BRIEFING
OCTOBER
2024

CHILDHOOD OBESITY

Obesity Action Scotland
Healthy weight for all

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EXECUTIVE SUMMARY

In 2018, Scotland set a national ambition to halve childhood obesity prevalence to 7% by 2030. Despite this, childhood obesity in Scotland is growing alarmingly. Almost a fifth of children (18%) are at risk of obesity, and when combined with overweight, a third of children (33%) are at risk.

The trend presents early, with over one-fifth of Primary 1 children being at risk for both outcomes. For obesity alone, the prevalence stood at 10.5% in 2022. Worryingly, children from deprived areas have double the risk of experiencing obesity at that age. A bold and urgent policy response is critical to reverse the trend and help meet the national child obesity target.

A range of multifaceted factors influence children's weight — their physical and built environment, wider societal and economic influences, commercial actions, school and childcare settings, public policy decisions, individual biology/genetics, family and peers. Thus, a cross-sectoral response towards improving the food environment plays a decisive role in determining children's weight outcomes.

Reducing levels of child obesity matters both for their developing years and the future. Obesity in childhood increases risk for several non-communicable diseases including cardiovascular diseases, which can result in poorer mental health outcomes and low self-esteem in children. Children at risk of obesity are also more likely to experience obesity as adults and have a higher risk of morbidity, disease, and premature death in adulthood.

Preventing obesity in childhood is more effective than attempting treatment of obesity later in life. There is strong evidence that obesity prevention reduces children's Body Mass Index (BMI). Reliance on personal responsibility does not serve the purpose as infants and children do not have freedom of choice and resources, further emphasising the need for creating healthier food environments. However, treatment that factors in children's growth needs and its distinctiveness from adult treatment options is also important. Child Healthy Weight programmes, run by health boards in Scotland, offer a range of treatment and prevention services.

The Scottish Government's 2018 Diet and Healthy Weight Delivery Plan includes a specific outcome focused on children 'ensuring they have the best start in life, eat well and are a healthy weight'. To this end, it is critical to implement with urgency commitments under the Delivery Plan and advance the action on: a) adopting regulation of promotions of food and drink products high in fat, salt and sugar (HFSS), b) restricting outdoor HFSS advertising c) tightening nutritional standards of school meals, d) universal free school meals to all primary school children and e) improving children's menus in the out of home sector.

Actions have been progressed in some areas. For example, regulatory intervention in 2020 have raised the nutritional standards of school meals; Red meat, pizza and chips servings in primary school meals have reduced; 20,000 additional women and families into the Best Start Foods programme on removal of income thresholds.

However, gaps remain. This includes enacting regulations to restrict promotions of unhealthy HFSS products; making mandatory the code of practice for children's menus; making the free school meals accessible to all school children

in primary 6 and 7; regulating advertising of unhealthy HFSS products in outdoor public spaces; and establishing cross sectoral mechanisms for their delivery.

As evidence indicates, a bold and early multisectoral response is critical to tackling childhood obesity and meeting the national targets and international commitments. Actions should be focused on tackling the affordability and availability of unhealthy food and drink products, promoting availability of healthy food, and addressing inequality in weight outcomes experienced by children, with a focus on addressing its underlying causes.

PURPOSE

This briefing paper provides an overview of the current levels of child obesity in Scotland. It discusses child obesity outcomes, the causes and consequences of child obesity, options for prevention and treatment, and informs discourses on inequalities. Further, the briefing highlights the current policy context in Scotland with a view to inform policy and practice. It offers a number of recommended actions for the Scottish Government and other stakeholders to take in addressing the growing levels of child obesity in Scotland.

OBESITY NUMBERS

- In 2022, 18% of children aged 2-15 were at risk of obesity in Scotland[6].
- In academic year 2022/23, 10.5% of children in primary 1 (approximately age 5) were at risk of obesity[3].
- 13.9% of children in the most deprived areas were at risk of obesity in 2022, compared to 6.8% of the least deprived[3].
- Around a third of pupils eat at least one portion of fruit and vegetables per day[7].
- Consumption of sugary soft drinks is more than twice as high among the most deprived children compared to the least deprived – 29.1% compared to 13.1%[7].

KEY ACTIONS REQUIRED

TOP ACTIONS REQUIRED BY NATIONAL GOVERNMENT

- Regulate to reduce the affordability, availability and marketing of unhealthy products through restrictions on promotions and advertising of unhealthy food and drink high in fat, salt and sugar (HFSS) and expanded health levies
- Strengthen the Out of Home Action Plan through mandatory measures such as for children's menus
- Tackle growing inequalities, including via the expansion of universal free school meals to all school-age children

LOCAL GOVERNMENT ACTIONS	NHS AND OTHER HEALTH-ACTOR ACTIONS
• Offer universal free school meals in line with national nutritional standards • Implement bans on outdoor advertising of unhealthy food	• Prioritise child healthy weight in all services and policies related to pre and post conception and early years • Improve population-wide surveillance by adding an additional measurement of height and weight in Primary 7 to the Child Health Surveillance Programme

DEFINITION OF CHILDHOOD OBESITY

Obesity in children aged 2 and over is defined using Body Mass Index (BMI)[1]. BMI is calculated by dividing an individual's weight (in kilograms) by their height squared (in metres). Children's height and weight proportions change as they grow and develop; therefore, age and sex specific growth reference data has to be used to interpret their BMI.

