Obesity Action Scotland
Healthy weight for all

FACTSHEET 2023/24 DATA

March 2025

OBESITY IN SCOTLAND

Prevalence, Causes, Impact and Responses

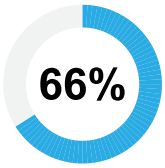
This factsheet reports on data from 2023/24.

OBESITY TRENDS

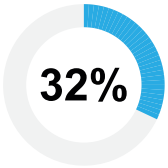
Obesity is a significant public health concern. In the 2023 Scottish Health Survey, adult obesity prevalence was 32% and 66% of adults were living with overweight and obesity[1]. Just under a third of children (30%) aged 2-15 in 2023 were at risk of overweight and obesity, with 17% at risk of obesity. There has been a 10% increase in the proportion living with obesity, compared to 2022 figures.

The figure for children at risk of overweight and obesity in Scotland in 2023 is down slightly from the previous year (from 33% to 30%), and the proportion of children at risk of obesity has also slightly decreased to 17% (down from 18% in 2022). This still is a worrying trend and indicates continuing lack of progress towards achieving the Scottish Government's ambition to halve childhood obesity to 7% by 2030. For the first time, the factsheet features obesity data by ethnicity for children, which is included in the 2023/24 Primary 1 BMI data, and shows that Primary 1 age children of Black, Caribbean or African ethnicity have a higher risk of obesity (13.6%) compared to children of White Scottish ethnicity (10.9%). This is outlined on page 4.

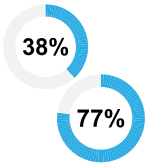
OBESITY PREVALENCE IN SCOTLAND



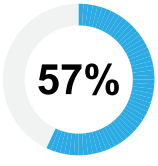
Two-thirds of adults (66%) live with overweight including obesity[4].



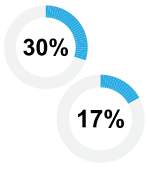
Nearly a third of adults (32%) live with obesity[4].



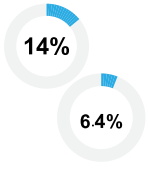
Overweight and obesity prevalence (BMI 25 or more) increases with age from 38% in the 16-24 age group to 77% in those aged 55-64[4].



57% of pregnant women had overweight and obesity in the year ending 31st March 2024.



Nearly a third of children (30%) aged 2-15 were at risk of overweight and obesity. 17% were at risk of obesity[4].



In 2023/24, 14% of children in the most deprived quintile were at risk of obesity, more than double the rate in children in the least deprived quintile (6.4%)[8].

Note on data included in this factsheet

Scottish Health Survey: In the 2023 Scottish Health Survey, in most instances, adult height and weight was measured and recorded by the researcher in the participant's home when completing the survey. For a small number of participants who completed the survey by telephone, self-reported height and weight data was gathered. Adjustment factors have been applied to the self-reported data to account for tendencies of individuals to overestimate their height and underestimate their weight. Data for children in the 2023 survey is fully measured data, with measurement of height and weight taken by the researcher. The survey records height and weight measurements of children aged 2-15[3].

Births in Scotland – maternal BMI data: Data on maternal BMI is recorded in the annual Births in Scotland publication. It reports data obtained from the Scottish Morbidity Record 02 (SR02) and is recorded at the ante-natal booking appointment. Reporting on mothers' height and weight data is mandatory on the SR02[4].

Primary 1 BMI Data: BMI data for children in primary 1 is measured data, gathered in the school setting as part of the Child Health Surveillance Programme, and is reported annually. It provides information on the overall proportion of children at risk of overweight and obesity and also provides a breakdown of this data by deprivation, ethnicity and health board[5]. The data does not include children who are home schooled, and the majority of independent schools do not record children's height and weight measurements in the Child Health Surveillance Programme.

This factsheet newly offers the primary 1 BMI data for school year 2023/24 by ethnicity. The primary 1 BMI data is included alongside the children's data from the Scottish Health Survey. This is because the Scottish Health Survey doesn't provide a breakdown of children's data by deprivation or ethnicity, which is important for demonstrating how obesity disproportionately impacts different societal groups.

