

LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



Research
Consortium for
SHN



WORKING PAPER

School Meals Case Study: England

Prepared by the Research Consortium for School Health and Nutrition, an initiative of the School Meals Coalition

Submitted by:

Myles Bremner, CEO, Bremner Consulting

Professor Greta Defeyter, Northumbria University

November 2022

Table of Contents

Country Profile	3
Population and economics	3
Education.....	3
Food security, nutrition and health	3
➤ Stunting	3
➤ Obesity	3
➤ Micronutrient deficiency	4
➤ Food insecurity.....	4
Design and implementation of school feeding programmes	5
Programme objectives	5
Targeting and coverage	6
Meal type.....	7
Nutritional norms	8
Food procurement	8
Legal framework and policy evaluation	9
Costs, benefits and budgeting	9
Monitoring and evaluation.....	10
Lessons learned and best practices.....	11
Challenges.....	12
Related resources	12
Corresponding authors.....	13

Country Profile

Population and economics¹

Table 1

Total population	Total number of population aged 5-19	Total number of population employed in agriculture sector	Gross Domestic Product (GDP) per capita
56,550,138 ²	10,090,908 (17.8% of population) ³	482,000 (1% of population) ⁴	47,334 USD ⁵

Education

Table 2

Total number of pupils	Total number of schools	Average class size	Percentage of pupils eligible for free school meals
9,000,031	24,454	26.7	22.5%

Food security, nutrition and health

➤ Stunting

1.93% of children aged 4-5 experience growth stunting.⁶

➤ Obesity

England's National Child Measurement Programmes (NCMP) provisional data⁷ indicates that in 2021/22:

¹ Authors use 1 GBP = 1.2 USD

² Office for National Statistics

³ Office for National Statistics

⁴ DEFRA

⁵ World Bank: <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=GB>

⁶ British Medical Journal: https://adc.bmj.com/content/106/Suppl_1/A227.2

⁷ England's National Child Measurement Programme (NCMP) [National child measurement programme - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

- 10.4% of reception children (ages 4-5) were obese (including severely obese); 12.5% were overweight but not obese; and 76.0% were a healthy weight.
- For Year 6 children (ages 10-11), provision data indicates that 23.5% are obese; 14.4% are overweight but not obese; and 60.7% are a healthy weight.
- For young adults (ages 16-24), provisional data indicates that 13% are obese; and 24% are overweight.⁸

➤ **Micronutrient deficiency**

Broadly, evidence shows low levels of micronutrient deficiency derived from food, with the following exceptions: Vitamin D; iron in children aged 11-28 (particularly girls); and calcium in children aged 11-18.

Table 2 Micronutrient deficiency in school-age children in England⁹

Micronutrients	Mean as % of reference nutrient intake (RNI)	
	Children aged 2-10	Children aged 11-18
Vitamin D	22%	23%
Folate	175%	101%
Iron	118%	76% (53% for girls)
Calcium	168%	88%

➤ **Food insecurity**

15% of England's population report being food insecure (21% of households with children).¹⁰

Soil-transmitted helminths are not endemic in England.

⁸ Common's Library, UK Parliament: <https://commonslibrary.parliament.uk/research-briefings/sn03336/>

⁹ UK Gov:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1019663/Follow_up_stud_2020_main_report.pdf

¹⁰ UK Gov: <https://www.food.gov.uk/research/food-and-you-2/food-and-you-2-wave-3>