Published sources of data on children's weight in Scotland, such as the Scottish Health Survey (SHeS), use BMI categories to report children's weight outcomes. This is outlined in Table 1 below.

Table 1
Child BMI weight thresholds

WEIGHT CATEGORY	BMI PERCENTILE
Risk of underweight	≤2nd percentile
Healthy weight	2nd - 85th percentile
Risk of overweight	85th - 95th percentile
Risk of obesity	≥ 95th percentile

Source: NHS Scotland

The weight categories outlined in the table above are used to categorise children's weight and are used primarily to assess the health of the whole population of children and monitor changes in the proportion of children in each weight category[2,a].

[a] The Scottish Health Survey and Primary 1 BMI statistics use the term 'at risk of obesity', which this document uses for consistency in reporting that data.

CHILDREN AND OBESITY IN SCOTLAND: FACTS AND FIGURES

PRIMARY 1 BMI DATA[3]

One of the main sources of data on children's weight in Scotland is Primary 1 (ages 4-5) BMI data, gathered through the Child Health Surveillance programme[3]. In this survey, health practitioners weigh the students mostly from state schools. In 2022/23, this included 89.3% of (n = 48,995) primary 1 children in all 14 health boards and approximately 13% of students from independent schools.

Data from 2022/23 academic year indicates a slight drop in the proportion of children at risk of developing overweight and obesity compared to the previous year.

In 2022, obesity risk among children in Scotland continues to be above pre-pandemic levels.

The proportion of children at risk of developing overweight and obesity in academic year 2022/23 was 21.9%[3]. When looking at obesity alone, the proportion of children at risk was 10.5%. This is a decrease from 11.7% in 2021/22 but remains higher than pre-pandemic levels (10.4%)[3].

Factors such as increased food insecurity, reduced access to healthy food due to the COVID 19 shutdown of schools and childcare environments, reduction in physical activity following lockdown restrictions and loss of routine activities, such as walking to school or childcare, and increased anxiety and stress among children and their families were among the reasons cited for the increased risk of overweight and obesity in children seen since the pandemic[4].

BMI measurement in primary 1 is important, as it can successfully identify large proportions of children who may have obesity in later childhood. Evidence from the child measurement programme in England, which weighs children in reception year and year 6 (equivalent to primary 1 and primary 7 (ages 10-11) in Scotland), shows that the proportion of those living with obesity at the start of primary school roughly doubles by the end of primary school. Currently in Scotland, BMI measurement is only taken in primary 1.

SCOTTISH HEALTH SURVEY

Another source of data on child weight is the Scottish Health Survey (SHeS). Researchers measure, gather and record the survey data on children's height and weight for a broadly representative sample of children aged 2 to 15[b] with the permission of their parent or guardian[5].

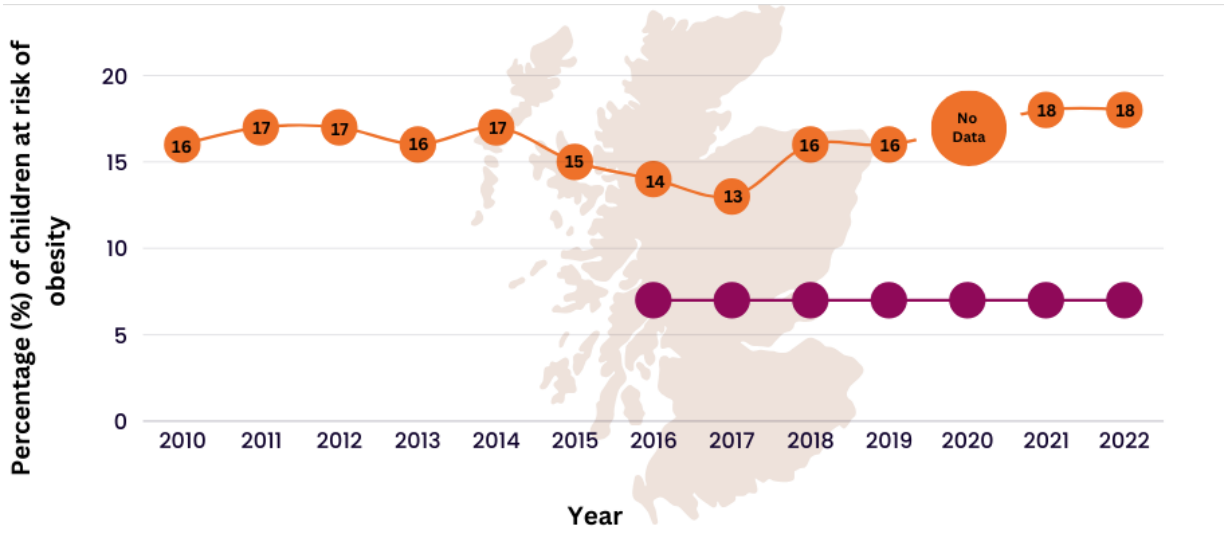
In 2022, almost 1 in 5 children (18%) aged 2 to 15 were considered to be at risk of obesity, and a further 15% at risk of overweight. This means a third of children aged 2 to 15 are considered to be at risk of overweight and obesity[6,c]. This risk varies slightly for boys and girls. Girls are at a higher risk of obesity (19%) compared to boys (17%). Children living in more deprived areas were also at a higher risk of combined overweight and obesity – 40% of children in the most deprived areas were at risk of overweight and obesity, compared to 35% in the least deprived[7].