DEFINITION OF OBESITY

Obesity describes the accumulation of excess body fat. Body Mass Index (BMI) is used to define overweight and obesity at population level. BMI is a measure of whether a person is a healthy weight for their height. According to the World Health Organization (WHO), for most adults, overweight is defined as having a BMI of 25 – 29.9 kg/m^2 and obesity is defined as having a BMI of 30kg/m^2 and higher. Severe obesity is defined as having a BMI of 40kg/m^2 and higher[6]. Data reported in this factsheet uses this approach to measuring obesity.

BMI offers a population level measure that is relatively accurate, simple and cheap. However, exceptions to the rule exist. For example, for people who are very muscular or pregnant women may have a high BMI but not have extra fat mass, where other measures may be used to provide accurate assessment.

The Lancet recently published a new definition which looks at an emerging approach to determining obesity. It defines obesity in two categories – pre-clinical and clinical obesity – which subsequently impacts on the treatment individuals receive. Pre-clinical obesity is defined as having a BMI of 30 or more with no associated co-morbidities, with non-medical responses such as weight loss advice, guidance and therapy offered. Clinical obesity is when a BMI of 30 or more presents with at least one associated co-morbidity such as diabetes. As an alternative to BMI, the Lancet paper recommends that obesity is measured either by direct measurement of excess fat, where available, or via an alternative measure such as waist circumference, waist-to-hip-ratio, or waist-to-height ratio, with cut off points appropriate to age, gender and ethnicity[7].

DEFINITION OF CHILDHOOD OBESITY

As with adults, obesity in children aged 2 and over in Scotland is defined using Body Mass Index (BMI). BMI is calculated by dividing an individual's weight (in kilograms) by their height in metres squared.

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.

Our sources of data on children's weight in Scotland use epidemiological BMI thresholds to report numbers of children at risk of underweight, overweight and obesity. These thresholds define children in the 2nd percentile of BMI or less as at risk of underweight; those with a BMI between the 85th and 95th percentile as at risk of overweight; and children in the 95th percentile or higher as at risk of obesity. The phrase 'at risk of' is correct when using these thresholds, as this reflects the increased likelihood of children with obesity developing serious health problems in later life[8].

GENDER

In the 2023 Scottish Health Survey, males were more likely to have overweight (including obesity) than females. This is the case for both men and boys aged 2-15, with boys more likely to be at risk of obesity than girls (19% compared to 15%) but boys were less likely to be at risk of overweight (12% compared to 14% of girls). Girls are therefore at greater risk of moving from overweight to obesity than boys. Overall, women were more at risk of obesity. Women are twice as likely as men to have severe obesity (6% compared to 3%)[1].

- 67% of men had overweight and obesity. 30% had obesity, and 3% severe obesity[1].
- 65% of women had overweight and obesity. 30% had obesity, and 6% severe obesity[1].
- Just under a third of children were at risk of overweight and obesity (30%). 17% were at risk of obesity[4].
- For boys aged 2-15, 31% were at risk of overweight and obesity in 2023. 19% were at risk of obesity[2], and for girls 29% were at risk of overweight and obesity. 15% were at risk of obesity[1].

