

Children's report card:

Influences on children and young people's diet, physical activity and weight

Introduction

This report card is part of a set that present public health information on children and young people's health and wellbeing in the Glasgow City Region (GCR) across a range of indicators. The Glasgow City Region comprises eight local authorities: Glasgow City^a; East Dunbartonshire; West Dunbartonshire; Renfrewshire; East Renfrewshire; Inverclyde; North Lanarkshire; and South Lanarkshire.

This work builds on the previous [GCPH Children and young people's profiles](#), [ScotPHO children's profiles](#) and newer data sources. In particular, the format of the summaries has drawn on the [Active Global Healthy Kids Alliance work](#) which has published report cards for Scotland in 2016 and 2018¹. These provide a critical assessment of Scottish children's physical activity, health behaviours and outcomes, as well as commenting on environmental and social influences on physical activity and health.

The report cards are the product of a working group led by the Glasgow Centre for Population Health and supported by the Information Services Division (ISD), a division of National Services Scotland, part of NHS Scotland. Additional group members included Glasgow Health and Social Care Partnership, NHS Greater Glasgow and Clyde and Glasgow City Council. The intention behind the report cards is to provide robust evidence and policy ideas to inform planning and future policy for children's services in the Glasgow City Region.

This section discusses the influences on children and young people's diet, physical activity and body weight and presents data from a range of sources and for different levels including at a Scotland level, for NHS Greater Glasgow and Clyde, and across Glasgow City Region (GCR) local authorities.

^a Glasgow is the term used to refer to Glasgow City (the local authority).

Why are diet, physical activity and body weight important for children and young people's health?

Maintaining a healthy weight throughout childhood is associated with many health benefits, while being overweight or obese is associated with a wide range of health problems over the entire lifespan and into the next generation. These include cardiovascular disease, type 2 diabetes, cancers, asthma, emotional distress and mental health difficulties in later life².

Poor diet and physical inactivity are the main factors associated with becoming overweight or obese³. Poor diet is a risk factor for ill health and, in the form of regular sugar consumption, is the main cause of dental decay⁴. Physical activity is known to impact on more than 20 conditions and non-communicable diseases – the benefits of physical activity go beyond that of its contribution to health weight and obesity⁵.

Diet and physical activity are strongly influenced by the economic, social, cultural and physical environments in which children and young people (CYP) live, grow and develop. Characteristics of the physical environments where children live are very important in shaping the behaviours that influence weight. The social conditions that result from inequalities in resources and power strongly influence CYP's exposure to a range of stressors which in turn increase the risk of developing obesity⁶.

Breastfed babies are more likely to maintain a healthy weight as they grow older⁷, as are children with parents who are a healthy weight³. There is also a body of evidence suggesting that lack of sleep^{8;9} can contribute to weight gain, and stress in early life¹⁰ can increase the risk of future weight gain. Children who are overweight and obese are at risk of remaining so as adults¹¹. The increasing inequalities observed in childhood obesity demonstrate the strong and growing association with poverty^{12,13,14}.

Being underweight in childhood, though much less common than being overweight, is also a health concern and can result from a poor diet, from underlying medical problems, or from both of these.

The indicators included in this summary are: **body weight; inequalities in body weight; diet; adult body weight; physical activity; physical inactivity; and breastfeeding.**

There is only limited data available at GCR level and, where this is not available, other local data is used. Where no local data is available, Scottish national data is used. The data used to create these indicators have been drawn from a variety of sources including the [Scottish Health Survey](#), the [National Diet and Nutrition Survey](#), routine data collected by the [NHS Information and Services Division \(ISD\)](#) and from information from the [Understanding Glasgow](#) website.

It is important to note that accurate measurement and interpretation of weight, diet and physical activity and inactivity in CYP is difficult and reported data tend to

underestimate the levels of obesity and physical inactivity that exist and overestimate physical activity¹⁵. The reasons are reported in detail elsewhere¹⁶. This report card includes the best available estimates of the current relevant population health data for CYP.

The following section provides summary headlines on each indicator and actions that are recommended to make progress. This is followed by the 'Where are we now?' section which provides more detail on each indicator and traffic light assessment of progress. The final 'what can we do about it?' section discusses in more detail approaches that can be used to make progress.

Red Amber Green (RAG) traffic light system

Each summary employs a 'Red Amber Green (RAG)' traffic light system to provide a sense of where the data indicate that good progress is being made in population health terms (Green); where there is cause for concern (Amber); and where there is more serious cause for concern (Red). A green light does not imply that further progress cannot be made but indicates that positive progress has been made.

Assessments of progress on an issue – as 'red', 'amber' or 'green' – are based on authors' judgements and are clearly subjective, albeit based on robust, available evidence.

Glossary and explanatory notes:

Body mass index (BMI): is a common measure of obesity patterns in populations. For children, age- and sex-specific BMI values are compared with data from a reference population to identify children whose BMI indicates they are underweight, overweight or obese, as well as children with BMI values just at the borderline of these groups. For this reason, children are described as being 'at risk' of overweight and obesity.