Design and implementation of school feeding programmes

Programme objectives

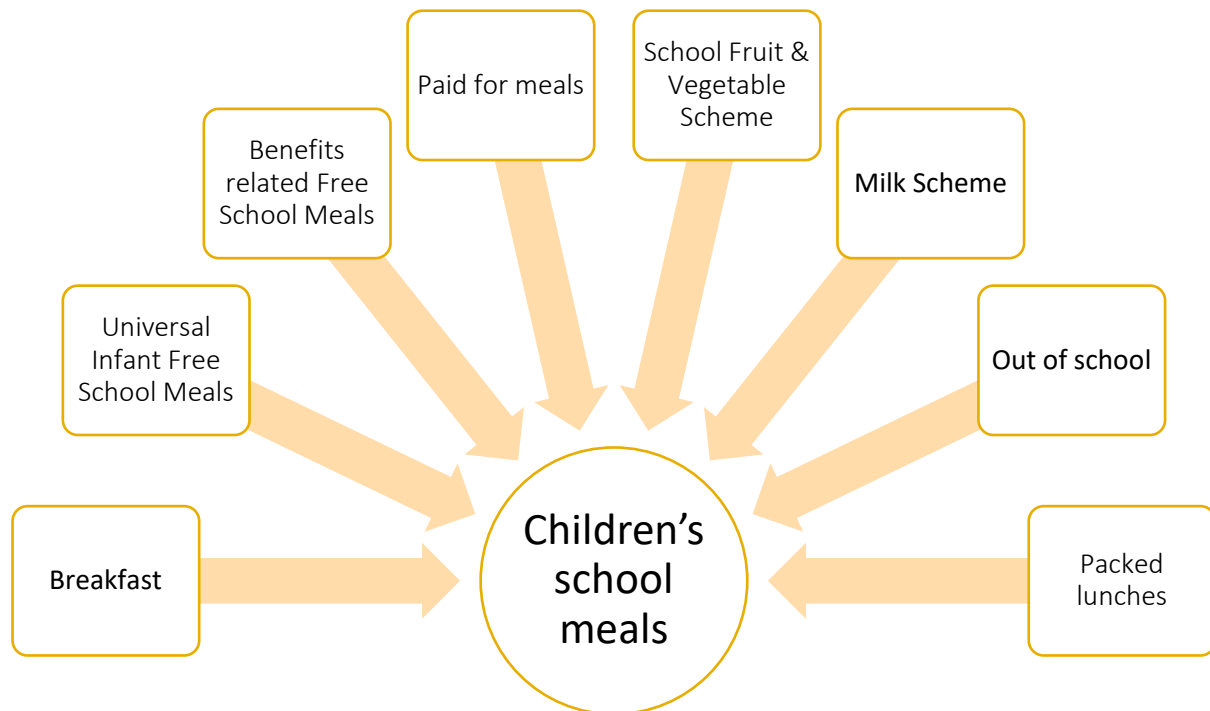


Figure 1 The range of school food interventions¹¹

There are a range of different school food interventions that are funded by government. These are accompanied by statutory frameworks and guidance for their implementation.

The current policy ambition is that school food should support health and learning outcomes for all pupils, as well as provide a nutritional safety net for those most vulnerable to food insecurity.

Schools have a statutory obligation to provide the two most significant interventions; universal free school meals for all children aged 4-7(UIFSM), and benefits related free school meals for all school-aged children in educational settings funded by the state.

¹¹ 2022, School Food Review Working Group. See <https://www.schoolfoodmatters.org/what-we-do/campaigns/food-policy/school-food-review>

Government also funds a national, targeted, school breakfast club programme¹², a holiday activities and food programme¹³. It also runs free and subsidised milk schemes¹⁴ and provides free fruit and vegetables for infant (4-6 years) aged pupils¹⁵.

Targeting and coverage

The Department for Education (DfE) has responsibility for:

- Setting eligibility and entitlement thresholds for the provision of free school meals.
- Setting funding rates for different school food interventions.
- Setting school food standards.
- Laying out the wider roles and responsibilities for Local Authorities and schools.

Whilst the Department for Food and Agriculture (Defra) and the Department for Health and Social Care (DHSC) contribute to school food policy (such as setting wider food health and safety standards or food procurement rules), DfE has the main responsibility for school food policy. Defra and DfE co-fund the school milk scheme, and DHSC and DfE co-fund the schools Fruit and Vegetable scheme.

