**Active Healthy Kids Report Card Scotland 2020. Draft Report Card Grades for Consultation in May-June 2021.**

The fourth Active Healthy Kids Scotland Report Card [www.activehealthykidsscotland.co.uk](http://www.activehealthykidsscotland.co.uk) will be published at the end of June 2021. This is a Knowledge Exchange project based on methodology which has been published, standardised for global use since 2014, and used in over 70 countries so far. The 2020 report card will be a ‘state of the nation’ snapshot of childhood and adolescence in Scotland just prior to the Covid-19 pandemic in 2020. The 2020 report card will also be included as part of an International ‘Global Matrix’ of Active Healthy Kids Report Cards from 60 nations towards the end of 2022 ([www.activehealthykids.org](http://www.activehealthykids.org)).

A research group (Prof John Reilly and Dr Farid Bardid, University of Strathclyde; Dr Leone Craig and Ms Jenni Robertson, Robert Gordons University; Dr Simone Tomaz, University of Glasgow; Dr Avril Johnstone , MRC Social and Public Health Sciences Unit/University of Glasgow) identified and assessed published sources of data for the 2020 Scottish report card and have produced the draft grades.

We are asking you to comment on any or all of the indicators we have graded using Microsoft Forms available from the link

There are the following three questions (1-3) for each indicator, and at the end you are invited to comment on any indicators which are not currently in the report card which you think we should include in future.

1. ***Do you agree or disagree with our draft grades ?***
2. ***Are you aware of any relevant data sources we have missed ?***
3. ***Have we misinterpreted any data ?***
4. ***Are there any indicators not included in the 2020 report card which should be included next time round Comments are required by 15th June, and should be provided via our project website***

[***www.activehealthykidsscotland.co.uk***](http://www.activehealthykidsscotland.co.uk)

***You can provide feedback on any or all of the individual grades.***

***If you want to discuss the grades/provide more detailed feedback, the group which produced the grades will be available to discuss them in two drop-in sessions on Zoom (Monday 21st June am and Thursday 24th June pm)- further details from Prof John Reilly (******john.j.reilly@strath.ac.uk******)***

***Many thanks for your help.***

**SUMMARY OF PUBLISHED DATA SOURCES FOR THE 2020 ACTIVE HEALTHY KIDS SCOTLAND REPORT CARD**

This document provides detailed information on all the data sources used to grade the indicators, why and how they were used, and a summary of the findings. Scottish data and proposed grades are explained. For further information/background on methodology (including data sources which could not be used and the reasons for that), please refer to information from the Active Healthy Kids Global Alliance [www.activehealthykids.org](http://www.activehealthykids.org) and previous Active Healthy Kids Scotland Report Cards (2013, 2016, 2018) [www.activehealthykidsscotland.co.uk](http://www.activehealthykidsscotland.co.uk)

In summary,

* We searched for published evidence/data sources from end 2018 onwards (this is when we stopped searching for data sources for the 2018 report card).
* **We excluded data obtained since Covid-19 lockdown in March 2020 - data collection during Covid-19 lockdown has been patchy, and a future report card will consider the impact of lockdown on the grades (in some other countries Covid-19 has had a devastating impact on a number of the grades) .**
* To be used for grading, data needed to be recent (end 2018 onwards), nationally representative, and affected by minimal bias (i.e. the method used to measure the indicator does not greatly overestimate or under-estimate the prevalence of the behaviour). Available data are critiqued by the report card working group in order to assess representativeness and risk of bias.
* Grading is based on data from children and adolescents aged 2 to 18 years and inequalities/differences considered by age, gender, socio-economic deprivation, ethnicity, chronic disease and disability where possible.

The grades were determined by the % of children and adolescents meeting an evidence-based benchmark using the grading scheme below.

* A+ = 94%-100%
* A = We are succeeding with a large majority of children (87%-93%)
* A- = 80%-86%
* B+ = 74%-79%
* B = We are succeeding with well over half of children (67%-73%)
* B- = 60%-66%
* C+ = 54%-59%
* C = We are succeeding with about half of children (47%-53%)
* C- = 40%-46%
* D+ = 34%-39%
* D = We are succeeding with less than half of children (27%-33%)
* D- = 20%-26%
* F = We are succeeding with very few of children (<20%)
* INC = Incomplete Grade, where Scottish data were not available or were insufficient/inadequate to assign a grade

**Draft Grades Summary and Evidence of Inequalities in Grades**

|  |  |  |
| --- | --- | --- |
| **Indicator** | **Draft Grade** | **Inequalities Identified ?** |
| Indicator 1: Sedentary BehavioursPage 6 | F (<20%) | Yes. Free-time screen-time higher in the more socio-economically deprived, and slightly higher in boys than girls. |
| Indicator 2: Overall Physical ActivityPage 8 | F (<20%)  | Unlikely for socioeconomic deprivation; girls slightly less likely to meet guidelines than boys |
| Indicator 3: Organised Sport and Physical ActivityPage 9 | B- (60-66%) | Yes. Reported participation lower in more socio-economically deprived individuals; participation declines with age; no marked differences between boys and girls. |
| Indicator 4: Active PlayPage 10 | D (27-33%) | Yes. Reported participation in active play slightly lower in girls than boys. |
| Indicator 5: Active TransportationPage 11 | C- (40-46%) | Yes. Active commuting to school via cycling lower in more socio-economically deprived.  |
| Indicator 6: Physical FitnessPage 11 | INC | INC |
| Indicator 7: DietPage 12 | F (<20%) | Yes. Markedly poorer diet in the more socio-economically deprived. |
| Indicator 8: ObesityPage 13 | INC. Prevalence of obesity is high but hard to grade, especially given limitations in Scottish obesity surveillance. | Yes. Markedly higher prevalence of obesity in the more socio-economically deprived, and socio-economic gap widening substantially with time. |
| Indicator 9: Family and PeersPage 15 | D-(20-26%)  | Yes. Family and peer diet, obesity, participation in sport and physical activity, volunteering in sport and physical activity all much less favourable in the more socio-economically deprived |
| Indicator 10: Community and EnvironmentPage 17 | B- (60-66%) – carried forward | Yes. Perceived safety lower in more socio-economically deprived neighbourhoods |
| Indicator 11: GovernmentPage 18 | C (Physical Activity)C+ (Diet) |

# Indicator 1: Sedentary Behaviours

**Benchmark:** % of children and youth who meet the evidence-based guidelines from the American Academy of Pediatrics and the Canadian Society for Exercise Physiology 2016 (5-17 year olds: no more than two hours of recreational screen time per day); for 2-4 year olds: no more than one hour of sedentary screen time per day from the Canadian Society for Exercise Physiology Guidelines 2017 and WHO Guidelines 2019. Note: the Guidelines currently provide a time limit recommendation for screen-related sedentary pursuits, but not for non-screen-related sedentary pursuits.

**Summary of methods of measurement:** Most sources of data used self/parent report of recreational screen time (i.e. TV viewing, gaming and other recreational screen time). At least two systematic reviews (Lubans et al see Active Healthy Kids Scotland Report Card 2013, longform, [www.activehealthykidsscotland.co.uk](http://www.activehealthykidsscotland.co.uk) and Prince-Ware et al 2017 ) concluded that the reliability of self or parent-reported sedentary time was unclear for almost all self-report methods, but a few methods had some evidence of reasonable reliability (including the screen time from HBSC Scotland 2018, used to grade the 2020 Active Healthy Kids Scotland Report Card) . These reviews also concluded that most self –report and parent-reported methods had not been validated, and so their accuracy is uncertain. For Scottish surveys it is unclear whether and to what extent measures of sedentary behaviour and screen time are biased, so they can be used in the Scottish Report Card, but with caution. The most likely bias is underestimation of recreational screen time, thus estimates of this behaviour used in Scottish surveys are probably conservative-i.e. exposure to screens may be higher than current Scottish estimates suggest. Time spent in other important forms of sedentary behaviour (e.g. sitting) is not objectively measured in Scottish surveys, but probably very substantial based on objectively measured English data which is readily generalisable to Scotland (e.g. Janssen et al 2016 Int J Behav Nutr Phys Act). Objectively measured sitting time typically accounts for over half of waking time by age 6 years and this increases with age to over three-quarters of waking time by age 15 years, and with age the bouts of sitting become much longer with fewer breaks in sitting.

**Gaps in Scottish data:** Available Scottish data are based on parental/self-report and do not always report relative to the international benchmark of 2 hours recreational screen-time/day, or do not provide data for an average day (taking into account differences between weekdays and weekends and schooldays versus non schooldays), and do not always add times spent on screens to provide total screen time. Surveillance of screen time is fairly good for adolescents (HBSC, 11, 13, and 15 year olds) but much more limited for children.

**DATA SOURCE 1 HEALTH BEHAVIOURS IN SCHOOL-AGE CHILDREN SCOTLAND HBSC 2018 (PUBLISHED IN JANUARY 2020, REPORTED ON ADOLESCENTS, IE 11,13, AND 15 YEAR OLDS)** This survey found some differences between boys and girls, differences by age some differences by type of screen-time measured, and social inequalities. Data are presented as % of the samples exceeding 2 hours on screens during free-time on weekdays (which will underestimate total screen time, see below) as follows

* TV on Weekdays
* Computer Gaming on Weekdays
* Computer time Other Than Gaming on Weekdays
* Note that there is a good deal of evidence (including from previous HBSC Scotland reports) that free-time screen time is significantly higher on weekends and school holidays (unstructured days, almost half of all days during the year), so these screen-time estimates from HBSC 2018 are likely to be conservative

**Summary of TV Viewing on Weekdays** (% of sample exceeding 2 hours/weekday)
Boys: 11y 69%; 13y 70%; 15y 73%. Girls: 11y 60%; 13y 68%; 15y 68%.Combined: 68% exceed 2 hours per day on weekdays on TV alone (and this will be higher at weekends, and when other forms of recreational screen time are added).

**Summary of Computer Gaming on Weekdays** (% of sample exceeding 2 hours/weekday) Boys: 11y 74%; 13y 72%; 15y 68%. Girls:11y 44%; 13y 43%; 15y 40%. Combined: 56% exceed 2 hours per day gaming alone on weekdays (and this will be higher at weekends, and when other forms of recreational screen time are added).

**Summary of Computer Use Other than Gaming on Weekdays** (% of sample exceeding 2 hours/weekday) Boys 63%; Girls 66%.

**Summed Screen Time Data, All Forms of Screen Time Added** These data are not in the main HBSC report but are available. Adding the various forms of free-time screen time together produces much higher levels of estimated screen time. For example, summed screen time data across the week from HBSC 2014 suggests that mean total screen time during free time is around 9 hours/day (SD 6) in boys and around 8 hours/ day (SD 5) in girls and these values have increased over time in HBSC to HBSC 2018.

**Socio-economic inequalities** are marked: Across all three domains of screen-time (TV, Gaming, Non-Gaming) % exceeding 2 hours/weekday was much higher in the most deprived vs least deprived. HBSC uses a ‘family affluence scale’ to compare between low, medium, and high SES groups. **Problematic screen time is the norm but is much more common among more deprived adolescents in HBSC**

**DATA SOURCE 2 SCOTTISH HEALTH SURVEY 2019 (PUBLISHED 2020, REPORTS DATA FROM 2-15 YEAR OLDS)**

SHeS 2019 summarised reported sedentary leisure time (screen and non-screen). There are no specific guidelines or benchmarks for this behaviour so it cannot be graded. In addition, there is no evidence on reliability of validity. The variable was substantially higher at weekends than weekdays. Data are given as mean sedentary leisure times on weekdays and weekends for boys and girls separately.

Boys mean 3.5 hours/weekday (SD 1.5); 4.9 hours/weekend day (SD 2.3).

Girls mean 3.6 hours/weekday (SD 1.4); 4.8 hours/weekend day (SD 2.1).

Inequalities- there was little difference by SIMD (though this was slightly higher in the lowest SIMD category for boys at weekends only).

