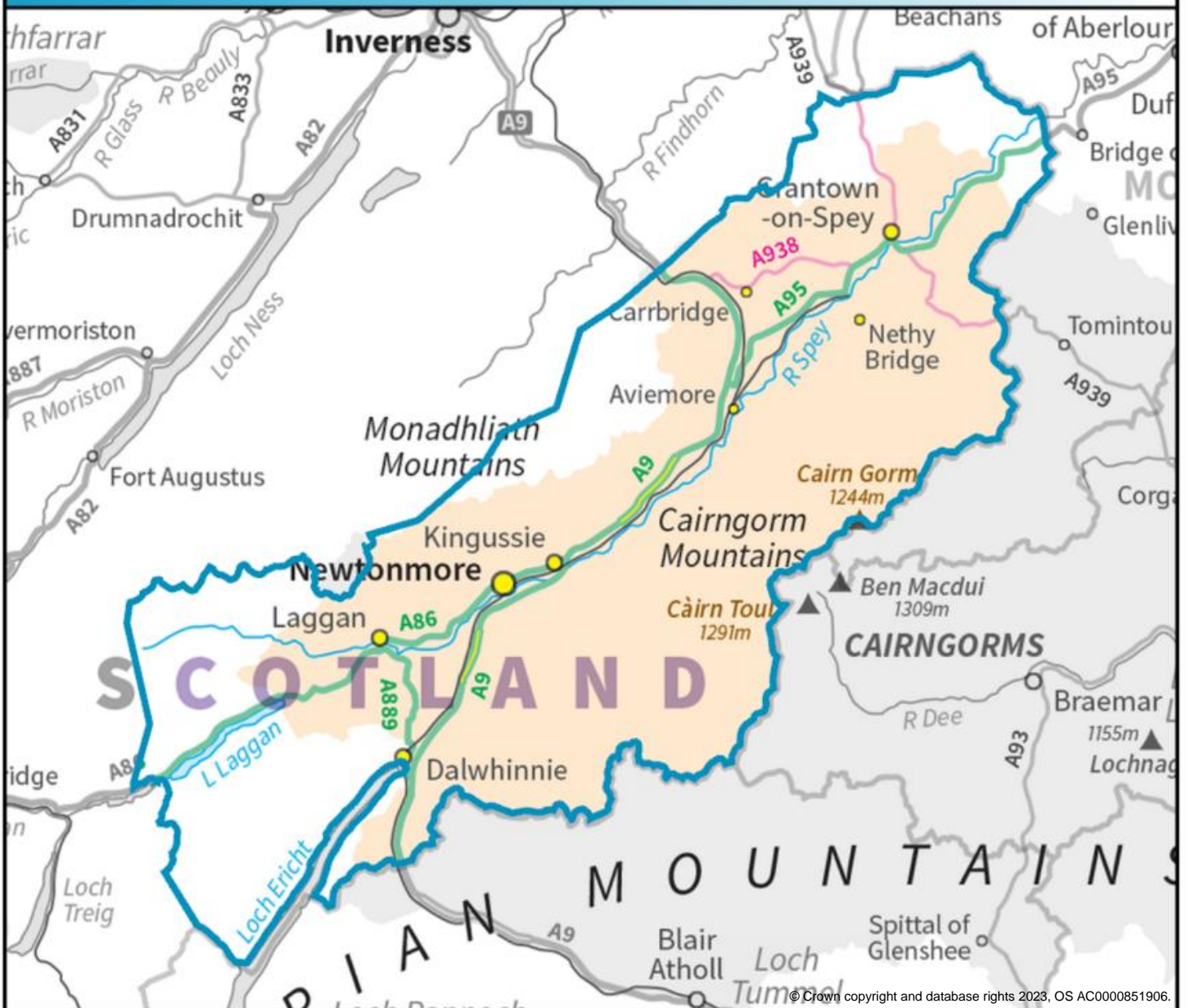


BADENOCH AND STRATHSPEY

Partnership Profile Children and Young People's Health & Wellbeing



Public Health Intelligence
November 2023



The Public Health Intelligence team are part of the Directorate of Public Health of NHS Highland and provide an expert resource on epidemiology, demography and population health evidence.



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Table of content

- Introduction..... 1
- Geographies and populations 1
- Deprivation and inequalities 2
- Statistical significance and confidence intervals..... 2
- Indicator definitions..... 3
- Badenoch and Strathspey Summary..... 4
- Population..... 6
 - Population of children and young people..... 6
 - Population projections 9
 - Population living in urban and rural areas.....13
- Social context and inequalities16
 - Deprivation.....16
 - Access, income and crime deprivation19
 - Child poverty22
- Pregnancy and births24
 - Live births.....24
 - Teenage pregnancy25
 - Smoking during pregnancy.....27
 - Maternal Body Mass Index during pregnancy.....28
 - Premature births.....30
 - Healthy birth weight.....31
- Early childhood development.....33
 - Babies exclusively breastfed at 6-8 weeks33
 - Developmental concerns at 27-30 months35
 - Childhood immunisations36
- Primary and Secondary school age39
 - Child healthy weight39

Oral health	41
Child dental health in Primary 1	41
Child dental health in Primary 7	42
HPV immunisation in Secondary 3 girls	43
Further information	46
Glossary	48
References	51

Introduction

This report provides an overview of children and young people's population health and wellbeing in Badenoch and Strathspey. Evidence is drawn from multiple sources including births, maternity records, and child health surveillance systems. It is a companion volume to a profile of [demography and deprivation](#) published in November 2022 and [adult health and wellbeing](#) published in March 2023.

The report considers indicators across the life course of babies, children and young people from pre-birth to young adulthood. Data are presented for Badenoch and Strathspey and, where available, intermediate zones or neighbourhoods within Badenoch and Strathspey. Comparisons are made to the Highland local authority and Scotland. A final section provides links to further resources where data are not available at the partnership level.

The reports do not cover information on the use or provision of health or social care services which other colleagues in NHS Highland may provide.

Geographies and populations

Profile reports are available for nine community planning partnerships in Highland local authority and four community planning groups in Argyll and Bute local authority. These partnership areas are the focus of action to improve the health of the people and communities in the area covered by NHS Highland Health Board.

This report uses four levels of geography: local authority, partnership area, intermediate zone and datazone. Local authorities, intermediate zones and datazones are nationally agreed geographical areas with defined boundaries. Partnership areas are locally defined geographies created without reference to national geographies. Therefore, partnership areas and national geographies may not neatly align.

The intermediate zone is the smallest spatial unit most commonly used for releasing and presenting potentially sensitive statistical data and reporting measures of population health. Most measures and figures are aggregations from datazones to higher geographical levels. The number of events in the intermediate geographies that best align with a partnership area may not sum to the exact total.

Deprivation and inequalities

This report presents some information on deprivation using the Scottish Index of Multiple Deprivation (SIMD)¹. The SIMD is an area-based measure of relative deprivation rather than household or individual deprivation. The SIMD can help to understand the life circumstances and health outcomes of people living in areas identified as experiencing high levels of deprivation.

Health inequalities have been defined as the “unjust and avoidable differences in people’s health across the population and between specific population groups”². Inequalities are not caused by a single issue, and can occur by age, sex, gender identity, ethnic group, disability, income, deprivation, geography and other factors.

The SIMD is used to monitor health inequalities by dividing the population into five groups (quintiles) or ten groups (deciles) based on their area deprivation level.

The SIMD represents deprivation less accurately in rural areas³. The statistical indicators used in the index do not capture the nature of rural disadvantage, and poor households in rural areas are unlikely to be spatially concentrated. Rural areas tend to be less socially homogeneous than urban ones in terms of deprivation, and deprived households in rural areas are unlikely to make much statistical impact on a small area (datazone) basis. A consequence is that rural disadvantage is less visible and ‘less easily tractable’ than in urban areas.

Statistical significance and confidence intervals

Statistical significance is used in this report to indicate whether a difference between two measures reflects a difference in the true or ‘underlying’ value rather than being attributable to random variation or chance. Statistical significance is determined using 95% confidence intervals.

