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Opportunities for improving childrens health in Wales. The potential of school food.



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1 Introduction

All children deserve the opportunity for good health. They have a right to live without hunger, with access to healthy nutritious food and the opportunity to learn skills that will shape future health.¹

Eating healthily in childhood and adolescence is one of the foundations of well-being, growth and development. Socio-economic differences in child nutrition are both avoidable and unfair.

Health and educational attainment are complementary goals. Health and well-being underpins educational achievement, which leads to better economic and social opportunities for individuals and better health.²

Schools are an integral part of the system and are an obvious setting for population-level public health interventions.³

Evidence indicates that one of the most effective ways to promote a healthy diet and prevent obesity in school-aged children is by supporting children to eat healthier food throughout the school day.⁴⁻⁶

The provision of school meals in the UK goes back over a hundred years and is linked to awareness and concern about malnutrition, poverty, and educational standards.

Today this includes overweight and obesity as a paradoxical state of malnutrition.

Currently in Wales the opportunities to improve population health through school food are not being maximised. Nationally, our understanding of what food children are being served, what they are actually eating and the impact this is having on their health and well-being is limited.

With universal free school meals due to be rolled out to primary school children across Wales by September 2024, the importance of health and nutrition in school food has never been more important.

Public Health Wales have established a strategic workstream focused on school food environments. Underpinned by the Well-being of Future Generations (Wales) Act, the workstream aims to support the school system to deliver children's nutritional requirements, and be a setting where children can develop positive relationships with food.

Achieving these ambitions requires collaboration across organisational boundaries and a pragmatic approach to the challenging context of school food provision. The Covid-19 pandemic, cost-of-living crisis, Brexit and climate change are having significant negative impacts on food security, health and wellbeing.⁷⁻⁸

It will take time, but if we are committed to creating a prosperous, resilient, healthier and equal Wales we must begin to look at the role school food can play in improving population health and reducing inequalities.

The aim of this resource is to lay the foundation to facilitate a shared understanding across the system of the role school food plays in child health and well-being, and opportunities to ensure they are supported to eat nutritionally adequate food throughout the school day.

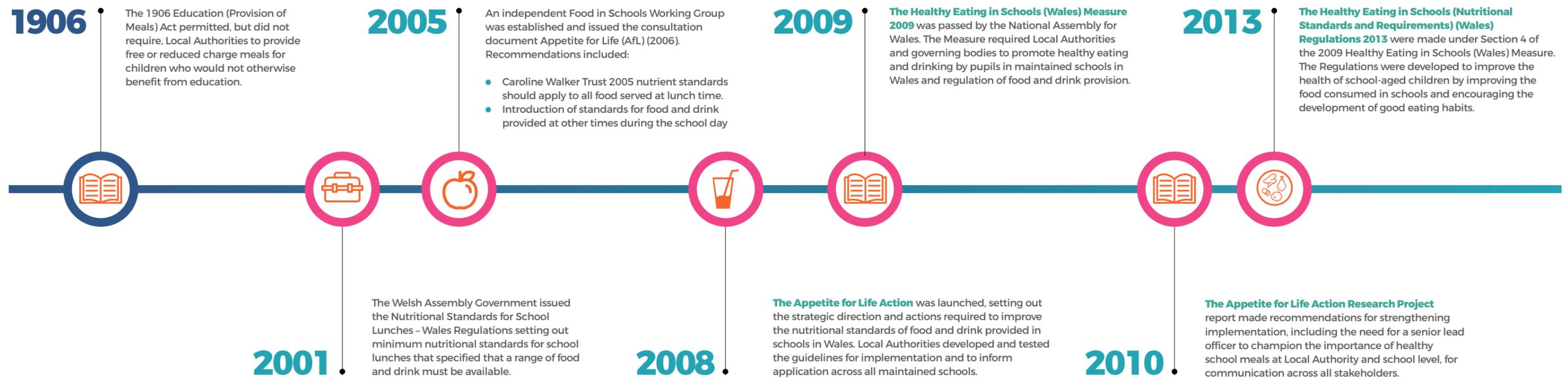
The resource describes:

- The history of school food as a public health intervention
- An overview of the school food system in Wales
- The current picture of the diet and health of school-aged children in Wales
- The opportunities to maximise the impact school food has on health and wellbeing outcomes
- The potential impact of school food on health and well-being



2 The History of School Food Provision in Wales

School meal provision in UK dates back over a hundred years and is summarised below. The rationale for introduction was to supplement diets of those experiencing poverty and to improve educational attainment, a foundation that is still relevant today. Its additional and evolving role in supporting the link between nutrition and health through ensuring the nutritional quality of the food provided has been thoroughly documented.