Proportion of boys and girls at risk of obesity by age

	Age 2-6	Age 7-11	Age 12-15
Boys	19%	21%	18%
Girls	18%	21%	17%

Source: Scottish Health Survey 2023

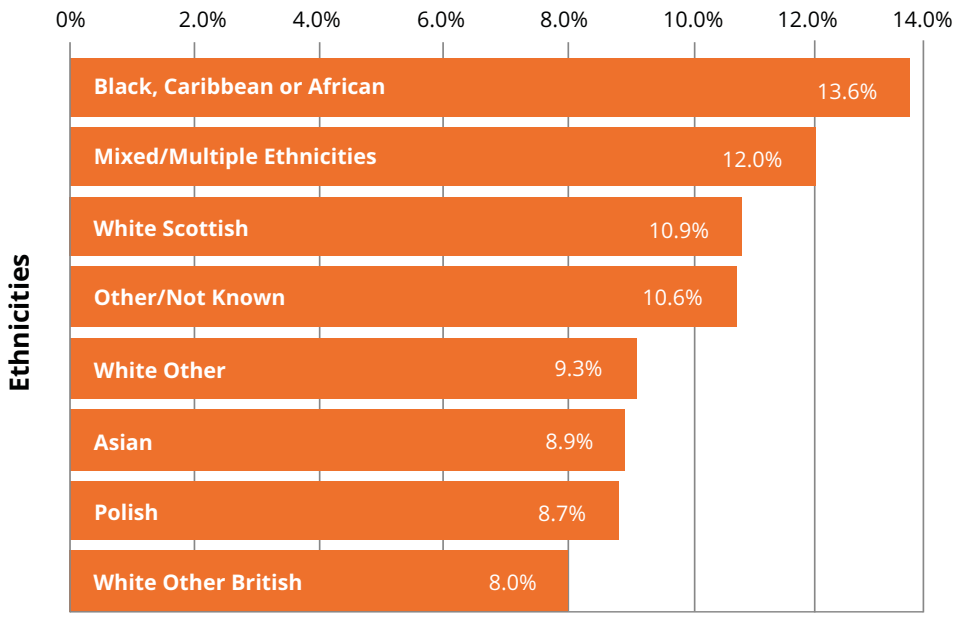
DEPRIVATION

- In 2023, adults from more deprived groups were more likely to have overweight and obesity than those who are less deprived - 69% of adults in the most deprived quintile had overweight and obesity, compared to 58% in the least deprived. For obesity, the figures are 36% and 25% respectively. Adults in the most deprived quintile are twice as likely to have severe obesity than those in the least deprived quintile[1].
- The 2023 Scottish Health Survey doesn't report data by deprivation quintile for children. Instead, we have made use of the 2023/24 Primary 1 BMI statistics to provide insight into obesity and deprivation in children in Scotland.
- In academic year 2023/24, Primary 1 BMI data shows primary 1 age children in the most deprived SIMD quintile were over twice as likely to be at risk of obesity than children in the least deprived quintile – 14% in the most deprived quintile, compared to only 6.4% in the least deprived. This is a persistant issue seen over several years[8].
- Measurement of BMI is also required in Primary 7 to track children's weight across their formative growing up years. This is currently the practice in England where BMI is measured in schools in reception year (equivalent to Primary 1) and Year 6 (equivalent to Primary 7).

ETHNICITY

- For the first time in 2023/24, the Primary 1 BMI statistics reported child weight by ethnicity. This data is not yet available in the Scottish Health Survey for adults or children[8].
- The data shows that Primary 1 age children of Black, Caribbean or African ethnicity have a higher risk of obesity (13.6%) compared to children of White Scottish ethnicity (10.9%)[8].
- Children of White Other British (8%), Polish (8.7%), Asian (8.9%) and White Other (9.3%) ethnicities have relatively lower risk of obesity[8].