A confidence interval is a range of values that is used to describe the uncertainty around a point estimate of a quantity, for example a rate or proportion. The 95% confidence interval indicates the degree of uncertainty in an estimate; 95 times out of 100, the interval will include the true or ‘underlying’ value. The wider the confidence interval, the greater the uncertainty in the measure. The width of the confidence interval depends on the size of the population and the underlying variability in the data. Estimates from larger populations (such as council areas) will have smaller confidence intervals and therefore provide more accurate estimates, than from smaller populations (such as partnership areas or intermediate zones) with larger confidence intervals.

The confidence intervals are used to interpret whether the difference in an indicator between two areas is statistically significant. If the confidence intervals of the two estimates do not overlap then there is a statistically significant difference between the two estimates. A comparison is made between the partnership area, council area and Scotland estimates. A more detailed explanation is available in a technical briefing⁴.

Please note that throughout the report 'significance' refers to statistical significance and is indicated as higher (+ symbol) or lower (- symbol) in the tables.

Indicator definitions

Many of the indicators presented in this report are published by the Scottish Public Health Observatory (ScotPHO). Full details of the indicator definitions used by ScotPHO are available within the ScotPHO online profiles tool⁵.

Further information on the geographies, populations and other terms used within the report is available in the [Glossary](#).

Badenoch and Strathspey Summary

Highland and the partnership area have a declining population of children and young people. Population projections forecast a continued reduction in the size of the population of children and young people.

Highland has a significant remote and rural geography where the needs of children and young people are often less recognised in national policy. In the partnership area children and young people aged under 18 years reside in remote small towns, or remote or very remote rural areas.

By presenting data for small areas, the profile highlights differences in the population of children and young people living in the most access deprived, income deprived and crime deprived areas of the Scottish Index of Multiple Deprivation (SIMD).

Tackling child poverty is a national priority. The profile highlights that there are many children and young people experiencing poverty. Measuring child poverty and profiling the population in at-risk groups is a complex task, particularly in rural areas.

Growing up in poverty and low-income households can lead to children having poorer health outcomes. For intermediate geographies within partnership areas, negative correlations are evident between relative low-income deprivation and health measures within the profile.

There have been decreasing numbers of births in Highland and the trend is expected to continue. The current birth rate for Highland is significantly lower than for Scotland.

Rates of teenage pregnancy show decreases over time in Highland and the partnership area. There is still room for improvement in this long-standing national priority to reduce unintended pregnancies in young people.

Smoking rates during pregnancy have decreased over time. Smoking during pregnancy is harmful to both mother and baby and remains a significant challenge to population health.

In Highland, the prevalence of mothers with high body mass index (BMI) has generally increased over time. There are increased risks of adverse outcomes for both mother and baby associated with obesity in pregnancy.

Premature birth rates have generally increased in recent years. Being born too early strongly influences the health of babies and can affect health and development throughout childhood and adult life.

Prevalence of breastfeeding at the 6-8 week health visitor review in Highland is increasing and significantly higher than in Scotland, although there is variation across partnerships.

Breastfeeding is one of the most preventative health measures for children and mothers and actions to improve breastfeeding rates should continue to be prioritised.

Identifying early child development concerns is essential to support children and families improve health, educational and social outcomes.

Immunisation programmes for children are effective at protecting children from serious infectious diseases. There is a need to promote and improve the uptake of childhood vaccination to consistently achieve the national coverage target of 95 percent.

The percentage of Primary 1 children measured with a healthy weight (BMI between 5% and 95% of 1990 UK reference range for age and sex) in Highland is significantly lower than in Scotland, although there is variation across partnership areas.

The proportion of Primary 7 children with no obvious decayed, filled or missing teeth in Highland and the partnership area has increased in recent years. In particular, the proportion among P7 children in Highland is significantly higher than in Scotland. Good oral health is essential for wellbeing.

Uptake rates for the HPV vaccine in Secondary 3 girls in Highland have decreased over time and are consistently lower than in Scotland. There is variation across partnership areas in achieving the expected HPV vaccine uptake of 80 percent.

Population

Population of children and young people

In Scotland, the definition of a child varies in different legal contexts. Statutory guidance supporting the Children and Young People (Scotland) Act 2014 and the United Nations Convention on the Rights of the Child 1989 include all children and young people under the age of 18 years^{6,7}. This section extends this definition to cover those aged 18 to 24.

Those commissioning and providing for the local health, educational and social needs of children and young people need to be aware that demands vary with the size of each annual population cohort and the cumulative sum of the individuals making up consecutive age groups.

As a result of birth rates and migration, the absolute number of children and young people of different ages living in an area changes each year.

Table 1: Population estimates for children and young people by age group and sex in Badenoch and Strathspey, 2021

Age Band	Female	Male	Total
All ages 0-24	1,584	1,644	3,228
Under 18	1,150	1,169	2,319
0	51	56	107
1-4	223	196	419
5-11	410	475	885
12-17	466	442	908
18-24	434	475	909

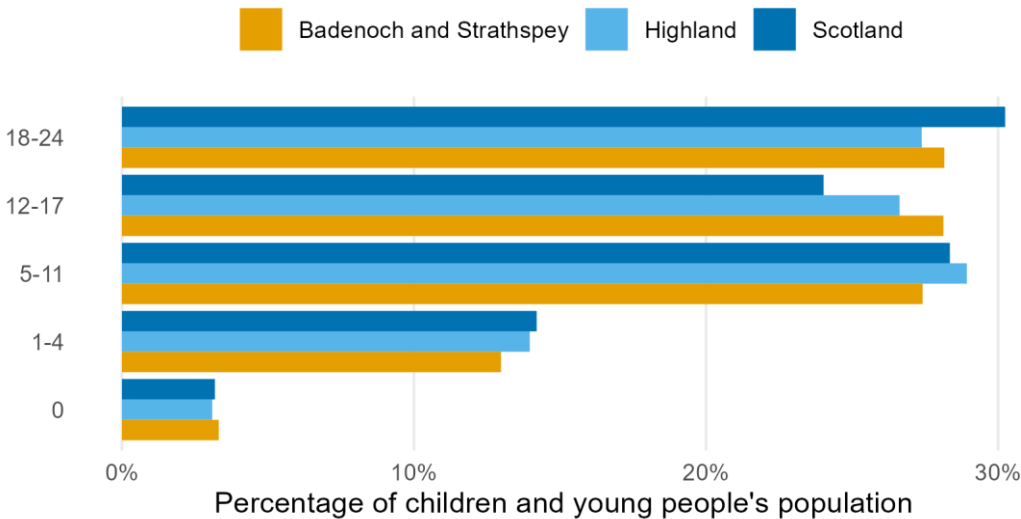
Source: National Records of Scotland, Small Area Population Estimates 2021

Table 2: Population estimates for children and young people by age group and area, 2021

Age Band	Badenoch and Strathspey	Highland	Scotland
All ages 0-24	3,228	59,586	1,469,338
Under 18	2,319	43,268	1,024,981
0	107	1,842	46,782
1-4	419	8,321	208,655
5-11	885	17,239	416,545
12-17	908	15,866	352,999
18-24	909	16,318	444,357