3 The School Food System in Wales. An overview.

In 2022 Nesta brought stakeholders together to start to map the typical primary school meal system in Wales (Overleaf).

The system is underpinned by the The Healthy Eating in Schools (Wales) Measure 2009 which sets out the roles and duties for ensuring the requirements of The Healthy Eating in Schools (Nutritional Standards and Requirements) (Wales) Regulations 2013 and the 'Healthy eating in maintained schools; Statutory Guidance for local authorities and governing bodies' are met.

Local Authorities and governing bodies are required to take account of the guidance. Local Authorities have a duty to act in schools to implement the guidance. The schools governing body should include the actions taken by the school to promote healthy eating in their annual reports.

Estyn report on the arrangements made by schools to promote healthy eating and drinking, however they do not monitor compliance with the Regulations or report on the quality of food provision.⁹

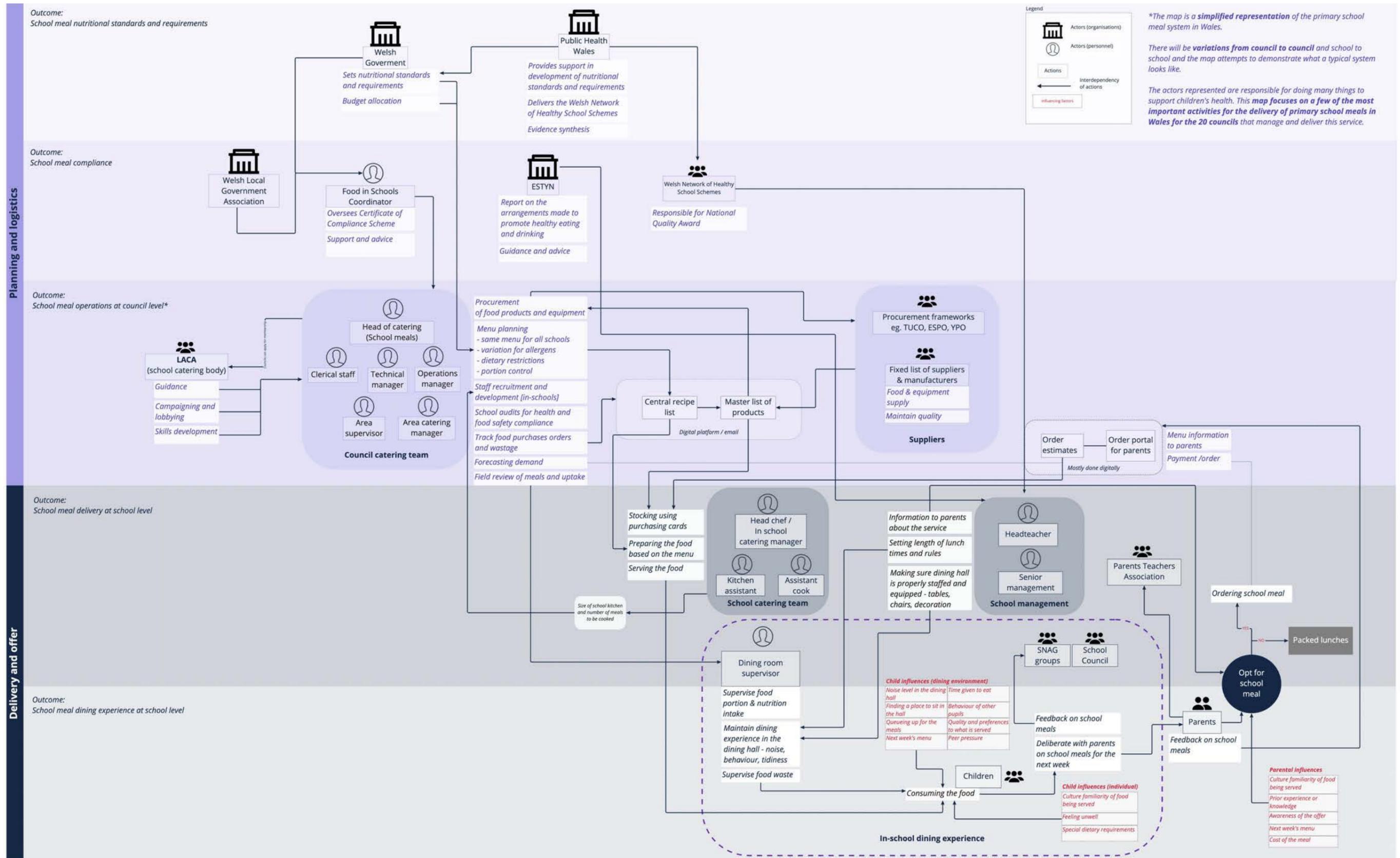
The Welsh Local Government Association (WLGA) advise and support councils and schools to achieve and maintain compliance with the Measure and Regulations through a range of guidance. They offer Local Authorities support through a voluntary Certificate of Compliance process. Their remit does not include monitoring of compliance or enforcement of the Regulations and Statutory Guidance.¹⁰

