Snickers from 58g to 48g, Twix from 58g to 50g and MilkyWay from 21.9g to 21.5g.

24. McDonald's

Category	Timeframe	
Morning goods	Post-Year 1	Scheduled to launch in 2018, recipe reformulation of pancakes has achieved a 5% reduction in sugar/serving.
Sweet spreads and sauces	Post-Year 1	Scheduled to launch in 2018, portion size reduction of pancakes syrup has achieved a 27% reduction in sugar/serving.

25. Mitchell & Butlers – Suburban

Category	Timeframe	
Ice cream, lollies and sorbets	Post-Year 1	In 2018 Mitchell & Butlers will launch a reformulated ice cream which has a 12% lower sugar content.

26. Mondelez

Category	Timeframe	
Biscuits	Post-Year 1	In September 2017 the portion sizes of four Belvita products were reduced from 50g to 45g/serving, resulting in a reduction in calories, fat and sugar in each serving. Calorie content ranged from 216 kcal to 220 kcal/serving before reduction, compared with 196 kcal to 200 kcal/serving after reduction.
Chocolate confectionery	Baseline to Year 1	Portion size reduction of seven multipack bars sold in discounters, independent and high street stores was completed, products ranged from 25.6g to 54.4g before, compared with 20g to 40g after reduction. The portion size of two multipack bars sold in grocery channels was also reduced, ranging from 38g to 54.4g before, compared with 32g to 47g after reduction.
	Post-Year 1	In 2017 the portion size of Cadbury Picnic multipack bars sold in discounters, independent and high street stores was reduced from 38g to 32g.
Calories, other nutrients and reduction across other categories	Baseline to Year 1	Prior to the 2015 baseline, as part of the chocolate industry's commitment to ensuring all single serve chocolate confectionery products are under 250kcal/serving, Cadbury Bar and a Half products were delisted.

27. Morrisons Ltd

Category	Timeframe	
Breakfast cereals	Baseline to Year 1	Using a gradual reformulation process the sugar content of Mighty Malties was reduced from 16g to 14g sugar/100g in summer 2016, and from 14g to 11g sugar/100g in November 2017.
	Post-Year 1	Following years of reformulation, six cereals have been further reformulated and are scheduled to launch in December 2017; the sugar content ranged from 7.1g to 28g sugar/100g before reformulation, compared with 6.6g to 25g sugar/100g after reformulation. This will result in the removal of 112 tonnes of sugar per annum.
Cakes	Post-Year 1	Reformulation of eleven bought in cakes has been completed, and will result in a 0.8% reduction in the SWA for sugar/100g and the removal of 59.3 tonnes sugar per annum; these products are scheduled to launch in April 2018. Reformulation includes the sugar content of The Best Chocolate Cake reducing by 16.4%, removing 11.2 tonnes sugar per annum.
Ice cream, lollies and sorbets	Post-Year 1	Reformulation of five ice cream cones has been completed, which will result in a 6% reduction in the SWA for sugar/100g and the removal of 126.8 tonnes of sugar per annum; these products are scheduled to launch in April 2018. Reformulation includes the sugar content of Strawberry Cone reducing by 15.3%.

Puddings	Post-Year 1	Reformulation of eighteen chilled desserts has been completed, which will result in a 3.4% reduction in the SWA for sugar/100g and the removal of 185.8 tonnes of sugar per annum, these products are scheduled to launch in April 2018. Reformulation includes the sugar content of Strawberry Trifle 600g and Raspberry Trifle 600g reducing by 14.7% and 15.9% respectively, removing 24.8 tonnes sugar per annum.
Sweet confectionery	Post-Year 1	Reformulation and a reduction in pack size of five products (Strawberry Pencils, Rainbow Belts, Cola Laces, Strawberry Laces and Fizzy Strawberry Straws) from 75g to 65g will result in a 0.3% reduction to the SWA for sugar/100g and the removal of 34 tonnes sugar per annum.
Yogurts and fromage frais	Post-Year 1	Reformulation of the recipes of three popular low fat fruit yogurts has achieved a reduction in sugar content which ranged from 12.5g to 13.8g sugar/100g before reduction compared with 11.6g to 11.7g sugar/100g after reduction. This will result in a 4.4% reduction in the SWA for sugar/100g and removal of 21.1 tonnes sugar per annum.

28. Muller UK & Ireland

Category	Timeframe	
Yogurts and fromage frais	Baseline to Year 1	Reformulation of the bestselling Müller Fruit Corner Strawberry twin pot reduced the sugar content from 15.6g to 12.6g sugar/100g, reducing calories per portion by over 10%. All added sugar was removed from Müller light Greek style yogurt, reducing sugar content from 9.2g to 7.2g sugar/100g. Müller Kids Corner twin pot yogurts were also reformulated (removing 50% added sugar), reducing the average sugar content from 16g sugar/100g to 10g or less/100g.
	Post Year 1	In January 2018 the recipe of the Müller light Fruitopolis Greek style yogurt range (3 products) was reformulated, removing the added sugar and reducing the total calorie content by over 20%. The average sugar content reduced from 9.7g to 5.8g sugar/100g following reformulation.

29. Nestlé UK and Ireland

Category	Timeframe	
Biscuits	Baseline to Year 1	Nestlé added extra milk and cocoa to the recipe for all KitKat products achieving a small sugar and calorie reduction, reducing from 51.6g to 51g sugar/serving and from 107 kcal to 104 kcal/serving.
Chocolate confectionery	Pre-Baseline	In 2014 portion size reduction was completed in twenty products (brands: Smarties, Milkybar, Yorkie, Lion, Drifter and KitKat); products ranged from 22g to 80g before reduction, compared with 21g to 75g after reduction. In 2015 portion size reduction was completed in seven products (brands: Aero and KitKat); products ranged from 43g to 78.3g before reduction, compared with 40.2g to 70g after reduction.

	Baseline to Year 1	Nestlé increased the milk content of the core Milkybar recipe, making milk the primary ingredient. Reformulation achieved a sugar and calorie reduction across the Milkybar range (eg reduction from 57.3g to 52.6g sugar/100g and from 66 to 65 kcal/portion in the 12g bar), removing approximately 350 tonnes of sugar from UK public consumption.
	Calories, other nutrients and reduction across other categories	Between January 2014 and December 2015, as part of the chocolate industry's commitment to ensuring all single serve chocolate confectionery products are under 250kcal, Nestlé removed 19.1 billion calories from their confectionery products.
Soft drinks	Pre-Baseline	San Pellegrino: the recipes of five soft drinks were reformulated which reduced the sugar content by 10%; sugar content ranged from 9.7g to 12.1g sugar/100g before reformulation, compared with 8.7g to 10.3g sugar/100g after reformulation.
Sweet confectionery	Pre-Baseline	In 2015 Rowntree's reformulated four recipes (twelve products), achieving sugar reduction through reduction in the fruit juice content. The biggest reduction was achieved in Rowntree's Randoms which reduced by 6g sugar/100g, from 59.1g to 53.1g sugar/100g. In addition, in 2014 the pack size of Polo Fruits was reduced from 37g to 34g.
Sweet confectionery	Baseline to Year 1	In April 2017 a new 30% less sugar version of Rowntree's Fruit Pastilles and Rowntree's Randoms, developed without the use of artificial sweeteners, colours or preservatives was introduced. The sugar was replaced by increasing the fibre content, contributing to an 8% reduction in calories/100g compared to the full sugar product.