The BMI thresholds used to define the epidemiological categories of child weight which are normally used for population health monitoring purposes are defined as¹⁷:

- At risk of underweight: BMI less than or equal to 2nd centile
- Healthy weight: BMI greater than 2nd centile and less than 85th centile
- At risk of overweight: BMI greater than or equal to 85th centile and less than 95th centile
- At risk of obesity: BMI greater than or equal to 95th centile
- At risk of overweight and obesity: combined BMI greater than or equal to 85th centile

Food insecurity: Douglas *et al.* use the following measure as an indicator of household food insecurity: “Households with an income below 60% of the average income (where the ‘average income’ is the median household equivalised income)”¹⁸.

Food poverty: NHS Health Scotland developed the following definition of food poverty: “The inability to acquire or consume an adequate or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so”¹⁹.

Obesogenic environment: The term ‘obesogenic environment’ describes the range of external factors that make it more likely that we will consume more energy than we need and have low levels of physical activity. For example, car travel that is cheaper and more convenient than public or active travel; marketing, promotion, availability and lower cost of energy dense and nutrient poor foods; more time in sedentary jobs and pastimes.

Physical activity recommendations for children⁵:

- Infants (less than 1 year) should be physically active several times every day in a variety of ways, including interactive floor-based activity, e.g. crawling.
- Toddlers (1-2 years) should spend at least 180 minutes (3 hours) per day in a variety of physical activities at any intensity, including active and outdoor play, spread throughout the day; more is better.
- Pre-schoolers (3-4 years) should spend at least 180 minutes (including at least 60 minutes of moderate-to-vigorous intensity physical activity) per day in a variety of physical activities spread throughout the day, including active and outdoor play.
- Children and young people (5-18 years old) should engage in moderate-to-vigorous intensity physical activity for an average of at least 60 minutes per day across the week. This can include all forms of activity such as physical education, active travel, after-school activities, play and sports.
- Children and young people should engage in a variety of types and intensities of physical activity across the week to develop movement skills, muscular fitness, and bone strength.
- Children and young people should aim to minimise the amount of time spent being sedentary, and when possible should break up long periods of not moving with at least light physical activity.

Physical inactivity: Physical inactivity is defined as participating in less than 30 minutes moderate intensity physical activity per week^{20;21}.

Scottish Health Survey: The Scottish Government monitors the weight of children aged 2-15 years old using the Scottish Health Survey. As children who do not participate in the survey are likely to be different to those who do, statistical methods are used to compensate as far as possible when reporting results, but differences may exist when compared with other data.





Sedentary behaviour: Sedentary behaviours are those that involve a sitting, reclining or lying posture during waking hours, involving little movement and using little energy above what is used at rest⁵. The Scottish Health Survey asks about the amount of time spent on screens (TV, computer, phones and tablets) and time spent sitting (e.g. eating, reading, studying and homework) and uses this to give an indication of the time that CYP spend being sedentary. The UK chief medical officers highlight the evidence for the health effects of being sedentary but their guidelines do not set a time limit for sedentary behaviour⁵. The Canadian Sedentary Behaviour Guidelines⁹ use screen time as a proxy for sedentary behaviour and recommends that 5-17 year olds should aim for no more than two hours of screen time per day (equivalent to 14 hours per week). This aligns with SIGN guideline 115 on the management of obesity²².




Headlines

A healthy diet and regular physical activity are crucial for the wellbeing and development of CYP. Poor diet, physical inactivity and obesity among children and adults has been a public health concern in Scotland and other developed countries for many years and, despite multiple interventions, many of the trends (though stabilising in recent years) are not yet moving in the right direction and inequalities remain a stark feature.

The number of CYP living in poverty is high and growing in some areas (see the [children's report card focused on poverty and income inequality](#)) and, as a result, food poverty and food insecurity have increased markedly in recent years, illustrated by a dramatic rise in the use of emergency food aid and food bank services by families (see the [children's report card focused on poverty and income inequality](#)). The lowest income groups spend a greater part of their income on food and are also most affected by price rises²³. Decreasing household income, increasing poverty and rising food prices mean that many low-income households experience food insecurity. This affects what families eat: energy dense foods high in fat, salt and sugar tend to be the cheapest and most available foods for those on low incomes²⁴.

The distribution of body mass index (BMI) varies by deprivation with children living in more deprived areas more likely to be at risk of being overweight, and much more likely to be at risk of being obese, than children living in the least deprived areas¹².