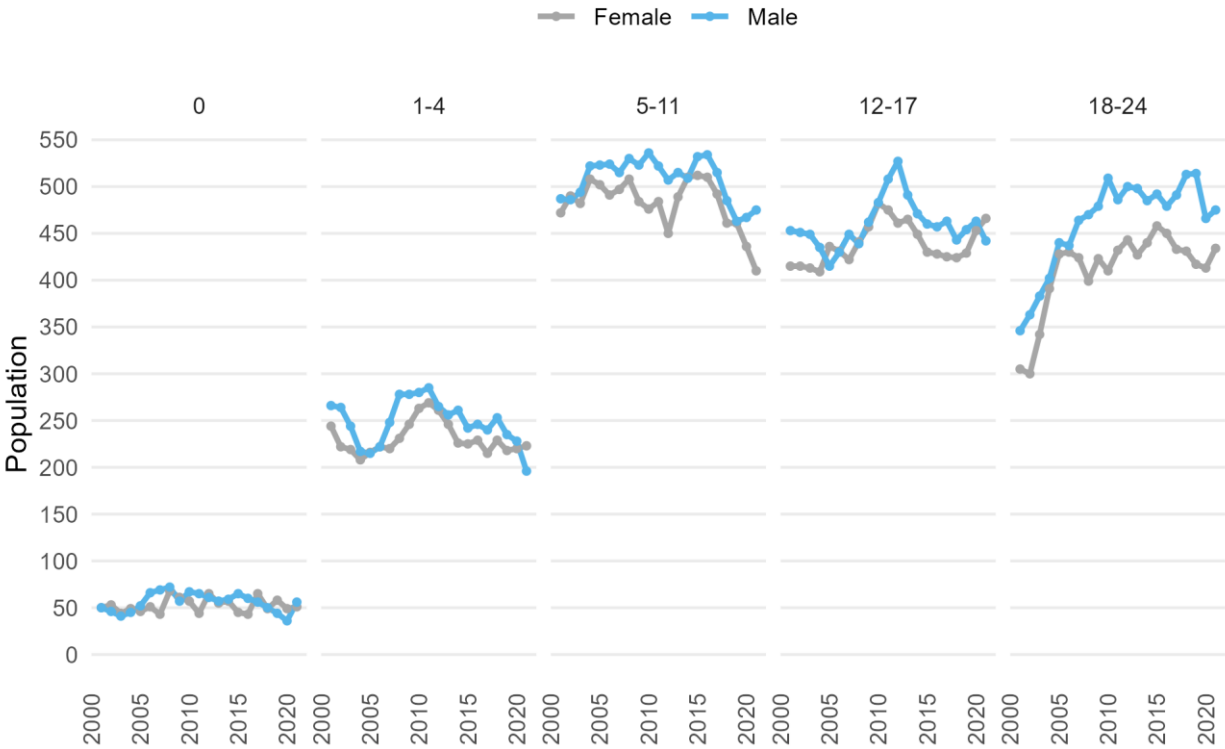
Source: National Records of Scotland, Small Area Population Estimates 2021

Figure 1: Distribution of children and young people’s population by age group and area, 2021



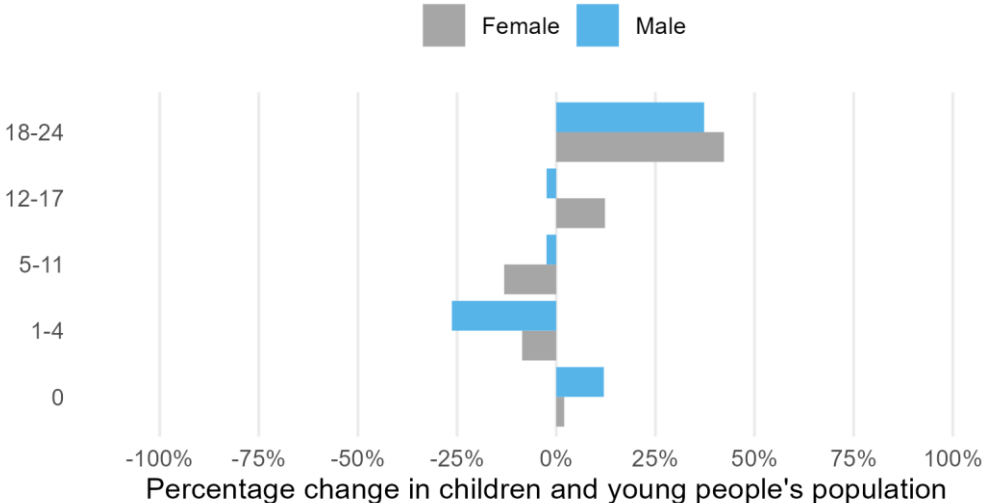
Source: National Records of Scotland, Small Area Population Estimates 2021

Figure 2: Children and young people’s population by age group and sex in Badenoch and Strathspey, 2001 to 2021



Source: National Records of Scotland, Small Area Population Estimates 2021

Figure 3: Percentage change in the population of children and young people by age group and sex in Badenoch and Strathspey between 2001 and 2021



Source: National Records of Scotland, Small Area Population Estimates 2021

Population projections

Population projections are informed by past trends in births, deaths and migration. They give an indication of what the future population, by age and sex structure, might be if recent local levels of fertility, mortality and migration continue, and take no account of policy or development aims within local areas.

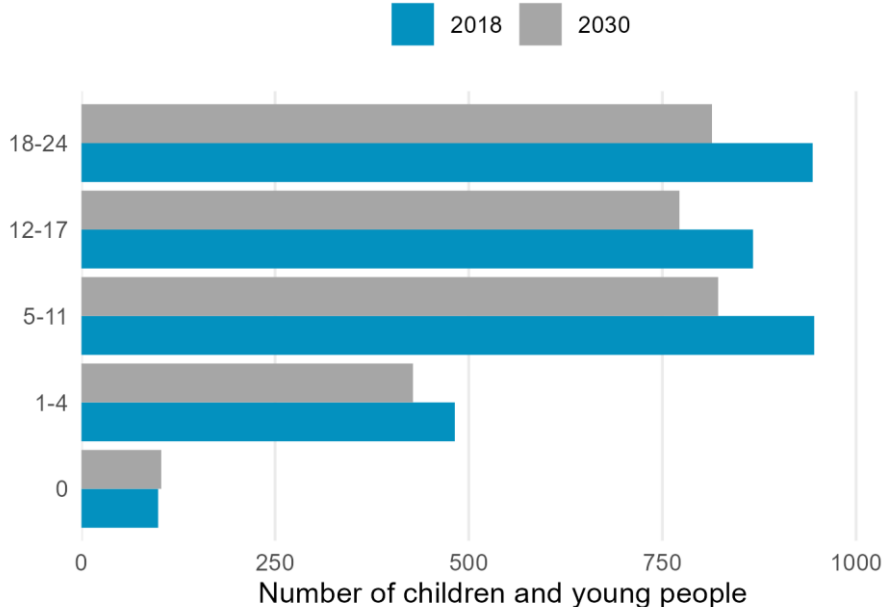
The 2018-based population projections for Highland and Argyll and Bute forecast a continued reduction in the size of the population of children and young people. Lower birth rates are the key factor contributing to the projected decline.

Table 3: Projected population of children and young people in Badenoch and Strathspey by age group, 2018 to 2030

Year	0	1-4	5-11	12-17	18-24	Totals
2018	99	482	946	867	944	3,338
2019	103	460	938	876	925	3,302
2020	104	448	915	905	892	3,264
2021	104	446	895	909	862	3,216
2022	104	427	897	894	848	3,170
2023	103	431	881	873	844	3,132
2024	103	431	870	852	840	3,096
2025	103	429	870	827	830	3,059
2026	103	428	855	808	842	3,036
2027	103	428	843	798	846	3,018
2028	103	428	838	783	843	2,995
2029	103	428	820	787	831	2,969
2030	103	428	822	772	814	2,939

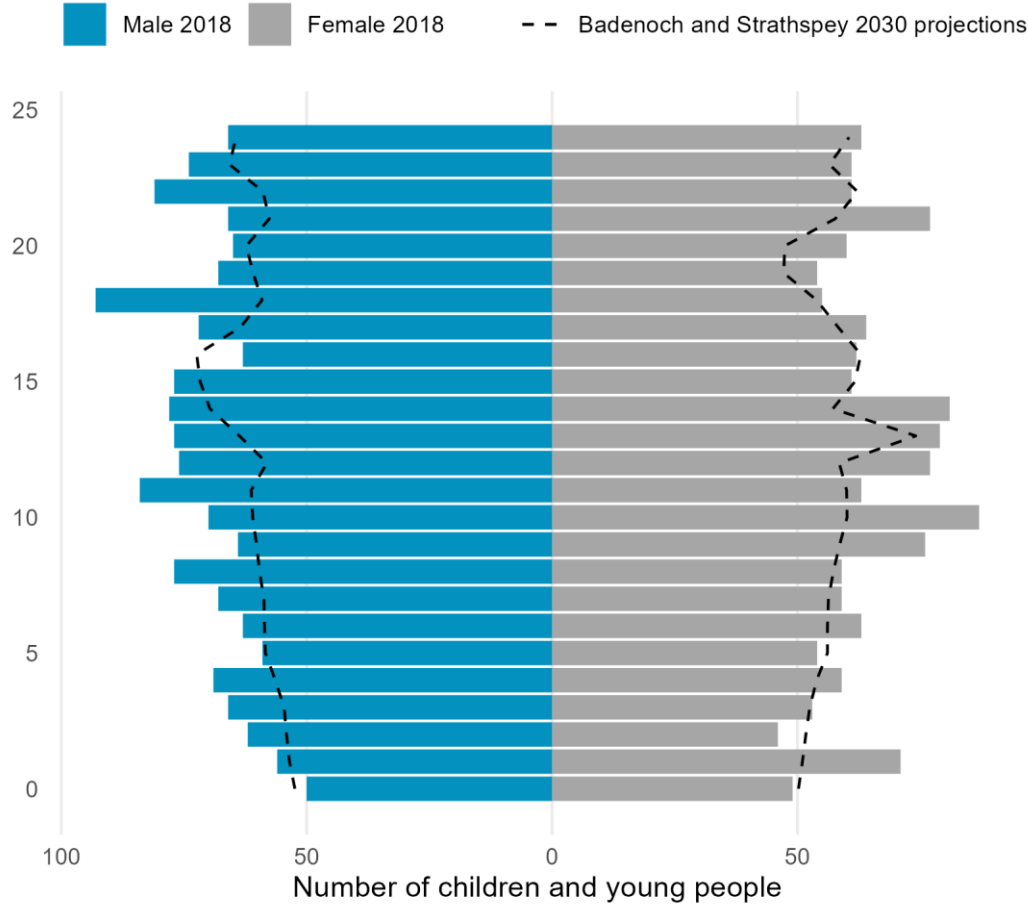
Source: Improvement Service 2018-based Population Projections for Sub Council Areas