Although the Healthy Eating in Schools (Nutritional Standards and Requirements) Regulations, 2013 are within law, the compliance with the nutritional standards in schools across Wales and the contribution they have made to the dietary intake of school-aged children in Wales is unknown.

Without a monitoring and compliance framework it is difficult to know whether schools are meeting the expected standards, and how school food environment policies impact on the diets of children and young people in the short term and long term.¹¹⁻¹² The Covid-19 pandemic and the increase in food insecurity has highlighted the need to monitor impact to protect the most vulnerable children.



Map shows how school meals are delivered in primary schools in Wales



4 The Diet and Health of School-Aged Children in Wales

Dietary patterns in childhood track into adulthood, therefore influencing equality of opportunity, life chances and health outcomes over the long term.¹³

Not meeting dietary recommendations over time increases the risk of poor health and disease such as malnutrition, nutrient deficiency diseases, type 2 diabetes, heart disease, stroke and some cancers.

Diet can also impact oral health. Tooth decay, tooth extractions and infections can lead to problems with eating, sleeping, playing and learning.¹⁴

Childhood and adolescence are critical times for growth, a physiological process requiring optimum nutrition.¹⁵ It is a crucial time of cognitive, physical, emotional and social development. How a child grows and develops lays the foundation for future health and well-being.



The Eatwell Guide¹⁶ is a policy tool used to define government recommendations about a healthy diet and applies to the general population of school-aged children.

It shows what different types of foods and drinks should be consumed, in what proportions, over a period of time such as a day or a week.

The dietary recommendations are estimates of energy and nutrient needs, taking into account the various factors that influence requirements such as growth and development.¹⁷

The National Diet and Nutrition Survey Rolling Programme (NDNS RP) gives an indication of the food composition, nutrient intake and nutritional status in the general population aged over 18 months of age living in private households in the UK.

A representative sample of around 1,000 people (500 adults and 500 children) take part in the NDNS RP each year.

The NDNS RP provides the only source of representative data about the nutritional status of children and young people in Wales.¹⁸

4.1 The Diet of School-Aged Children in Wales

The diets of many children and young people in Wales fall short of national dietary recommendations.¹⁹

The nutritional quality of food consumed by children is linked to deprivation. Children and young people in low-income households are more likely to have diets lower in fibre, fruit, vegetables and oily fish and most vitamins and minerals compared to higher income households.¹⁸

The nutritional quality of food consumed by children is linked to deprivation.¹⁸

However, the majority of children and young people in Wales consume inadequate amounts of fruit and vegetables, oily fish, fibre and eat too much saturated fat, salt and sugar.^{18,20,21}

During adolescence, most young people do not eat breakfast everyday and just 45% report that they eat at least one portion of fruit or vegetables per day.²⁰