In 2018, the Scottish Government published their Diet and Healthy Weight Delivery Plan[8], which outlined an ambition to halve childhood obesity by 2030. This set 2016 as a baseline year for the Plan, which means the ambition was to achieve a child obesity prevalence of 7%. This is indicated in the purple line in the graph below. The orange line on the graph shows the percentage of children recorded as being at risk of obesity each year. There is no data available for 2020, as children's data was not gathered in the 2020 survey, due to the pandemic.

Since 2018, there is a widening gap between the national childhood obesity target rate set for 2030 and obesity prevalence among children in Scotland.

Figure 1

Percentage of children aged 2-15 at risk of obesity each year, compared to target prevalence of 7%



Source: Obesity Action Scotland, using SHeS data

[b] Legally, individuals up to the age of 18 are classified as children in Scotland. However, in practice in many areas, including parental rights and responsibilities, the definition of a child applies to individuals up to the age of 16. SHeS recognises children in line with this practice.

[c] Due to the pandemic, the Scottish Health Survey 2021 modified the methodology for gathering children's weight from measurements by researchers to self-reporting by the adult completing the survey on behalf of the child. This raised concerns about its comparability with the measured P1 BMI data for that period. Subsequently, the 2022 SHeS measured and recorded children's height and weight data with parental consent during in-person interviews.

INSIGHTS FROM GROWING UP IN SCOTLAND (GUS) SURVEY

The Growing Up in Scotland (GUS)[9] survey is an important longitudinal research project aimed at tracking the lives of Scottish children from birth, through their childhood, into adolescence and beyond. GUS contains a nationally representative sample of over 5,000 children born in Scotland between 2004/05, who have been followed up regularly since they were aged 10 months. There are 2,238 children who were successfully followed up to age 14. Healthy weight and perception of body weight are regularly reported.

Obesity Action Scotland commissioned researchers at University of Glasgow to undertake in-depth analysis of this survey data to better understand changes in weight status over children's life course, including inequalities present at different childhood ages and across time, as well as how strongly food insecurity is associated with weight outcomes. The study focused on children's weight outcomes at ages 4, 10 and 14[10].

KEY FINDINGS FROM THE STUDY INDICATE:

- Children who experienced food insecurity at a young age were four times more likely to experience persistent obesity from the start of Primary school up to age 14 than children who did not experience food insecurity.
- At least half of today's Scottish children will likely experience overweight or obesity by age 14.
- The prevalence of overweight and obesity increased from 25% at age 4 to 37% at age 14. This was mainly driven by increases in obesity, which rose from 10% to 22%.
- Poverty and social disadvantage, including area level deprivation, circumstances of parent(s), food insecurity and a range of other, often coexisting factors, amplify the risk of experiencing overweight and obesity throughout childhood.

Greater coherence between food insecurity and obesity interventions can yield a range of co-benefits.

PARENTAL VIEWS ON CHILDREN'S WEIGHT: INSIGHTS FROM OAS PARENTS OMNIBUS SURVEY [11]

In 2021, Obesity Action Scotland commissioned a survey on parental perceptions regarding their children's weight changes and current weighing practices in schools. Parental attitudes to schools weighting their children can provide important insights on the likelihood of children participating in in-school weighing programmes. The data was gathered via a survey of 1,004 parents in Scotland undertaken by IPSOS Mori.

HEADLINE FINDINGS:

- Majority of parents (55%) supported their child(ren) being weighed at school; 28% opposed.
- Men were more supportive of the practice, but overall, a majority of both men (66%) and women (51%) were in favour.
- Parents in households with three or more children showed more support, compared to households with only one child (67% vs 52%).
- More parents of children aged 5-8 supported the practice (62%) compared to those of 15-17-year-olds (50%), and there was generally more 'strong support' of the practice from parents with children in younger age groups (age 11 and under).

Reasons given by parents for not supporting their child(ren) being weighed included concerns over mental health and wellbeing, a belief that it is not the school or government's place to weigh children, and that it was deemed unnecessary.

CHILDHOOD OBESITY AND INEQUALITY

It is well evidenced that children from deprived backgrounds experience poorer health and wellbeing outcomes, lower life expectancy, and are more likely to have overweight and obesity than children from more affluent backgrounds[12].

The Primary 1 BMI statistics show there are significant inequalities in overweight and obesity outcomes between children from the most and least deprived backgrounds. The data shows that 26.8% of children from the most deprived quintile in Scotland in academic year 2022/23 were at risk of overweight and obesity, compared to 16.8% of children from the least deprived quintile.