Figure 4: Projected population of children and young people in Badenoch and Strathspey by age group, 2018 and 2030



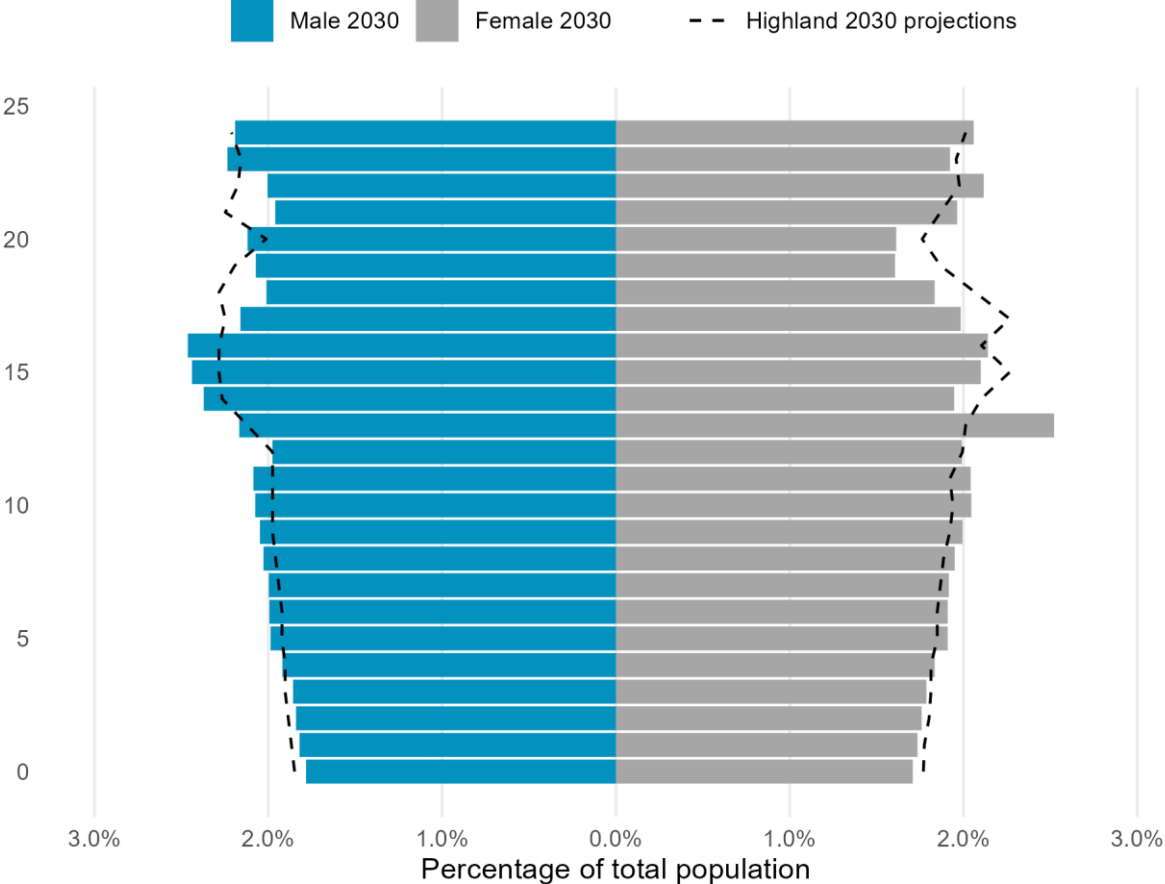
Source: Improvement Service 2018-based Population Projections for Sub Council Areas

Figure 5: Estimated and projected population of children and young people in Badenoch and Strathspey, 2018 and 2030



Source: Improvement Service 2018-based Population Projections for Sub Council Areas

Figure 6: Projected population of children and young people in Badenoch and Strathspey compared to the Highland area in 2030



Source: Improvement Service 2018-based Population Projections for Sub Council Areas

Population living in urban and rural areas

The Scottish Urban Rural Classification (SGURC) is consistent with the government's core definition of rurality, which defines settlements of 3,000 or fewer people as rural. It also classifies areas as remote based on drive times from settlements of 10,000 or more people⁸.

We highlight the population of children and young people who potentially live at a distance from service points in our major population centres in remote and rural areas. These places include villages, islands, peripheral coastal communities, and small towns in remote and very remote locations.

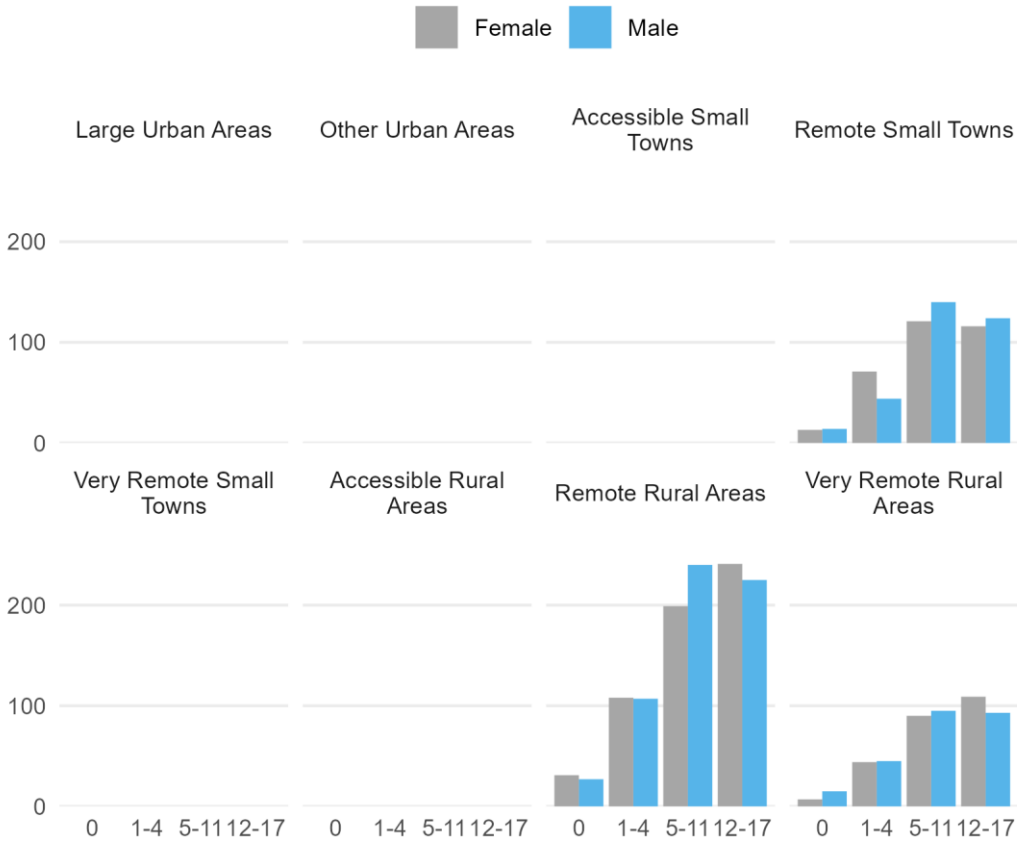
Policy concerns in rural and remote areas often focus on economic regeneration, employment, rural prices and poverty, housing and fuel poverty, and population ageing, particularly the retention of young adults in such communities⁹. The needs of children and younger people living in these areas are often less directly recognised.