30. Pladis UK

Category	Timeframe	
Biscuits	Baseline to Year 1	In 2017 reformulation across the go ahead! range resulted in 10% sugar reduction in both Crispy Fruit Slices and Yogurt Breaks and up to 40% sugar reduction in Fruit Bakes, removing 347 tonnes of sugar from the portfolio each year. Sugar content ranged from 28.3g to 39.9g sugar/100g before reformulation, compared with 22g to 35.2g sugar/100g after reformulation.

31. Premier Foods

Category	Timeframe	
Cakes	Baseline to Year 1	Between January and March 2017 the recipe of Mr Kipling Viennese Whirls was reformulated, reducing the sugar content in both the biscuit and cream element of the product. Sugar content was reduced from 28.1g to 26.4g sugar/100g and calories from 145 kcal to 140 kcal/serving.
Puddings	Baseline to Year 1	In 2017 two phases of Ambrosia Devon Custard reformulation were completed, reducing the sugar content from 11.4g to 10.9g sugar/100g initially and then to 10.6g sugar/100g. This removed approximately 200 tonnes of sugar from the UK diet annually.

32. Pret a Manger

Category	Timeframe	
Cakes	Post-Year 1	The portion sizes of muffins are being reduced from 145g to 115g/serving. In addition the High Fibre Muffin is scheduled to be delisted and replaced with a lower sugar muffin.
Soft drinks	Post-Year 1	All canned drinks and Pure Pret Stills are being reformulated to have a sugar content below 5g sugar/100ml, meaning they will not be subject to the soft drinks industry levy.

33. Samworth Brothers

Category	Timeframe	
Cakes	Baseline to Year 1	Reformulation of Soreen and the introduction of single serve products meant that 27% fewer calories and 4753 fewer tonnes of sugar were sold in 2017 compared with 2015.

34. Sodexo

Category	Timeframe	
Calories, other nutrients and reduction across other categories	Baseline to Year 1	A number of approaches have been used to reduce sugar intakes including: the repositioning and portion size reduction of sugar sachets (portion size reduction has helped to remove over 5,000kg of sugar), and the reformulation of recipes. Overall, this has reduced the amount of sugar used in the business during 2016-17 by 36.5% compared with 2015-16.

35. SPAR UK

Category	Timeframe	
Ice cream, lollies and sorbets	Post-Year 1	Scheduled to launch in March 2018, nine ice creams have been reformulated; removing 8.1 tonnes of sugar (equivalent to 1.9million teaspoons) and achieving a 7.4% reduction in SWA for sugar/100g. The sugar content ranged from 18.5g to 34g sugar/100g before reduction, compared with 14.3g to 28.8g sugar/100g after reduction.
Soft drinks	Post-Year 1	Scheduled to launch in February 2018, eleven soft drinks have been reformulated to have sugar content below 5g sugar/100ml, meaning all SPAR soft drinks will not be subject to the soft drinks industry levy. Reformulation has achieved the removal of 168 tonnes of sugar which is equivalent to 638 million calories.

36. Starbucks

Category	Timeframe	
Biscuits	Baseline to Year 1	In June 2017 the recipe of Milk Choc Chunk Cookie was reformulated achieving a 6% reduction in sugar/serving.
Cakes	Pre-Baseline	In 2015 the Chocolate Brownie was replaced with a lower sugar recipe resulting in a 30.7% reduction in sugar/ serving.
	Baseline to Year 1	In March 2017 the recipe of Carrot Cake was reformulated by removing icing from the cake's sides and using new technology for depositing less icing between layers, achieving a 16% reduction in sugar/serving. In 2018 a further 46% reduction in sugar/serving will be achieved by moving to a Carrot Loaf.
	Post-Year 1	In 2017, five reformulated cakes were launched; the sugar content of Lemon Loaf Cake reduced by 5.9%/serving, Chocolate Marble Loaf Cake reduced by 6.8%/serving, Pumpkin Loaf Cake reduced by 17.2%/serving and seasonal Ginger Loaf Cake reduced by 23.8%/serving. Reformulation of Cookies and Cream Cake achieved a 27.7%/serving reduction in sugar and a 22%/serving reduction in calories.
Morning goods	Post-Year 1	In September 2017 the recipes of the Croissant and Pain Au Chocolat were reformulated, achieving a sugar reduction of 8.6% and 20.2% sugar/serving respectively. In November 2017, the recipe of the previously delisted Almond Croissant was reformulated to contain 13.6g less sugar and 237 fewer calories per serving than the original product.
Yogurts and fromage frais	Post-Year 1	In September 2017, reformulation of the Berry Crunch Yogurt achieved a 40% reduction in sugar and 34% reduction in calories. The portion size was reduced from 240g to 160g/serving.

37. Tangerine Confectionery

Category	Timeframe	
Sweet Confectionery	Baseline to Year 1	In 2017 the pack weights of five products (three brands; Barratt, Jamesons Ruffles, Princess) were reduced on average by 10%, removing one serving from each pack. This reduction has removed 113 tonnes of sugar.
Sweet Confectionery	Post-Year 1	In September 2017 the Sweet Champions Christmas Selection pack was reformulated, reducing the sugar content from 59.2g to 58.1g sugar/100g. This is expected to remove 8 tonnes of sugar from sale.

38. The Jordans & Ryvita Company

Category	Timeframe	
Breakfast cereals	Pre-Baseline	Reformulating the base recipe of ten cereals in May 2014 resulted in Jordans' SWA for sugar/100g reducing by 10% (from 21.4g to 19.2g sugar/100g). The fruit content has been maintained and added sugar has been reduced without the use of substitute ingredients, to the minimum level required to meet consumer acceptance standards and maintain processing specifications.
	Baseline to Year 1	In August 2017 two low sugar granolas specifically formulated to contain less than 5g sugar/100g were launched. The products contain chicory root fibre instead of sugar, delivering some sweetness and the binding properties needed to form oat clusters. They are significantly different in terms of taste and texture to current Jordans' products.
	Post-Year 1	In July 2018, Jordans are scheduled to launch three new baked cereal products with sugar content of approximately 10g sugar/100g; with the intention of reducing the SWA for sugar/100g across the company's breakfast cereals range.