Promote and support small businesses and independent enterprises tackling obesogenic environments in deprived areas.

When looking at obesity alone, children from the most deprived backgrounds were over twice as likely to be at risk of developing obesity compared to the least deprived children (13.9% vs 6.8%)[3].

This pattern is replicated across all Scottish Index of Multiple Deprivation (SIMD)[d] quintiles, with an increasing trajectory of obesity as level of deprivation increases, as illustrated in Table 2.

[d] SIMD quintiles are used to categorise the population by deprivation. The Index uses a range of five quintiles, each representing 20% of the population, from most deprived through to least deprived.

Table 2
Percentage of primary 1 children at risk of overweight and obesity (combined) and obesity by SIMD quintile, academic year 2022/23

SIMD QUINTILE	PROPORTION OF CHILDREN AT RISK OF OVERWEIGHT AND OBESITY (COMBINED)	PROPORTION OF CHILDREN AT RISK OF OBESITY
1 (most deprived)	26.8%	13.9%
2	24.4%	12.5%
3	22.1%	10.8%
4	18.7%	7.8%
5 (least deprived)	16.8%	6.8%

Source: Public Health Scotland (2023) Body Mass Index of Primary 1 children in Scotland. School Year 2022/23 report[3]

ADDITIONAL EVIDENCE

Evidence from a recently published report from the Health Foundation on health inequalities in Scotland highlights that inequalities in children's weight outcomes appear at a very young age. The report examined differences in weight status of children at 27-30 months and at the primary 1 stage and found that those living in more deprived areas are 1.5 times more likely to be at risk of overweight and obesity at both time points, compared to their least deprived counterparts[13].

Action on the food environment, going beyond promotion of physical activity, is key to preventing childhood overweight and obesity in deprived communities.

Another significant finding in the report was in relation to physical activity. The report found that the proportion of children failing to meet physical activity guidelines is very low and there is a very weak social gradient in physical activity outcomes. In fact, children from more deprived backgrounds are slightly more likely to participate in physical activity and meet the guidelines than their least deprived counterparts.

Inequalities in overweight and obesity seen in children from a young age are unlikely to be explained by physical activity, and rather it is inequalities in diet, including in terms of accessibility and affordability of healthy food that is a bigger concern and much stronger driver of the outcomes seen.

EVIDENCE ON CHILDREN'S DIETS

HEALTH AND WELLBEING CENSUS

The first Health and Wellbeing Census[14] conducted by the Scottish Government was published in February 2023 and includes information on children's diets, including fruit and vegetable consumption, and consumption of unhealthy HFSS products including crisps, chips and soft drinks. Covering the years 2021 and 2022, the Census reports data gathered by and reported from 16 local authorities covering over 132,000 school age pupils from primary 5 to secondary 6 (approximately ages 9 to 17). Notably, the census used a self-reporting questionnaire completed by the students and employs experimental statistics that is still under development[e].

The Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2020[43] require at least one portion of fruit and two portions of vegetables to be offered as part of all primary school meals and secondary school meals which meet a required set of nutritional and other standards (referred to as secondary school analysed lunches)[f]. It should be noted that in the Health and Wellbeing Census data reported children may not have recognised the portions of fruits and vegetables, particularly if they were delivered as part of a meal. This may in part explain why some children under reported eating any fruit or vegetables in the survey.

The Census gathered data on the consumption of a variety of food items across the whole day — both during and outside of school hours, such as at home, and provides a breakdown of the data by age group (school year) and deprivation quintile.

[e] The survey results have been published to involve users and stakeholders in their development and to build in quality and understanding at an early stage of the process.

[f] The Nutritional Requirements refer to analysed secondary school lunch. These are lunches which meet a required set of nutritional and other standards which include: meeting statutory nutrient standards for school meals, including the amount of calories, and the minimum and maximum levels of key nutrients such as total fat, saturated fat, free sugars and sodium; offer a minimum of 2 options for a main course and at least one other course; include not less than two portions of vegetables and one portion of fruit; be available for no more than the value of a free school meal; and be clearly marked on the menu.

HEADLINE FINDINGS:

- Around a third of pupils say they eat at least one portion of fruit and vegetables respectively daily. Fruit intake was generally higher in younger groups while vegetable intake was higher in older groups. Just over 60% of pupils report eating less than one portion of fruit and vegetables respectively per day.
  - 40.2% of primary 5 pupils ate fruit at least once a day compared to 30.6% of secondary 6 pupils.
  - 28.8% of primary 5 pupils ate vegetables at least once a day compared to 37.5% of secondary 6 pupils.
  - The higher intake of fruit in primary 5 children could be a result of the universal free school meal offer available to this age group.
- There are multiple factors that can cause some children to be more exposed to unhealthy food than others. Evidence shows that there is often a significantly greater concentration and clustering of unhealthy food outlets in more deprived areas[22], and healthy food can cost up to 3 times more in these areas[23]. This is supported by findings from the Census which found that a considerably higher proportion of the most deprived pupils consumed sugary drinks and chips daily compared to the least deprived pupils (across all school years) – 29.1% in the most deprived quintile compared to 13.1% in the least deprived.
- There is a clear equity gap in terms of daily fruit and vegetable consumption, with over twice as many of the least deprived children in the survey eating vegetables daily (43%) compared to the most deprived (21%).
  - There is therefore a correlation between increasing deprivation and unhealthy food consumption across the SIMD quintiles.
- More pupils from younger years consume unhealthy food daily than older groups (aside from sugary drinks which is the same for both). Specifically, by food categories:
  - 12.2% of primary 5 pupils ate chips or fried potatoes at least once a day compared to 4.8% of secondary 6 pupils.
  - 23.7% of primary 5 pupils ate crisps at least once a day compared to 11.6% of secondary 6 pupils.
  - School food guidelines, discussed earlier in the briefing, do not permit chips to be served daily in schools. These findings are reflective of the Census reporting what children eat each across an entire day, not just in school.
- More than 80% of children across all school years reported doing physical activity outside of school hours that resulted in them breaking a sweat or being out of breath.

Children from more deprived areas reported consuming less healthy diets than those from less deprived areas.

CAUSES OF CHILDHOOD OBESITY

Childhood obesity is complex and has multiple causes. These causes are multi-faceted and wide-ranging.

Child nutrition in early life, especially breast feeding, is crucial for appropriate child development and healthy weight[17]. Body weight in childhood may be partly determined by genes[18], but isn't caused by genes alone. The environment in which the child lives is critical and remains the strongest determinant[19]. Childhood BMI is a predictor of adult BMI – children who have obesity in childhood are much more likely to have obesity as adults[20,21].

Environments children are exposed to every day are a major influencing factor for health, and this influence can be both positive and negative. They can promote health but can also cause poor health outcomes, including overweight and obesity[22].

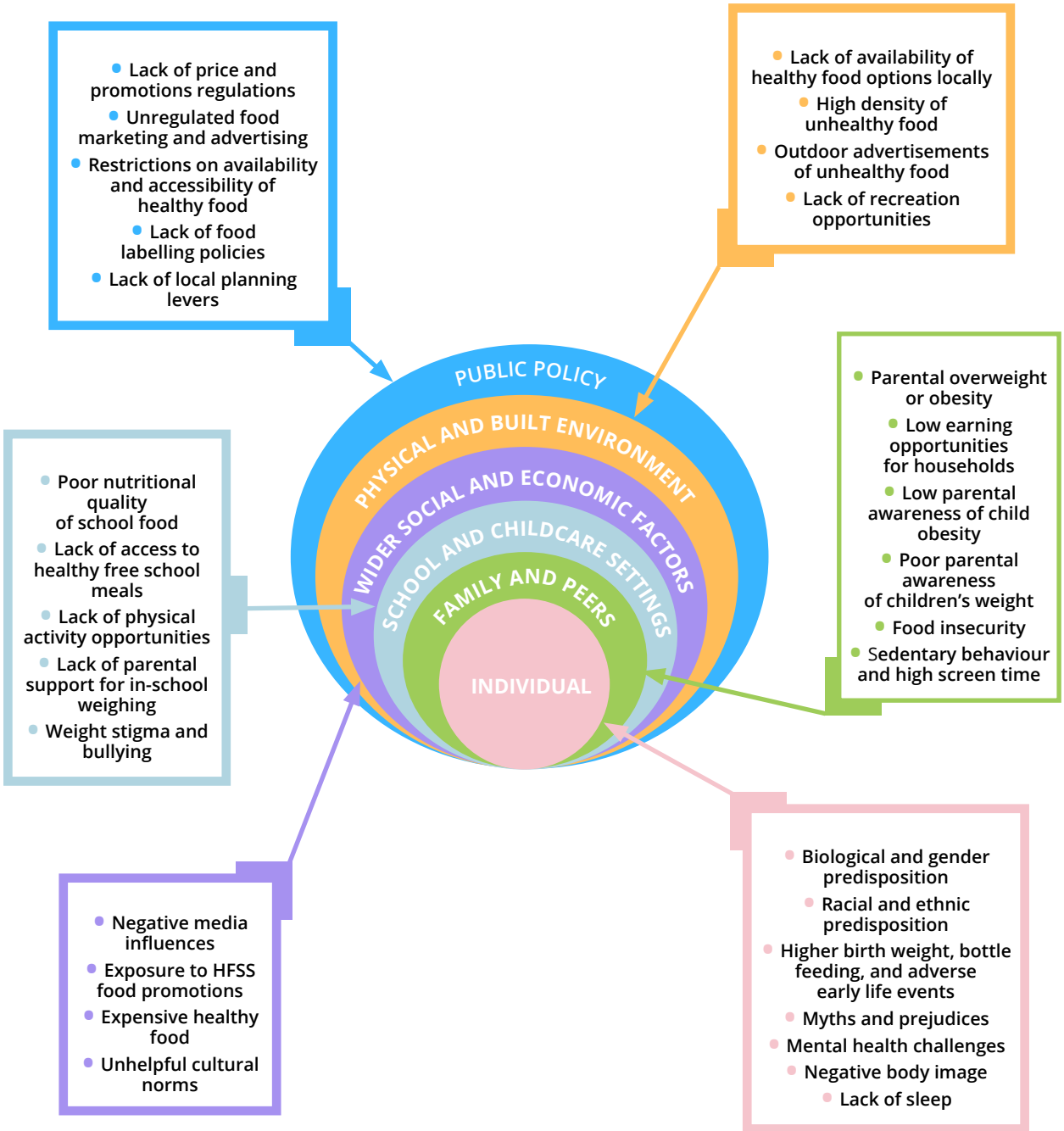
Specifically, the food environment is a strong driver of child obesity. The currently high levels of childhood obesity are driven by modern 'obesogenic' environments where cheap, energy-dense, food and drinks high in fat, salt and sugar are widely available, more affordable than healthier options, and are acceptable to everyone, with limited physical activity opportunities. Evidence shows that healthy food options are often less available, particularly in more deprived areas. Essential food items can cost up to 3 times as much in rural and deprived areas[19], and the clustering of fast-food outlets disproportionately affects deprived areas[18]. Children and young people are also exposed to high levels of unhealthy food advertising in their daily lives, including on television, online, on outdoor billboards and public transport. Evidence shows that this influences the food choices and preferences of children and young people[22].