Table 4: Population aged under 18 years by Scottish Government Urban Rural Classification in Badenoch and Strathspey

Classification	0	1-4	5-11	12-17
Large Urban Areas	0	0	0	0
Other Urban Areas	0	0	0	0
Accessible Small Towns	0	0	0	0
Remote Small Towns	27	115	261	240
Very Remote Small Towns	0	0	0	0
Accessible Rural Areas	0	0	0	0
Remote Rural Areas	58	215	439	466
Very Remote Rural Areas	22	89	185	202

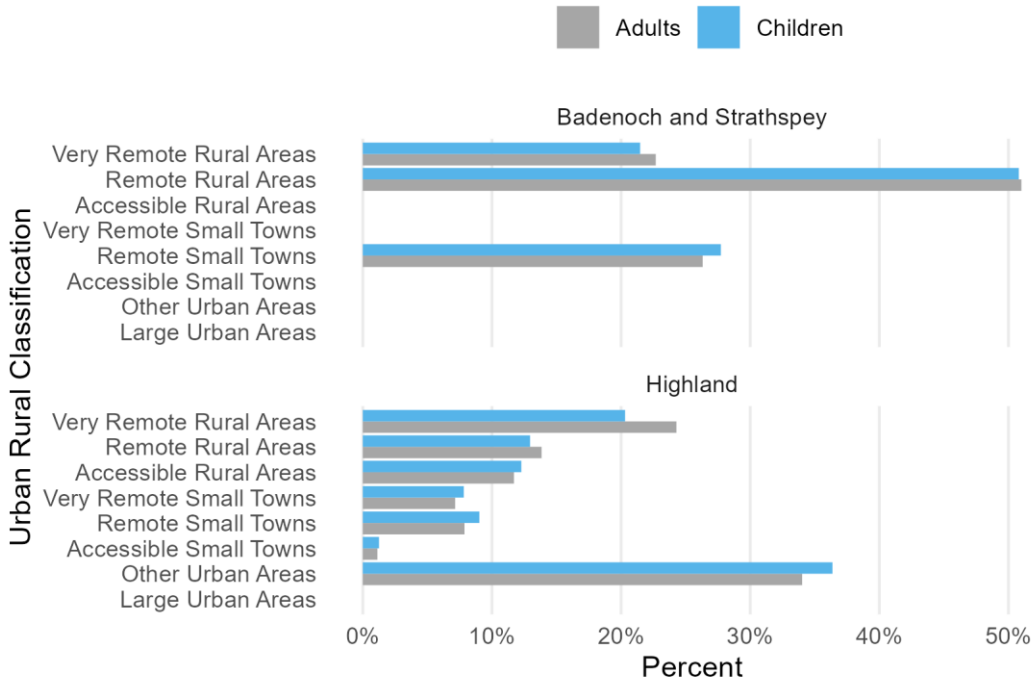
Data source: Scottish Government Urban Rural Classification 2020; National Records of Scotland Small Area Population Estimates 2021

Figure 7: Population aged under 18 years by Scottish Government Urban Rural Classification in Badenoch and Strathspey



Data source: Scottish Government Urban Rural Classification 2020; National Records of Scotland Small Area Population Estimates 2021

Figure 8: Comparison of the population of children aged under 18 years and adults by Scottish Government Urban Rural Classification



Data source: Scottish Government Urban Rural Classification (2020) and National Records of Scotland Small Area Population Estimates (2021)

Social context and inequalities

Deprivation

National and local organisations can use the Scottish Index of Multiple Deprivation (SIMD) to identify areas of need and to allocate funding and resources. The SIMD combines multiple measures across seven domains (income, employment, health, education, housing, geographic access and crime) into a single summary statistic for every small area (datazone) in Scotland. For analysis and decision making, small areas can be grouped into categories such as quintiles, deciles or the 15 percent most deprived areas in Scotland¹.

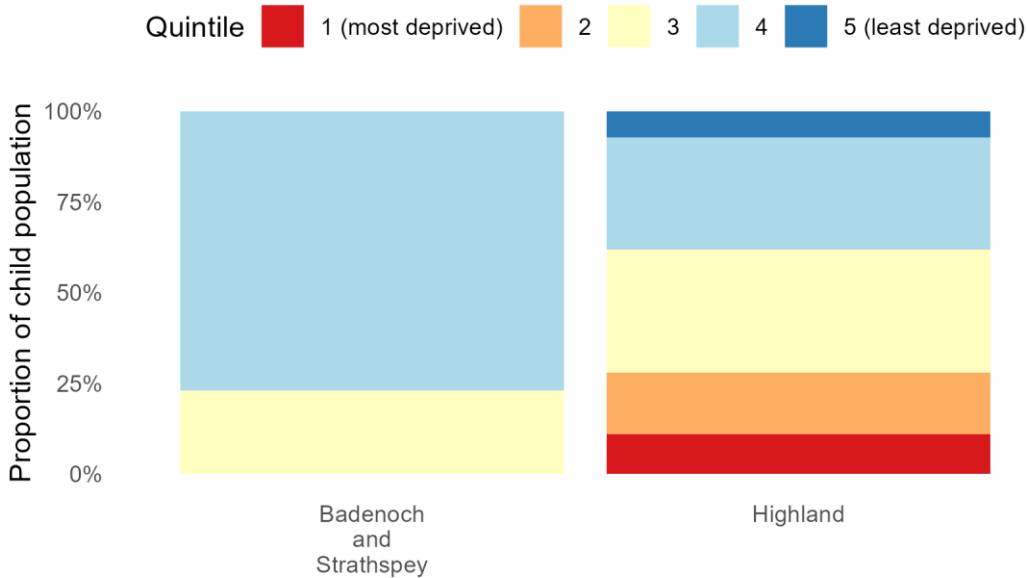
We highlight the population of children and young people aged under 18 years by national quintile of the SIMD.

Table 5: Population of children aged under 18 years in Badenoch and Strathspey by national quintile of the Scottish Index of Multiple Deprivation

Quintile	Quintile under 18 population	Quintile population	Percent of all under 18	Area population	Percent of area population
3	557	3,192	23.3	14,041	3.97
4	1,837	10,849	76.7	14,041	13.10

Source: Scottish Index of Multiple Deprivation 2020 and NRS Small Area Population Estimates 2021

Figure 9: Proportion of children under 18 years living in small areas which are in the most to least deprived quintiles



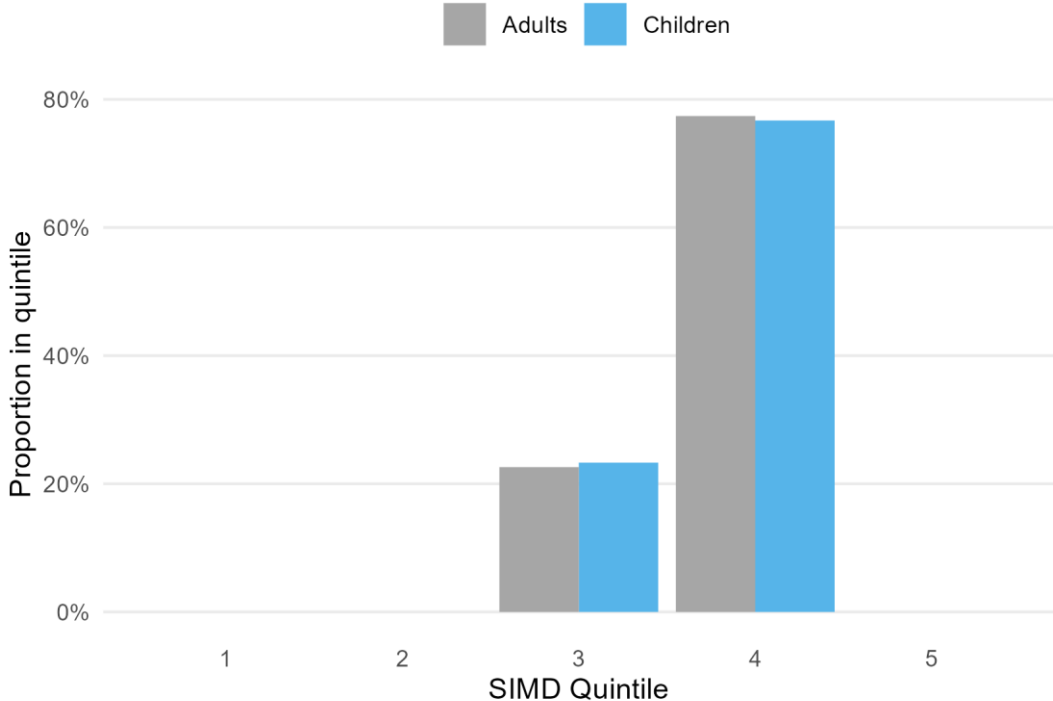
Source: Scottish Index of Multiple Deprivation 2020 and NRS Small Area Population Estimates 2021