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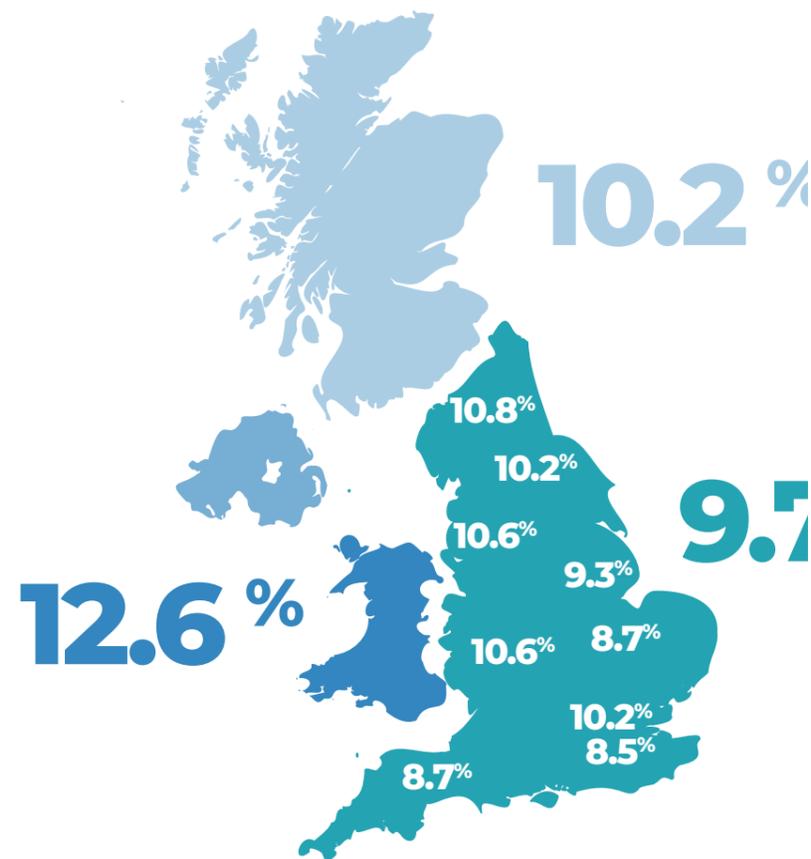
4.1.1 Overweight and obesity

Being above a healthy weight in childhood is associated with poorer physical, psychological and emotional health. Children living with obesity are more likely to become adults living with obesity and have a higher risk of ill-health, disability and premature death in adulthood.²²⁻²³

In 2018/19 26.9% of children aged 4-5 years in Wales were above a healthy weight, of which 12.6 % were classified as having obesity. This is higher than all areas of England and Scotland and has been increasing in Wales since 2012/13. (Figure 1).²⁴

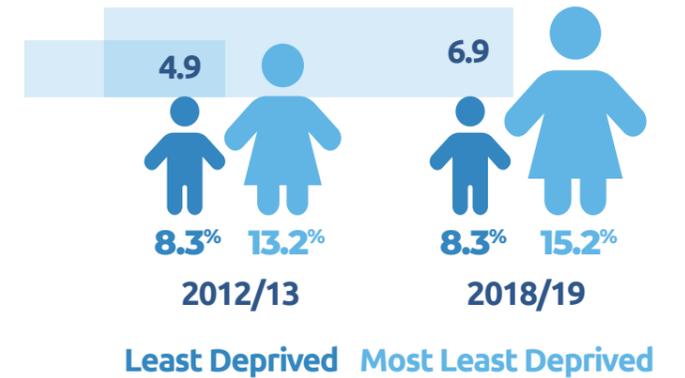


Percentage of children in Reception year or Primary 1, living with obesity, Wales, Scotland, England and English regions, Child Measurement Programme for Wales, Child Health Systems Programme School System (Scotland) and National Child Measurement Programme (England) 2018/19



Children living in areas of multiple disadvantage are more likely to be living with obesity by the time they start school. **Between 2012 and 2019 the gap between the most and least disadvantaged areas grew (Figure 2).**

Percentage of children, aged 4 to 5 years living with obesity, Wales, most and least deprived fifth in Wales, Child Measurement Programme for Wales 2012/13 to 2018/19



The Child Measurement Programme for Wales measures the height and weight of children in Reception class. No further routine height and weight measurements are taken for children and young people.