Figure 2 outlines factors that negatively influence children's diet and weight.

Interventions should stipulate mandatory regulations, rather than voluntary codes of practice, which are currently used and found ineffective.

Figure 2

Factors that negatively influence children's diet and weight



Source: Adapted from article by Jebeile et al in The Lancet Diabetes & Endocrinology, 2022/23

CONSEQUENCES OF CHILDHOOD OBESITY

Table 3
Current and future health risks from childhood obesity

HEALTH RISKS NOW	HEALTH RISKS LATER
Obesity during childhood can have a harmful effect on the body in a variety of ways[24]. Children with obesity have a greater risk of: • high blood pressure and high cholesterol, which are risk factors for cardiovascular disease (CVD)[21] • increased risk of glucose intolerance, insulin resistance and type 2 diabetes[21] • breathing problems such as sleep apnoea and asthma[21] • joint problems and musculoskeletal discomfort[21] • fatty liver disease, gall stones and gastro-oesophageal reflux (heartburn)[21] • poor mental health, including depression, behavioural problems and issues at school[21] • low self-esteem and low self-reported quality of life[25] • impaired social, physical and emotional functioning[22]	Additionally, there are a range of health risks in later life for children with obesity. Identifying future health risks now for children is important for both short and long-term prevention. These include: • More likely to have obesity as adults[26] • Higher risk of morbidity, disability and premature death in adulthood[21] • Adult obesity is associated with a range of serious health conditions including heart disease[27], type 2 diabetes[28], and cancer[29] • Obesity and disease risk factors in adulthood will be more severe[21]

PREVENTION

Preventing obesity in childhood is preferable to attempting treatment of obesity in later life. This is because returning to a healthy weight is extremely difficult for people who already have obesity. There is strong evidence that obesity prevention reduces children's BMI.

Reliance on personal responsibility does not serve the purpose as infants and children do not have freedom of choice and resources, further emphasising the need for changes to influencing environmental factors.

Strategies that are most likely to prevent childhood obesity require government leadership, including legislative actions to create a healthier food environment, as well as the delivery of targeted programmes and interventions.

The most striking benefits to population wellbeing have come from public health, not medical interventions.

TREATMENT AND INTERVENTIONS

Treatment of obesity is also important for the health of children[21]. Obesity treatment in children and adolescents is different to obesity treatment of adults, as it should recognise a child's growth needs.

The latest data from Public Health Scotland outlines that there were 39,452 referrals to weight management services recorded between 1 October 2019 and 30 September 2022. Children (aged 18 and under) accounted for just under 9% (8.6%) of referrals[30] Evidence shows that longer (over 6 months) and intensive (high contact time) interventions are most effective for children and young people[31].

Since 2008, NHS Scotland health boards have run Child Healthy Weight programmes, with the aim to reduce rates of childhood obesity. The primary 1 BMI data outlined earlier in the briefing is gathered as part of these programmes, which offer a range of prevention and treatment services across each health board area in Scotland[35].

SCOTTISH GOVERNMENT GUIDANCE ON CHILDHOOD HEALTHY WEIGHT INTERVENTIONS

Scottish Government guidance on childhood healthy weight interventions are set out in the ***Standards for the delivery of tier 2 and tier 3 weight management services for children and young people in Scotland*** document, published in 2019[32]. The standards help ensure a consistent, equitable and evidence-based approach to the treatment of overweight and obesity for children and young people up to the age of 18 in Scotland. Based on the SIGN and NICE guidance, the standards inform the response of Health and Social Care Partnerships, NHS Boards and the broad range of professionals who are involved in the planning and delivery of weight management services for children and young people. The guidance highlights that services should be designed to meet the needs of local populations, weight management services for children and young people should be delivered in a suitable environment, with a clear referral pathway and criteria, and should be supported by a programme of effective monitoring, evaluation and reporting to ensure services continually improve.