Indicator	Recommended actions
<p>Body weight</p> <p>Several GCR local authorities had a slightly higher proportion of P1 children who were a healthy weight compared with the rest of Scotland (77%) in 2018/19 but the figures for Glasgow City (75%), Inverclyde (75%), North Lanarkshire (74%) and South Lanarkshire (76%) were below this average¹².</p> 	<p>The proportion of children who are an unhealthy weight in P1 indicates there is a need to develop interventions that help avoid unhealthy weight gain in the preschool years.</p> <p>Evidence shows that the proportion of children who are at risk of overweight or obesity increases with age. Consideration should be given to improving support offered to families in early childhood, both preschool and in the early school years, to help prevent weight gain. Consideration should also be given to introducing robust measurements of body weight for older children as part of the child health programme.</p> <p>Community Planning Partners (CPPs) should ensure that the policies, strategies and practices across the different domains of community planning are consistent in supporting a healthy weight, and that they encompass both support for CYP to maintain a healthy body weight and provision of appropriate interventions for CYP who are above a healthy weight. These interventions should align to the standards for weight management services for children and young people in Scotland²⁵ and local partners should work closely together to support the local implementation and delivery of these services.</p>
<p>Inequalities in body weight</p> <p>In 2018/19 children living in the most deprived areas of NHSGGC were more likely to be at risk of overweight (12.4% compared with 11.2%) and much more likely to be at risk of obesity (13.8% compared with 5.7%) than those in the least deprived areas^{12,12}. Similar patterns were observed in North and South Lanarkshire. These inequalities are increasing.</p> 	<p>CPPs should adopt a whole system approach²⁶ to addressing obesity by addressing the wider and inter-related social, cultural, environmental and economic influences on CYP's diet and physical activity, particularly in areas of high deprivation.</p> <p>CPPs should avoid focusing only on individual behaviour change and health education which do not address the societal and environmental factors that influence these diet and physical activity, and inadequately address the unequal opportunities that exist for enabling a healthy diet and a healthy weight.</p> <p>All public services should acknowledge and act on the role of poverty as a barrier to achieving a healthy diet and weight, and link their local strategies on poverty and food.</p>
<p>Diet</p> <p>In 2018, 15% of Scottish CYP (aged 2-15) met the '5-a-day' recommendation and 10% did not consume any fruit or vegetables on the previous day. On average CYP ate just 2.8 portions of fruit or vegetables per day²⁷. Those aged 11 to 18 years continue to have the poorest diet of all age groups in Scotland.</p> 	<p>The Scottish Government and local authorities should recognise and prioritise the provision of affordable, high quality, nutritious food as a right. For CYP this means increasing and improving the equitable distribution of access to high quality, affordable, nutritious food in all settings and environments which influence CYP's health, particularly in areas of high deprivation.</p> <p>CPPs should engage CYP in decision-making to improve the food environment in and around schools in order that developments aimed at improving health also meet their needs and preferences.</p>
<p>Adult body weight</p> <p>In the period 2015-18 63% of adults in NHSGGC aged 16 and over were overweight, including 28% who were obese²⁸. These data have relatively been stable since 2008, however inequalities are increasing for women.</p> 	<p>Changes in the environments in which people live and work which make it easier for everyone be physically active and to eat a healthy diet, are more likely to support a healthy weight in adults, children and young people.</p> <p>All public services should acknowledge and act on the important role of poverty as a barrier to achieving a healthy diet and weight, and link their local strategies on poverty and food.</p> <p>It is important that public services work together to engage and</p>

	<p>support women and their partners before they become pregnant and in early pregnancy to help them start their pregnancy at a healthy weight and in good physical and nutritional health. Action to engage and support people in these interventions or services should be tailored to meet local and individual circumstances.</p>
<p>Physical activity At least two thirds of CYP in Scotland do not meet the current physical activity guidelines and the proportion meeting the guidelines falls with age²¹.</p> <p>Physical activity is gendered with less than half of girls aged 13-15 years reporting that they meet the recommended activity levels.</p>	 <p>Local authorities, using their planning powers as well as their education, land and leisure services, should enable physical activity to be part of CYP's everyday life by increasing access to safe, high quality greenspace, making active travel to school easier and safer, and building opportunities for free (or low cost) active play into the school day and into leisure time.</p> <p>An increase in the number and variety of age-appropriate opportunities which encourage and enable girls and boys of all ages to participate in physical activity as well as provision of more opportunities for families to be physically active together.</p> <p>Support for pregnant women to be physically active and to limit weight gain during pregnancy should be available equitably.</p>
<p>Sedentary behaviour In 2018 CYP in Scotland spent 3.3 hours sedentary (outside of nursery or school) on weekdays and 4.6 hours sedentary on the weekends. This has been stable since 2015 but increases as children age²¹.</p>	 <p>Local authorities should consider developing recommendations for limiting sedentary behaviour.</p> <p>Public bodies and third sector providers of youth services should help parents and carers as well as children and young people to understand the importance of physical activity, and of limiting sedentary time, for healthy growth and development and should provide more and varied opportunities CYP and for families to be more physically active.</p>
<p>Breastfeeding Across Scotland the proportion of babies who are breastfed (including mixed feeding) at the 6-8 Health Visitor review has increased from 36% of babies in 2002/3 to 43% in 2018/19. Of these 32% were exclusively breastfed.</p> <p>Since 2016 the proportion of babies exclusively breastfed at 6-8 weeks has increased in all GCR local authorities except Inverclyde. However, there are large differences in the rates across GCR local authorities, ranging from 41.4% in East Renfrewshire to 13.3% in Inverclyde²⁹.</p>	 <p>There is good evidence that interventions can work to improve breastfeeding rates. Comprehensive approaches that consider a wide range of issues and that involve new mothers will be most effective.</p> <p>Interventions within the health service are important, such as ensuring the availability and quality of breastfeeding support for new mothers and supporting good nutrition in the early years.</p> <p>NHS interventions and services should be accompanied by adequate support and facilities for breastfeeding in all workplaces, healthcare and community settings.</p>

Where are we now?