To understand more about the weight of older children the Health Behaviour in School-aged Children (HBSC) survey and the School Health Research Network (SHRN) Student Health and Well-being Survey²⁰ collect self-reported information about the percentage of children aged 11-16 who are, underweight, healthy weight, overweight or obese.

The 2021/2022 20% of survey respondents reported being above a healthy weight (categorised as overweight or obese).²⁰ **A higher percentage of boys (23%) reported being above a healthy weight compared to girls (17%).**

There was variation by family affluence with **29% of respondents being above a healthy weight in the LOWEST family affluence category** and **18% of respondents being above a healthy weight in the HIGHEST family affluence category.**

Being a healthy weight is one of the most effective ways to protect childhood well-being and reduce the risk of health conditions in childhood and into adulthood.

Child oral health has improved since the Design to Smile Programme was implemented in schools in Wales.

4.1.2 Oral Health

Child oral health has been improving in Wales since 2007/08. The amount of tooth decay children aged 5 are experiencing has been reducing however the latest data, collected in 2022/23, shows that this reduction in prevalence appears to be levelling off.

In terms of severity, there has been a significant reduction in the number of teeth affected by the disease across Wales between 2015/16 and 2022/23.²⁵

- The prevalence and severity of tooth decay is higher in children living in areas of high deprivation.²⁵
- Avoidable differences in children's health status also plays a role in the severity of tooth decay.¹⁴

Child oral health has improved since the Design to Smile Programme was implemented in schools in Wales. However, evidence also shows there are inequalities in access to health services which have an impact on child health for those living in the most deprived areas.²⁶



4.1.3 Food insecurity

Food insecurity considers the uncertainty that households can face over being able to access sufficient food to meet dietary requirements, and preferences for a healthy life due to lack of money or other resources.

There is an association between food insecurity and poorer general health, poorer mental health, higher levels of stress and higher levels of overweight and obesity.²⁷⁻³⁰

Food insecurity can result in both malnutrition and overweight, within the same country, communities and households, causing a double burden of disease.³¹

Malnutrition in children has negative consequences for growth and development as well as psychological well-being.³²

Evidence indicates that food insecurity impacts on the ability to eat a healthy diet, compromising quality, variety, quantity of food. Specifically, food insecurity can lead to lower consumption of fruit and vegetables.



In Wales the latest wave of the Food and You 2 Survey found that 27% of respondents from Wales were classified as having experienced food insecurity in the previous 12 months.³³

The survey found that food insecurity disproportionately affects households with children under 16 years of age compared to households without children under 16 years of age.

Food insecurity can lead to individuals being unable to consume a healthy, balanced diet over time, this can lead to them not meeting their nutritional requirements, hunger and malnutrition.

5 Opportunities to maximise the impact school food has on health and wellbeing outcomes

We need to use the opportunities available to us to ensure the food provided in schools is affordable, enjoyable and nutritious¹¹ and that school food provision is having the intended positive impacts on child and adolescent health and wellbeing.

The Wellbeing and Future Generations (Wales) Act

The Well-being of Future Generations (Wales) Act (WFG Act) is about improving the social, economic, environmental and cultural well-being of Wales. It means that public bodies must strive for a sustainable Wales by thinking about the long-term, working better with people, with each other and with our communities to prevent problems and take a more joined-up approach.



It provides an enabling policy context to ensure that organisations work together to ensure the school food environment maximises its opportunity to improve the health and wellbeing of children now and in the future.

The Healthy Weight : Health Wales Strategy

Wales' long-term strategy to prevent and reduce obesity in Wales embraces the WFG Acts five ways of working; long-term thinking, taking an integrated approach, involvement, collaboration, and preventative action to develop a systems based approach to create healthier environments, settings and people.

The Strategy prioritises action to 'Enable our education settings to be places where physical and mental health remains a priority' with a 'focus on good nutrition across the school day'.



Review of the Nutrition Standards for food served in schools



The Healthy Weight Healthy Wales 2022-24 Delivery Plan committed to recommence work to inform revisions to the Healthy Eating in Schools.³⁴

Revision of the Regulations creates the opportunity to;

- Understand the strengths of the existing Regulations and overcome their challenges.
- Ensure the Regulations reflect the most up to date scientific evidence for nutrients and food whilst considering broader societal goals.³⁵
- Consider the importance of monitoring compliance with the nutritional standards across Wales, to understand the impact they are having on consumption of a nutritious meal and subsequently the health and well-being of children and young people.