Table 6: Proportion of children under 18 living in small areas which are in the most to least deprived quintiles

	1 (most deprived)	3	4	2	5 (least deprived)
Badenoch and Strathspey		23.0	77.0		
Highland	11.0	34.0	31.0	17.0	7.2

Source: Scottish Index of Multiple Deprivation 2020 and NRS Small Area Population Estimates 2021

Figure 10: Proportion of children aged under 18 years and adults by national deprivation quintile in Badenoch and Strathspey



Source: Scottish Index of Multiple Deprivation 2020 and NRS Small Area Population Estimates 2021

Access, income and crime deprivation

The SIMD provides information on the number and percentage of the population aged 0-25 years living in the 20% most access deprived, 20% most income deprived and 20% most crime deprived areas in Scotland. These are important measures of wellbeing related to inclusion and safety.

Table 7: Percentage of children and young people aged 0-25 years living in the most access deprived SIMD quintile

	Number	Percent age	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	30,953	50.0	49.6	50.4	+	
NHS Highland	40,291	48.3	47.9	48.6	+	-
Scotland	322,749	20.8	20.7	20.8		-
Skye, Lochalsh and West Ross	3,165	73.8	72.5	75.1	+	+
Mid Ross	4,875	67.7	66.6	68.8	+	+
Sutherland	1,777	64.6	62.8	66.3	+	+
Lochaber	2,744	51.5	50.2	52.9	+	
Inverness	10,579	46.5	45.9	47.2	+	-
Caithness	2,779	42.6	41.4	43.8	+	-
Badenoch and Strathspey	1,385	41.3	39.7	43.0	+	-
Nairn and Nairnshire	1,339	40.1	38.5	41.8	+	-
East Ross	2,310	36.2	35.0	37.4	+	-

Source: Scottish Index of Multiple Deprivation 2016, Scottish Government and Public Health Scotland

Table 8: Percentage of children and young people aged 0-25 years living in the most income deprived SIMD quintile

	Number	Percent age	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	5,347	8.6	8.4	8.9	-	
NHS Highland	7,589	9.1	8.9	9.3	-	+
Scotland	306,769	19.7	19.7	19.8		+
East Ross	1,739	27.3	26.2	28.4	+	+
Caithness	742	11.4	10.6	12.2	-	+
Inverness	2,412	10.6	10.2	11.0	-	+
Lochaber	220	4.1	3.6	4.7	-	-
Nairn and Nairnshire	92	2.8	2.2	3.4	-	-
Mid Ross	142	2.0	1.7	2.3	-	-
Badenoch and Strathspey	0	0.0	0.0	0.1	-	-
Skye, Lochalsh and West Ross	0	0.0	0.0	0.1	-	-
Sutherland	0	0.0	0.0	0.1	-	-

Source: Scottish Index of Multiple Deprivation 2016, Scottish Government and Public Health Scotland

Table 9: Percentage of children and young people aged 0-25 years living in most crime deprived SIMD quintile

	Number	Percent age	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	9,756	15.8	15.5	16.1	-	
NHS Highland	11,508	13.8	13.6	14.0	-	-
Scotland	312,389	20.1	20.0	20.2		+
East Ross	2,005	31.4	30.3	32.6	+	+
Caithness	1,535	23.6	22.5	24.6	+	+
Inverness	4,551	20.0	19.5	20.6		+
Lochaber	884	16.6	15.6	17.6	-	
Nairn and Nairnshire	299	9.0	8.0	10.0	-	-
Mid Ross	378	5.2	4.8	5.8	-	-
Skye, Lochalsh and West Ross	104	2.4	2.0	2.9	-	-
Badenoch and Strathspey	0	0.0	0.0	0.1	-	-
Sutherland	0	0.0	0.0	0.1	-	-

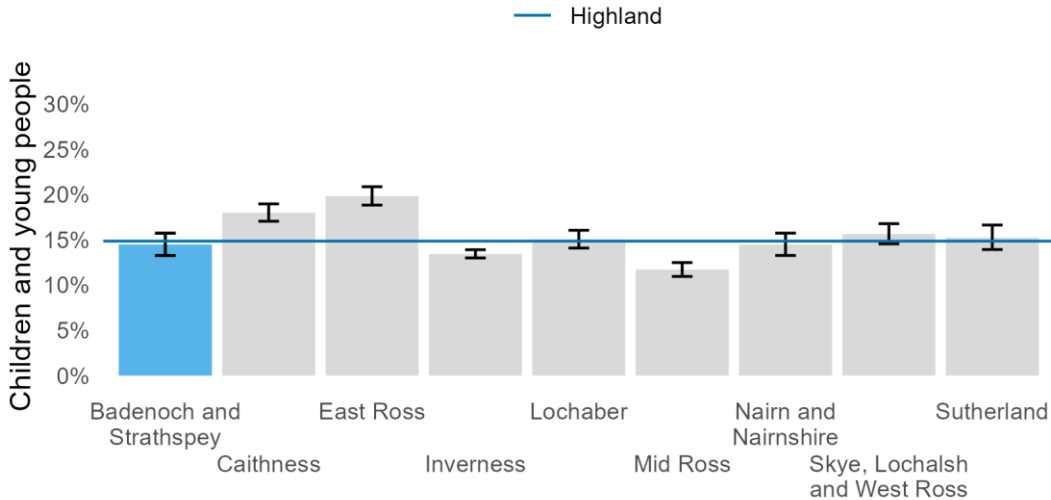
Source: Scottish Index of Multiple Deprivation 2016, Scottish Government and Public Health Scotland

Child poverty

The challenges to tackling child poverty were set out in the Child Poverty (Scotland) Act 2017 and the latest national delivery plan Best Start, Bright Futures¹⁰. Children living in poverty are more likely to have health issues, including mental health problems, gain fewer qualifications, experience stigma and bullying at school and be at higher risk of being care experienced¹¹. The priority of policy focuses on children at greatest risk of poverty where the mother is less than 25, lone parent families, ethnic minority families, families with three or more children or a child under one and families where someone in the house is disabled.

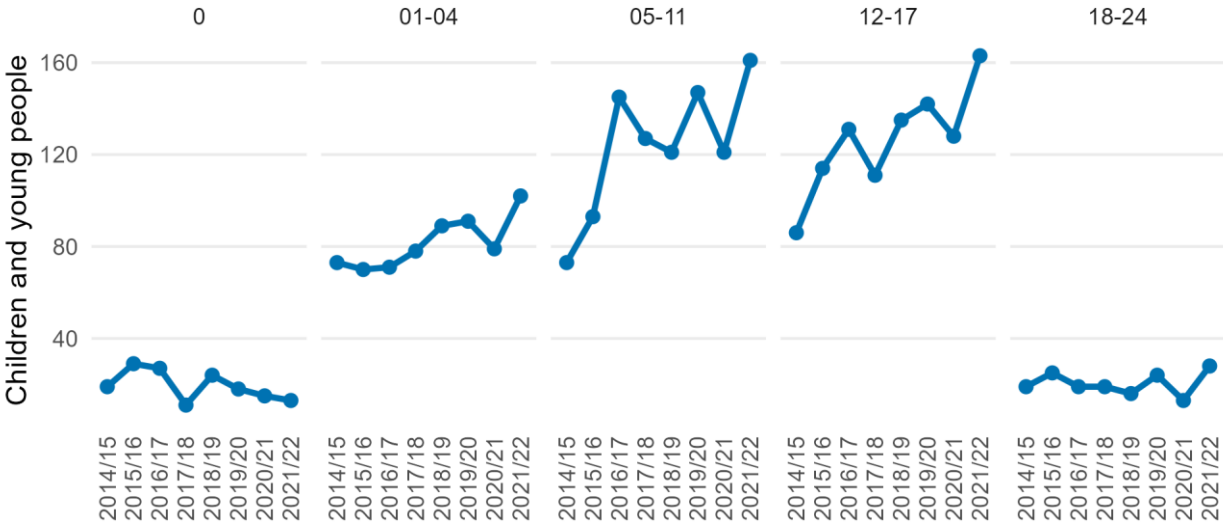
Particularly in rural areas, it is a complex task to accurately measure child poverty, profile the population in at-risk groups and describe the factors related to changes, such as social security, income from employment and the cost of living. Currently, data sources that provide detail at local authority and community partnership are limited¹².