39. Tesco Food Stores Ltd

Category	Timeframe	
Biscuits	Baseline to Year 1	Between May and July 2017 reformulation of thirty-six family favourite biscuits (including Cookies, Digestives, Sandwich Creams) reduced the average sugar content from 30.8g to 27.8g sugar/100g, a 9.7% reduction across the range. A 30% sugar reduction was achieved in Tesco Value Chocolate Digestives.
Breakfast cereals	Pre-Baseline	Prior to 2015 Tesco reformulated the recipes of eighty-six own label cereal products achieving an average sugar reduction of 7%. Reformulation reduced the sugar content of five family favourite breakfast cereals including Frosted Flakes, Chocosnaps and Honey Nut Clusters.
Breakfast cereals	Baseline to Year 1	Reformulation of the breakfast cereal range continued over year 1 delivering a further sugar reduction of 15%. In year 1 reformulation of a family favourite product, Frosted flakes, reduced the sugar content by 18%.
Ice cream, lollies and sorbets	Baseline to Year 1	In March 2017 the sugar content of Tesco Neapolitan Soft Scoop Ice Cream, a top-selling product, was reduced by 5.7% from 21.1g to 19.9g sugar/100g. This was achieved by reducing sucrose and rebalancing the remaining sugar components. Milk solids were increased to retain product quality.
Morning goods	Pre-Baseline	Between 2014 and 2015 the sugar content of eight pack Chocolate Chip Brioche Rolls was reduced from 20.3g to 19g sugar/100g, a 6.4% reduction.
	Baseline to Year 1	In August 2017 the sugar content of four pack Pain au Chocolate was reduced from 17.2g to 11.5g sugar/100g, a 33.1% reduction in sugar.

Puddings	Pre-Baseline	Between 2014 and 2015 reformulation was completed in five individual cheesecakes products (3x100g). Sugar content was reduced from an average of 25.1g to 20.7g sugar/100g, a 17.2% sugar reduction across the range. The sugar content of Strawberry Cheesecake, a high volume selling line, was reduced by 22.3%.
	Baseline to Year 1	In March 2017 the recipe of Apple Strudel was reformulated, reducing the sugar content from 14.7g to 12.4g sugar/100g, a 15% reduction. Reformulation was achieved by reducing the sugar within the filling, the total quantity of the filling used, and using a finer sugar crystal on top of the product.
Soft drinks	Pre-Baseline, Baseline to Year 1 and Post- Year 1	The recipes of forty-nine products (value, core and finest) were reformulated. Sugar content reduced from an average of 9.2g to 4.5g sugar/100g, a 47.8% sugar reduction across the range, meaning by October 2017 23,000 tonnes of sugar were removed from customer diets. In addition, the sugar content of all own label children's and soft drinks are below the sugar tax level (achieved November 2016).
Sweet spreads and sauces	Baseline to Year 1	In July 2017 reformulation of five chocolate spreads reduced average sugar content from 57g to 51.4g sugar/100g, a 9.8% reduction across the range. An 11.9% reduction in sugar/100g was achieved in Tesco Chocolate Spread.
Yogurts and fromage frais	Pre-Baseline	Between 2012 and 2015 the recipes of five low fat yogurts were reformulated, reducing the average sugar content from 15.2g to 14.2g sugar/100g, a 7.1% sugar reduction across the range. A reduction of 18.2g sugar/100g was achieved in Low Fat Toffee Yogurt by reducing the amount of sugar in the toffee mixture.
	Baseline to Year 1	In September 2016 the recipe of Finest Black Cherry Yogurt was reformulated by reducing the fruit conserve dosage and the sugar content of the base yogurt. Reformulation reduced the sugar content from 14.4g to 12.9g sugar/100g, and a reduction in energy content from 191kcal to 170kcal/serving means the product complies with PHE kcal portion guidance for yogurts.

40. Unilever UK

Category	**Timeframe**	
Ice cream, lollies and sorbets	Post-Year 1	In March 2018 two new Ben and Jerry's ice creams are scheduled to launch; Moo-phoria Caramel-Cookie-Fix and Moo-phoria Chocolate-Cookie-Dough have 36% less calories/serving, 23% less sugar/100ml and 65% less fat/100ml than similar ice cream products.

41. Perfetti Van Melle

Category	Timeframe	
Sweet confectionery	Baseline to Year 1	Chupa Chups Lollipops: Introduced a sugar free variant replacing sugar with sweeteners, and achieving a 100% reduction in sugar and a 39% decrease in calories (46.6 to 28.3 kcal/100g). In 2017 all brand media spend focused on sugar free lollipops.
Sweet confectionery	Baseline to Year 1	Fruit-tella: In 2016, 30% reduced sugar Strawberry / Summer Fruits Chews were introduced (reduced sugar product has 37g sugar/100g compared with 55g sugar/100g in the standard product). Reformulation was achieved by replacing sugar with inulin and additional fruit juice. Sugar Free Fruit Gums and Fruit Foams were also introduced, sweetened with Stevia and containing 161 fewer calories/100g than the leading jelly product.
Sweet confectionery	Post-Year 1	In 2017 Fruit-tella 30% Less Sugar Gummies (developed in partnership with key retailers) were introduced; these products are 36% lower in sugar than the standard product and 45% lower in sugar than the weighted average of UK Jellies market (MAT Sales May 2017).

42. Waitrose Ltd

Category	Timeframe	
Breakfast cereals	Baseline to Year 1	In 2016 reformulation of breakfast cereals achieved an average sugar reduction of 15% across twenty-seven products. Reformulation included sugar reduction in 3 Essential breakfast cereals; Wholegrain Bran flakes reduced from 15.7g to 10.8g sugar/100g, Fruit and Nut Muesli from 23.9g to 19.1g sugar/100g and Fruit and Fibre from 22.7g to 21g sugar/100g.
Ice cream, lollies and sorbets	Baseline to Year 1	In March 2017, as part of reformulation in fourteen ice cream lines, the sugar content of Vanilla Dairy Ice Cream and Chocolate Chip Dairy Ice Cream reduced from 19.1g to 17.9g sugar/100g and 22.4g to 21.1g sugar/100g respectively.
	Post-Year 1	In October 2017, as part of reformulation in fourteen ice cream lines, the sugar content of Essential Waitrose Vanilla Soft Scoop reduced from 19.2g to 16.6g sugar/100g.
Puddings	Post-Year 1	In September 2017 the recipes of fifteen mid-tier chilled desserts were reformulated. Reformulation included twin-pack Syrup Sponge Puddings reducing from 45.1g to 34.5g sugar/100g; twin-pack Sticky Toffee Puddings reducing from 33.3g to 28.9g sugar/100g and Mixed Berry Trifle reducing from 17.9g to 14.1g sugar/100g.
Yogurts and fromage frais	Pre-Baseline	In August 2015 the recipes of eight mid- tier yogurts were reformulated. Deliciously Silky Toffee Low Fat Yogurt had the biggest sugar reduction from 20g to 13.8g sugar/100g. Deliciously Nutty Hazelnut Low Fat Yogurt reduced from 15g to 12.6g sugar/100g, and Low Fat Vanilla Yogurt reduced from 16.9g to 13.1g sugar/100g.