School governing bodies decide the form that school lunches take but must ensure that the lunches and other food and drink provided meets the school food standards. Governing bodies are strongly encouraged to work with the senior leadership team to develop a whole school food policy, including:

- Setting out the school's approach to its provision of food
- Food education (including practical cooking)
- The role of the catering team as part of the wider school team
- The school's strategy to increase the take-up of school lunches

The 152 English Local Authorities (LA's) have a wider statutory obligation bestowed on them by the national government for children's safeguarding and wellbeing. Many LA public health teams will have an active engagement in supporting schools with resource materials and programmes around wider health and nutrition (local

¹² UK Government (2022). Available at: <https://www.gov.uk/guidance/breakfast-clubs-programme-2021-2023>

¹³ UK Government (2022). Available at: <https://www.gov.uk/government/publications/holiday-activities-and-food-programme/holiday-activities-and-food-programme-2021>

¹⁴ UK Government (2022). Available at: <https://www.gov.uk/government/collections/the-school-milk-subsidy-scheme-guidance>

¹⁵ UK Government (2022). Available at: <https://assets.nhs.uk/prod/documents/SFVS-factfile-2017.pdf>

authorities also run the School Nurse programme, who sometimes get involved in school food activities).

Meal type

Whilst most schools identify 'school food' as being the lunchtime offer, schools now have many different 'school food' touch points.

The different aspects to the school food offer can be summarized as:

- Breakfast Provision
- Breaktime
- Lunchtime (incorporating free meals, paid for meals, brought in packed lunches)
- After-school provision, either as a formal part of the education offer
- Food education (both formal lessons and informal aspects)
- Wider community provision in schools (set up of community cafés, invitation to parents of younger children etc.)
- Holiday Provision – whilst the main holiday provision food program is administered through the respective local authority teams, some schools will engage with the program, either as serving sites or in targeting and identifying qualifying families.

In England, most schools have production kitchens (c. 98% of secondary schools and c. 90% of primary schools)¹⁶. Most schools have an external catering provider, but around 25% of schools organise their own school food provision. School menus normally have a main meal choice, and a dessert choice. There are specific allergen controls and measures in place. Menus are normally on 3-week rotations, to strike a balance of variety of dishes and to meet the school food standards. Meeting children's allergen and dietary needs is a statutory obligation. Secondary schools increasingly have cafeteria style outlets, with buffet stations and grab and go stations – ranging from high-end protein and salad bars to standard sandwich and snack fare.

Nutritional norms

The government encourages all schools to promote healthy eating and provide healthy, tasty and nutritious food and drink. Compliance with the requirements for School Food Regulations 2014¹⁷ is mandatory for all state funded schools including academies and free schools. These school food standards are to ensure that food provided to pupils in school is nutritious and of high quality; to promote good nutritional health in all pupils; protect those who are nutritionally vulnerable and to promote good eating behaviour.

The revised standards for school food came into force on 1 January 2015 and are set out in the requirements for School Food Regulations 2014.

A summary of the standards and a practical guide are available at school food standards: resources for schools¹⁸. They set out a food-based approach “designed to make it easier for school cooks to create imaginative, flexible and nutritious menus”. They also include recommended portion sizes.



Figure 2 The School Food Standards in England

Food procurement

England’s fragmented school meals system means different school caterers adopt different food procurement systems from using large national food suppliers, through to local supply chains. School food contracts over certain financial threshold values have to follow respective public sector procurement rules. There are government buying standards¹⁹ for food and catering services but schools are not required to follow these.

¹⁷ UK Government (2022). Available at: <https://www.legislation.gov.uk/uksi/2014/1603/contents/made>

¹⁸ UK Government (2022). Available at: <https://www.gov.uk/government/publications/school-food-standards-resources-for-schools>

¹⁹ UK Government (2022). Available at: <https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-food-and-catering-services/government-buying-standard-for-food-and-catering-services>

Legal framework and policy evaluation

Free school meals for impoverished children were first introduced in the 1906 Education (Provision of Meals) Act as a means of tackling malnutrition.²⁰

Subsequent policies have widened and limited the reach of the policy, (universal provision under the 1944 Education Act, and then significantly limited eligibility under the 1986 Social Security Act²¹ but the core purpose has remained to provide a nutritional safety net for children who need it.

Subsequent legislation to free school meal entitlement and school food standards (both nutritional and safety) has led broadly to a progressive application of nutritiously good and safe nutrition in schools.