Body weight



AMBER – This indicator is amber because several GCR local authority areas have a slightly higher proportion of Primary 1 children who are a healthy weight than the Scottish average. However, the proportion of children who are at risk of overweight or obesity is too high and increases as children age. We need to increase and strengthen our efforts to address the obesogenic environment in which CYP live and grow.

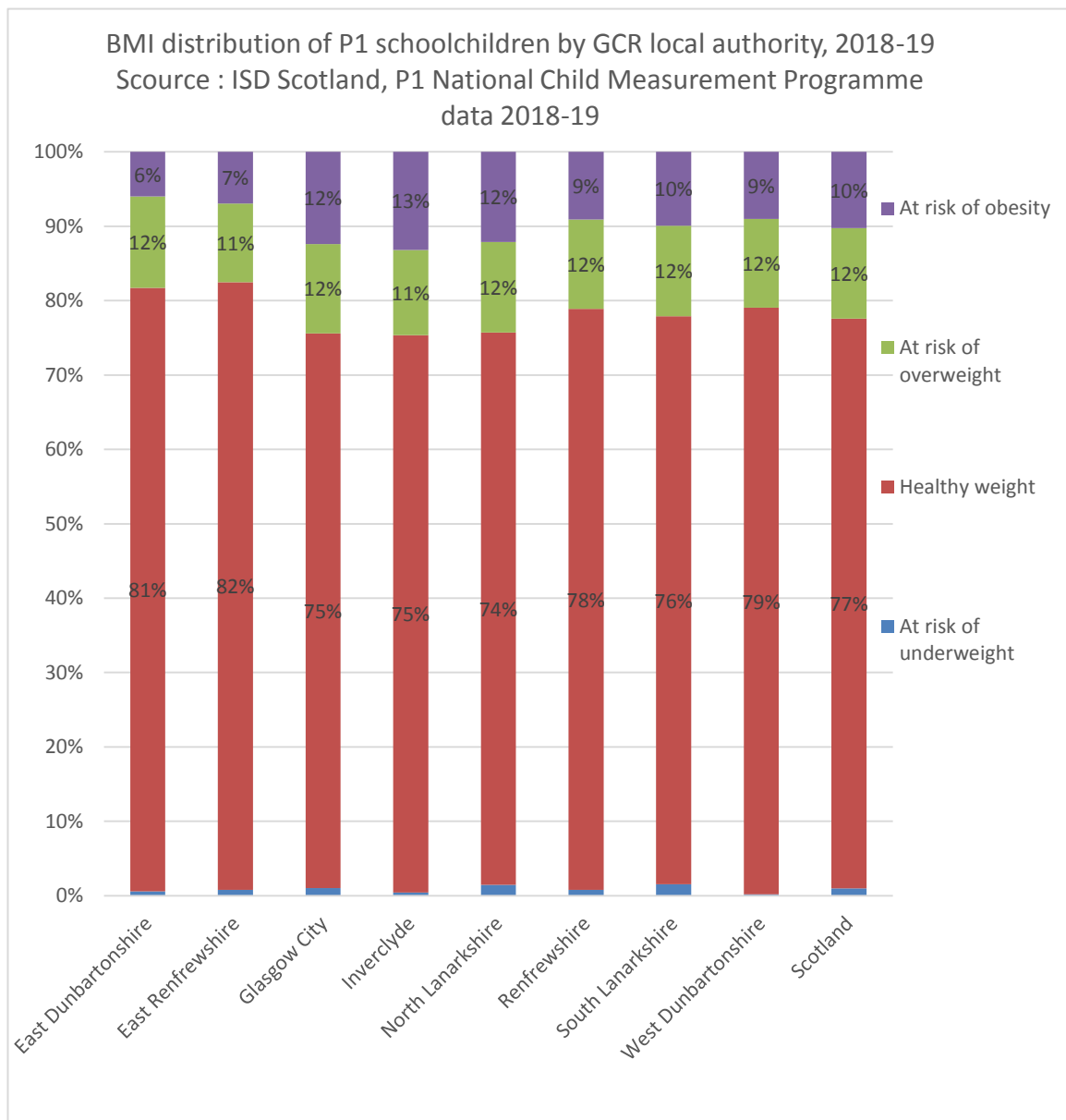
Scottish Government data from the Scottish Health Survey reported that, in 2018, 70% of children (aged 2-15 years old) were in the healthy weight range²⁷. The proportion of healthy-weight children has varied since 1998, with the lowest prevalence occurring in 2011 (65%) and the highest in 2015 and 2017 (both 72%).