**INDICATOR 1 SEDENTARY BEHAVIOUR GRADING SUMMARY** The best data available are for adolescents only (11,13, and 15 year olds, from HBSC), and these data fit the international benchmark. The time spent in the different forms of free-time screen time are at least partly additive and suggest that by early-adolescence most Scots greatly exceed 3 hours/day recreational screen time (1 hour more than the recommendation). **Based on these data (with increases in reported screen time over successive surveys, and the likelihood that 2018 HBSC weekday data underestimate total screen time) an F grade would be appropriate.** Moreover, the HBSC data also suggest that recreational screen time is strongly socially patterned (higher in adolescents from more deprived families), and slightly higher in boys than girls.

# Indicator 2: Overall Physical Activity of Moderate-to-Vigorous Intensity (MVPA)

**Benchmark:** % of children and youth who meet the Global Recommendations (WHO 2020) on Physical Activity for Health, which recommend that children and youth (5-18 years) accumulate an average of at least 60 minutes of moderate- to vigorous-intensity physical activity (MVPA) per day. Children under 5 years of age who are capable of walking unaided should be physically active daily at any intensity for at least 180 minutes, spread throughout the day, and this should include 60 minutes/day MVPA (WHO 2019; UK Health Depts 2019; Canadian Society for Exercise Physiology 2017).

**Summary of methods of measurement:** Survey data used self/parent report of physical activity or MVPA which creates some doubt about the accuracy of measurement, though the method used in HBSC has some evidence of validity at group level and so is likely to be suitable for surveillance as noted below and in previous report cards.

**Major gaps in Scottish data**: SHeS data for the under 5’s are still not reported relative to UK or international recommendations as noted in previous report cards**.** In primary school aged children; the SHeS could not be used for grading as it assumes that all reported activities were at least moderate intensity which is impossible (‘ no information on intensity of physical activity is collected’, SHeS 2019), thus compliance levels reported in the 2015 and 2016 SHeS are substantially overestimated. See also Basterfield et al Arch Dis Child 2008; 93: 1054-1058, which found that in 6-8 year olds the SHeS measure overestimates MVPA by an average of 2 hours per day: Since SHES does not measure MVPA (see also Scottish report cards in 2013 and 2016 [www.activehealthykidsscotland.co.uk](http://www.activehealthykidsscotland.co.uk)) good surveillance data in Scotland are limited to adolescents as noted below. There is also a serious lack of data for older adolescents, 16 to 18 year olds, the PA guidelines and AHKGA benchmark go up to age 18 but Scottish surveillance stops at age 15 in the HBSC and in the SHeS, adult PA guidelines are –incorrectly-applied to 16-18 year olds.

 The HBSC does measure intensity and has been validated for adolescents, at least at the population surveillance level (see longform report card from 2013 and more recent publication Hardie Murphy et al BMC Public Health 2015; 15: 1080) thus providing more realistic estimates of compliance for 11 to 15 year olds that can be used for grading. HBSC Scotland reports data on meeting the MVPA guideline every day, while the Active Healthy Kids Global Alliance benchmark (and WHO guideline for school-age children and adolescents 2020) use an average of at least 60 minutes MVPA per day. HBSC 2018 (data collected in 2017-2018) found that the % of 11, 13, and 15 year olds reporting that they did not meet the 60 minutes per day MVPA *every day* was as follows: 20% for the 11 year olds, 18% for the 13 year olds; 13% for the 15 year olds. The HBSC measures relative to the pre-2020 WHO MVPA guideline for school-age children and adolescents which is not ideal.**There was a suggestion of some inequality in HBSC,** with slightly higher prevalence not meeting guideline in those in the lowest family affluence scale, but this is inconsistent with substantial evidence from many large UK and Scottish studies which have used accelerometry to measure MVPA more accurately (they consistently do not find socio-economic inequalities in MVPA). Girls are also slightly less likely to meet the guideline than boys at all ages. **Inequality= incomplete for socio-economic status, but a small inequality between boys and girls.**

**Draft grade= F, as in previous report cards, but multiple major gaps in surveillance of MVPA in Scotland**

# Indicator 3: Organised Sport and Physical Activity

**Benchmark:** % of children and youth who participate in organized sport and/or physical activity programmes**.** *Note: the benchmark includes sport AND exercise/physical activities, so this indicator is not solely sport and the key word is ‘organised’ (i.e. the indicator is organised sport and physical activity).* There is no recommendation for the frequency/duration of organised sport and physical activity participation.

**Summary of methods of measurement:** All data sources used self/parent report.

**Major gaps in Scottish data:** Only one source (Scottish Health Survey 2019, published in 2020, reported participation in the week prior to the survey) measured participation in organised sport & PA (in 2-15 year olds) according to the benchmark and the prevalence estimate from this data source does not include participation in organised sport & PA within school lessons**. Lack of data for 16 to 18 year olds., though participation showed an age-related decline to age 15 years in SHeS data so participation prevalence across the child-adolescent age range will be lower than the 66% in SHeS** **.**

**Inequalities** were evident in the SHeS data (Table 315)-participation lower in children and adolescents from lower SIMD, in both sexes; participation declines with age; no significant differences in participation between the sexes.

**INDICATOR 3 PARTICIPATION IN ORGANISED SPORT AND PHYSICAL ACTIVITY GRADING SUMMARY**

Participation will be lower in 16-18 year olds not covered by surveillance so overall child and adolescent participation <66%. B- (60-66%).

# Indicator 4: Active Play

**Benchmark (any of the following could be used to grade this indicator):** % of children and youth who engage in unstructured/unorganized active play at any intensity for more than 2 hours a day, % of children and youth who report being outdoors for more than 2 hours a day

**Summary of methods of measurement:** This indicator refers to participation in unstructured/unorganized physical activity/active play and time spent outdoors. Perceived safety, access to, and availability of outdoor/indoor spaces and opportunities for PA are dealt with in indicator 7. All sources of data use self/parent report measures.

**Major Gaps in Scottish data:** Currently no national survey provides evidence of how much time children are spending in active play for more than 2 hours per day. In the last report card, data from the 2016 Scottish Health Survey was reported in 15-minute blocks which meant the data could be re-analysed to the benchmark. The Scottish Health Survey has changed their data collection for this indicator to number of days the child engages in active play meaning that the data cannot be re-analysed this time.

The recently published “British Children’s Play Survey” does meet the benchmark and provides an informative summary of active and outdoor play levels at a **UK** level, but given the small sample of Scottish children included in the survey it could not be used for grading. , The evidence base for active play thus far has used self/parent reports measurements and self-report measurements often overestimate true levels of active play (as with other indicators such as physical activity). The addition of objective measures of active play, albeit more expensive, would improve the evidence base significantly and enable us to understand how much time Scottish children spend in active play.

**Grade: Given the lack of suitable evidence the grade from the 2018 report card will be carried forward to the 2020 report card.**

***For further information on the available data in Scotland see Table 1.***

**Inequalities:** The previous report card noted gender inequalities in engagement in active play with boys engaging in higher amounts of active play compared to girls during the weekday and weekend.

# Indicator 5: Active Transportation

**Benchmark:** % of children and youth who use active transportation to get to and from places (e.g., school, park, mall, friend’s house). All children and adolescents have to commute to nursery/school and so potential for active forms of commuting is assumed to be 100%.

**Summary of methods of measurement:** all sources of data used self/parent/carer reported active travel (i.e. walking, cycling, scooting/skateboarding, and park & stride) to nursery/school.

**Major gaps in Scottish data:** Three sources of data available for grading (Hands Up Scotland Survey; Transport & Travel in Scotland; HBSC), data still focuses on commute to and from nursery/school only (for 3- to 18-year-olds). There appears to be no data describing active commuting to and from other places. Despite efforts to increase active travel (substantially more government funding), some of the available Scottish data suggest a trend of decreasing active school transport.

**Draft grade= C-** (40-46%). **Indication of inequality:** There is some indication of inequality in active school transport (in older children; there appears to be some differences between 1st and 5th quintile levels of deprivation in both walking and cycling to school).

**For further detail on the potential sources of data used to grade see Table 2.**

# Indicator 6: Physical Fitness

**Benchmark:** Data on physical fitness indicators (e.g. cardiorespiratory fitness, grip strength, balance etc) should be interpreted using sex-specific and age-specific European normative values from ‘Tomkinson et al European normative values for physical fitness in children and adolescents aged 9–17 years: results from 2 779 165 Eurofit performances representing 30 countries *Br J Sports Med* Published (2017) 10.1136/bjsports-2017-098253’.

**Major Gaps in Scottish data:** There are no nationally representative data on indicators of physical fitness or motor competence in children and young people in Scotland. A summary of our search for relevant data is in Table 3.

# Indicator 7: Diet

**Benchmark:** % of children and adolescents consuming at least 5 portions of fruit and vegetables a day, % of children and adolescents meeting the Scottish Dietary Goals (SDGs) which were revised in 2016(e.g. average intake of free sugars should not exceed 5% of total energy intake in children over 2 years, average intake in saturated fat should not exceed 11% of food energy intake (often equivalent to total energy in children)) <https://www2.gov.scot/Topics/Health/Healthy-Living/Food-Health/DietaryGoalsScot>

**Summary of Methods of measurement**: Self or parent report using 24-h recall for fruit and vegetable consumption and frequency of consumption of selected foods in the Scottish Health Survey (SHeS), and 4-day non-weighed diet diary in National Diet and Nutrition Survey (NDNS). Other recent surveys include the Health Behaviour in School-Aged Children (HBSC) Scotland Study 2018, which collects information on a nationally representative sample of young people aged 11, 13 and 15 years using a self-completion questionnaire. The HBSC collects information on frequency of consumption of fruit and vegetables and other selected high fat/high sugar foods, but does not assess portion size. The Living Costs and Food Survey (LCFS) collects Scottish data on household and eating out food and drinks purchases for every person >7 years of age in each household over a 14 day period using food diaries, which is used to estimate food consumption and nutrient intakes, for a typical average household member (i.e. cannot be reported for children). There is no updated Scottish LCFS data since the previous report card. Data from these surveys cannot be used for grading as they do not fit the benchmarks described above, however they do provide an insight into the (unhealthy) food and drink environment in Scotland.

**Major gaps in Scottish data:** The SHeS fruit and vegetable questions are semi-quantitative (which are used to estimate the % of 2-15 year olds meeting the 5-a-day recommendation) but information on other foods describes frequency of consumption only and does not cover all foods and drinks (thus the data cannot be used to estimate the % of 2-15 year olds meeting/exceeding the SDGs). The NDNS provides comprehensive food and nutrient intake data for children, which is used to calculate average intakes of sugar, saturated fat etc. and can be compared with the SDGs but the % of children and adolescents meeting/exceeding the SDGs is not reported. Recent NDNS data are **not** available separately for Scotland. The 2008/09 to 2011/12 NDNS was reported for Scotland, this was used in the previous 2016 and 2018 report cards and has been used along with the more recent UK wide data to inform the 2020 report card due to the lack of appropriate data that fit the benchmarks from other surveys.

Draft Grade- further detail on Scottish data sources are provided in **Table 4,** but grading for the 2020 report card could only be based on the % of children and adolescents meeting the 5 portions of fruit and vegetables/day-this was well below 20% overall (F grade), **and was much lower in children and adolescents from more socio-economically deprived families than those from less socioeconomically deprived families.**

# Indicator 8: Obesity

**Benchmark:** Obesity is an excess of body fatness (a level of body fatness which increases risk of disease) and so, ideally, the prevalence of obesity should be estimated based on body fatness measures from national surveys. In Scotland, as in most other countries, body fatness is not measured and a simpler proxy for body fatness, the Body Mass Index (BMI) is used to estimate prevalence of obesity. BMI is much lower in children and adolescents than in adults and so for the age range 2-18 years, BMI should be expressed relative to age and sex as a centile or SD score (SIGN 2003, 2010); for school-age children and adolescents these centiles or SD scores should be expressed or calculated relative to UK 1990 reference data; for children aged up to 4 years the UK 1990 data have been replaced by growth standard data derived from the World Health Organisation multicentre growth reference study and so the WHO data and definitions should be used when estimating obesity prevalence of 2-4 year olds. Note that UK 1990 reference data should not be used for toddlers and pre-school children, and adult BMI criteria (e.g. BMI > 30.0 to define obesity) should not be used until at least age 19 years.