Percentage of children at risk of obesity



Source: Primary 1 BMI data, school year 2023/24

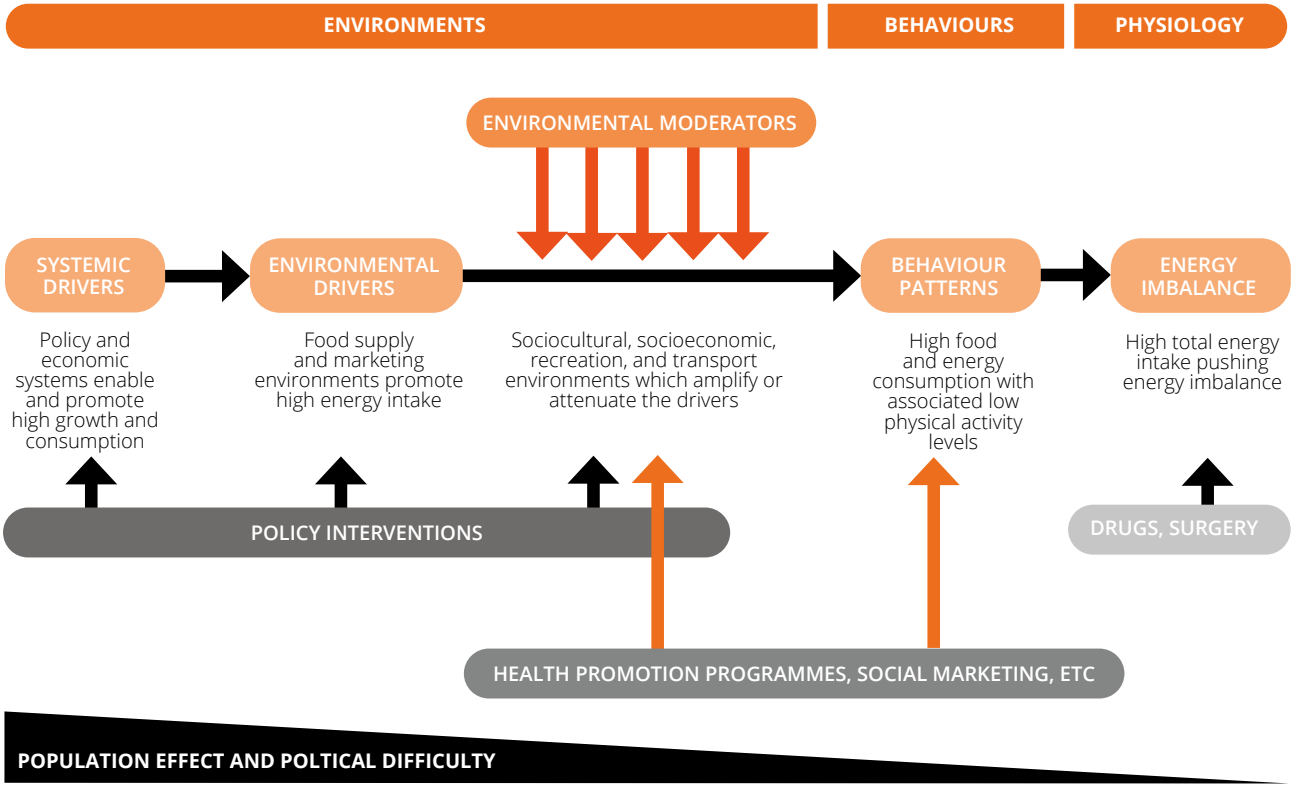
MATERNAL OBESITY

- In the year ending 31st March 2024, 57% of pregnant women had overweight and obesity. This is an increase from the previous year (56.5%)[2].
- When looking at just obesity, this has continued to rise year on year and is now at the highest level recorded – 27.9%, compared to 27.2% the previous year[2].
- Women from more deprived backgrounds are much more likely than their less deprived counterparts to be living with overweight and obesity during pregnancy. More than 60% (60.2%) of pregnant women in the most deprived SIMD quintile were recorded as having overweight and obesity, compared to 49.9% in the least deprived SIMD quintile[2].
- Postnatal maternal BMI measurements that are critical for pregnancy-related weight management are not currently recorded in Scotland.

CAUSES OF OBESITY

Obesity occurs when energy intake from food and drink is greater than the body's energy requirements over a prolonged period. An obesogenic environment is one where wider structural factors play a role in diet and nutrition. These include political, social, economic, environmental, cultural and commercial factors, and have a strong influence on the cost, availability and consumption of food[6]. In obesogenic environments, inactivity and overconsumption of energy-dense foods high in fat, salt, sugar (HFSS) are easy, affordable, and widely accepted.

A framework model outlining obesity determinants and solutions



Source: Lancet (2011)[9], adapted by Obesity Action Scotland

IMPACT OF OBESITY

Obesity increases the risk of

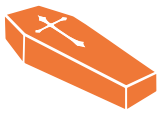
Type 2 diabetes[10]

Infertility in women, impotency in men[15]

Kidney disease[19]

13 common cancers[11]

Complications during pregnancy and birth[16]



Premature death[20]

Cardiovascular disease[12]

Musculoskeletal problems[14]

Unemployment[21]

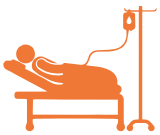
Alzheimer's disease and dementia[13]

Mental health problems[17, 18]

Discrimination and stigmatisation[22]

Gastrointestinal disorders[14]

Respiratory disorders[14]



Increased risk of hospitalisation[20]

Severe illness and death from COVID-19[23]

Non-alcoholic fatty liver disease[24]

Arthritis[25]

ADDITIONAL RISKS FOR CHILDREN WITH OBESITY

There are a number of additional risks for children who have or who are at risk of obesity. These include:

- Emotional and behavioural impacts including stigmatisation and bullying, low self-esteem, and absence from school[20].
- Physical health impacts including breathing difficulties, increased risk of bone fractures, hypertension, early markers of cardiovascular disease, insulin resistance, and physiological effects[20].
- Higher risk of dental caries and other oral health problems, with close links to inequality[27].
- Increased risk of having obesity in adulthood[26].
- Higher risk of morbidity, disability and pre-mature death in adulthood[1].