In 2018, 29% of children aged 2-15 years old across Scotland were at risk of overweight or obesity across Scotland (13% at risk of overweight and 16% at risk of obesity). The age group most at risk of being overweight and obesity in 2018 were those aged 12-15 years old (12% at risk of being overweight and 21% at risk of obesity) which reflects the increase in body weight that is observed as CYP age. Some gender differences have been observed with girls more likely to gain weight as they move into their teens (37% of girls aged 12-15 years old were at risk of being overweight including obesity, compared to 31% of boys)²⁷.

Annually, most children aged 5 years old are weighed as part of a wider child health surveillance programme (the national child health programme). In 2018/19 this covered around 76% of Primary 1 children in Scotland (falling from over 88% in 2017/18) and the data can be broken down to NHS Board and local authority level. Using this data, several GCR local authorities have a higher proportion of P1 children who are a healthy weight compared with the rest of Scotland (77%) in 2018/19 but the figures for Glasgow City (75%), Inverclyde (75%), North Lanarkshire (74%) and South Lanarkshire (76%) were below this average¹².

Within GCR, Inverclyde, Glasgow City and North Lanarkshire had the highest proportion of P1 children at risk of overweight and obesity (24-25%) of whom at least half were at risk of obesity. East Dunbartonshire and East Renfrewshire had fewer than 20% of children at risk of overweight and obesity (see Figure 1). The proportion of children in P1 who are at risk of being underweight has remained relatively stable, between 1 and 2% in both NHSGGC and across Scotland, since 2009/10¹².

Figure 1.



Source: ISD Scotland. Child Health Surveillance¹².

Inequalities in body weight



RED: This indicator is given a red classification because of the increasing inequalities gap in the proportion of children at risk of overweight and obesity. We need to get much better at recognising and addressing the role of poverty in influencing the extent to which CYP are able to maintain a healthy weight.

In 2001/2 the proportion of children at risk of being overweight and obese was similar for all deprivation categories. Since then a social gradient has emerged with trends in P1 data showing an increasing inequalities gap. Primary 1 children in the most deprived areas of NHS Greater Glasgow and Clyde were more likely to be at risk of overweight (12.4% compared with 11.2%) and much more likely to be at risk of obesity (13.8% compared with 5.7%) than those in the least deprived areas¹². This is due to an increase in the proportion of children who are a healthy weight in the least deprived areas (82.2%) and a fall in the most deprived areas (73.2%). The proportion of children at risk of being underweight is similar for children in all deprivation categories (between 0.6 and 1.2%). Figures in the GCR local authorities that fall outside NHSGGC (North and South Lanarkshire) show a similar pattern.

Diet



RED: There is good evidence that the Scottish diet remains poor, with too many children, young people and adults regularly consuming sugar and too few eating adequate amounts of fruit and vegetables, particularly in areas of high deprivation. We have classified this indicator as red because 11-18 year olds continue to have the poorest quality diets. We need to increase our efforts to provide healthy, affordable, good quality food to CYP and families, particularly in more deprived areas.

Diet is important for health over and above the influence that it has on body weight. There is very strong evidence that good nutrition is important and protects against many cancers, type 2 diabetes and cardiovascular disease.

Survey data from 2008 to 2012³⁰ found that, in general, the Scottish population does not consume a healthy diet, and specifically consumes too much saturated fat, salt and sugar and not enough fruit and vegetables, oil-rich fish and fibre. These data indicate that CYP aged 11-18 years old had the poorest diets; consuming the fewest portions of fruit and vegetables and the highest percentage of food energy from sugars. A substantial proportion of girls in this age group also had low intakes of some vitamins and most minerals. Some social patterns were observed, particularly decreased consumption of fruit and vegetables and increased consumption of energy from sugars in those with lower income and from higher deprivation areas.

More recent data, from the Scottish Health Survey 2018, suggests that there have been few changes in consumption of fruit and vegetables, reporting that only 15% of children ate the recommended five portions of fruit and vegetables per day and 10% of children did not eat any fruit or vegetables on the previous day. On average children and young people ate just 2.8 portions of fruit or vegetables per day²⁷. More positively, 16% of children aged 2-15 years old consumed non-diet soft drinks daily in 2017/18, down from 35% in 2015/2016.

Overweight and obesity in adults



RED: This indicator is classed as red because almost two thirds of Scottish adults are overweight or obese and there is a growing socioeconomic gradient, particularly for women. Children with parents who are obese are more likely to be an unhealthy weight. More focused action is required to support women and parents to avoid weight gain and achieve and maintain a healthy weight from conception, particularly in areas of high deprivation.

Adult weight is important for child health. Children who have a parent who is obese are more likely to be at risk of overweight or obesity than those with a parent who is either overweight or who is a healthy weight^{31;32}. Evidence suggests that maternal diet and weight are important risk factors before, during and after pregnancy^{3;33}. Half of all women in Scotland were above a healthy weight in early pregnancy (56% of women from the most deprived area compared with 44% of women from the least deprived areas)³⁴.