Universal Free School Meals for Primary School Pupils

All primary school children in Wales will get free school meals by 2024 as part of the co-operation agreement between Welsh Government and Plaid Cymru, through a phased implementation approach.³⁶

This universal approach has specific opportunities to address inequalities through inclusive provision, removing stigma and increased support for those that were just above the current threshold for free school meals.

For the policy to be a success the provision of nutritious and enjoyable food and high uptake is essential. To understand and be able to communicate the impact of the policy, monitoring of compliance with Regulations to assess the impact on consumption and health and wellbeing outcomes is essential.

All primary school children in Wales will get free school meals by 2024



The Curriculum and Assessment (Wales) Act 2021



The Curriculum and Assessment (Wales) Act 2021, established the new curriculum for Wales in law, covering the education of children aged 3-16 years.

The aim of the curriculum,³⁷ known as the four purposes, is to support its learners to become:

- ambitious, capable learners, ready to learn throughout their lives
- enterprising, creative contributors, ready to play a full part in life and work
- ethical, informed citizens of Wales and the world
- healthy, confident individuals, ready to lead fulfilling lives as valued members of society.

Whole-School Approach to Health and Well-being

In 2021, the World Health Organisation (WHO), working with the United Nations Educational, Scientific and Cultural Organization, set the global challenge of every school being a health promoting school.

They state that:

“The concept of health promoting schools is a whole-school approach to promoting health and attainment by using the organisational potential of schools to foster the physical, social-emotional and psychological conditions for health as well as for positive education outcomes.”

A whole-school approach in the context of school food, therefore extends beyond the food served, and the curriculum to promote health and mental well-being to all aspects of children and young people’s primary and secondary education.

The ambition to support schools to be health promoting in Wales has been delivered through Welsh Network of Healthy School Schemes (WNHSS) since its launch in 1999.

A recent strategic review of the scheme will ensure that future delivery supports schools to optimise opportunities to embed health and wellbeing within the daily functioning of the school.

Additionally changes to the delivery model have paved the way for Public Health Wales to develop of a thematic whole-school approach framework for food.

Global standards identify eight key elements of health-promoting schools and systems



Six Areas of Learning and Experience

The six areas have been described which all present opportunities to embed consistent, evidence-based principles derived from the Eatwell Guide about healthy and sustainable diets within wider societal contexts of different cultural beliefs and socio-economic status.³⁷



Expressive Arts

Food, seasons and celebrations – cultural/religious festivals and their link to food, music and drama.



Health and Well-being

Healthy balanced diet (Eat Well Guide), food and mood, food preferences.



Humanities

Where food comes from, cultural and religious associations with food, sustainability, food systems, growing food.



Languages, Literacy and Communication

Food advertising, food marketing, cooking (reading/writing recipes), food labelling – ingredients (what is in the food we eat).



Mathematics and Numeracy

Budgeting, food shopping, labelling, cooking/ recipe measurements, nutritional analysis.



Science and Technology

Food preparation, cooking, food science -physiology (e.g. digestion), food chemistry, microbiology, food packaging, product development, food safety.