	Baseline to Year 1	In 2016 the recipes of West Country yogurts were reformulated; the sugar content of Madagascan Vanilla Yogurt reduced from 13.6g to 11.8g sugar/100g, Scottish Raspberry Yogurt reduced from 12.8g to 11.8g sugar/100g, and Lemon Curd Yogurt reduced from 18.4g to 16.5g sugar/100g.
	Post-Year 1	Scheduled to launch in 2018, three low fat flavoured yogurts (sold in a multipack of 6 Essential Waitrose yogurts) have been reformulated; sugar has been reduced from 13.3g to 11g sugar/100g in Strawberry Flavour, from 13.6g to 11.1g sugar/100g in Raspberry Flavour, and from 13.5g to 12.7g sugar/100g in Black Cherry Flavour.

43. Whitbread

Category	**Timeframe**	
Biscuits	Post-Year 1	In Autumn 2017 reformulation of the Wafer Biscuit Curl achieved a 34.8% reduction in sugar/serving.
Ice cream, lollies and sorbets	Post-Year 1	In Autumn 2017 the recipes of Cookie Dough Ice Cream and Lemon Curd Sorbet were reformulated, achieving a 4% and 6.8% reduction in sugar/100g respectively. Vanilla Ice Cream, used in a number of desserts, was also reformulated reducing the sugar content by 6.2%.
Puddings	Pre-Baseline	From 2012 to 2014 the sugar/serving of Brewers Fayre Profiteroles was reduced by 13.9% and from 2014 to 2015 a portion size reduction and a change in product reduced the sugar/serving of Brewers Fayre Lemon Meringue Pie by 43%. Between 2012 and 2014 the sugar/serving of Beefeater Rocky Road Sundae, Beefeater Chocolate Brownie, and Beefeater Belgian Waffle was reduced by 3.8%, 4.1% and 9.7% respectively.
	Baseline to Year 1	Since 2015 the sugar/serving of Brewers Fayre Vanilla Ice Cream with Chocolate Sauce has reduced by 17%. In 2017 the average sugar content of Brewers Fayre Core Desserts and Beefeater Core Desserts has reduced by 16% and 5% respectively. Reduction is predominantly attributed to a changing product range; including the new offering of mini desserts that are under 300kcal.
	Post-Year 1	In Autumn 2017 Profiteroles were reformulated, reducing the sugar content by 6.5%. Sharing Jaffa Cake was also reformulated, reducing sugar/portion by 34%.
Sweet confectionery	Post-Year 1	In Autumn 2017 the recipe of Marshmallows was reformulated, reducing sugar/serving by 22%.

44. Yoplait UK Ltd

Category	Timeframe	
Yogurts and fromage frais	Pre-Baseline	In 2014, 11% sugar reduction was achieved in Frubes (Strawberry, Red berries and Peach Flavours); the sugar content was reduced from 14.5g to 12.9g sugar/100g.
	Pre-Baseline	Fruity Smooth Yogurt Raspberry/Strawberry was reformulated, reducing the sugar content from 13.8g to 12.2g sugar/100g (11.6% sugar reduction). Four fromage frais flavours were also reformulated, reducing sugar from 12.2g to 11.9g sugar/100g. The portion size of standard pots was reduced from 50g to 47g, and Big Pots were reduced from 100g to 85g.

Appendix 5: Estimated tonnes of sugar purchased

Table 1 shows the estimated tonnes of sugar purchased for consumption across the food categories covered by the PHE sugar reduction programme (except cakes and morning goods) from the Kantar Worldpanel dataset (for retailers own brand and manufacturer branded products). This combines all 3 mechanisms for reduction and reformulation recommended by PHE. Unlike other analyses presented in the year 1 report, these figures include products with imputed sugar values in the Kantar Worldpanel dataset in order to best represent the total market. If these figures were not included, the year on year comparison would be affected by changes in the proportion of foods with real sugar values in the Kantar Worldpanel dataset. Products with volume data presented in servings are not included, as this would skew the volumes due to each servings being estimated as one kg. The baseline and year 1 data from manufacturers and retailers is also shown graphically in Figure 1.

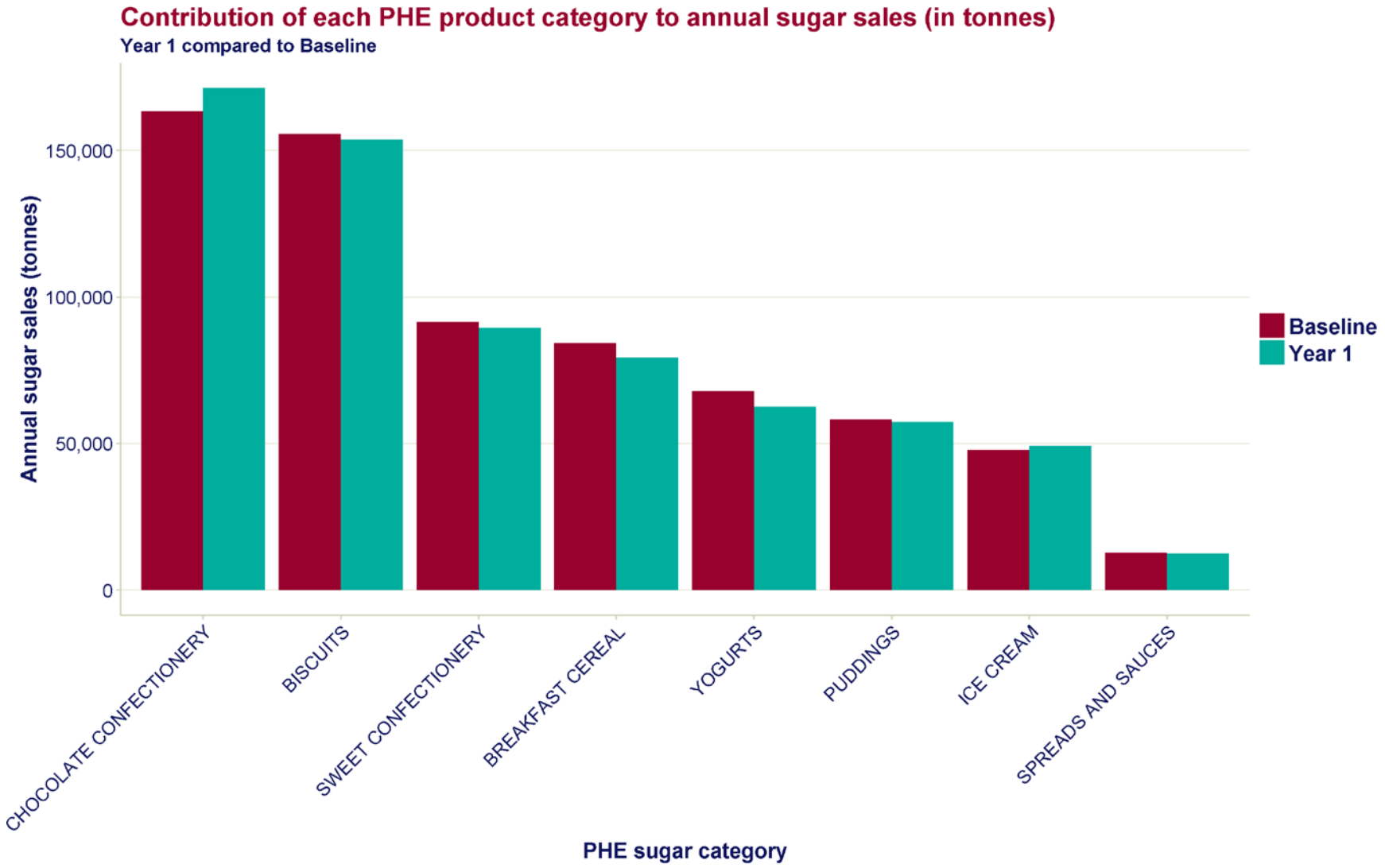
Table 1 also shows estimates of the tonnes of sugar coming from food purchased for out of home consumption. These estimates include volume sales for out of home where brand or channel-matched nutrition data (brand matched: for each product type, MCA calculated a simple average of the nutrition information for each available product from that specific brand/business; channel matched: for each product type, MCA calculated a simple average of the nutrition information for each available product from that channel) is not available. For these sales, average sugar values across the whole category have been used to impute sugar levels. This provides a consistent basis for comparing estimates from in-home and out of home.