In 2015-18, 63% of adults in NHS Greater Glasgow and Clyde aged 16 and over were overweight, including 28% who were obese²⁸. This compares with 65% of adults in Scotland aged 16 and over who were overweight, including 28% who were obese²². These data have been relatively stable since 2008.

Obesity rates in adults are consistently higher in Scotland's most deprived areas compared with the least deprived and are particularly pronounced for women, although slightly more men are overweight³⁵.

Physical activity



RED: This indicator is red because current data suggest that CYP of all ages do not participate in enough physical activity for their health and that the proportion who are physically active falls with age. More concerted and co-ordinated action is required to provide safe, free, regular opportunities for CYP to be active in a range of settings.

The Scottish Health Survey records self-reported physical activity among different age groups in Scotland. These data include all physical activity including commuting

to school and activity at school as well as leisure activities. As highlighted in the introduction^{15;16}, this data is likely to overestimate rates of physical activity. Children's physical activity was not reported in the 2018 survey report as the Chief Medical Officer's physical activity guidelines were under review with implications for the measurement method for children's physical activity used in the survey. These new guidelines were published in 2019²¹.

However, comparing physical activity reported in the 2017 survey with the physical activity guidelines at the time^b suggests that 33% of CYP (aged 5-15 years old) were active at the recommended level of at least 60 minutes on every day of the week (including activity at school). Data also shows that the proportion meeting the guidelines fell with age (45% of 5-7 year olds met the 2017 guidelines compared with just 18% of 13-15 year olds) and, excluding activity at school, a higher proportion of boys than girls met the physical activity guidelines at all ages. CYP from more deprived areas were less likely to meet the physical activity guidelines.

As the [children's report card on the environment](#) lays out, travelling actively to school could be an easy way to build activity into each day, yet CYP in Glasgow City Region have relatively low rates of active travel to school³⁶. The environment focused children's report card also highlights the importance of good quality greenspace, which has been linked with higher levels of physical activity and reduced obesity in children and young people³⁷. Access to high quality greenspace varies across the GCR.

Physical inactivity



RED: This indicator is classified as red because current data indicates that the proportion of time CYP engaged in sedentary behaviours is too high. Greater awareness of the importance of limiting sedentary time is required and more concerted and co-ordinated action is necessary to encourage and enable CYP to be more active in a range of settings.

The amount of time spent on screens (TV, computer, phones and tablets) and time spent sitting (e.g. eating, reading, studying and homework) is used by the Scottish Health Survey as a proxy for sedentary behaviour²¹, and gives an indication of the time that CYP spend being physically inactive. Current CMO guidelines do not give a time limit for sedentary behaviour⁵, however the Active Healthy Kids reports¹⁵ use the Canadian Sedentary Behaviour Recommendation³⁸ of no more than two hours of recreational screen time per day for 5-17 year olds and no more than one hour of sedentary screen time per day for 2-4 year olds³⁹. The SIGN guideline on the management of obesity recommends that young people have less than 2 hours of screen time per day²².

^b Recommendations in 2017: at least 60 minutes of activity on all seven days in previous week – including activities in schools.

In Scotland in 2018, CYP (aged 2-15 years old) spent an average of 3.3 hours sedentary (outside of nursery or school) on weekdays and 4.6 hours sedentary on the weekends²⁷. This is considerably more than the maximum time recommended by both the Canadian Sedentary Behaviour Recommendation and the SIGN guideline on the management of obesity. A similar pattern was found for boys and girls and neither group has shown a change in the average time spent sedentary since 2015. The proportion of time that is spent sedentary increases with age, for example on weekdays those aged 2-4 years old were sedentary for an average of 2.9 hours, 3.2 hours for those aged 8-10 years old and 4.3 hours for those aged 13-15 years old. All age groups spent more time on screens and sedentary at weekends. There is also evidence that time spent on screens is associated with increased processed food consumption^{40,41,42}, thus compounding the association between screen time and obesity.