**Summary of Methods of Measurement:** Two sources of data are available: the Scottish Health Survey (SHeS) measured height and weight in 2-15 year olds and the Child Health Surveillance Programme measured height and weight in Primary 1 children (approximately 5 year olds). Scottish Health Survey data for 16-18 year olds are reported separately and – incorrectly-use adult BMI criteria for adolescents. The data sources used measured height and weight to calculate BMI, and for children and adolescents aged 2 to 15 years BMI data were interpreted using the UK 1990 BMI reference data. The data sources used BMI ≥ 85th percentile to define overweight and obesity and BMI ≥ 95th percentile to define obesity.

**Major gaps in Scottish data:** SHeS obesity prevalence data for older adolescents (16-18 year olds) are expressed using adult criteria, which is incorrect and substantially underestimates the prevalence of obesity quite apart from the inherent error in using BMI. SHeS data for 2-4 year olds are also expressed relative to UK 1990 reference data rather than the WHO multicentre growth reference. Obesity prevalence estimates from the SHeS are compromised further by the relatively small sample size in the survey, producing relatively unstable estimates of prevalence and an inability to examine prevalence inequalities between subgroups. Regardless of how BMI is expressed or interpreted, systematic reviews have shown that BMI provides highly conservative estimates of the prevalence of obesity (excessive fatness) - see Active Healthy Kids Scotland Report Card 2013 longform (www.activehealthykidsscotland.co.uk). The problem for surveillance is that BMI has a moderately high false negative rate i.e. many children and adolescents who are excessively fat have an apparently healthy BMI-for-age, thus Scottish surveillance data underestimates the scale of the problem. BMI-for-age estimates were used to grade obesity in 2020 as in previous years, but with the knowledge that this provides a highly conservative perspective. There is a lack of data on obesity prevalence for 16 to 18 year olds (since the SHeS use adult criteria rather than the UK 1990 reference data to define obesity in this age group) and for 2-3 year olds (the SHeS use the UK 1990 BMI reference data instead of the WHO growth standard data to define obesity in children aged up to 4 years). An additional problem is that the SHeS is too small to provide prevalence estimates with a high degree of certainty, and too small to identify inequalities in obesity prevalence with certainty. The Child Health Surveillance Programme only assesses children in Primary 1 (approximately 5 years).

**Draft Grade.** The major gaps and problems in obesity surveillance in Scotland summarised above makes it difficult to assign a grade to obesity prevalence, and prevalence of obesity is hard to fit into a grading scheme designed for prevalence of meeting recommendations for health behaviours. The best surveillance evidence in Scotland comes from Primary 1 measures of height and weight- these provide large samples with >80% of the population measured, but only in primary 1. **Inequalities.** All Scottish and UK data show that obesity prevalence increases steadily with age after primary 1 and so the primary 1 data cannot be used to assign a grade. However, we note that prevalence of obesity in primary 1 (allowing for the moderately high false negative rate when using BMI for age) is around 16%, and this is much higher in children from more deprived families than those from less deprived families. This higher prevalence in more deprived groups is also supported by findings from the SHeS. Moreover, the gap in obesity prevalence in primary 1 between the most and least socioeconomically deprived increased substantially over the period 2011-2018 (Stewart et al BMJ Open 2021). Further information on data considered when attempting to grade obesity prevalence is provided in **Table 5.**

# Indicator 9: Family and Peers

**Benchmark (any of the following could be used to grade this indicator):** % of parents of family members (e.g. parents, guardians) who facilitate physical activity and sport opportunities for their children ; % of parents who meet the Global Recommendations on PA for Health (i.e. adults accumulate ≥150 minutes of moderate-intensity aerobic PA/week or ≥75 minutes of vigorous-intensity aerobic PA/week or an equivalent combination of MVPA, % of family members (e.g., parents, guardians) who are physically active with their kids, % of children and youth with friends and peers who encourage and support them to be physically active, % of children and youth who encourage and support their friends and peers to be physically active. These were the benchmarks for the Global Matrix 3.0, however since child and adolescent diet and obesity are indicators in the Scottish report card, we have extended the benchmark to include estimates of parental diet and overweight/obesity.

**Summary of methods of measurement:** We have had to use adult data as a proxy for parental influence and the nature of the socio-ecological environment at the family level. This included 1) % of adults who met the adult physical activity guidelines, 2) % of adults with overweight and obesity, 3) % of adults who met the 5-a-day fruit and veg recommendation; 4) % of adults reporting frequent participation in sport and physical activity and reporting volunteering in sport and physical activity.

Physical activity and diet were measured by self-report, height and weight were measured. Reliance on self-report methods increases risk of bias, and BMI provides a conservative estimate of obesity prevalence in adults (as in children), there is a high false negative rate, particularly in women, so that obesity is much more prevalent than would be suggested by prevalence of high BMI (a lot of adults, especially women, with apparently healthy BMI have excessive body fatness). An additional problem is that 16-18y olds are treated as adults in the SHeS and the adult BMI definitions are applied to define overweight and obesity- this is incorrect as noted above and leads to a further erroneous underestimate of the prevalence of obesity in the adult data in SHeS. Lower BMI cut-offs should be used since BMI does not reach adult values until the end of growth (see Active Healthy Kids Scotland 2018 report card for a more detailed critique).

**Adult Physical Activity Data:** 31% of men and 27% of women in SHeS 2019 met the combined guidelines for moderate-to-vigorous-intensity physical activity and muscle-strengthening.

**Adult Leisure-Time Screen Time Data:** Mean of 5.4 hours/day reported on weekends; 6.2 hours /day reported on week. This cannot be graded but indicates that family environments are characterised by high levels of recreational screen time.Parent and adult modelling of activity and screen time is likely to be unfavourable based on adult physical activity and screen time data.

**‘Adult’ (from age 16 years as incorrectly used by SHeS) BMI Data:**More than 29% of all adults in Scotland have obesity according to their BMI. Mean BMI was >27 in all age groups over 25. BMI and overweight and obesity prevalence are strongly socially patterned- much more prevalent in more deprived groups (though not reported specifically in SHeS 2019).

**Adult Diet** (Meeting Fruit & Vegetable intake recommendation): 22% prevalence overall and this was strongly socially patterned. Parent and adult modelling of behaviour unfavourable.

**The Scottish Household Survey (2019) has two relevant sources of data: adult participation in sport and physical activity** (around half of adults report participation in >14 of the previous 28 days; this includes walking) and this is significantly lower in women, those from more socio-economically deprived groups, in older adults, and in those with chronic disease; **sport and physical activity volunteering-**around 5% of adult men and 2% of adult women reported volunteering in sport and physical activity in the previous 12 months (volunteering is less common among more socio-economically deprived adults).

**Draft Grade D-.** The available data are somewhat limited and difficult to grade but show, as in previous report cards, that children and adolescents in Scotland grow up in an environment which is characterised by the following: low levels of physical activity, high levels of sedentary behaviour, in which overweight and obesity are the norm, and in which unhealthy diets are the norm. Since the 2018 Active Healthy Kids Report Card, new data have become available on meeting guidelines for musculoskeletal health, and on participation in sport and physical activity and volunteering- these data generally suggest that things are worse than they appeared in the 2018 report card (grade D). Moreover, **these aspects of the family environment are much less healthy in more deprived families than in less deprived families.**

# Indicator 10: Community and Environment

**Benchmark (any of the following could be used to grade this indicator):** % of children or parents who perceive their community/ municipality is doing a good job at promoting physical activity (e.g., variety, location, cost, quality), % of communities/municipalities that report they have policies promoting physical activity, % of communities/municipalities that report they have infrastructure (e.g., sidewalks, trails, paths, bike lanes) specifically geared toward promoting physical activity, % of children or parents who report having facilities, programs, parks and playgrounds available to them in their community, % of children or parents who report living in a safe neighbourhood where they can be physically active, of children or parents who report having well-maintained facilities, parks and playgrounds in their community that are safe to use.

**Methods of measurement:** This indicator refers to perceived safety, access to, and availability of outdoor/indoor spaces and opportunities for PA *in the local community*, not actual participation in active play, which is dealt with in indicator 4. In previous report cards, the Scottish Household Survey has provided a reasonable estimate of this indicator through parental reported perceived safety, access to, and availability of their children’s play in their neighbourhood. However, in recent versions of this survey these questions have been omitted. The HBSC study provided some data related to perceived safety which does meet the benchmark, however, this survey only captured one aspect of the benchmark and not other important factors.

**Major Gaps in Scottish data:** As mentioned, we are not aware of any recently published surveys or studies that can give us an estimate of community and environment. Surveys have looked at frequency of use of outdoors and access to greenspace but these do not meet the benchmark. Furthermore, these studies are based on self-report data and are likely to have some bias.

Draft Grade: Data from the 2018 Scottish report card was much more comprehensive than the data available for the 2020 card so this was used along with the newly available data to produce the draft grade of B-.

**Inequalities**: Adults with a lower SIMD score reported less frequent visits to outdoors, and being a 5 minute walk or less to greenspace compared to those with a higher SIMD score. There were consistent inequalities in young people’s perceptions of their local neighbourhood e.g. from HBSC 2018. On all measures included, young people from the lowest SES group were more likely to report negative perceptions of their local area .

# Indicator 11 Government (Physical activity and Diet)

**Benchmark:** a) Evidence of leadership and commitment in providing physical activity and improved diet opportunities for all children and youth; b) allocated funds and resources for the implementation of physical activity/diet promotion strategies and initiatives for all children and youth; c) Demonstrated progress through the key stages of public policy making (i.e., policy agenda, policy formation, policy implementation, policy evaluation and decisions about the future) in relation to diet and physical activity.

**Major gaps for this indicator:** Despite numerous policy documents, action plans and strategies, more information is required (or needs to be detailed) regarding monitoring, evaluating, funding, and reporting on progress (i.e., impact) of policies

**Grading:** The grade for the government indicator determined using the Policy Audit Tool Version 2 (PAT v2) that was initially developed by HEPA Europe and has since been used by the Welsh Report Card team (Ward et al., 2020). See Tables 7.1, 7.2 and 7.3 for more information about how the Government indicator was graded.

Scotland has many creditable policies at the national level and overall, there appears to be many good links made between the policies and organisations accountable for implementation. There appears to be some level of implementation following on from the **Active Scotland Delivery Plan** published in July 2018. The Public Health Scotland website highlights ‘National actions’ that support the Scottish Government’s priority to have a more active Scotland and directs users to strategies to increase/improve physical activity in Scotland. In Scotland, physical activity in children is both a priority for health and wellbeing as well as a key means for Scotland to reach their goals of carbon neutral in the future (through increased walking and cycling, or active travel). The National Walking Strategy (Let’s get Scotland Walking) is a clear example of a policy document that emphasises the importance of physical activity for both of these reasons. This shows a lot of promise for the future of children (as people of all ages) in Scotland. Additionally, under the current political administration, there has been substantial investment in local partners to support active travel across Scotland; children are a priority in these plans.

In addition to this, it is worth noting that physical activity is also explicitly mentioned, in addition to diet, to help reduce the rates of overweight and obesity in children. Based on the results of the previous Scottish report cards as well as this report card, this is warranted.