Figure 11: Percentage of children and young people in low income families - relative low income, 2021/22



Source: National Records of Scotland, Small Area Population Estimates 2021
 Department for Work and Pensions Stat-Xplore

Figure 12: Number of children and young people in low income families - relative low income in Badenoch and Strathspey, 2014/15 to 2021/22



Source: Department for Work and Pensions Stat-Xplore

Pregnancy and births

A good start in life is important for the long term health and wellbeing of babies, children and young people. There are strong links between health in the preconception period and during pregnancy and child health outcomes, with consequences that can extend across generations.

Live births

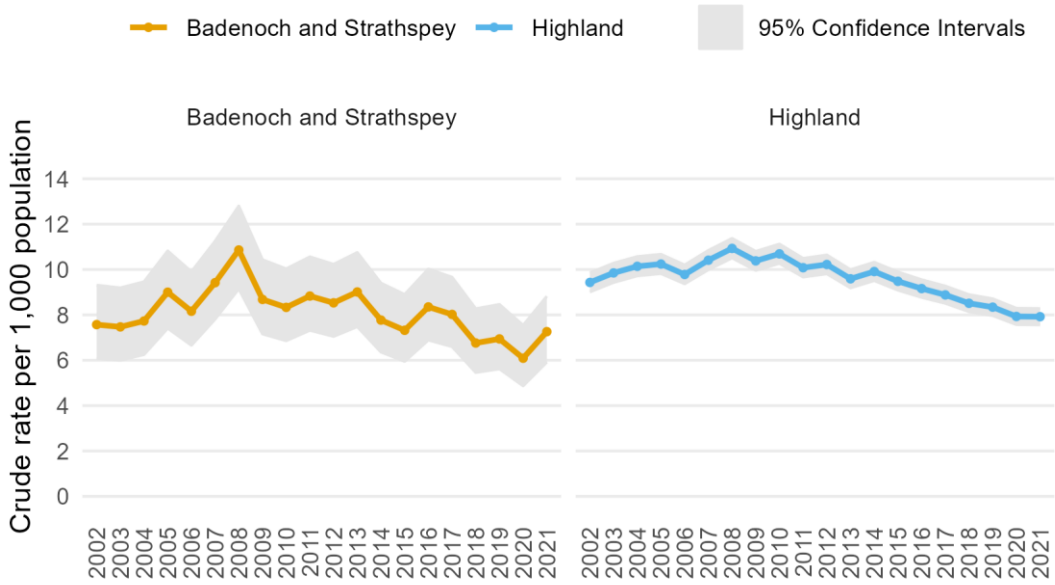
Birth trends are an important measure of population health and are used to track important changes in society. Birth rates fluctuate considerably and reflect trends in the fertility rate of mothers by conception age and mothers born outside the UK. We highlight the number of live births and the crude birth rate in an area.

Table 10: Number of live births and crude rate per 1,000 population, 2021

	Number	Rate	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	1,885	7.9	7.6	8.3	-	
NHS Highland	2,484	7.7	7.4	8.0	-	
Scotland	47,786	8.7	8.6	8.8		+
Inverness	775	9.4	8.8	10.1		+
Mid Ross	216	7.9	6.9	9.1		
Caithness	193	7.6	6.6	8.8		
East Ross	169	7.6	6.5	8.8		
Badenoch and Strathspey	102	7.3	5.9	8.8		
Lochaber	139	6.9	5.8	8.2	-	
Skye, Lochalsh and West Ross	138	6.9	5.8	8.2	-	
Nairn and Nairnshire	86	6.3	5.0	7.8	-	
Sutherland	67	5.1	4.0	6.5	-	-

Source: National Records of Scotland

Figure 13: Live births per 1,000 population, 2002 to 2021



Source: National Records of Scotland; Data from 2002 to 2021, by calendar year

Teenage pregnancy

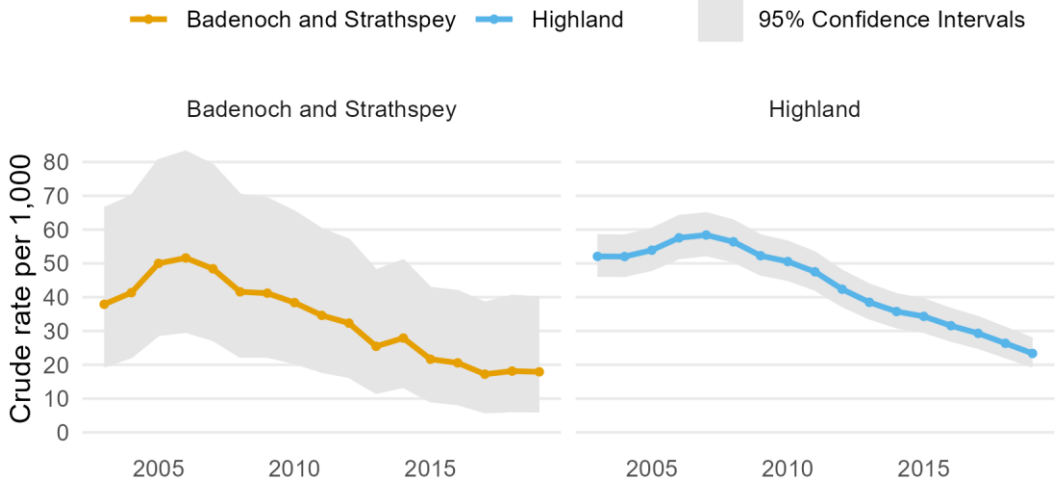
Many teenage women experience unintended or unwanted pregnancies, although this may be a planned, positive life choice for some women. Reducing unintended teenage pregnancy has been a long-standing priority for the Scottish Government.

Table 11: Rate of teenage pregnancies per 1,000 females aged 15-19, 2020

	Average number	Rate	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	137	23.4	19.6	27.6		
NHS Highland	176	22.2	19.1	25.8	-	
Scotland	3,742	27.1	26.2	27.9		
East Ross	18	30.7	18.1	48.8		
Inverness	56	28.3	21.4	36.8		
Mid Ross	17	22.9	13.3	36.9		
Caithness	15	22.3	12.3	37.2		
Lochaber	11	20.8	10.3	37.2		
Badenoch and Strathspey		17.9	6.3	39.8		
Skye, Lochalsh and West Ross		16.8	7.1	33.6		
Nairn and Nairnshire		13.5	4.1	32.4		
Sutherland		11.2	2.5	31.0		

Source: National Records of Scotland

Figure 14: Rate of teenage pregnancies per 1,000 females aged 15-19, 3 year aggregates, 2002-2004 to 2018-2020



Source: National Records of Scotland; Data from 2002-2004 to 2018-2020, by calendar year

Smoking during pregnancy

Smoking during pregnancy is harmful to both mother and baby. Maternal smoking is associated with preterm and low birth weight babies and increased risk of miscarriage, stillbirth and Sudden Infant Death Syndrome (SIDS). It also increases the risk of the baby developing many respiratory conditions, attention and hyperactivity difficulties; learning difficulties; problems of the ear, nose and throat; obesity; and diabetes¹³. Smoking status is self-reported and consequently may under-report smoking prevalence.