Breastfeeding



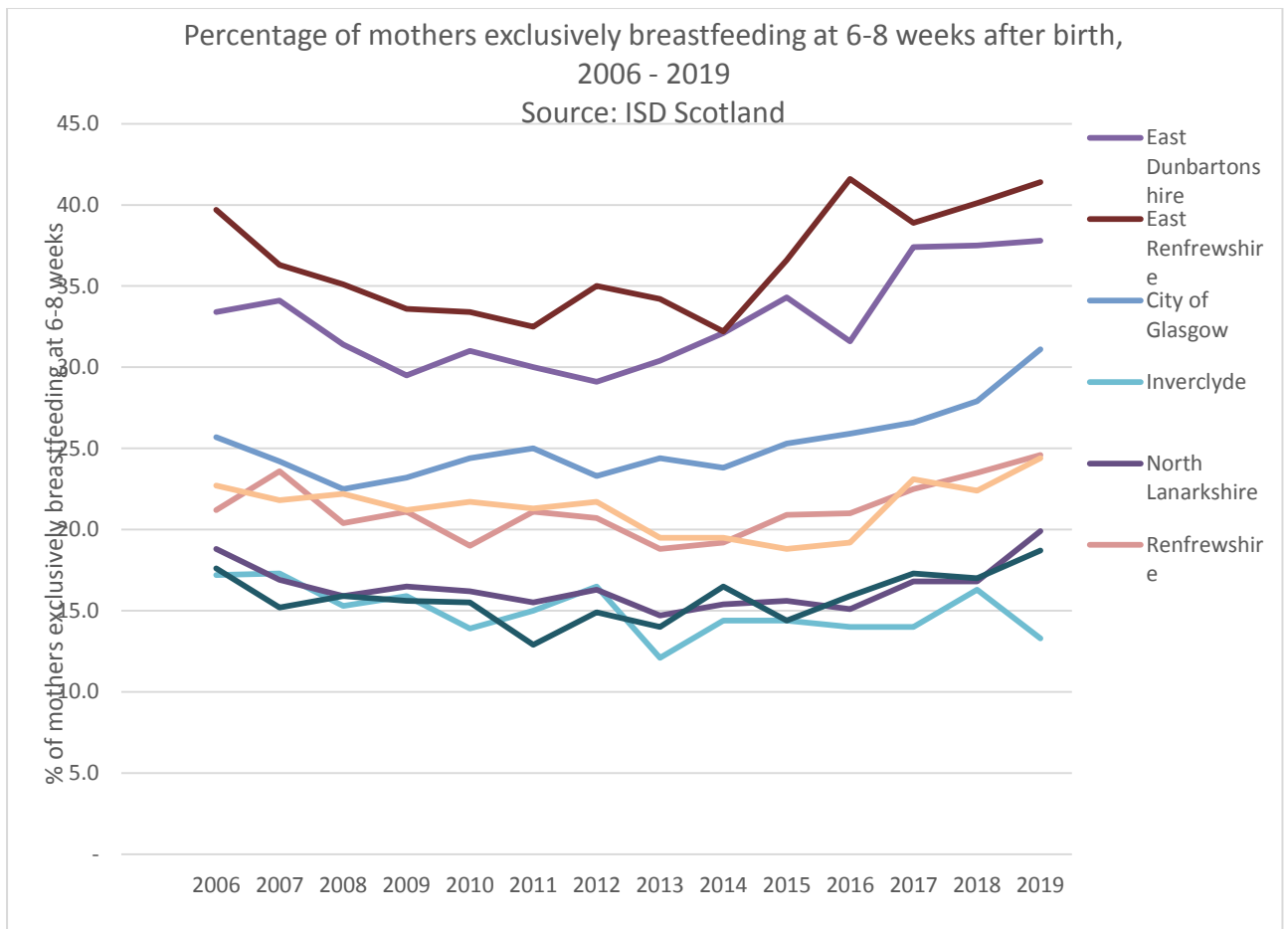
AMBER: Like Scotland, local authority areas in GCR have low levels of breastfeeding which have fluctuated over 15 years, but there has been a promising increase in almost all areas since 2016. However, there is wide variation in rates between different local authority areas and further action is required to support women, and particularly those from more deprived areas, to start and maintain breastfeeding.

There is strong evidence to show the protective effect that breastfeeding has for a range of public health issues, including childhood obesity, particularly when children are exposed to longer durations of breastfeeding^{3,43}.

Across Scotland the proportion of babies being breastfed (including mixed breast and formula milk) at the 6-8 week Health Visitor review after birth has increased from 38% of babies born in 2002/03 to 43% of babies born in 2018/19, with 32% breastfed exclusively for the 24 hours prior to their 6-8 week review⁴⁴. This is a positive development although breastfeeding rates in Scotland remain low compared with those seen in other countries and fall far short of recommended levels. Breastfeeding is much more common among older mothers and those from less deprived areas of Scotland.

There have been fluctuations in exclusive breastfeeding rates (at the 6-8 week review) in the majority of GCR local authority areas since 2006, with increases observed since 2016 for all but Inverclyde²⁹. East Renfrewshire and East Dunbartonshire have had consistently higher exclusive breastfeeding rates than Glasgow City, and all other GCR local authority areas consistently lower rates²⁹. West Dunbartonshire, North Lanarkshire and Inverclyde have had rates below 20% throughout this period with Inverclyde declining in recent years (Figure 2).

Figure 2.



Source: ISD Scotland. Infant Feeding in Scotland²⁹.

Sleep

A considerable body of evidence links short sleep duration in both adults and children⁴⁵ with an increased risk of obesity and suggests that sleep duration may influence BMI in adolescents and young adults⁴⁶. Further research to understand the association is required but current evidence suggests that the increased risk of obesity associated with insufficient sleep is equivalent to or higher than the risk associated with other factors strongly correlated with weight, such as parental obesity and sedentary behaviour including television viewing⁴⁷. There are no population level data about sleep patterns in Scottish CYP to help us understand the current situation in Scotland.

What we can do to improve diet, physical activity and weight in CYP locally?