**The benchmark is in three parts and we have commented on each below:**

**a)  Evidence of leadership and commitment to providing PA opportunities for all children & youth.**

*The text above suggest that we have achieved some success in Scotland – physical activity (for people of all ages) is high on the list of priorities as an outcome (for better health and wellbeing) and as a means to achieve other priorities and there are many relevant policies/strategies/targets in place, and these are well-informed.*

**b)  Allocated funds and resources for the implementation of PA promotion strategies and initiatives for all children & youth.**

*Funding has been allocated to/dedicated to several causes that should have a positive impact on children’s physical activity but largely through active travel (e.g.,* [*£27m for active travel*](https://www.gov.scot/news/gbp-27m-funding-for-active-travel/) *in October 2019,* [*Transport Scotland*](https://www.transport.gov.scot/news/45-projects-share-1m-in-grants-to-support-sustainable-travel/) *creating a £1m fund for sustainable travel in February 2019,* [*£81k funding for cycle training in children*](https://www.transport.gov.scot/news/further-investment-in-cycle-training-for-early-years/) *– Play on Pedals – in August 2018). The Scottish government has also got numerous partners to assist with achieving these goals.*

**c) Demonstrated progress through the key stages of public policy making (i.e. policy agenda, policy formation, policy implementation, policy evaluation and decisions about the future).**

*There is clear evidence of leadership and commitment to increasing levels of physical activity and providing physical activity opportunities for children and youth (benchmark a). The allocation of funds and resources for implementation of policy has increased substantially since previous report cards (benchmark b). Progress through the key stages of public policymaking (policy agenda; policy formation; policy implementation; policy evaluation; decisions about the future) is improved but still arguably limited, with some policy efforts stalling at implementation and many at the evaluation stage (benchmark c). Overall, more information about impact is required and future policy documents would benefit including more detailed information about monitoring, evaluation, and reporting.*

***Draft grade for physical activity Government and Policy C based on the Ward et al Tool and publication.***

**Diet and Obesity**

There is evidence of commitment towards improving diet and tackling childhood obesity, with several relevant policies/strategies/targets in place, with clearly identified accountable organisations for implementation. Several had defined funding however, for some the source of this was vague. However, the evidence of monitoring and evaluation and identifiable reporting structures was less clear. Pre-existing policies/targets/strategies include the Criteria for healthcare retail standard (2015), Better eating, better learning: a new context for school food (2014), Beyond the School Gate (2014), A fairer, healthier Scotland: A strategic Framework for Action (2017-2022), Recipe for Success: Scotland’s national food and drink policy, becoming a Good Food Nation (2014), Scottish Dietary Goals (2016), Soft Drinks Industry Levy (2018) / The Finance Act (2017) and Scotland’s Free School Meals (2015). A further £1 million was invested over a two-year period for providing free school meals during school holidays (2019). March 2020: £30 million allocated to councils to assist in free school meals at the beginning of the coronavirus pandemic. A further £27.6 million was provided in June 2020. The comprehensive A healthier future: Scotland's diet and healthy weight delivery plan (2018) superseded Scotland’s obesity route map (2010). Under the Poverty and Social Justice Policy (2017), the Fair Food Fund supplied grants to 34 community organisations within Scotland to tackle food insecurity and food inequities between 2017 and 2019. A further >£120 million was invested during the coronavirus pandemic (2020/2021). There have been few new policies/strategies in this area since the previous report card, furthermore, the Good Food Nation Bill is yet to be implemented. The Scottish Food Coalition has been attempting to implement the Good Food Nation Bill since 2014. This bill is due to be pushed during the 2021 parliamentary session. The proposed bill focuses on tackling food insecurity, restricting HFSS marketing and halving childhood obesity by 2030.

**Draft grade: C+ for Diet (based on the Ward et al policy audit tool used).**

**Table 1 Data Considered for the Active Play Indicator**

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| --- | --- | --- | --- | --- |
| **Survey name, year data collected, name of the report and year report published and link(s) to the document/survey**  | **Details of participants**  | **Method of measurement (including the questions asked in the survey to measure the indicator)**  | **Findings**  | **Additional comments**  |
| **Survey:** Scottish Health Survey (SHeS) 2019**Publication:** Scottish Health Survey 2019 - volume 1: main report (published originally Sep-20)<https://www.gov.scot/collections/scottish-health-survey/> | Nationally representative sample of 1,747 children (aged 2-15).Unweighted= 1,747Weighted= 1,756 | **Method:** Self-report for children age 13-15 years and parent proxy-report for children age 0-12 yrs. **Questions – Page 221-224.** Card F3 shown: * Other active things like:
* Ride a bike
* Kick a ball around
* Run about (outdoors or indoors)
* Play active games
* Jump around

How many days did you/ your child engage in these activities described above (answered separately for weekday and weekend).  | Data **cannot be used for grading** as data is reported as the number of days the child engaged in active play rather than total minutes per day.  | In the 2018 report card, re-analysed data from the 2016 Scottish Health Survey was used to provide a grade for the report card. In the 2016 Scottish Health Survey, data were reported in 15-minute blocks compared to the 2019 report card which presented the number of days each child engaged in active play.  |
| **Publication:** Olsen, J.R., Mitchell, R., McCrorie, P. and Ellaway, A., 2019. Children's mobility and environmental exposures in urban landscapes: a cross-sectional study of 10–11 year old Scottish children. Social Science & Medicine, 224, pp.11-22.<https://www.sciencedirect.com/science/article/pii/S027795361930053X> | A nationallyrepresentative sample of 10 to 11 year old children. 2162 consented to be contacted for the accelerometery study (known as SPACES). For this study a small sample of 100 children (aged 10 and 11) living in Edinburgh and Glasgow were analysed to determine where children spent their time visiting.  | Children wore GPS devices over 8 consecutive days during waking hours. Location points are recorded every 10 seconds. Geographical Information Systems (GIS) were used to understand landscape characteristics, such as roads, leisure centres, and greenspace etc. using a 25m2 grid size. These methods combined inform on time spent in specific locations.  | Data **cannot be used for grading** as data it is limited to a single age group (10 to 11 year olds) and analysis conducted in a small sample of children (n= 100).  |  |
| **Survey:** Findings from the HBSC 2018 survey in Scotland health behaviour in school-aged children: world health organization collaborative cross-national study <http://www.hbsc.org/membership/countries/scotland.html> | A nationally representative sample of 5286 children aged 11 years (P7), 13 years (S2) and 15 years (S4).  | **Method:** Self-reported measure of frequency and duration of local greenspace use in the summertime (i.e. not in the past week/4 weeks) collected from 13 and 15 year olds (i.e. not 11 year olds). **Questions:** Frequency - ‘Thinking of the summer months, out of school hours how often do you usually pass through or spend time in any of the following places in your local area? Parks, play areas, public gardens, woods, playing fields or sports pitches, golf courses, beaches, canals, rivers or by lochs or other types of natural open space, categories ranged from <once a month to every day. Duration – ‘Thinking of the summer months, out of school hours how much time overall in a week do you usually spend in the following places in your local area (see examples above)? Categories ranged from None to >=7 hrs/wk  | Data cannot be used for grading as it does not fit the benchmark. |  |
| **Publication:** Dodd HF, FitzGibbon L, Watson BE, Nesbit RJ. Children’s Play and Independent Mobility in 2020: Results from the British Children’s Play Survey. International journal of environmental research and public health. 2021 Jan;18(8):4334. | 1,919 parents and caregivers (54% female) of children (49% female) aged 5 to 11 years (M = 8.45, SD = 1.99), of which 174 (9%) were from Scotland.Although the total sample was nationally representative of Great Britain, the Scottish sample was small and is therefore not representative of Scotland as a whole.  | **Method:** The Children’s Play Scale (CPS) was used. **Questions:** The CPS asks parents about their child’s play in seven places: home or in other people’s homes; outside at home or at other people’s homes; playground; greenspace; street or public places close to home; outdoors near water; indoor play centres and pools.Parents reported the frequency with which their child plays in each place, second, the length of time their child plays in each place and, finally, howadventurously their child plays in each place. Questions related to risk and ae children are allowed to play outside alone were also included.  | Data **cannot be used for grading** as sample is small and not nationally representative of Scotland. |  |
| **Survey:** Public Health Scotland,COVID-19 Early years resilience and impact survey (CEYRIS) - Report 2 - Play and learning, outdoors and social interactions<http://www.healthscotland.scot/publications/covid-19-early-years-resilience-and-impact-survey-ceyris> | Parents and carers of over 11,234 children aged 2–7-year-olds in Scotland.The sample was not representative and, therefore, results represent the views of the parents and carers who answered our survey.  | Method: Unweighted cross-sectional study. Parents completed the survey for their child (focus one child, but could be completed a number of times)The first round of the survey ran between 22nd June and 6th July 2020. Questions: How would you rate the following areas of your child’s life now compared to how it was before the lockdown?1. Time spent outdoors? (Rated: much worse, worse, about the same, better, much better).
2. Number of days the child played outside in the last week (Rated: everyday, most days (4-6), some days (1-3 days), none.)
3. Number of days the child has been to a park or other greenspace in the local area (Rated: as above).
 | Data **cannot be used for grading** as sample is not nationally representative (under representation of lower-income families) and surveys parents of children during the COVID-19 pandemic (June and July 2020). |  |

**Table 2 Data Considered for the Active Transportation Indicator**

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| --- | --- | --- | --- | --- |
| **Survey name, year data collected, name of the report and year report published and link(s) to the document/survey** | **Details of participants** | **Method of measurement (including the questions asked in the survey to measure the indicator)** | **Findings** | **Additional comments** |
| **Travel to School in Scotland**Hands Up Scotland Survey 2019:National Summary ReportLink: <https://www.sustrans.org.uk/media/6692/hands-up-scotland-survey-2019_national-summary-report.pdf> (Published June 2020) | Nationally representative survey from **n=35,552 nursery children** and **n=472,617 school pupils**, amounting to **n=508,169** pupil responses overall. **67.2% of all state school** pupils enrolled in Scotland participated (**n=468,588**). All 32 local authorities in Scotland participated. | **Method**: Data collection took place between the 9th and 13th of September 2019. Data collection was conducted by school staff (on a class-by-class or whole-school basis) as instructed by their local authority officer, with support from Sustrans. The question asked is, ‘*How do you normally travel to school*?’ with the following 8 response options:1. Walk, 2. Cycle, 3. Scooter/skate, 4. Bus, 5. Park & stride, 6. Driven (car), 7. Taxi, 8. Other | **School-going children:****Active travel:** 47.8% across all schools used active travel (without any form of motorised transport:41% walked, 4% cycled, 3% skated)**Public sustainable travel:**16.0% travelled to school by bus.**Multi-mode travel:**10.2% reported park and stride to school.**Nursery-going children:****Active travel:**43.0% used active travel (without any form of motorised transport: 35.9% walked, 3.9% cycled, 3.2% scooted/skated.)**Public sustainable travel:**2.9% travelled to nursery by bus.**Multi-mode travel**4.0% reported park and stride to nursery. | \*As with previous findings in report cards, park and stride **still** not considered as active travel.**Interesting trends:**There is evidence of a steady decline in the proportion of pupils reporting walking to school (from 45.8% in 2010 to the lowest recorded level of 41.0% in 2019). Primary schools have shown the **largest decrease in walking levels** (from 48.7% in 2010 to 41.6% in 2019). The 2019 survey recorded an increasing trend in cycling in all schools (not nursery) from 2.8% in 2010 to the highest recorded levels of 4.1% in 2019. The % of pupils normally travelling to school by park and stride increased from 7.4% in 2010 to a high of 10.2% in 2019. |
| **Transport and Travel in Scotland** Results from the Scottish Household Survey<https://www.transport.gov.scot/media/48317/sct09201490081.pdf>(published September 2020) | Nationally representative subset of the Scottish Household Survey (SHS) data based on n=1920 parent/caregiver/household reports. | Householders with young people in the household who are under the age of 18 and go to school were asked the question below.*How does [child] usually travel to school during term time?* 16 choices were provided, the active travel choices were walking and cycling. | Around half of children (52%) walked to school, 19% travelled by bus.Mode of travel varied by age: 4 to 11yos: 59% reported walking to school12 to 18yos: 42% reported walking to school.**Walk to school by SIMD:**Most deprived (1st): 63%, 2nd quintile: 55%, 3rd quintile: 48%, 4th quintile: 41%,least deprived (5th): 51%.**Bike to school by SIMD:**Most deprived (1st): 1%, 2nd quintile: 1%, 3rd quintile: 1%, 4th quintile: 2%, least deprived (5th): 4%. | \*As with previous report cards, travel by scooter/skating, and park & stride not measured.**Interesting reasons for results:**Of those walking, 88% per cent did so because the school is **close by**, 9% reported **convenience**. |
| **Active commute to school: does distance from school or walkability of the home neighbourhood matter? A national cross-sectional study of children aged 10–11 years, Scotland, UK****Reference:**Macdonald L, McCrorie P, Nicholls N, et al. Active commute to school: does distance from schoolor walkability of the home neighbourhood matter? A national cross-sectional study of children aged 10–11 years, Scotland, UK. BMJ Open 2019;9:e033628. doi:10.1136/ bmjopen-2019-033628  | 713 children (male: n=330, female: n=383; 10 - 11 years old) from SPACES. | Cross-sectional study. Data collected between May 2015 and May 2016 (in partnership with the Growing Up in Scotland Study, a nationally representative longitudinal cohort study). Children completed a travel diary and reported how they travel **to** and **from** school each day during two school weeks (10 days/20 trips). Travel diaries completed at home under the supervision of their parent/carer. An active school travel variable was created to consider any school journey(s) that included a stage recording travel by foot, cycling, scooter and/or skateboard. Children (n=713) provided travel diary data for up to 20 trips (10 trips to school and 10 trips home from school over a 2-week period). | \*Only children aged 10-11 considered for the study, although sample size is fair. Not used for grading42.7% of children reported active travel to school all the time (‘all travel’); 65.7% reported active travel most of the time (‘active 60%+ travel’) considering to and from school (both directions combined).  | **Interesting reasons for results:**The likelihood of using an active mode of travel for all or most school journeys generally **decreased** with **increasing** **home-to-school distance**, and active travel to school was **less likely for those living within the least walkable areas**. |
| **12-Year Trends in Active School Transport across Four European Countries—Findings from the Health Behaviour in School-Aged Children (HBSC) Study****Reference:**Haug,E.;Smith,O.R.F.; Bucksch, J.; Brindley, C.; Pavelka, J.; Hamrik, Z.; Inchley, J.; Roberts, C.; Mathisen, F.K.S.; Sigmundová, D. 12-Year Trends in Active School Transport across Four European Countries—Findings from the Health Behaviour in School-Aged Children (HBSC) Study. Int. J. Environ. Res. Public Health 2021, 18, 2118. https:// doi.org/10.3390/ijerph18042118  | Data from 88,212 students (11, 13 and 15 years old) from Czech Republic, Norway, Scotland, and Wales. **Scottish sample**:In 2006: n=5720, 2010: n=6274, 2014: n=5340, and 2018: n= 4563  | Using data from the Health Behaviour in School-Aged Children (HBSC) study collected in 2006, 2010, 2014, and 2018 in the Czech Republic, Norway, Scotland, and Wales, recent trends in active school transport were explored using a cross-sectional study design (conducted every fourth year). Mode of travel **to** and **from** school was assessed with two questions: *“On a typical day is the main part of your journey to school made by \_\_?”* and *“On a typical day is the main part of your journey from school made by \_\_?”*. Response options included: 1. Walking, 2. Bicycle, 3. Bus, 4. Train, 5. Tram, underground or boat, 6. Car, motorcycle or moped, 7. Other means. | **In Scotland:****AVERAGE active travel across survey years:**Walking both ways: 44.6%Cycling both ways: 1.3%One-way active school travel: 9.6%Active school travel both ways: 46.0%**Per year %s****Walking both ways:** 45.7% (2006), 46% (2010), 43.9% (2014), 42.1% (2018)**Cycling both ways:** 1% (2006), 1% (2010), 2% (2014), 1.1% (2018)**One-way active school travel:** 10% (2006), 9.5% (2010), 9.2% (2014), 9.6% (2018)**Active school travel both ways:** 46.9% (2006), 47.2% (2010), 46% (2014), 43.3% (2018) | **Other interesting findings:**Significant gender difference in Scottish 13yo girls for active travel[OR, (99.9%CI)] 0.80 (0.64, 0.99) – girls less likely to engage in active school transport.Children from more affluent families were less likely to have active school transport **both ways** as compared to their counterparts from less affluent families. |