Costs, benefits and budgeting²²

Table 4 Cost:Benefit analysis of school food in England

Food intervention ²³	Age Range ²⁴	Pupil numbers	Funding allocation (or price charged) per meal (190 days in a school year)	Total government investment (to nearest \$m)
UIFSM	4-7	1.25m	\$2.89	\$684m
Benefits related FSM in schools	5-18	1.9m	\$2.96	\$882m
Benefits related free meals in colleges	16-18	0.9m	\$2.89	\$44m
Pupil pays for school meals	4-18	c.3.5m [estimated]	c. £1.80 - £3.00	n/a
Gov funded Breakfast Scheme	4-16		n/a	\$14m
School Fruit and Vegetable Scheme	4-7	2.3m	n/a	\$50m
School Milk Schemes	3-7		n/a	c. \$62m
Holiday Activities and Food Scheme	5-16			>\$264m

²⁰ Finch, A., 2019. [The provision of school meals since 1906: progress or a recipe for disaster? | History and Policy](#)

²¹ Evans, C.E.L., & Harper, C.E., [A history and review of school meal standards in the UK - PubMed \(nih.gov\)](#)

²² Department for Education, figures provided to case study authors, 10th November, 2022

²³ Note - Additional costs for Early Year Settings and Special Schools cannot be separated out from educational budgets

²⁴ Note – funding is provided for specific school year groups, therefore ages can occasionally go over or under.

Analysis published in 2022 shows a positive cost: benefit return on investment in free school meals.²⁵ The Report takes a more extensive and comprehensive approach to the costs and benefits. Modelling an expansion of free school meals, the researchers calculated a return of between £1.38 and £1.71 for every £1 invested.

Core benefits arise directly from the children who receive FSM, through improvements across two pathways:

Education and employment:

- Improved educational attainment in the medium term, leading to improved productivity and employment longer term, contributing to improved lifetime earnings and contributions.
- Improved ability to learn and reduced absenteeism in the short term – with linked cost savings for schools (such as catch-up programmes).

Health and nutrition:

- Reduced financial pressure for families on lower incomes, enabling the purchase of more nutritious food at home.
- Decreased incidence of obesity and diet-related diseases in childhood – the savings calculated are for the lower health costs of a reduction in obesity among children receiving FSM over the 2025– 2045 period only.

Wider benefits are indirect, generated over and above the core benefits, impacting the broader economy and supply chain. These include increased demand for school food catering, expanding employment opportunities and increasing spending in the school food economy. They are not included in the core cost-benefit analysis as they involve multiplier effects.

Monitoring and evaluation

Most studies evaluating school meals in the UK have primarily focused on pupils' health and wellbeing, or educational attainment outcomes.

Diet and nutrition studies have found that the introduction of SFS improved the nutritional quality of meals. On average school meals were found to meet SFS for total protein, fats, saturated fats, salt, vitamin C, and non-milk extrinsic

²⁵ Impact on Urban Health, 2022. Investing in Children's Future: A Cost Benefit Analysis of Free School Meal Provision Expansion: <https://www.urbanhealth.org.uk/insights/reports/expanding-free-school-meals-a-cost-benefit-analysis>

sugars.^{26,27,28} Packed lunches tend to be of lower nutritional value, especially in terms of total sugars, salt, protein, fibre, zinc, Vitamin A, iron and folate than school meals.^{29,30}

For bodyweight, Holford and Rabe³¹ estimate that for all children exposed to the UIFSM policy there was a small reduction in the proportion that were obese and a small increase in the proportion of children within a healthy weight range.

For attainment, there is some evidence of a positive association between universal meal provision and attainment. Findings from the Free School Meal pilot study³² noted improved academic attainment in two out of the three pilot areas after two years of universal free school meals.

Lessons learned and best practices

England's School Food Plan³³, published in 2013, sets out three important principles that must be adopted to deliver a good school food system:

- Effective Leadership
- Giving children what they want
- Taking a 'whole school approach'

The introduction of school food standards in 2007, followed by the delivery of the School Food Plan's seventeen policy and practice actions, have seen an increase in the number of children eating better school meals in England³⁴.

²⁶ Stevens, L., Nicholas, J., Wood, L. & Nelson, M. (2013) 'School lunches v. packed lunches: a comparison of secondary schools in England following the introduction of compulsory school food standards', *Public Health Nutrition*, 16(6), 1037–1042. doi:10.1017/S1368980013000852.