COST OF OBESITY IN SCOTLAND

Recently published research outlined the cost of obesity to Scotland in 2022 was £5.3 billion. This is comprised of costs to the NHS, costs to individuals due to the impact of poor health on their quality of life, costs to social care, and costs to the wider economy and productivity[28].

The main costs associated with unhealthy diet and weight can be grouped into three broad categories – *direct, indirect and intangible*. Direct costs are generally those which relate to costs of health care services including prevention, diagnosis and treatment of conditions. Indirect costs refer to the loss of productivity to society, typically including abesteeism and premature mortality. Finally, intangible costs relate to the psychological burden to individuals and their friends and families from pain, suffering and bereavement experienced as a result of poor health from overweight and obesity[29].

Evidence suggests that *indirect* costs are the most significant costs of obesity, accounting for almost two-thirds of total economic costs and impacts from overweight and obesity[30]. Such costs are broad and far-reaching, highlighting the importance of actions and interventions to address them. These costs include loss of productivity attributable to loss of life or impaired life quality, direct health care costs, and investment to mitigate the impact of obesity.

The cost from obesity to the NHS in Scotland is estimated to be £772 million[24]. Average NHS costs for people with a body mass index of 40 kg/m^2 (severe obesity) are estimated to be twice those for people with a BMI of 20 kg/m^2 (within healthy weight range).

The research calculated the cost to the economy to be £213 million. This is comprised of costs to employers from lost productivity and reduced economic output due to additional sick days taken by people living with obesity[31].

These costs are also not borne equally in society, with the research indicating clear patterns of inequality. Those who are in the most deprived population quintiles bear a greater burden with regards to the costs of obesity. The two most deprived quintiles bear almost half of the cost (48%), compared to only 14% in the least deprived quintile. Projections suggest that, if nothing is done, this will continue to worsen, both in terms of overall rates of obesity and the burden from it[24].

OBESITY PREVENTION INTERVENTIONS

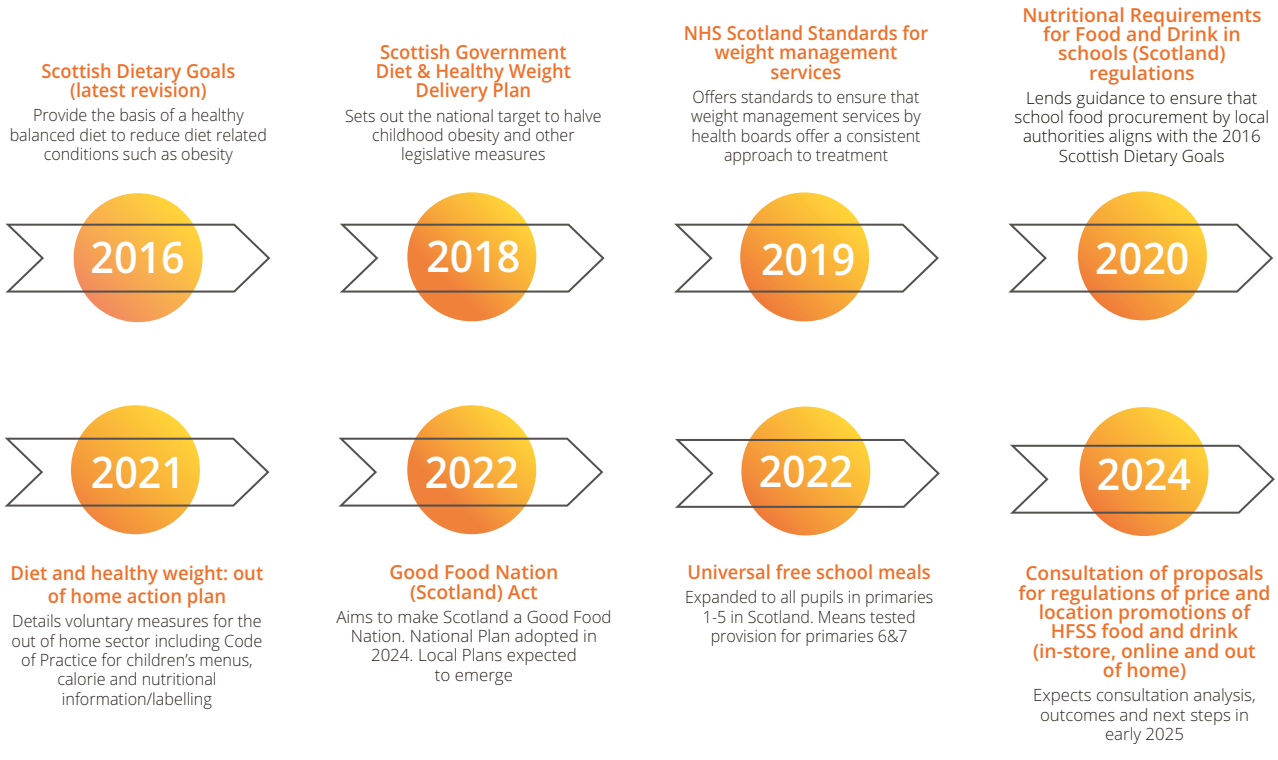
Interventions which are mandatory, including legislation and regulation, are known to be much more effective at improving population health and weight outcomes than interventions that are voluntary and remain focused on individual behaviours and require high levels of individual agency. Interventions should be focused on transforming the food environment to make healthy food options readily available and affordable for everyone, regardless of where they live.