SCOTTISH GOVERNMENT GUIDANCE TO SUPPORT HEALTHY WEIGHT INTERVENTIONS IN PREGNANCY AND THE EARLY YEARS

Pregnancy and early childhood are crucial times to intervene with regards to obesity treatment. In 2021, the Scottish Government published a guidance document that identified interventions for supporting pregnant women and young children to maintain a healthy weight[33]. The report is based on findings of a research study undertaken on child healthy weight systems in Scotland and took in the views of healthcare workers, and parents. The report recommends the following interventions:

- **Interventions in pregnancy** should aim to support pregnant women to eat well, exercise safely, and monitor their health and that of their unborn babies. The focus is not to get the women to lose weight during pregnancy but rather to minimise risks to mother and baby; promote healthy weight gain during pregnancy; improve nutrition for both the mother and their unborn baby; support healthy behaviour change; and prevent gestational diabetes.
- **Interventions in the early years** (from birth to primary 1) should be delivered where the BMI of a child is above the 91st centile. Interventions fall into four categories. These are: health visitor-led interventions, programmes aimed at the whole family, dietitian-led interventions, and support provided by other services and professionals.
- **Interventions at primary 1** involves a nursing follow-up to the initial primary 1 measurement, to provide support to parents. Types of interventions can include a family-based weight management programme; and a programme focused on feeling good and having fun, where families take part in activities together, over a period of 9 weeks.

In terms of effectiveness, health professionals are generally positive about the interventions. However, the report outlines that the effectiveness of these interventions is often determined by the willingness of parents to engage, and highlights that even where research participants were positive about the interventions on offer, uptake could still be low among parents. Barriers identified include cultural barriers and a lack of time and money.

The research identified a number of barriers to ensuring consistency in delivery of interventions across the country. These included the size of the health board, the rurality of the area, high caseloads, mixed skill sets, and an ongoing impact from Covid-19 on service provision. These barriers have the potential to lead to inconsistent delivery which can cause and further embed existing inequalities with regards to weight management services and interventions for pregnant women and young children.

OTHER WEIGHT MANAGEMENT AND OBESITY TREATMENT GUIDANCE

The World Health Organization, in their report[26] emphasise that weight management programmes and interventions for children should:

- Be Family based.
- Multicomponent, including nutrition, physical activity, and psychosocial support.
- Delivered by multi-professional teams with appropriate training and resources.
- Delivered as part of universal health coverage.

POLICY CONTEXT

The Scottish Government has made a range of policy commitments focused on improving child health outcomes.

DIET AND HEALTHY WEIGHT DELIVERY PLAN[8]

The Scottish Government published their Diet and Healthy Weight Delivery Plan in 2018. The Plan outlined a number of policy commitments, with Outcome 1 specifically focused on children, ensuring they have 'the best start in life, eat well and are a healthy weight'. The Plan also details the pledge made by the Scottish Government in their 2018/19 Programme for Government to halve childhood obesity by 2030 (discussed earlier in the briefing).

Additionally, the Delivery Plan has a number of additional outcomes with policy commitments focused on improving the food environment and reducing diet related inequalities, which also impact on children. These include:

- **Restricting HFSS advertising** – the Delivery Plan recognises the impact advertising has on normalising what is acceptable for children to eat[34]. The Scottish Government has devolved powers to restrict outdoor advertising, such as advertising on billboards, transport and at bus stops[g]. To date, no action has been taken on this.
- **Restricting HFSS food promotion and marketing within premises** – the Delivery Plan committed to consult on regulations to restrict promotions and marketing of unhealthy discretionary HFSS food and drink products, that is products that are not required as part of a healthy, balanced diet, with a commitment to further explore proposals for restricting promotions online.
  - Since the Delivery Plan has been published, there has been four consultations on various formats of these restrictions. The latest consultation[35] held between February and May 2024 sought views on the details of proposed regulations (secondary legislation) to restrict price and location promotions of these HFSS products in both retail premises and online. The outcome of the consultation is expected to be published in late 2024, with regulations anticipated to be laid out in 2025.
- **Coherence and coordination** – the Delivery Plan emphasises the need for joined-up policy and cross sectoral leadership in maximising its outcomes. Mechanisms for cross sectoral collaboration within and outside the government would facilitate this approach.

OUT OF HOME ACTION PLAN[36]

Another commitment within the Delivery Plan is the development of an Out of Home Action Plan to support healthier options when eating out of home. The Action Plan was published in 2021 and contains a commitment to the development of a Code of Practice for children's menus that is meant to inspire response from eating outlets. The Code of Practice has been piloted in 2024 by Public Health Scotland as part of its Eating Out, Eating Well Framework[37], with results to follow.

[g] Powers to regulate TV and digital, online advertising are reserved to the UK Government.

The Action Plan and associated Code of Practice are voluntary, not mandatory measures. Evidence shows that mandatory measures are much more likely to be effective for achieving the desired change and outcomes.

FREE SCHOOL MEALS[38]

The Scottish Government currently offers universal free school meals to all pupils in primaries 1-5. The latest available data from the Healthy Living Survey shows that uptake of free school meals has been increasing over the last few years - uptake increased from 67% in 2022 to 70% in 2023[39].