**Table 3 Data Considered for the Physical Fitness Indicator**

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| --- | --- | --- | --- | --- |
| **Survey name, year data collected, name of the report and year report published and link(s) to the document/survey**  | **Details of participants**  | **Method of measurement (including the questions asked in the survey to measure the indicator)**  | **Findings**  | **Additional comments**  |
|  |  |  | We were unable to find any nationally representative data on indicators of physical fitness. We will consult with key stakeholders from PEPASS, SportScotland, Active Scotland to check for nationally representative datasources. **Grade = INC**  | .  |

**Table 4 Data Considered for the Diet Indicator**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Survey name, year data collected, name of the report and year report published and link(s) to the document/survey**  | **Details of participants**  | **Method of measurement (including the questions asked in the survey to measure the indicator)**  | **Findings**  | **Additional comments**  |
| **Survey:** Scottish Health Survey (SHeS) 2019 (Published Sept 2020)**Publication:** The Scottish Health Survey 2019: Volume 1: Main Report (published Sep 2020)[**https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2020/09/scottish-health-survey-2019-volume-1-main-report/documents/scottish-health-survey-2019-edition-volume-1-main-report/scottish-health-survey-2019-edition-volume-1-main-report/govscot%3Adocument/scottish-health-survey-2019-edition-volume-1-main-report.pdf?forceDownload=true**](https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2020/09/scottish-health-survey-2019-volume-1-main-report/documents/scottish-health-survey-2019-edition-volume-1-main-report/scottish-health-survey-2019-edition-volume-1-main-report/govscot%3Adocument/scottish-health-survey-2019-edition-volume-1-main-report.pdf?forceDownload=true)Further data are available in supplementary web tables <https://www.gov.scot/publications/scottish-health-survey-2019-supplementary-tables/>Technical report provides info on data collected and the questionnaires used in the survey <https://www.gov.scot/publications/scottish-health-survey-2019-volume-2-technical-report/> | Nationally representative sample of 1,978 children (0-15yrs).  Ages 2-15 were used in the findings | interviewer-administered questionnaire for a) fruit and vegetable consumption **in portions per day in the previous 24h,** with household measures used to give examples of portions (80g), interviewers record full and half portions but nothing smaller and b) frequency of consumption of 16 selected other foods e.g. oily fish, processed meat, non-diet soft drinks and high fibre breakfast cereals using nine frequency options (‘6 or more times a day’ to ‘less than 1 time per month or never’).Also reported by SIMD 2020 quintiles and equivalised income quintiles in supplementary tables  | In 2019, mean daily fruit and veg intake in 2-15yr olds was 2.8 portions (2.6 for boys, 3.0 for girls), little change over time). 14% of 2-15 year olds met the 5-a-day guideline (12% boys, 16% girls) and 9% ate no fruit or veg (9% boys, 9% girls).  **% meeting 5-a-day by age** 2-4yr: 20% (M 15%, F 25%)5-7yr: 13% (M 11%, F 15%)8-10yr: 11% (M 11%, F 11%) 11-12y: 14% (M 15%, F 14%) 13-15yr: 13% (M 11%, F 15%) **% eating no fruit & veg by age**2-4yr: 5% (M 3%, F 7%)5-7yr: 9% (M 12%, F 6%)8-10yr: 9% (M 10%, F 9%) 11-12y: 10% (M 9%, F 12%) 13-15yr: 13% (M 11%, F 15%)**Mean fruit & veg portions/day by age** 2-4yr: 3.2 (M 3.1, F 3.4)5-7yr: 2.8 (M 2.5, F 3.2) 8-10yr: 2.7 (M 2.5, F 2.8)11-12y: 2.7 (M 2.8, F 2.7)13-15yr: 2.6 (M 2.6, F 2.6)**Mean fruit & veg portions/day by SIMD**least: 3.3 (M 3.2, F 3.3)4th: 2.9 (M 2.8, F 3.1)3rd: 2.5 (M 2.2, F 2.8) 2nd: 2.5 (M 2.3, F 2.7) most: 2.8 (M 2.6, F 2.9)**% meeting 5-a-day by SIMD** least: 17% (M 18%, F 16%)4th: 15% (M 14%, F 16%)3rd: 12% (M 5%, F 19%) 2nd: 11% (M 10%, F 12%) most: 16% (14M %, F 18%)**% eating no fruit & veg SIMD**least: 4% (M 5%, F 3%)4th: 4% (M 5%, F 3%)3rd: 14% (M 11%, F 16%) 2nd: 10% (M 11%, F 10%) most: 14% (M 14%, F 14%)**Frequency of eating other foods**Processed meat ≥ 2 times/wk: 42%Sweets or chocolates ≥ once/day: 48%Biscuits ≥ once/day: 28%Cakes ≥ 2 times/wk: 28% Non-diet soft drinks ≥ once/day: 8% Crisps/savoury snacks ≥ once/day: 38% Chips ≥ 2 times/wk: 45%oily fish ≥ once a week: 16%≥2 slices of high fibre bread/day: 27%high fibre/low sugar cereal ≥ 5 times/wk: 29% The frequency of eating these foods was similar boys vs girls except for processed meats, high fibre bread, high fibre/low sugar cereal (all higher among boys).The frequency of eating foods high in fat and/or sugar (i.e. processed meats, sweets/chocs, biscuits, crisp and chips) are similar in 2-4yr olds vs older children. Among 2-4yr olds, 44% eat sweets/chocs at least once a day, 26% eat biscuits at least once a day, 39% eat chips at least twice a week. There was evidence of increasing consumption of non-diet soft drinks with increasing age with 3% of 2-4yr olds consuming ≥ once/day vs 15% of 13-15yr olds.**Frequency of eating foods by SIMD** Eat meat (all types) 2-4 times a week: 41% least vs 44% most.Eat meat products (burgers, pies etc.) 2-4 times a week: 29% least vs 38% most.Biscuits ≥ once/day: 21% least vs 33% most – boys ate more biscuits than girls across all SIMD quintilesIce cream ≥ once/wk: 49% least vs 55% mostCakes ≥ 2 times/wk: 30% least vs 25% mostCrisps/savoury snacks ≥ once/day: 36% least vs 46% mostChips ≥ 2 times/wk: 37% least vs 52% mostTuna fish ≥ once/wk: 27% least vs 27% mostWhite fish ≥ once a week: 61% least vs 49% mostOily fish ≥ once a week: 25% least vs 11% mostHigh fibre/low sugar cereal ≥ 5 times/wk: 37% least vs 18% most - across all SIMD quintiles, boys ate high fibre/low sugar cereal more often than girls59% of children from the most deprived SIMD quintile ate white bread the most as opposed to 36%, suggesting that those from more affluent families consume more fibrous bread. | Little evidence of change since last report card other than for sugar sweetened beverages. Younger children ate more fruit and veg than older children and girls more than boys. Those in least deprived SIMD quintile consumed more fruit and veg, and also had the least children consuming no fruit and vegetables in the last 24hrs, although a similar percentage met the 5 a day in least and most deprived quintiles. Those in least deprived SIMD quintile also consumed fish and high fibre breads and cereals more frequently and high fat/high sugar foods and non-diet soft drinks less frequently. A similar pattern was seen by quintiles of equivalised income. |
| **Survey:** National Diet and Nutrition Survey Rolling programme Results from Years 1-4 (combined) for Scotland (2008/09-2011/12), published 2014  <https://www.foodstandards.gov.scot/publications-and-research/publications/national-diet-and-nutrition-survey-rolling-programme-results-from-years-1-4> This report combines data from the years 2008-2012 to provide a sufficient number of children in Scotland. | National Diet and Nutrition Surveys since 2011/12 are **not** available separately for Scotland so data from these surveys cannot be used for grading. The 2008/09 to 2011/12 NDNS mentioned in the previous column was reported for Scotland and data from this survey was used in the 2016 and 2018 report cards.  | Methods: 4-day non-weighed diet diary | In 1.5-3 y olds the energy intake was 4.88 MJ/d in boys and girls combined. The mean energy intake in 4-10 y olds was 6.77 MJ/d in boys and 6.20 MJ/d in girls, while for 11-18 y olds mean energy intake was 8.42 MJ/d in boys and 6.41 MJ/d in girls. Total fat as a % food energy was 33.9 % in boys and 33.85 in girls (1.5-18y). Saturated fatty acids provided 13.2% food energy in boys and 12.9% food energy in girl, while non-milk extrinsic sugars (similar to added sugars) provided 15.8% energy in boys and 14.9% energy in girls, with the highest values of 16.3% seen in the 11-18y old boys.  | Previous report card comments: No new NDNS data since the 2016 report card. The grade for this indicator has been carried forward from the 2016 because no data sources since the previous card have measured this indicator according to the benchmark. The NDNS 2014 was the data source used to grade this indicator in the 2016 report card, along with the % meeting the 5-a-day guideline from the SHeS.  |
| **Survey:** National Diet and Nutrition Survey (NDNS)**Publication:** NDNS: results from years 9-11: report (Published December 2020)<https://www.gov.uk/government/statistics/ndns-time-trend-and-income-analyses-for-years-1-to-9>  | Data **not** available separately for Scotland | Methods: 4-day non-weighed diet diary | In 1.5-3 y olds the energy intake was 4.45 MJ/d in boys and girls combined. The mean energy intake in 4-10 y olds was 6.44 MJ/d in boys and 5.69 MJ/d in girls, while for 11-18 y olds mean energy intake was 7.43 MJ/d in boys and 6.51 MJ/d in girls. Total fat as a % food energy was 35.3 % in 1.5-3 y olds, 34.1 % in boys and 34.2 % in girls aged 4-10 y and 34.0 % in boys and 34.5 % in girls aged 11-18 y. Saturated fatty acids as a % food energy was 14.8 % in 1.5-3 y olds, 13.0 % in boys and 13.1 % in girls aged 4-10 y and 12.7 % in boys and 12.5 % in girls aged 11-18 y. Free sugars as a % total energy was 9.7 % in 1.5-3 y olds, 12.4 % in boys and 11.8 % in girls aged 4-10 y and 12.1 % in boys and 12.1 % in girls aged 11-18 y. | UK wide data. No new Scottish data since the 2016 report card. |
| **Survey:** Health Behaviour in School-Aged Children (HBSC) Scotland Study**Publication:** Findings from the HBSC Survey in Scotland 2018 (published Jan 2020) <https://www.gla.ac.uk/media/Media_707475_smxx.pdf>**Data Sources:** <https://www.uib.no/en/hbscdata>  | Nationally representative samples of 5,286 young people aged 11, 13 and 15  | The family affluence scale (FAS) was referred to. Each participant completes an anonymized, HBSC international standard paper-based questionnaire under exam conditions. FAS was expressed as low, medium and high. | Daily fruit consumption by age:11yo: 41% (M 38%, F 44%)13yo: 35% (M 29%, F 40%)15yo: 30% (M 24%, F 36%) Daily fruit consumption by FAS:Low: 23%, Medium: 36%, High: 48%Daily vegetable consumption by age:11yo: 35% (M 31%, F 39%)13yo: 39% (M 35%, F 43%)15yo: 35% (M 28%, F 42%) Daily vegetable consumption by FAS:Low: 25%, Medium: 46%, High: 49%40% of all girls / 30% of all boys ate fruit every daily whereas 41% of all girls / 31% of all boys ate vegetables every day. Fruit consumption decreased with age whereas vegetable consumption remained low. For every age group, girls had a higher fruit and vegetable intake.Breakfast eaten on weekdays by age: 11yo: 75% (M 77%, F 74%)13yo: 60% (M 68%, F 52%)15yo: 50% (M 56%, F 45%) Breakfast eaten on weekdays by FAS:Low: 51%, Medium: 63%, High: 68%62% of adolescents reported eating breakfast every school day, this decreased with age. Those with higher FAS were less likely to skip breakfast. Girls were more likely to skip breakfast. This trend has been reported on for over a decade.Soft drinks and energy drinks by age:11yo: 14% (M 17%, F 11%)13yo: 18.5% (M 21%, F 16%)15yo: 20% (M 23%, F 17%) Daily consumption of soft drinks by FAS:Low: 23%, Medium: 17%, High: 12%Daily consumption of energy drinks by FAS:Low: 7%, Medium: 5%, High: 4%Sweets or chocolate consumption by age:11yo: 27.5% (M 26%, F 29%)13yo: 26% (M 24%, F 28%)15yo: 29% (M 30%, F 28%) Daily consumption of sweets or chocolate by FAS:Low: 29%, Medium: 27%, High: 29%Daily consumption of cakes or biscuits by FAS:Low: 13%, Medium: 11%, High: 12%Daily consumption of crisps by FAS:Low: 20%, Medium: 17%, High: 17%Daily consumption of crisps by FAS:Low: 11%, Medium: 8%, High: 6% | Study is completed every four years.Younger children ate more fruit than older children and girls more fruit and vegetables than boys. Consumption of fruit and vegetables increased with increase in family affluence and consumption of high fat/high sugar foods decreased.  |
| **Survey:** Living Costs and Food Survey (LCFS) data from years 2013 to 2015 published in**:** 1. Food Standards Scotland. Estimation of food and nutrient intakes from Living Costs and Food Survey data in Scotland (2001 – 2015), **interim report published November 2017** http://www.foodstandards.gov.scot/publications-andresearch/latest-estimation-of-food-and-nutrient-intakes-interim-report
2. Estimation of food and nutrient intakes from food purchase data in Scotland 2001 – 2015, full report published June 2018 <https://www.foodstandards.gov.scot/downloads/D19-01_Final_Report_2001-2015_-_130618.pdf>
3. Note: a lot of the data from the above publications is reported in the FSS Situation Report: The Scottish Diet: It needs to change 2018 update <https://www.foodstandards.gov.scot/downloads/Situation_report_-_the_Scottish_diet_-_it_needs_to_change_-_2018_update_FINAL.pdf>
 | The LCFS is an annual survey and includes a representative sample of households in mainland Scotland, ~550 households (approx. 1300 people/year)  | **Method**: Provides robust estimates of food consumption and nutrient intakes from 2013 to 2015 in Scotland. These reports also include data from 2001 to look at differences over time and by SIMD. The survey collects information on household and eating out food and drinks purchases for every person >7 years of age in each household over a 14 day period using food diaries. Results are an estimate of a typical average household member. Info is based on food and drinks purchased rather than actual consumption, however waste and other conversion factors are used to estimate the amount of food that was consumed for both household and eating out purchases. Results are reported as population average intakes/mean daily consumption per person of foods, nutrients, energy density, food and drinks indicative of diet quality etc. Estimates mean food consumption and nutrient intake for Scotland based on household and eating out food and drinks purchases. | There has been no updated data on this since the last report card. Data presented in FSS Situation Report: The Scottish Diet: It needs to change 2020 update was for 2013-2015. That showed no progress on energy, density, fibre, fruit & vegetable consumption, oil rich fish consumption and total fat intake, and little progress on free sugars and saturate fat intakes, but a 13% reduction in salt intakes. | Previous report card comments: Data not used for grading as the results are an estimate of a typical average household member, this cannot be reported for children or for parents.  |