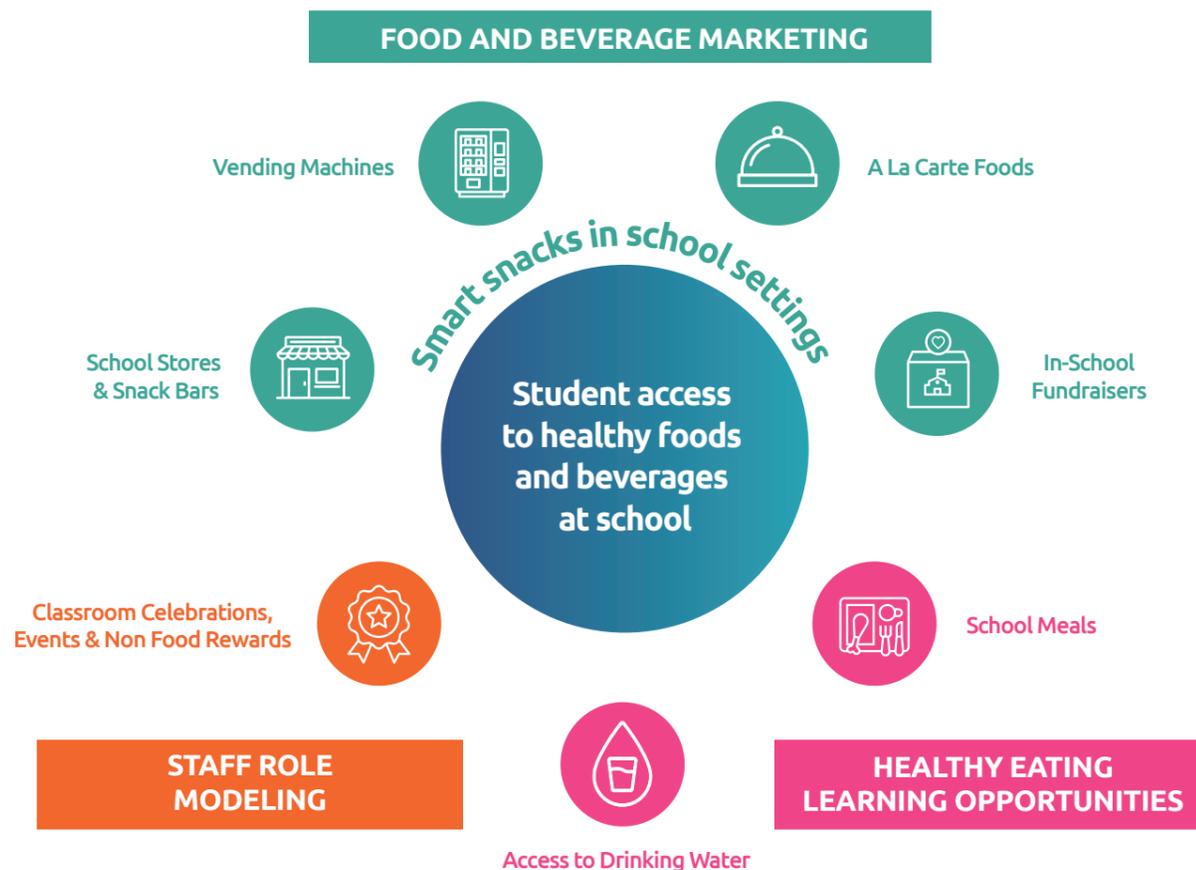
6 The potential impact of school food on health and well-being

The school setting provides an environment in which the health of children can be protected and promoted and a healthy school food environment is an effective population health approach to support the nutrition and health status of school-aged children.³⁸ If we maximise the opportunities available to us, ensuring the provision of nutritious food throughout the school day in a sustainable environment that promotes positive social and cultural relationships with food, short medium and long-term benefits can be achieved. (Figure 3).

These benefits broadly fall into the categories of:

- fair and equal access to healthy food and drink whilst in school, preventing hunger and supporting household food security.
- contributing to the consumption of a nutritious and sustainable diet, and the development of food life skills, healthier food preferences, norms and behaviours.

Figure 3: Student access to healthy foods and beverages at school



- supporting educational achievement, helping children and young people reach their aspirations for a fulfilling life and for society to benefit through economic outcomes.

All of these impacts contribute to a reduction in health inequalities and support longer, healthier lives.

6.1 Short term benefits

The most immediate impacts will only be realised if children eat the food that is offered. It must therefore be affordable, enjoyable and nutritious.¹¹ Eating at least one nutritious meal a day will prevent hunger, give children the concentration to learn, participate in school activities and support household food security.³⁹ For some children, a school meal will be the main, and possibly only, meal of the day.