²⁷ Spence, S., Delve, J., Stamp, E., Matthews, JNS., White, M., & Adamson, AJ. (2013) The Impact of Food and Nutrient-Based Standards on Primary School Children's Lunch and Total Dietary Intake: A Natural Experimental Evaluation of Government Policy in England. *PLoS ONE* 8(10): e78298. doi:10.1371/journal.pone.0078298

²⁸ Nicholas, J., Wood, L., Harper, C., & Nelson, M. (2013). The impact of the food-based and nutrient-based standards on lunchtime food and drink provision and consumption in secondary schools in England. *Public Health Nutrition*, 16(6), 1052–1065. doi:10.1017/S136898001300027X

²⁹ Stevens, L., Nicholas, J., Wood, L. & Nelson, M. (2013) 'School lunches v. packed lunches: a comparison of secondary schools in England following the introduction of compulsory school food standards', *Public Health Nutrition*, 16(6), 1037–1042. doi:10.1017/S1368980013000852.

³⁰ Evans, CEL., Melia, KE., Rippin, HL., Hancock, N., & Cade, J. (2020) A repeated cross-sectional survey assessing changes in diet and nutrient quality of English primary school children's packed lunches between 2006 and 2016. *BMJ Open* 10 (1) e029688. doi:10.1136/bmjopen-2019-029688

³¹ Holford, A. J., & Rabe, B. (2022). Going universal. The impact of free school meal lunches on child body weight outcomes. *Journal of Public Economics Plus* <https://doi.org/10.1016/j.pubecp.2022.100016>

³² Kitchen, S., Tanner, E., Brown, V., Payne, C., Crawford, C., Dearden, L., Greaves, E., & Purdon, S. (2013) Evaluation of the Free School Meals Pilot. Impact Report. London: Department for Education

³³ Independent School Food Plan: <http://www.schoolfoodplan.com/>

³⁴ Defeyter, M.A, Bundy, D. A.P., Bremner, M., & Page, A. (2023). Hunger in the UK Classroom in Downes, P., Li, G., Van Praag, L., & Lamb, S. (Eds.) (2023, forthcoming). *Routledge International Handbook on Equity and Inclusion in Education*. London: Routledge

Challenges

Whilst responsibility for school food policy has remained with the Department for Education, the application of the school food system has become increasingly fragmented over the last thirty years, with a range of different operating models and delivery.

There is limited national data collection or national monitoring of uptake or school food standards.³⁵ In 2022, Government committed to new measures to improve school food monitoring and compliance in schools.³⁶

At school level, there is significant variation of schools' capability, capacity, and motivation in delivering high quality and high take-up of school food.³⁷

1 in 3 school-age children in England living in poverty (800,000) miss out on free school meals despite cost-of-living struggles of families. The main causes are restrictive eligibility criteria and lack of universal provision.³⁸

Recently, there have been increased funding constraints (borne out by inflationary pressures on food, staffing and utility costs).

Related resources

- [School Food Standards: Resources for schools](#)
- [Free School Meals: Guidance for schools and local authorities](#)
- [School Meals and Nutritional Standards \(England\)](#)

³⁵ National Food Strategy – The Plan (2021) Available at: <https://www.nationalfoodstrategy.org/the-report/>

³⁶ 2022, HM Government, Levelling Up White Paper Available at: <https://www.gov.uk/government/publications/levelling-up-the-united-kingdom>

³⁷ Jamie Oliver Food Foundation (2017) A Report on the Food Education Learning Landscape. Available at: <https://drive.google.com/drive/folders/0B6vmekGX5OPfTm9xMzc5VkpCUTg>

³⁸ Child Poverty Action Group (2022). Available at: <https://cpag.org.uk/news-blogs/news-listings/800000-children-poverty-not-getting-free-school-meals>



Corresponding authors

Myles Bremner

CEO, Bremner Consulting

Myles@bremnerconsulting.co.uk

Greta Defeyter

Professor of Developmental Psychology,
Northumbria University

greta.defeyter@northumbria.ac.uk

Required citation

Bremner, Myles; Defeyter, Greta; (2022) School Meals Case Study: England. Working Paper.
London School of Hygiene & Tropical Medicine, London. DOI:

<https://doi.org/10.17037/PUBS.04671121>



This work is licensed under a Creative Commons Attribution 4.0 International License.