**Table 5 Data Considered for the Obesity Prevalence Indicator**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Survey name, year data collected, name of the report and year report published and link(s) to the document/survey**  | **Details of participants**  | **Method of measurement (including the questions asked in the survey to measure the indicator)**  | **Findings**  | **Additional comments**  |
| **Survey:** Scottish Health Survey (SHeS) 2019 (Published Sept 2020)**Publication:** The Scottish Health Survey 2019: Volume 1: Main Report (published Sep 2020)[**https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2020/09/scottish-health-survey-2019-volume-1-main-report/documents/scottish-health-survey-2019-edition-volume-1-main-report/scottish-health-survey-2019-edition-volume-1-main-report/govscot%3Adocument/scottish-health-survey-2019-edition-volume-1-main-report.pdf?forceDownload=true**](https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2020/09/scottish-health-survey-2019-volume-1-main-report/documents/scottish-health-survey-2019-edition-volume-1-main-report/scottish-health-survey-2019-edition-volume-1-main-report/govscot%3Adocument/scottish-health-survey-2019-edition-volume-1-main-report.pdf?forceDownload=true)Further data are available in supplementary web tables <https://www.gov.scot/publications/scottish-health-survey-2019-supplementary-tables/>Technical report provides info on data collected and the questionnaires used in the survey <https://www.gov.scot/publications/scottish-health-survey-2019-volume-2-technical-report/> | Nationally representative sample of 1,978 children (2-15yrs).   | Height, weight, waist circumference, BMI under UK 1990 reference standards. Percentile cut-offs: At or below 2nd percentile: At risk of underweight, Above 2nd percentile and below 85th percentile: Healthy weight, At or above 85th percentile and below 95th percentile: At risk of overweight, At or above 95th percentile: At risk of obesitySIMD 2020 quintiles were used | **Summary:** Among 2-15 year olds, 30% were at risk of overweight incl obesity (16% were at risk of obesity). 32% of boys and 28% of girls were at risk of overweight incl obesity (17% of boys and 15% of girls were at risk of obesity). ***% children at risk of overweight or obese (>=85th percentile) by SIMD***least: 23% (M 29%, F 15%) 4th: 24% (M 24%, F 25%) 3rd: 27% (M 28%, F 27%) 2nd: 42% (M 44%, F 41%) most: 35% (M 36%, F 34%) ***% children at risk of overweight or obese (>=85th percentile) by age***Age 2-6: 30% (M 33%, F 28%)Age 7-11: 25% (M 29%, F 20%)Age 12-15: 37% (M 34%, F 39%)Total: 30% (M 32%, F 28%)**Summary:** Obesity was associated with SIMD as those from a more deprived background were at a higher risk of overweight/obesity. As reported in the 2016 SHeS from the previous AHKRC, those in the 2nd most deprived area were at the most risk of overweight/obesity. Boys were reported to be at a higher risk of overweight/obesity than girls.Risk of overweight/obesity increased with decreasing quintile of equivalised income.  | >=85th percentile was used to indicate overweight/obesity risk. |
| Survey: Primary 1 Body Mass Index (BMI) statistics Scotland (2020)Publication: <https://beta.isdscotland.org/find-publications-and-data/population-health/child-health/primary-1-body-mass-index-bmi-statistics-scotland/> Supplementary data tales can be found in the link provided above. | Only 41% of Primary 1 pupils (23,934) were assessed. The data collected is nationally representative of Scottish children. | UK90 BMI. ≥ 85th percentile: overweight/obesity, ≥ 95th: obesity  | 76.3% of Primary 1 children in 2019/20 had a BMI in the healthy weight range. 12.3% of children were at risk of overweight and 10.4% were at risk of obesity (22.8% at risk of overweight or obesity combined). Included in the 10.4% of children at risk of obesity were 2.8% of children at risk of severe obesity. 1% of children were at risk of underweight.***% children at risk of overweight or obese (BMI >=85th percentile) by SIMD***Most: 27.2% (14% OW, **13.3% obese**)2nd: 25.5% (12.9% OW, 12.6% obese)3rd: 23% (12.6% OW, 10.4% obese)4th: 20.5% (11.3% OW, 9.2% obese)Least: 17.2% (10.8% OW, **6.4% obese**)The more deprived the SIMD quintile, the more likely a child was at risk of overweight/obesity. Those in the most deprived areas were at the highest risk of being overweight/obese.Those in the most deprived areas were twice as likely to beat risk of being overweight/obese than those in the least deprived areas (13.3% of those in the most deprived areas were at risk as opposed to 6.4% of those in the least deprived areas).Boys were slightly less likely than girls to have a healthy weight (75.7% boys; 76.8% girls). Boys were slightly more likely than girls to be at risk of overweight or obesity (23.0% boys; 22.5% girls) but were also twice as likely at risk of being underweight (1.3% boys; 0.6% girls).  | Only surveys P1s. Despite having less numbers than the 2019/2018 reports, the data is nationally representative of Scottish children and is therefore a reliable representation of the P1 BMIs. The trend of those from a more deprived area being more at risk of being overweight/obese reflects the findings from the previous two years, further supporting the reliability of this data.In comparison to the 2018 AHKRC, the most recent data shows that the gap between the most deprived and least deprived areas has widened as those in the least deprived areas have displayed lower rates of obesity/overweight whereas those in the most deprived areas have slightly higher rates.Those in the least deprived areas have lower rates of overweight/obesity. In AHKRC 2018 ***% children at risk of overweight or obese (BMI >=85th percentile) by SIMD***: Least = **18.3%** (11.2% OW, 7.1% obese)Most = **26.4%** (13.3% OW, 13.2% obese)Vs. 2020 findings ***% children at risk of overweight or obese (BMI >=85th percentile) by SIMD***:Least: **17.2%** (10.8% OW, 6.4% obese)Most: **27.2%** (14% OW, 13.3% obese) |
| Primary 1 Body Mass Index (BMI) statistics Scotland (2019)<https://www.isdscotland.org/Health-Topics/Child-Health/Publications/2019-12-10/2019-12-10-P1-BMI-Statistics-Publication-Report.pdf>  | Nationally representative sample of 44,782 (76.3%) Scottish Primary 1 pupils | UK90 BMI. ≥ 91st percentile: overweight/obesity, ≥ 98th: obesity  | 76.6% of Primary 1 children in 2018/19 had a BMI in the healthy weight range. 12.2% of children were at risk of overweight and 10.2% were at risk of obesity (22.4% at risk of overweight or obesity combined). Included in the 10.3% of children at risk of obesity were 2.8% of children at risk of severe obesity. 1.0% of children were at risk of underweight.***% children at risk of overweight or obese (BMI >=85th percentile) by SIMD***most: 26.4% (12.8% OW, **13.7% obese**)2nd: 24.3% (12.5% OW, 11.8% obese)3rd: 23.3% (12.5% OW, 10.8% obese)4th: 20.6% (12.2% OW, 8.4% obese)least: 17.6% (11% OW, **6.5% obese**)The more deprived the SIMD quintile, the more likely a child was at risk of overweight/obesityThose in the most deprived areas were twice as likely to beat risk of being overweight/obese than those in the least deprived areas. | Only surveys P1s.More recent data was available (see 2020 findings) |