Overall there has been an estimated reduction of 1%, or 6000 tonnes of sugar, between baseline and year 1 from retailers and manufacturers. Additional analysis and discussions with stakeholders is needed to fully explore and understand this result.

Table 1: Estimated sugar sales (in tonnes) by food category at baseline and year 1 for all manufacturers and retailers and for out of home in year 1

Product Category	Manufacturers & retailers Baseline	Manufacturers & retailers Year 1	% change	Out of home Year 1
Biscuits	155,573	153,701	-1%	34,219
Breakfast cereals	84,315	79,240	-6%	6,089
Chocolate confectionery	163,445	171,225	5%	n/a
Ice cream, lollies and sorbets	47,774	49,229	3%	17,654
Puddings	58,249	57,429	-1%	25,405
Sweet spreads and sauces	12,805	12,541	-2%	-
Sweet confectionery	91,522	89,491	-2%	n/a
Yogurts and fromage frais	67,838	62,667	-8%	4,831
All categories (excluding cakes and morning goods)	**681,521**	**675,523**	-1%	-
Cakes	n/a	n/a	n/a	79,256
Morning Goods	n/a	n/a	n/a	20,934

Figure 1: Estimated tonnes of sugar in baseline and year 1from products purchased for retailers and manufacturers



Appendix 6: Update on other workstreams that form the wider reformulation programme and general stakeholder engagement

Calories

In August 2017, PHE was commissioned by the then Department of Health (now the Department of Health and Social Care), to start working to develop the calorie reduction programme (1,2).

The evidence on children's calorie consumption, and government's challenge to the food industry, are set out in 'Calorie reduction: The scope and ambition for action' published in March 2018 (3).

The calorie reduction programme challenges the food industry to achieve a 20% reduction in calories by 2024 in products that contribute significantly to calorie intakes of children (up to the age of 18 years) and where there is scope for substantial reformulation and/or portion size reduction. This requires work to be undertaken by retailers and manufacturers, restaurants, pubs, cafes, takeaway and delivery services and others in the eating out of home sector.

The products covered by the programme include ready meals, pizzas, meat products, savoury snack products, sauces and dressings, prepared sandwiches, composite salads and other "on the go" foods including meal deals. It does not cover foods included in the sugar reduction programme. Shifting consumer purchasing towards lower calorie options provides an additional mechanism for action. The year ending August 2017 will be the baseline against which progress will be measured. PHE will advise government if progress is not being made.

Businesses are encouraged to start work now to reduce the calorie content of everyday foods included in the calorie reduction programme. PHE will engage with stakeholders over the coming months to set specific product category guidance, using a sales weighted average approach across broad food categories which focus on top selling products. These will be published in mid-2019. PHE will also consider whether separate guidance for the eating out of home and takeaway/delivery sectors is required in order to achieve the same level of ambition. Guidance for smaller businesses will also be considered. In parallel to setting guidelines, PHE will also discuss with stakeholders the

metrics and analyses that will be used to monitor the programme as PHE will regularly and openly report on progress across categories as well as by businesses and in top selling products.

Drinks: Juice and milk based drinks

In July 2017 PHE began engaging with stakeholders relevant to the juice and milk based drinks categories. Although juice and milk based drinks are excluded from the soft drinks industry levy (SDIL) they are included as part of PHE's sugar reduction and wider reformulation programme. These drink categories include:

- juices (fruit and vegetable juices with no added sugar), in-home (retail/ manufactures) and out of home
- milk and milk substitute drinks for retailer own brand and manufacturer branded products and in the out of home sector. Included are drinks that are pre-packaged (more than 75% milk) and powders, syrups, pods that are either made with milk or water. Included are all out of home milk and milk substitute drinks, as sold with additions (including syrups, flavourings, toppings)

PHE completed the engagement and technical work with stakeholders in February 2018. The guidelines are published in the technical report 'Sugar reduction: juice and milk based drinks'. Sugar reduction ambitions for juice and milk based drinks take into consideration PHE's key learning following 3 category specific meetings (July and November 2017, February 2018), over 20 industry 1:1 meetings and written stakeholder feedback.

HM Treasury is committed to reviewing the exemption for milk-based drinks from the SDIL in 2020, taking into account the progress made through voluntary reformulation. HM Treasury will decide after completion of the review whether the exemption for these drinks should continue.

Engagement with businesses providing food and drink for consumption out of the home

In 2017 PHE completed a stakeholder mapping of the breadth of businesses within the out of home sector. This mapping aimed to widen PHE's ongoing commitment to engage with businesss in this sector; and to help address the need for a level playing field across the food industry (together with retailers and manufacturers) to meet the 20% sugar reduction target by 2020. The out of home sector has been split into 13 sub-categories, grouped by business model, to help identify common concerns specific to ways of working or methods of operation.