Evidence shows that almost all obesity prevention interventions are highly cost-effective to society. The savings on health care costs and improved productivity, through reduced absenteeism, for example, could outweigh the costs of direct investment required to deliver the interventions.

Recently published evidence highlighted there are a range of policies that have a very strong or strong evidence base and have a very high or high impact on obesity, but which are of low or very low cost to the government. These include a ban or restrictions on all HFSS price promotions in food retail premises and restricting positioning/placement of HFSS products in retail stores[14]. Significantly, these policies require legislative or regulatory action, need to be comprehensive and require very little individual agency. In contrast, the findings highlight that banning or restricting only volume promotions, such as buy one get one free offers, in food retail businesses, for example, whilst still being of very low cost to governments, has only a moderate impact on obesity and moderate quality of evidence, further demonstrating the need for comprehensive interventions.

Further evidence highlights significant net benefit to the UK economy of four obesity prevention policies which had either already been implemented or are scheduled to be introduced by the UK Government. These policies are the Soft Drinks Industry Levy (SDIL) (already implemented), in-store location promotion restrictions (implemented in October 2022) on products high in fat, salt and sugar (HFSS), restrictions on price promotions of HFSS products, and a 9pm watershed for advertising HFSS products on TV and a ban on paid-for online advertising, which is due to be implemented in October 2025. The findings outline that over a 25-year period, the combined net benefit of these policies is estimated to be over £76 billion[33], demonstrating the significant cost that obesity has to the economy and the huge economic benefits that can be achieved when such policies are implemented. Such policies help to rebalance the food system, addressing the structural and systemic issues which drive obesity, and ensure that the healthy option is the cheapest and most accessible option for everyone. No one policy is a silver bullet, and as the evidence cited here demonstrates, a range of policies and interventions are required to be introduced and implemented simultaneously to achieve improved population weight outcomes.

POLICY RESPONSES IN SCOTLAND



INTEGRATED HEALTH AND SOCIAL CARE AND OBESITY RESPONSE IN SCOTLAND

Under the Public Bodies (Joint Working) (Scotland) Act 2014, local authorities and health boards are required by law to work together to plan and deliver adult community health and social care services. This is referred to as 'health and social care integration' and is delivered by Health and Social Care Partnerships (HSCPs), of which there are 31 in Scotland. Under this model, the local authority and health board HSCP creates a delegated third body called the Integration Joint Board (IJB). There are 30 IJBs in Scotland[34].*

Each IJB is required to produce a strategic plan to deliver on the nine National Health and Wellbeing Outcomes.

These Outcomes include: People are able to look after and improve their own health and wellbeing and live in good health for longer; and health and social care services contribute to reducing health inequalities[34].

Priority actions to deliver these outcomes include commitments to taking a prevention-focused approach to obesity, addressing some of the underlying factors contributing to obesity, fostering a healthy food environment and promoting healthy weight. Local IJB Plans can be expected to reflect these priority actions.

*one HSCP has chosen a different model/approach rather than creating an IJB, hence why there are 31 HSCPs and 30 IJBs.

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