**Table 6 Data Considered for the Community and Environment Indicator**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Survey name, year data collected, name of the report and year report published and link(s) to the document/survey**  | **Details of participants**  | **Method of measurement (including the questions asked in the survey to measure the indicator)**  | **Findings**  | **Additional comments**  |
| **Survey:**Scottish Household Survey (SHS) 2019 **Publication:**Scotland's People Annual Report: Results from the 2019 Scottish Household Survey   <https://www.gov.scot/publications/scottish-household-survey-2019-annual-report/>     |   |   |   | Since publication of the previous report card, the SHS has not asked questions in relation to children’s perceived safety, access to, and availability of play in their neighbourhood.   |
| **Survey:** Scottish Household Survey (SHS) 2018 Publication: Scotland's People Annual Report: Results from the 2019 Scottish Household Survey   <https://www.gov.scot/publications/scotlands-people-annual-report-results-2018-scottish-household-survey/>   | Nationally representative survey, 10,532 household interviews completed (9,702 adult interviews completed).  | **Methods:** The household component of the survey is completed by the household reference person  **Questions:**a)Frequency of visits made to the outdoors (by SIMD, urban/rural, age).  b) % of adults withing walking Distance to Local Greenspace (by SIMD)   | a) Frequency of visits made to the outdoor cannot used for grading because it refers to frequency of visits to the outdoors by adults generally rather than specific features of the environment which may promote or inhibit physical activity   b) Walking Distance to Local Greenspace (by SIMD) Up to 5 mins: 65% 6-10 mins: 21% 11 minutes or more: 12% Don’t know: 1%   **By SIMD** A 5 minute walk or less: SIMD 1= 58, SIMD 2= 63, SIMD 3= 68, SIMD 4= 69, SIMD 5= 68  Within a 6-10 minute walk: SIMD 1= 26, SIMD 2= 22, SIMD 3= 20, SIMD 4= 17, SIMD 5= 22  11 minute walk or greater: SIMD 1= 14, SIMD 2= 13, SIMD 3= 11, SIMD 4= 12, SIMD 5= 10  Don't Know: SIMD 1= 3, SIMD 2= 2, SIMD 3= 1, SIMD 4= 1, SIMD 5= 1   | Since publication of the previous report card, the SHS has not asked questions in relation to children’s perceived safety, access to, and availability of play in their neighbourhood.  |
| **Survey:**Findings from the HBSC 2018 survey in Scotland health behaviour in school-aged children: world health organization collaborative cross-national study   <http://www.hbsc.org/membership/countries/scotland.html>   | A nationally representative sample of 5286 children aged 11 years (P7), 13 years (S2) and 15 years (S4).    | Self-reported measure of perception of physical environment in local area.   **Questions:** a) % who think local area is good to live in (really good, good, OK, not very food, not good at all); b) % who feel safe this often in local area ( Always, most of the time, sometime, rarely or never); c)  It is safe for younger children to play outside | **a) local area is a good place to live** Really good: boys= 45%; girls= 41% Good: boys= 27%; girls= 31% OK: boys= 23%; girls= 22% Not very food: boys= 4%; girls= 3% Not good at all: boys= 2%; girls= 2%  **b) Feeling safe in local area:** Always: boys= 64%; girls= 59% Most of the time: boys= 27%; girls= 31% Sometime: boys= 7%; girls= 8% Rarely or never: boys= 2%; girls= 1%  **c)****It is safe for younger children to play outside:**11–year old boys= 85% 11–year old girls= 85% 13–year old boys= 85% 13–year old girls= 81% 15–year old boys= 78% 15–year old girl= 80% All= 82% **There are good places to spend your free time:**11–year old boys= 82% 11–year old girls= 80% 13–year old boys= 64% 13–year old girls= 59% 15–year old boys= 57% 15–year old girl= 51% All= 66%     | **Inequalities:**There were consistent inequalities in young people’s perceptions of their local neighbourhood. On all measures included, young people from the lowest SES group were more likely to report negative perceptions of their local area  |
| **Publication:** Olsen, J.R., Mitchell, R., McCrorie, P. and Ellaway, A., 2019. Children's mobility and environmental exposures in urban landscapes: a cross-sectional study of 10–11 year old Scottish children. Social Science & Medicine, 224, pp.11-22.  <https://www.sciencedirect.com/science/article/pii/S027795361930053X>   | A nationally representative sample of 10 to 11 year old children. 2162 consented to be contacted for the accelerometery study (known as SPACES). For this study a small sample of 100 children (aged 10 and 11) living in Edinburgh and Glasgow were analysed to determine where children spent their time visiting.     | Children wore GPS devices over 8 consecutive days during waking hours. Location points are recorded every 10 seconds.   Geographical Information Systems (GIS) were used to understand landscape characteristics, such as roads, leisure centres, and greenspace etc. using a 25m2grid size.   These methods combined inform on time spent in specific locations.   | Data **cannot** be used for grading as data it is limited to a single age group (10 to 11 year olds) and analysis conducted in a small sample of children (n= 100), and only provides time spent in each location.   |   |

**Table 7.1 Scoring rubric to determine a grade for the Government Indicator (physical activity only); from Ward et al**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Criterion | Scores |  |  |  | Max total score |
| **Number and Breadth of Relevant Policies**Policies/ strategies/ action plans that reference physical activity. | **Policy Number** | Score | **Policy Breadth (No. of Sectors)** | Score | 9 |
| 20+ | 5 | **10+** | **5** |
| **15-19** | **4** | 8-9 | 4 |
| 10-14 | 3 | 6-7 | 3 |
| 5-9 | 2 | 4-5 | 2 |
| 1-4 | 1 | 1-3 | 1 |
| 0 | 0 | 0 | 0 |
| **Identified Supporting Actions**Strategic documents with specific actions that promote physical activity | **No. of Policies with identifiable Actions** | **Score** | 12 |
| Actual number of documents to maximum of 20 | 0-20 |
| **Identified Accountable Organisation(s)**Discreet organisations specifically identified as responsible for delivery of actions. | **Proportion (%) of Policies with Identified Responsibilities for delivery of Actions** | **Score** | 15 |
| 100% | 25 |
| 80% | 20 |
| **60%** | **15** |
| 40% | 10 |
| 20% | 5 |
| 0 | 0 |
| **Identifiable Reporting Structures**Strategic documents with explicit reporting systems including frequency and format of reports | **Proportion (%) of Policies with Identified Systems for Reporting Delivery of Actions** | **Score** | 5 |
| 100% | 15 |
| 75% | 12.5 |
| 67% | 10 |
| 50% | 7.5 |
| **33%** | **5** |
| 20% | 3 |
| 0 | 0 |
| **Identified Funding**Explicit references to funding to support identified actions | **Proportion (%) of Policies with Identified Funding Sources** | **Score** | 2 |
| 100% | 20 |
| 75% | 15 |
| 50% | 10 |
| 25% | 5 |
| **10%** | **2** |
| 0 | 0 |
| **Monitoring and Evaluation Plan**Explicit reference to monitoring and evaluation of progress and impact of the policy | **Proportion (%) of Included Policies with Identified Systems for Monitoring & Evaluation** | **Score** | 2.5 |
| 100% | 10 |
| 75% | 7.5 |
| 50% | 5 |
| **25%** | **2.5** |
| 10% | 1 |
| 0 | 0 |

**Table 7.2 Descriptive scoring grid for the Government Indicator (physical activity only; links to Table 7.1)**

|  |  |  |
| --- | --- | --- |
| **Criterion** | **Narrative/explanation** | **Score** |
| **Number and Breadth of Relevant Policies***Policies/ strategies/ action plans that reference physical activity.* | In Scotland, there are eighteen national policies/strategies/action plans/guidelines that mention and/or promote physical activity in children. These policy documents are represented in a variety of directorates within the Scottish Government (14 out of 43), namely: Energy and Climate Change Directorate, Agriculture and Rural Delivery Directorate, Economic Development Directorate, Environment and Forestry Directorate, Fair Work, Employability and Skills Directorate, Housing and Social Justice Directorate, Scottish National Investment Bank Directorate, Community Health and Social Care Directorate, Children and Families Directorate, Early Learning and Childcare Programme Directorate, Population Health Directorate, Learning Directorate, Constitution and Cabinet Directorate, Performance and Strategic Outcomes Directorate.  | 9 |
| **Identified Supporting Actions***Strategic documents with specific actions that promote physical activity* | Twelve of the 18 policy documents mention specific actions to promote physical activity. In some cases, the actions are for the purpose of improving/increasing physical activity, for some others physical activity is promoted to meet another goal (e.g., reduce overweight/obesity, active travel) | 12 |
| **Identified Accountable Organisation(s)***Discreet organisations specifically identified as responsible for delivery of actions.* | Twelve of the eighteen policies mention partner organisations. These partners include, but are not limited to, Paths for All, **sport**scotland, Cycling Scotland, Sustrans, Actify, The Daily Mile.  | 15(12/18 = 67%) |
| **Identifiable Reporting Structures***Strategic documents with explicit reporting systems including frequency and format of reports* | Seven of the 18 policiesidentify monitoring and reporting systems. The structure of this information is highly variable between policy documents where it exists.  | 5(7/18 = 39%) |
| **Identified Funding***Explicit references to funding to support identified actions* | Three of the 18 policies mention or report funding that is **specifically allocated** to promoting/increasing physical activity. | 2(3/18 = 17%) |
| **Monitoring and Evaluation Plan***Explicit reference to monitoring and evaluation of progress and impact of the policy* | Six of the 18 policies explicitly reference their plan for monitoring and evaluation. It is promising to note that there were some policies that had been updated or had progress reports published (e.g., The National Walking Strategy, Play Strategy), showing promise for future policies.  | 2.5(6/18 = 33%) |
| **Score out of 100: 45.5; Proposed Grade: C** |