PHE completed the first phase of engagement meetings in 2017, meeting around 40 parent companies who have been involved with the sugar reduction work programme. PHE's next stage of engagement is expected to continue through 2018. Priority

businesses are bakery-led stores and sandwich shops, quick service cafes, coffee shops and food service businesses. PHE plan to continue engaging with the sector and the programme will expand to target more businesses through 2018. Table 1 below lists the names of businesses that have attended the meetings convened by PHE between mid-September 2017 and March 2018.

In January 2018 an alliance of businesses from the eating out of home sector published a voluntary code of practice signalling the intention that all signatory businesses will meet the PHE sugar reduction ambition of a 20% reduction across relevant product categories by 2020.

Salt

In March 2017, PHE re-published the salt targets originally set under the Public Health Responsibility Deal (4). PHE is assessing industry's progress towards meeting these targets and, later this year, will publish an analysis and assessment of industry progress. This assessment will inform PHE's consideration of future advice to Government on next steps for activity on salt reduction.

A urinary sodium survey to assess salt intake in adults aged 19-64 years in England will commence later in 2018. The assessment will be based on analysis of the sodium content of 24-hour urine collections in a sample of 600 adults designed to be representative of the UK population, between October 2018 and April 2019. The survey is due to report in November 2019.

Saturated fat

The government's Scientific Advisory Committee on Nutrition's draft report on saturated fat was published for consultation on 8 May 2018 (5). Once the conclusions and recommendations on this are known, this will be used to review and inform any future work on saturated fat reduction.

Product ranges targeted explicitly at babies and young children

The reduction and reformulation programme will move to consider baby, weaning and toddler foods (those targeted at children aged 4/6 months to around 3 years). Initial scoping and development of the ambition for the programme will include consultation with industry and other stakeholders.

General stakeholder engagement: September 2017 to March 2018

Table 1 shows which organisations attended the various meetings convened by PHE between mid-September 2017 and March 2018. Please note that this does not include

engagement to set the guidelines for the drinks that form part of PHE's reformulation programme as this is reported separately.

Table 1: Organisations who have attended meetings convened by PHE between mid-September 2017 and March 2018

Company	November data meetings	Calorie stakeholder engagement	1:1 meetings mid-September 2017 to March 2018
Trade bodies			
Association of Convenience Stores		✓	
British Fruit Juice Association (BFJA)		✓	
British Hospitality Association (BHA)	✓	✓	✓
British Retail Consortium (BRC)	✓	✓	
British Soft Drinks Association (BSDA)	✓	✓	
Business Services Association (BSA)		✓	
Dairy UK	✓	✓	
Food and Drink Federation (FDF)	✓	✓	✓
The Pizza, Pasta and Italian Food Association (PAPA)		✓	
Provision Trade Federation		✓	
Snack, Nut & Crisp Manufacturers Association (SNACMA)		✓	
UK Cinema Association	✓		
Retailers			
Aldi Stores Ltd	✓	✓	
ASDA Stores Ltd	✓	✓	✓
Co-operative Food	✓		
Lidl UK GMBH	✓	✓	
Marks and Spencer		✓	✓
Morrisons LTD	✓	✓	✓
J Sainsbury's	✓	✓	✓
SPAR UK			✓

Tesco Food Stores Ltd	✓	✓	✓
Waitrose LTD	✓	✓	
Walgreens Boots Alliance	✓	✓	
Wilko Retail Ltd			✓
Manufacturers			
Allied Bakeries	✓	✓	
Alpro (UK) LTD	✓		✓
Arla Foods		✓	✓
Associated British Foods plc		✓	
Aunt Bessie's Ltd			✓
Bakkavor Group plc		✓	
Beechdean Farmhouse Dairy Ice Cream	✓		
Birds Eye			✓
Burtons Biscuit's Co	✓	✓	
Cawston Vale Limited		✓	✓
Cereal Partners Worldwide (Nestlé)	✓		
Danone UK Ltd	✓		✓
Dorset Cereals Ltd			✓
Dr Oetker			✓
Elior UK	✓	✓	
Fage (UK) Ltd		✓	
Federation of Bakers	✓	✓	
Ferrero (JW Thornton Ltd)	✓		
Finsbury Foods		✓	
Fox's Biscuits Ltd		✓	
General Mills UK	✓	✓	✓
Greencore Group plc	✓		
Hain Daniels Group	✓	✓	
Dunhills PLC (Haribo UK)	✓	✓	
The Hershey Company			
ICAM chocolate	✓	✓	
Innocent Drinks	✓	✓	✓

The Jordans & Ryvita Company	✓		
Kallo Foods		✓	
Kellogg Co. of G B Ltd Company	✓	✓	
Kerry Group	✓	✓	
Kinnerton Confectionery	✓	✓	
Lactalis Nestlé UK	✓		
Lotus Bakeries		✓	
Macphie UK	✓		
Mars Chocolate UK	✓	✓	
Merlin Entertainments (Bidfood)	✓	✓	
Mondelez	✓	✓	
Morning Foods Ltd			✓
Müller UK & Ireland	✓	✓	✓
Nestlé UK and Ireland	✓	✓	✓
Park Cakes Ltd	✓		
PepsiCo Inc.	✓	✓	✓
Perfetti Van Melle	✓	✓	
Pladis UK	✓		
Premier Foods	✓	✓	✓
Princes Group	✓		✓
R & R Ice Cream (Froneri)	✓		
Refresco Group	✓		
Samworth Brothers	✓	✓	
St Dalfour			✓
Tangerine Confectionery	✓	✓	
Taste Trends Ltd	✓		
Tetra Pak		✓	
Unilever UK & Ireland	✓		
Valeo Foods Group	✓		
Vimto			✓
Wanis Ltd	✓		
Weetabix Ltd	✓		✓
Wessanen UK		✓	

Yakult GB	✓	✓	
Yeo Valley Farms		✓	
OOH			
The Association of Licensed Multiple Retailers (ALMR)	✓		
Ask Italian Restaurants		✓	
Brakes	✓	✓	
British Beer & Pub Association (BBPA)		✓	
British Frozen Food Federation (BFFF)	✓		✓
Burger King		✓	✓
Caffé Nero Group Ltd		✓	
Casual Dining Group	✓	✓	
Compass Group UK		✓	
Costa Coffee			✓
Delifrance UK		✓	
Domino’s Pizza		✓	
Fullers Nationwide Pubs		✓	
Gather & Gather (MITIE catering).	✓	✓	
Greene King	✓	✓	
Greggs PLC	✓	✓	
Jamie Oliver restaurants	✓	✓	
Just Eat		✓	
Marston’s PLC	✓		
McDonald's	✓	✓	✓
Mitchells & Butlers PLC - Suburban	✓	✓	
Pizza Express		✓	
Pizza Hut		✓	
Punch Taverns plc		✓	
Sodexo	✓		
Starbucks	✓	✓	
Subway		✓	