There is much that can be done by local organisations to address the drivers of poor diet, physical inactivity and unhealthy weight in collaboration with partners and in the planning and provision of our services.

Community Planning Partners:

- **Policies, strategies and practices across the different domains of community planning should be consistent in supporting healthy weight, and the messages that CYP receive should be consistent in all parts of their lives.**
- **There should be more emphasis on improving the wider and inter-related social, cultural, environmental and economic influences on CYP's diet and physical activity, particularly in areas of high deprivation.**
- **Whole system approaches²⁶ to food and physical activity should be adopted which seek to influence multiple aspects of children's lives, lifestyles and the environments in which they live** (including schools, neighbourhoods and leisure centres). Narrow interventions focusing on single aspects of behaviour or health education do not address the societal and environmental factors and inadequately tackle the unequal opportunities that exist for enabling a healthy weight.
- **Recognition and priority should be given providing affordable, high quality, nutritious food as a right** by increasing and improving the equitable distribution of access to affordable, high quality, nutritious food in all settings and environments which influence CYP's health, particularly in areas of high deprivation.
- **There should be much greater acknowledgement of, and action on, the role of poverty as a barrier to achieving a healthy diet and weight, and local poverty and food strategies should be linked.** Poverty and food strategies should support each other by extending action on food poverty beyond emergency food aid, to supporting community-based responses which reduce poverty and increase local access to affordable, nutritious food in dignified ways.
- **CYP should be engaged in decision-making** about the food environment in and around schools in order that developments aimed at improving health also meet their needs and preferences.

Health services:

- **High quality breastfeeding support for new mothers should be provided, particularly in areas of high deprivation where breastfeeding levels tend to be lower.** This should be accompanied by adequate support and facilities for breastfeeding in workplaces, healthcare and community settings.
- **Support should be available and accessible to families** during early childhood, during the preschool and the early school years, to help prevent weight gain.
- **Services and interventions for CYP who require support to manage their weight should align to the standards for weight management services for children and young people in Scotland²⁵** and local partners should work closely together to support the local implementation and delivery of these services.
- **Support for pregnant women to be physically active and to limit weight gain during pregnancy should be available equitably.** Pregnant women should be made aware of the UK CMOs physical activity guidelines⁴⁸ during pregnancy and postpartum. Public services should work together to engage, inform and support women and their partners before they become pregnant and in early pregnancy to help them maintain a healthy weight, and good physical and nutritional health. Action to engage and involve women and their partners in these services should be strengthened in more deprived areas, and should be tailored to meet local circumstances.
- **Physical activity brief advice should be offered to parents/carers of CYP who are physically inactive** and, where appropriate, signposted or referred to appropriate health behaviour change support to increase their physical activity levels.
- **A stronger monitoring framework should be established.** Consideration should be given to introducing additional robust measurements of body weight for older children, which provides opportunities for interventions where indicated, and to improve monitoring of CYP's physical inactivity.

Local authorities:

- **Free or low-cost nutritious meals should be provided, with appropriate portion sizes and limited foods high in salt, unhealthy fats and added sugars in schools and other settings frequented by CYP.** Not only does this transform the immediate food environment, but by leveraging the collective purchasing power of the public sector, institutions can influence the availability of healthy foods. Healthy eating, physical activity and body image should be addressed in the school curriculum and will be most successful if they are long-term, comprehensive and take a whole-school approach⁴⁹.
- **Local authorities should help enable physical activity to be part of everyday life, through planning powers, education, land and leisure services.** Evidence shows that the most effective ways of doing this are by increasing the proportion of CYP who actively commute (walking, cycling, scooting and so on) to and from school and by building participation, as individuals and as families, in affordable physically active play, for example in local greenspaces or community amenities as well as at school^{50;51}. This is reiterated in the WHO Global Action Plan for Physical Activity (2018) which calls on governments to implement a system-based approach to physical activity⁵². There is evidence to support playground design that encourages varied, traditional and non-traditional, physically active play, and for making school facilities for physical activity available to CYP before, during and after the school day, at weekends and during school holidays⁵¹. There is also evidence that suggests that free access to leisure facilities can help address inequalities in physical activity⁵³.
- **Information and advice about the importance of physical activity should link to provision of practical opportunities for CYP to be more active.** Public bodies and third sector providers of youth services should help parents and carers as well as children and young people to understand the importance of physical activity, and of limiting sedentary time, for healthy growth and development and should support this with provision of more and varied opportunities CYP and for families to be more physically active.
- **A range of age-appropriate opportunities should be available which encourage and enable all children and young people, and both boys and girls to participate in physical activity. Opportunities for families to be physically active together should also be increased.** A whole school approach to physical activity should be adopted to build on and enhance existing education and school-based interventions. The 'Seven Best Investments' that work for physical activity⁵⁴ identify the importance of a 'whole of school approach' and the role of healthcare in the promotion of physical activity.
- **Local authorities should consider monitoring sedentary behaviour of children and young people as part of existing surveys,** and to use this information to develop actions to reduce the time that children and young people spend sedentary.

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