In 2023, the Scottish Government reaffirmed its commitment to expand universal free school meals to all pupils in primaries 6 and 7[40]. However, the 2024/25 Programme for Government limited free school meals to those in Primary 6 and Primary 7 who receive the Scottish Child Payment[41].

The Scottish Government's expansion to 1,140 funded hours of early learning and childcare introduced a universal entitlement to a free meal for all 3-and 4-year-old children and eligible 2-year-old children as part of the early learning and childcare (ELC) day. This can be delivered as breakfast, lunch or dinner. ELCs must have a clear and comprehensive policy for the provision of healthy, nutritious meals and snacks which must be consistent with national standards[42].

In February 2021, the Scottish Government published Healthy Eating in Schools: guidance 2020[43] which highlighted the new Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2020, aiming to align more closely to the Scottish Dietary Goals. The new Regulations centre around three key themes to make primary school meals healthier - increasing access to fruit and vegetables, reducing the amount of sugar accessible within schools, and ensuring provision of red and red processed meat is in line with the Scottish Dietary Goals.

Obesity Action Scotland previously undertook an analysis of school meals in the country to understand the extent to which they meet the 2020 guidance. This followed similar reviews in 2017, 2019 and 2020. For the 2021 review, menus of 29 local authorities that published school menus on their website were analysed.

KEY FINDINGS FROM THE LATEST REPORT IN 2021[44] HIGHLIGHT:

- All local authorities studied in 2021 offered a day without red or processed meat[h], with an overall reduction in the number of occasions any red or processed meat was offered, from 114 times a week in 2017 to 64 times per week in 2021.
- However, the amount of processed meat in the form of sausages and burgers appears to have increased slightly in 2021.
- There has been a reduction in the number of local authorities who offered pizza and chips on their school menus (15 out of 29 local authorities, compared to 21 in 2020).
- There has also been a decline in the amount of days fish was offered on school menus – a decrease of 22% from the earlier 2020 report. Dietary guidance from Food Standards Scotland suggests at least 2 portions of fish per week for both children and adults, one of which should be oil rich fish[45].

Reducing processed meat consumption and improving oily fish intake in schools improves the healthiness of school meals to meet school meal nutritional requirements.

[h] In the report, processed meat is defined as meat that has undergone methods other than freezing that enhance flavour or improve preservation such as through salting, smoking, marinating, air-drying or heating, and includes foods such as beef, chicken and turkey burgers; chicken and pork sausages; meatballs; pulled pork; hot dogs; gammon; chicken, ham and turkey slices, and chicken and turkey nuggets. This differs from the Scottish Government's definition of processed meat which only includes red processed meat such as beef burgers, meatballs and hotdogs, and does not include white processed meat such as chicken and turkey burgers or sausages.

Healthy school meals matter. Evidence shows that school meals are often much healthier than packed lunches, containing less sugar, salt and fat[46]. Provision of school meals therefore offers a unique opportunity to drive the required dietary change among children in Scotland and to act as an exemplar for healthy food.

BEST START FOODS[47]

Best Start Foods grants are currently provided to pregnant women and families with young children under the age of 3 on certain benefits for purchasing fruits and vegetables and other healthy foods. From February 2024, the income threshold was removed extending eligibility to a further 20,000 women and families[48].

GOOD FOOD NATION (SCOTLAND) ACT: NATIONAL AND LOCAL GOOD FOOD NATION PLANS

The Good Food Nation (Scotland) Act was passed in 2022 and sets out a vision for Scotland as a good food nation[49].

The development of national and local Good Food Nation plans is a central component of the Act, and the plans will set out how child obesity interventions will be implemented and monitored both nationally and in local areas.

In early 2024, the Scottish Government consulted on the first draft National Good Food Nation Plan. The draft Plan made several references to child weight outcomes, including formalising the ambition to halve child obesity by 2030 and significantly reduce diet-related health inequalities[50]. The draft National Plan outlined a number of indicators for monitoring progress on child health, diet and weight outcomes. These include:

- The number of children registered for free school meals, and the percentage uptake of school meals (both free and paid).
- Proportion of public and private sector food businesses implementing the code of practice for children's menus.
- The proportion of households experiencing household food insecurity
- The percentage of children who are a healthy weight, and the percentage at risk of obesity
- Fruit and vegetables intake of 2–15-year-olds

These indicators will be used to monitor progress towards achieving the aims and objectives of the Good Food Nation Act and contribute towards meeting the overall target of halving childhood obesity by 2030 and significantly reducing diet-related health inequalities. They will also be used to inform the development of indicators for the local plans.

The consultation analysis report was published in early October 2024[51]. The next steps are for the draft National Plan to be amended to reflect the feedback in the consultation, and the amended draft to be laid before the Scottish Parliament for their consideration and comment. The local Good Food Nation plans will be informed by the national plan and are expected in 2026.

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Obesity Action Scotland
232-242 St Vincent Street Glasgow
G2 5RJ

www.obesityactionscotland.org
X - @obesityactionsc
E-mail - info@obesityactionscotland.org