Whitbread	✓	✓	✓
Yum! Brand Inc.	✓	✓	
Zizzi	✓		
NGOs			
Action on Sugar	✓	✓	✓
Association for Nutrition (AfN)	✓	✓	
British Dental Association	✓		
British Dietetic Association (BDA)	✓	✓	
British Nutrition Foundation (BNF)	✓	✓	
Cancer Research UK	✓	✓	
Consensus Action on Salt and Health (CASH)		✓	
Diabetes UK	✓	✓	
National Obesity Forum		✓	
Obesity Health Alliance (OHA)	✓	✓	
The Food Foundation		✓	
UK Health Forum	✓	✓	
Which?		✓	✓
World Cancer Research Fund UK	✓	✓	
Other			
Honeycomb Project Management ltd	✓	✓	
MCA Insight	✓	✓	

References

1.HM Government. Childhood obesity: A plan for action 2016 [Available from: https://www.gov.uk/government/publications/childhood-obesity-aplan-for-action.
2. Department of Health and Social Care and Public Health England. Next stage of world-leading childhood obesity plan announced 2017 [Available from: https://www.gov.uk/government/news/next-stage-of-world-leading-childhood-obesity-plan-announced.
3. Public Health England. Calorie reduction: The scope and ambition for action 2018 [Available from: https://www.gov.uk/government/publications/calorie-reduction-the-scope-and-ambition-for-action.
4. Public Health England. Salt reduction: targets for 2017 2017 [Available from: https://www.gov.uk/government/publications/salt-reduction-targets-for-2017].
5. Public Health England. Saturated fats and health: draft SACN report 2018 [Available from: https://www.gov.uk/government/consultations/saturated-fats-and-health-draft-sacn-report.

Appendix 7: Summary of the November 2017 data meetings

On the 2nd and 3rd November 2017, Public Health England (PHE) met with key stakeholders from all sectors of the food industry, non-governmental organisations (NGOs), other government departments and the devolved nations.

Four separate meetings were held across 2 days:

Thursday 2 November	Eating out of home sector
Thursday 2 November	Wash up (for any business not able to attend their allotted meeting)
Friday 3 November	Retailers
Friday 3November	Manufacturers

The purpose of these meetings was to discuss the data and metrics that would be included in the detailed year 1 progress report. PHE provided an overview of the summary statistics and data for individual businesses and top selling brands that would be used to demonstrate progress.

Separate meetings were held for each sector due to the different datasets that are used for out of home versus food sold through retail (retailer own brand and manufacturer branded products); and to allow comments common to each sector to be given. After these meetings, PHE circulated to all stakeholders the meeting slides (including explanatory notes with changes) reflecting comments made. A top line summary of the meetings was also provided. Templates setting out the final data requests and for businesses to submit case study data were also provided. Attendees were asked to provide written comments within 2 weeks.

Written feedback was received from 16 stakeholders: 5 manufacturers, 1 retailer, 4 out of home businesses, 4 trade associations and 2 NGOs. The comments were considered when confirming analyses and drafting the report.

Overall summary of feedback

Stakeholder feedback was supportive of PHE's reduction and reformulation programmes as set out in 'Childhood obesity: A plan for action'. Some businesses indicated that they are investing in new technologies and ingredients to achieve the 20% sugar reduction guideline by 2020. Stakeholders were pleased that methodologies used in the data analysis were transparent; and that, where possible, the same metrics would be used for each sector and results given equal prominence. It was also appreciated that there would be a narrative around the tables and

graphs. Stakeholders raised a number of issues over the data and metrics that were proposed for inclusion in the progress report including the audience, the contributions different categories make to sugar intake and the use of specific data points.

Permission for data use

Due to restrictions placed by Kantar Worldpanel (one of 2 data suppliers), PHE was required to request written permission from retailers and manufacturers to publish some of the data. The percentage change in individual businesses' sales weighted average (SWA) related data would only be presented for those who agree to its publication. PHE emphasised that they did not intend to explicitly publish any business-specific SWAs whatever permissions they obtain. Where permission was not obtained from a business, this would be shown in the relevant tables.

Overall reporting

Some stakeholders were concerned about reporting the percentage SWA change which businesses have achieved in each category. It was felt this could be misleading as it could favour those who have demonstrated a large percentage reduction and not acknowledge those already at or near the 2020 guideline. PHE said that they would find a way of indicating where products or a business' SWA is already at or below the 2020 guideline eg by colour coding. Stakeholders were also concerned that reformulation progress would be monitored by comparing the business' year 1 SWA with the category SWA guidelines and not their own baseline SWA with the guideline therefore being interpreted as a target. PHE clarified that the SWAs set for the product categories allowed products with a range of sugar levels and acknowledged there would be products above the guideline.

It was asked whether PHE was planning to calculate a SWA figure which combined all categories together, and thus report whether there was a reduction in the total SWA across the whole programme. PHE said that they may not be calculating this.

Several stakeholders also asked whether there would be one table which brings together all sectors. PHE said it was not likely to be possible to combine the 2 datasets.

Product specific information

The purpose and objective of including the "top sugar-contributing product" in tables 3 and 4 of the slides presented during the meeting was questioned as low sugar products which have a high sales volume could be listed. This may therefore not fairly represent the reformulation work completed. There were also concerns that highlighting one product would not show the true picture of a whole category. PHE explained that these products would remain included as they contribute most to the SWA (and therefore

sugar intakes) and also help indicate whether any reformulation progress has been made. PHE confirmed they would add a supporting narrative and where appropriate include signposts to the relevant supporting case studies to provide some context. PHE explained that they would consider the information included in the table that showed data for all the categories combined.

Nutrition information

Businesses questioned whether the nutrition information would be based on real data or whether typical values would be used. PHE confirmed only “real” nutrition information included in the Kantar Worldpanel dataset would be included in the analysis. PHE invited industry to provide any additional nutrition information for any products where lower levels due to reformulation would not be reflected in the dataset.

Market share

The reason for only reporting on the top 10 businesses by market share was queried. There was a query raised that smaller businesses whose products are not captured in the datasets or who did not provide additional nutrition information would not be highlighted even though their products contribute to sugar intakes. Attendees were also concerned that it would only be companies who are engaged in the process that would be scrutinised. PHE clarified that, on average, for each category the top 10 businesses cover 80-90% of the market and as such there is no need to include additional, smaller businesses. In addition, where this level of market share is covered by a smaller number of businesses PHE confirmed that it may not be necessary to include as many as 10. This would be reviewed on a case by case basis.

Some stakeholders were concerned that growth in a business, category or brand could undermine the reformulation progress that has been made, as increased sales could lead to an increased SWA. In addition, retailers explained they overtrade in some areas and may therefore dominate in some categories. There was also concern that using market share within the analyses and reporting challenges the biggest businesses and not necessarily the products with the highest sugar content. They questioned whether PHE would remove market share from the information. PHE confirmed the progress report would highlight the top 10 businesses by total sugar sales for each food category as these are the products which are seen to contribute the most to sugar intakes. Reporting in this way gives an accurate picture of the market and highlights the sugar contributions of each business. PHE explained that although companies may appear multiple times in certain categories they may not appear in them all, and they would include narrative where appropriate to provide context. PHE also said that businesses would have the opportunity to show the progress that had been made in case studies they were encouraged to provide (appendix 4).