Improved school food standards, dining environments and universal free school meals can lead to higher levels of school lunch take up.^{40,41}

Additionally a school environment supportive of healthy eating can improve a child's overall relationship with food.^{40,42-45}

Providing food in schools which align to the Eatwell Guide creates opportunities to improve both the environmental and health impacts of our children's diets.^{46,47}

6.2 Medium term impacts

Eating healthier food over the medium term will support children to grow steadily and be a healthy weight,⁴⁴ whilst preventing malnutrition and dietary deficiencies. It also supports the capacity of the child and young person to make decisions about healthier food choice, preparing them for life where food plays a role in social gatherings.⁴⁸

Children who do not receive enough food to eat are likely to achieve lower levels of educational attainment.⁴⁹

Changing knowledge about nutrition, and changing the food offered in schools can lead to moderate improvements in general school achievement of teenagers with obesity, when compared to standard school practice.⁵⁰

Based on the premise that having more concentration for learning and lower absenteeism supports children's educational attainment.



6.3 Longer term impacts

Food eaten in childhood and adolescence lays the foundations for preferences, norms and behaviours that continue into adulthood. Diets high in saturated fats and sugars in childhood are likely to lead to similar diets in adulthood, as well as increasing a child's risk of overweight and obesity and subsequent diet and weight related disease in adulthood.

With school food reaching almost all children and young people at scale, over a sustained period of time of critical childhood development, the food eaten in school has the potential to have a significant impact on a child's future diet and relationship with food.

School health and nutrition is not only an investment in schoolchildren and

adolescents' health and well-being but has benefits extending to communities and society.

Good health, good nutrition and good education are not only rights and ends in themselves, they are an investment in a country's future and in the capacity of its people to lead productive and satisfactory lives.³⁹

Evidence of the implementation of school meal policies in Finland and Sweden have found substantial long term benefits on educational attainment, health, higher lifetime income, a reduction in socio-economic inequalities in adulthood and a positive impact on the local and national economy.⁵¹⁻⁵²

School food impacts nearly all children and is an important lever to close the gap in health outcomes.⁵³



Figure 4: Short, Medium and Long Term Impacts of School Food



Healthy school food environment

Food and meals meeting nutrition standards are available

Increased uptake of healthy school food

Increased uptake of free school meals

Impact - Short term

- Children eat healthy and environmentally sustainable food
- Prevents hunger
- Children have the concentration to learn and energy to participate in school activities
- Supports household food security

Impact - Medium term

- Supports child development
- Supports optimum growth and healthy weight
- Prevents malnutrition and dietary deficiencies
- Supports positive social norms about food, a healthier relationship with food and healthier lifestyle choices
- Supports oral health
- Supports educational attainment

Impact - Longer term

- Reduces risk of childhood overweight and obesity
- Reduces risk of health problems in childhood such as asthma, sleep disordered breathing, type 2 diabetes and musculoskeletal conditions
- Supports mental well-being
- Reduces risk of diet related disease in adulthood e.g. type 2 diabetes, heart disease, stroke and some cancers
- Contributes to improved employment and productivity, reducing poverty and bringing value to the economy
- A reduction in food consumption-based climate impact

Contributes to:
 Longer healthier lives
 A reduction in health and socio-economic inequalities

7 Conclusion

All children should have the opportunities to thrive and be healthy.

The school age years are a time for rapid growth and development^{17,54,55} and are a critical stage for the establishment of healthy dietary patterns to take into adulthood.^{56,57}

A healthy balanced diet provides the nutrients required to support this critical time of growth. This has long term impacts on future health and wellbeing outcomes.

Schools contribute significantly towards the dietary patterns of children owing to the time spent at school during the primary and secondary years. Schools are therefore an influential part of children and adolescents food environments.

Effective healthy school food approaches have the potential to foster the positive conditions for the health and well-being of children and young people and the reduction in health inequalities.

The impacts over the short, medium and long-term have been described in this report and are understood now better than ever.

Healthy school food is also about widely held values in our society: fairness and equality, a preventative approach contributing to helping children and young people to live longer, healthier lives and to reach their aspirations for a fulfilling life through supporting educational achievement. A unified system with a shared language that addresses health and educational attainment has reciprocal effects for individuals, families and society.⁴⁹

Wales is at an important point in time to take action. Unless progress continues and the opportunities available to us are maximised, the huge opportunity that school food can make on the health and well-being of children and young people, will not be realised.

Public Health Wales is committed to working with our partners to realise the potential of school food in improving the health and educational outcomes for children and young people in Wales, and importantly in reducing inequalities. In recognition of this opportunity Public Health Wales have established a specific work programme on the school food environment which will see Public Health Wales 'working together for a healthier school food environment'.



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