**Table 7.3 Policy instruments considered to grade the Government Indicator (physical activity only)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Title of policy instrument** | **Published** | **Sector (Directorate)** | **Link & notes** |
| **1** | Update to the Climate Change Plan 2018 – 2032 | Dec-20 | Energy and Climate Change Directorate, Agriculture and Rural Delivery Directorate, Economic Development Directorate, Environment and Forestry Directorate, Fair Work, Employability and Skills Directorate, Housing and Social Justice Directorate, Scottish National Investment Bank Directorate | ([link](https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/))  |
| **2** | Recommendation report from the Scottish Government’s Body Image Advisory Group on Good Body Image | Mar-20 | Community Health and Social Care Directorate | [Link](https://www.mentalhealth.org.uk/sites/default/files/MHF_Body-Image2020_Report_ONLINE-VERSION%20%281%29.pdf) |
| **3** | Scotland’s National Outdoor Play & Learning Position Statement | Dec-20 | Children and Families Directorate, Early Learning and Childcare Programme Directorate | [Link](https://www.inspiringscotland.org.uk/wp-content/uploads/2021/03/National-Position-Statement-Dec-2020.pdf) |
| **4** | National parenting strategy: making a positive difference to children and young people through parenting | Oct-12 | Children and Families Directorate | [Link](https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2012/10/national-parenting-strategy-making-positive-difference-children-young-people-through/documents/00403769-pdf/00403769-pdf/govscot%3Adocument/00403769.pdf) |
| **5** | Realising the ambition: Being Me National practice guidance for early years in Scotland | Feb-20 | NO DIRECTORATE; see https://education.gov.scot/improvement/learning-resources/realising-the-ambition/ | [Link](https://education.gov.scot/improvement/learning-resources/realising-the-ambition/) |
| **6** | Restricted Roads (20 mph Speed Limit) - (Scotland) Bill | Sep-18 | NO DIRECTORATE; see https://www.parliament.scot/bills-and-laws/bills/restricted-roads-20-mph-speed-limit-scotland-bill | [Link](https://www.parliament.scot/-/media/files/legislation/bills/previous-bills/restricted-roads-20mph-speed-limit-scotland-bill/introduced/policy-memorandum-restricted-roads-20mph-speed-limit-scotland-bill.pdf)Unsuccessful at national level, did not make it past stage 1; only implemented at a local (city-wide) level in the City of Edinburgh and evaluation is ongoing. |
| **7** | A healthier future: Scotland's diet and healthy weight delivery plan | Jul-18 | Community Health and Social Care Directorate | [Link](https://www.gov.scot/publications/healthier-future-scotlands-diet-healthy-weight-delivery-plan/) |
| **8** | Public Health Priorities for Scotland | Jun-18 | Population Health Directorate | [Link](https://www.gov.scot/binaries/content/documents/govscot/publications/corporate-report/2018/06/scotlands-public-health-priorities/documents/00536757-pdf/00536757-pdf/govscot%3Adocument/00536757.pdf?forceDownload=true) |
| **9** | Included, engaged and involved part 1: promoting and managing school attendance | Jun-19 | Learning Directorate | [Link](https://www.gov.scot/publications/included-engaged-involved-part-1-positive-approach-promotion-management-attendance-scottish-schools/)Limited mention of PA but by keeping attendance high, opportunities for PA are arguably higher. |
| **10** | Protecting Scotland’s Future: The Government’s Programme for Scotland 2019-20 | Sep-19 | Constitution and Cabinet Directorate | [Link](https://www.gov.scot/publications/protecting-scotlands-future-governments-programme-scotland-2019-20/) |
| **11** | Scotland and the Sustainable Development Goals: A national review to drive action | Jul-20 | Performance and Strategic Outcomes Directorate | [Link](https://www.gov.scot/binaries/content/documents/govscot/publications/progress-report/2020/07/scotland-sustainable-development-goals-national-review-drive-action/documents/scotland-sustainable-development-goals-national-review-drive-action/scotland-sustainable-development-goals-national-review-drive-action/govscot%3Adocument/scotland-sustainable-development-goals-national-review-drive-action.pdf?forceDownload=true)In this document there is mention that diet and PA both play a role in mental health (p40) but little connection is made between PA and mental health in other Scot Gov policy. |
| **12** | Let’s get Scotland Walking: The National Walking Strategy, Action Plan 2016-2026 (note: 2 PDFs, most recent plan is a revised action plan) | Mar-19 | Community Health and Social Care Directorate | [Link](https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2014/06/lets-scotland-walking-national-walking-strategy/documents/00452622-pdf/00452622-pdf/govscot%3Adocument/00452622.pdf) |
| **13** | Active Scotland Delivery Plan (note the committee for stakeholder list) | Jul-18 | Community Health and Social Care Directorate | [Link](https://www.gov.scot/publications/active-scotland-delivery-plan/) |
| **14** | Cycling Action Plan for Scotland 2017-2020 | Jan-17 | NO DIRECTORATE; see https://www.transport.gov.scot/publication/cycling-action-plan-for-scotland-2017-2020/ | ([link](https://scotlandscurriculum.scot/)) |
| **15** | Sport for Life: A Vision for Scotland (note: 2 PDFs, one is a consultation report published in Feb 2019) | Apr-19 | NO DIRECTORATE; see https://sportscotland.org.uk/about-us/sport-for-life/ | ([link](https://www.transport.gov.scot/media/10311/transport-scotland-policy-cycling-action-plan-for-scotland-january-2017.pdf)) |
| **16** | Play Strategy (note: 2 PDFs, one is a progress report published in 2020) | Oct-13 | Children and Families Directorate | ([link](https://sportforlife.org.uk/documents/Sport-for-Life-Full-Document.pdf))([link to progress report](https://sportscotland.org.uk/about-us/sport-for-life-2020/): April 2019 – March 2020) |
| **17** | Obesity Route Map | Mar-11 | NO DIRECTORATE; see https://www.gov.scot/publications/obesity-route-map-action-plan/ | ([link](https://www.playscotland.org/resources/print/Scotland-Play-Strategy-Action-Plan.pdf?plsctml_id=18546))([link to 2020 progress report](https://www.playscotland.org/resources/print/Play-Scotland-Play-Strategy-Review-2020.pdf?plsctml_id=20940)) |
| **18** | UK Chief Medical Officers' Physical Activity Guidelines | Sep-19 | NO DIRECTORATE; see https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/832868/uk-chief-medical-officers-physical-activity-guidelines.pdf | CMO guidelines are UK-wide, not promoted on ScotGov website |

**Table 7.4 Scoring rubric to determine a grade for the Government Indicator (****diet and obesity)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Criterion | Scores |  |  |  | Max total score |
| **Number and Breadth of Relevant Policies**Policies/ strategies/ action plans that reference diet or obesity. | **Policy Number** | Score | **Policy Breadth (No. of Sectors)** | Score | 6 |
| 20+ | 5 | 10+ | 5 |
| 15-19 | 4 | 8-9 | 4 |
| **10-14** | **3** | **6-7** | **3** |
| 5-9 | 2 | 4-5 | 2 |
| 1-4 | 1 | 1-3 | 1 |
| 0 | 0 | 0 | 0 |
| **Identified Supporting Actions**Strategic documents with specific actions aimed at improving diet or obesity | **No. of Policies with identifiable Actions** | **Score** | 8 |
| Actual number of documents to maximum of 20 | 0-20 |
| **Identified Accountable Organisation(s)**Discreet organisations specifically identified as responsible for delivery of actions. | **Proportion (%) of Policies with Identified Responsibilities for delivery of Actions** | **Score** | 25 |
| **100%** | **25** |
| 80% | 20 |
| 60% | 15 |
| 40% | 10 |
| 20% | 5 |
| 0 | 0 |
| **Identifiable Reporting Structures**Strategic documents with explicit reporting systems including frequency and format of reports | **Proportion (%) of Policies with Identified Systems for Reporting Delivery of Actions** | **Score** | 5 |
| 100% | 15 |
| 75% | 12.5 |
| 67% | 10 |
| 50% | 7.5 |
| **33%** | **5** |
| 20% | 3 |
| 0 | 0 |
| **Identified Funding**Explicit references to funding to support identified actions | **Proportion (%) of Policies with Identified Funding Sources** | **Score** | 10 |
| 100% | 20 |
| 75% | 15 |
| **50%** | **10** |
| 25% | 5 |
| 10% | 2 |
| 0 | 0 |
| **Monitoring and Evaluation Plan**Explicit reference to monitoring and evaluation of progress and impact of the policy | **Proportion (%) of Included Policies with Identified Systems for Monitoring & Evaluation** | **Score** | 5 |
| 100% | 10 |
| 75% | 7.5 |
| **50%** | **5** |
| 25% | 2.5 |
| 10% | 1 |
| 0 | 0 |

**Table 7.5 Descriptive scoring grid for the Government Indicator (diet and obesity; links to Table 7.4)**

|  |  |  |
| --- | --- | --- |
| **Criterion** | **Narrative/explanation** | **Score** |
| **Number and Breadth of Relevant Policies***Policies/ strategies/ action plans that reference diet or obesity.* | In Scotland, there are ten national policies/strategies/action plans/guidelines that mention and/or aim to improve diet or tackle obesity in children which are relevant to the timescale of the current report card. These policy documents are represented in a variety of directorates within the Scottish Government (5 out of 43), namely: Community Health and Social Care, Agriculture and Rural Economy, Children and Families, Population Health, Housing and Social Justice, and in addition HM Revenue and Customs.  | 5 |
| **Identified Supporting Actions***Strategic documents with specific actions aimed at improving diet or obesity.* | Eight of the ten policy documents mention specific actions to improve diet or tackle obesity. | 8 |
| **Identified Accountable Organisation(s)***Discreet organisations specifically identified as responsible for delivery of actions.* | All policies/strategies had identifiable accountable organisations. | 25(10/10 = 100%) |
| **Identifiable Reporting Structures***Strategic documents with explicit reporting systems including frequency and format of reports* | Three of the ten policiesidentify monitoring and reporting systems. | 5(3/10 = 30%) |
| **Identified Funding***Explicit references to funding to support identified actions* | Five out of ten policies had identified their funding. Many of the sources listed were vague.  | 10(5/10 = 50%) |
| **Monitoring and Evaluation Plan***Explicit reference to monitoring and evaluation of progress and impact of the policy* | Four of the ten policies had a published motoring and evaluation plan. Many policies have promised evaluation plans, but they have not yet been published.  | 5(4/10 = 40%) |
| **Score out of 100: 58; Proposed Grade: C+** |

**Table 7.6 Policy instruments considered to grade the Government Indicator (diet and obesity)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Title of policy instrument** | **Published** | **Sector (Directorate)** | **Link & notes** |
| **1**  | Criteria for healthcare retail standard  | Oct-15 | Community Health and Social Care Directorate | [Link](https://www.gov.scot/publications/criteria-healthcare-retail-standard/)  |
| **2**  | Better eating, better learning: a new context for school food  | Mar-14 | Agriculture and Rural Economy Directorate  | [Link](https://www.gov.scot/publications/better-eating-better-learning-new-context-school-food/)  |
| **3**  | Beyond the School Gate - Improving Food Choices in the School Community  | Jun-14 | Community Health and Social Care Directorate | [Link](https://www.gov.scot/publications/beyond-school-gate-improving-food-choices-school-community/) |
| **4**  | A fairer, healthier Scotland: A strategic Framework for Action (2017-2022) | May-17 | NHS Health Scotland/ Community Health and Social Care Directorate  | [Link](http://www.healthscotland.scot/media/1426/afhs-a-strategic-framework-for-action_june2017_english.pdf) Associated with National Performance Framework |
| **5**  | Recipe for Success: Scotland’s national food and drink policy, becoming a Good Food Nation | Jun-14 | Agriculture and Rural Economy Directorate  | [Link](https://www.gov.scot/publications/recipe-success-scotlands-national-food-drink-policy-becoming-good-food/)  |
| **6** | Revised Dietary Goals for Scotland | Mar-16 | Population Health Directorate | [Link](https://www.gov.scot/publications/scottish-dietary-goals-march-2016/) |
| **7** | Soft Drinks Industry Levy (2018), under The Finance Act (2017)  | Implemented Apr-18Finance Act Mar-17 | HM Revenue and Customs  | [Link](https://www.gov.uk/topic/business-tax/soft-drinks-industry-levy)[The Finance Act (2017)](https://www.gov.uk/government/publications/finance-bill-2017-legislation-and-explanatory-notes) |
| **8** | Free School Meals  | Implemented Jan-15 | Children and Families Directorate, Population Health Directorate  | [Link](https://www.gov.scot/policies/maternal-and-child-health/free-school-meals/)  |
| **9** | A healthier future: Scotland's diet and healthy weight delivery plan | Jul-18 | Community Health and Social Care Directorate  | [Link](https://www.gov.scot/publications/healthier-future-scotlands-diet-healthy-weight-delivery-plan/)Superseded Obesity Route Map (2010) |
| **10** | Fair Food Fund, under Poverty and Social Justice Policy (2017)  | 2017 | Housing and Social Justice Directorate, Children and Families Directorate  | [Link](https://www.gov.scot/policies/poverty-and-social-justice/) |