A stakeholder questioned whether demographic information was being captured and whether the “discounter” retailers would be captured in the progress report. PHE explained that demographic information is being captured. The top ten businesses included would be based on 2017 sales data but that the companies included in future progress reports may change.

There was concern that since the 2015 baseline there has been a shift in customer purchasing from manufacturer branded to retailer own brand products. This may mean an individual retailers’ SWA has increased since 2015, even though products have a lower sugar content per 100g than the brand or per 100g in 2017 compared to 2015. PHE invited industry stakeholders to provide evidence of SWA increase through product switching as case studies.

Data

Businesses were concerned about products that may not have been included in the 2015 baseline report; and that if these are included in the 2017 report this may have a significant effect on the SWA. PHE confirmed that significant changes from 2015 to 2017 meaning the data was incomparable would be investigated and that these would be discussed with stakeholders if necessary.

Some industry stakeholders were concerned that a reduction in sugar levels would lead to an increase in the use and consumption of artificial sweeteners. Others indicated that the use of artificial sweeteners is an important aspect of the reformulation work. PHE confirmed the consumption of artificial sweeteners would not be monitored in the annual sugar reformation progress reports but that businesses can include details on the use of these in case studies.

A stakeholder asked how seasonal products are captured in the data set. PHE confirmed that the sales data covers 52 weeks of the year and that additional data collections are undertaken to capture seasonal products such as those sold at Easter and Christmas.

A stakeholder asked whether there would be any data included on population sugar intakes and whether there is any evidence that product reformulation has contributed to a reduction in sugar intakes. It was explained that the National Diet and Nutrition Survey runs on a different timescale to the reformulation programme and there would be a time lag before any sugar reformulation work is reflected in population sugar intakes. A stakeholder asked how progress made for the sweet spreads and confectionery categories would be reported. PHE confirmed the data would probably be presented using the same categories as the 2015 baseline report.

There was general agreement from stakeholders that additional measures of progress (ie growth in sugar-free confectionery) would be welcome. PHE invited stakeholders to provide information on the additional measures that could be included.

Stakeholders were concerned about the relevance of colour coding both businesses and products in the data tables. They believed that by using colour coding the guidelines could be misinterpreted as targets and not guidelines. Stakeholders asked if colours were to be used to highlight progress could they be consistent across tables.

Stakeholders were concerned about the accuracy of the data provided by the 2 data suppliers. Stakeholders raised concerns over the inaccuracy of MCA data as sales volumes are not related to individual products and that the survey does not fully reflect the eating out of home sector. The retailer and manufacturing sector were concerned that because PHE does not include products which have imputed or cloned nutrition values in the Kantar Worldpanel dataset then not all of the products which contribute to sugar intakes and SWAs would be included. PHE acknowledged that not all reformulation progress may be captured in the data used for the analysis and/or presented in the progress report. This is why PHE was asking businesses to provide case studies to highlight particular progress made.

Pack size

There was concern over how to report whether a reduction in pack or portion sizes affected product sales ie if customers purchase 2 products rather than one. PHE said they would take this into consideration and aimed to monitor where possible. PHE also invited businesses to provide feedback on how much portion size reduction information could be included in the report, as this could have a negative impact on consumer perception.

Categories

There was concern over whether the 2 PHE data suppliers may have categorised products differently from industry and how this would affect the SWAs. PHE explained they would use the same method of categorisation which was used to calculate the baseline; and that they would only consider re-categorising products if there is evidence that this would have a significant effect on the figures. PHE invited stakeholders to provide feedback.

There was confusion over how products are divided between the out of home and retailer sectors. PHE explained unless the product is taken to the customer’s home it would not be included in the Kantar Worldpanel dataset. Therefore, food which is purchased from the retail sector but is consumed outside of the home would not be captured by Kantar Worldpanel but would be captured by MCA.

Timeframe of reformulation

Stakeholders raised concerns that owing to product development timelines, with product reformulation often taking a number of months to complete, the progress they have made may not be included in dataset used for the analysis for the year 1 sugar reduction progress report. PHE acknowledged that the timeframe since the guidelines were published, and the data used to establish the SWA used in the progress report, has been limited. It was also acknowledged that not all reformulation progress would be captured but that where this was missed it would be covered in future progress reports.

Soft drinks industry levy

A trade association questioned whether PHE would consider including the progress retailers have made for products included in the soft drinks industry levy as part of achieving the 5% reduction in SWA for sugar (g/100g). PHE said they would consider calculating progress both with and without the inclusion of soft drinks.

Wider reformulation

Businesses questioned whether product reformulation in other categories not covered by the sugar reduction programme would be included in the report. PHE explained industry is welcome to submit case studies for sugar reduction in other categories.

Post meeting note: Some businesses submitted case studies for categories not covered by the sugar reduction programme. However, these have not been included in the report due to the volume of case studies received for products that are covered by the programme. There will be opportunities to highlight progress for these products through other parts of the reformulation programme.

A stakeholder questioned whether progress towards achieving the portion size guidelines (calories in products likely to be consumed in a single occasion) would only be captured in the initial summary or whether there would be an additional breakdown of the progress made. This was of particular concern for categories such as sweet and chocolate confectionery where progress by direct reformulation was likely to be limited. PHE confirmed that they would consider including matrices which measure progress on achieving a reduction in the SWA calories per portion and calorie guidelines in the report.

A retailer questioned if they were able to provide pre-baseline information for sugar/calorie reduction if the information requested for salt and saturated fat (as indicated in the data template) was missing. PHE confirmed they would welcome all pre-baseline information as far back as 2013 which may be included in an annex of the

report. Companies would not be penalised for missing quantitative information for other nutrients.

A stakeholder questioned whether information presented for other nutrients (fat/saturated fat/salt) was needed in the report. PHE said it was committed to monitor any unintended consequences of the sugar reduction programme on other nutrients (calories and saturated fat should not increase with sugar reduction and action should continue towards achieving the 2017 salt targets).

Quality checks

Businesses asked whether stakeholders would be able to review the information that would be included in the report ahead of its publication. PHE confirmed this would not be possible. There would be a large amount of data included in the report and it would not be feasible for this to be sent to businesses prior to publication. It is also important to manage the timing of data release. PHE confirmed they would set out the analytical process in the report; and would conduct internal quality control checks and engage with stakeholders when necessary. PHE envisaged that the report would be published in the usual publication format with advance notice for stakeholders likely 1 or 2 days prior to publication.