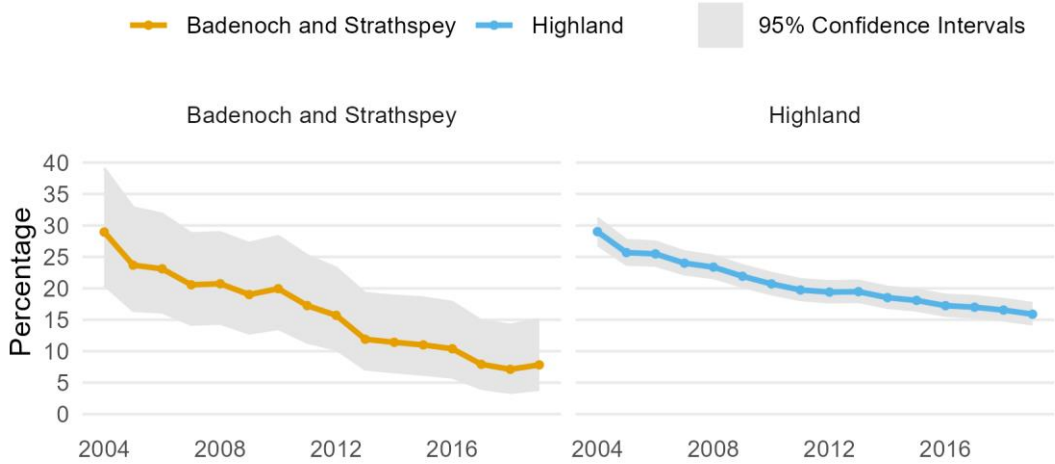
Table 12: Percentage of women smoking during pregnancy, 2019

	Average number	Percent age	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	293	15.9	14.3	17.6	+	
NHS Highland	367	15.6	14.2	17.1		
Scotland	6,444	13.9	13.6	14.2		-
East Ross	54	25.8	20.3	32.1	+	+
Nairn and Nairnshire	19	21.1	13.8	30.8		
Caithness	40	20.6	15.5	26.8	+	
Sutherland	11	16.8	9.5	27.8		
Lochaber	24	15.8	10.8	22.6		
Inverness	102	13.9	11.6	16.6		
Skye, Lochalsh and West Ross	14	13.0	7.8	20.9		
Mid Ross	24	11.2	7.6	16.2		
Badenoch and Strathspey	8	7.8	3.9	15.1		

Definition: Number of women recorded as a 'current smoker' at first antenatal booking appointment

Source: Public Health Scotland (SMR02)

Figure 15: Percentage of women smoking during pregnancy, 3 year aggregate, 2002-2004 to 2018-2020



Definition: Percentage of women recorded as a 'current smoker' at first antenatal booking appointment 3 year aggregate percentage from 2002-2004 to 2018-2020, by calendar year

Maternal Body Mass Index during pregnancy

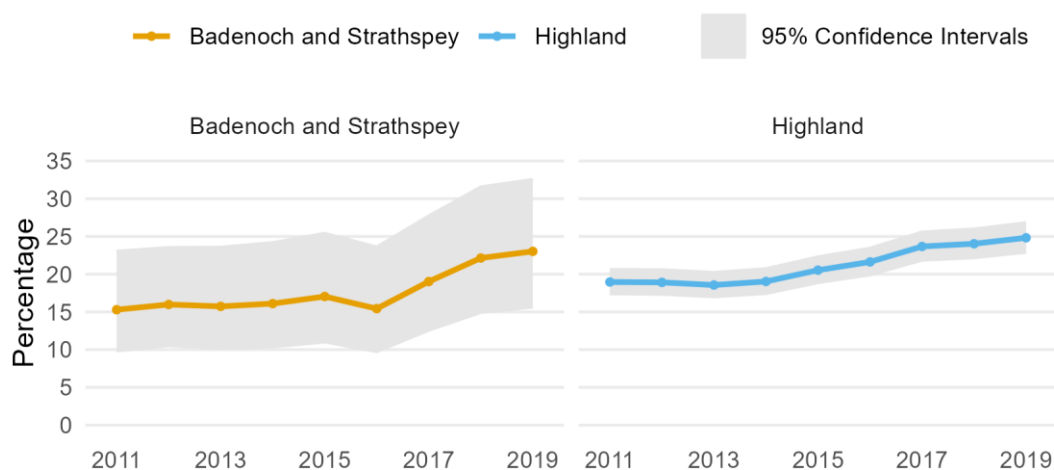
A high body mass index (BMI) during pregnancy increases the risk of complications for both mother and baby. Obesity in pregnancy is associated with an increased risk of miscarriage, stillbirth and recurrent miscarriage. Possible adverse outcomes are maternal blood clots, gestational diabetes, postpartum haemorrhage, pre-eclampsia, and extended labour. While other risk factors will contribute, risks for the baby include congenital disorders, fetal macrosomia, growth problems, childhood asthma and childhood obesity¹⁴.

Table 13: Percentage of women with high BMI in pregnancy, 2018/19-2020/21

	Average number	Percentage	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	461	24.8	22.9	26.8		
NHS Highland	582	24.9	23.2	26.7		
Scotland	11,265	25.3	24.9	25.7		
Skye, Lochalsh and West Ross	31	29.6	21.6	39.0		
Sutherland	19	29.0	19.4	41.0		
Lochaber	43	28.7	22.0	36.5		
Caithness	56	28.1	22.3	34.7		
Nairn and Nairnshire	25	27.8	19.5	37.9		
East Ross	58	27.4	21.8	33.8		
Mid Ross	50	23.1	18.0	29.2		
Badenoch and Strathspey	22	23.0	15.6	32.6		
Inverness	162	21.8	18.9	24.9		

Definition: Pregnant women recorded as obese (BMI 30 and over) at antenatal booking appointment
 Source: Public Health Scotland (SMR02)

Figure 16: Percentage of pregnant women with high BMI in pregnancy, 3 year aggregates, 2010/11-2012/13 to 2018/19-2020/21



Definition: Percentage of pregnant women recorded as obese (BMI 30 and over) at antenatal booking appointment
 Data from 2010/11-2012/13 to 2018/19-2020/21, by financial year; 3-year aggregates

Premature births

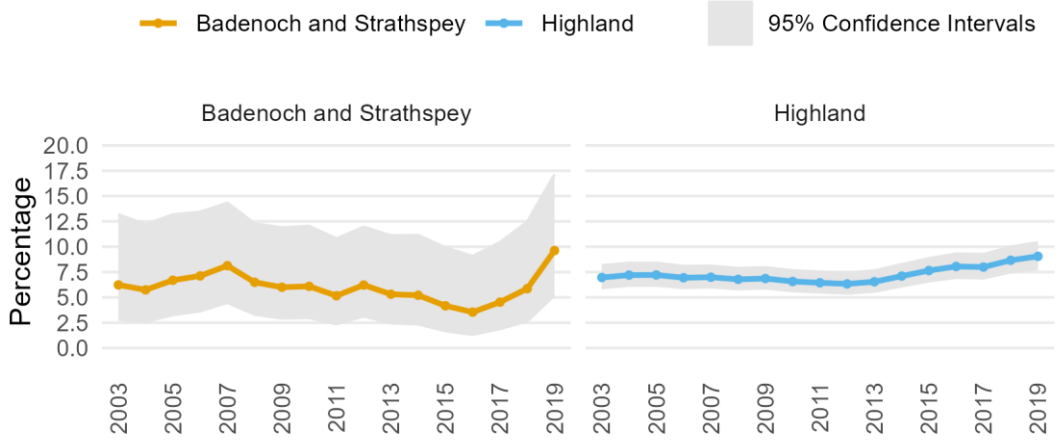
Gestation refers to the number of weeks pregnant a woman is when she delivers her baby. Babies born at less than 37 weeks are considered preterm or premature. Gestation at delivery strongly influences the health of babies. Babies born preterm can have multiple difficulties in the days and weeks following birth. The consequences of being born too early can continue to affect health and development throughout childhood and adult life. In Scotland, being born too soon is the principal reason babies require admission to neonatal care and the single most significant cause of death in early infancy¹⁴.

Table 14: Percentage of premature births, 2019

	Average number	Percentage	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	172	9.1	7.8	10.4		
NHS Highland	230	9.2	8.1	10.4		
Scotland	4,067	8.4	8.2	8.7		
East Ross	23	10.8	7.3	15.6		
Skye, Lochalsh and West Ross	11	9.9	5.5	17.1		
Sutherland	7	9.6	4.6	19.2		
Badenoch and Strathspey	10	9.6	5.2	17.1		
Inverness	72	9.4	7.6	11.8		
Lochaber	13	8.4	4.9	13.9		
Caithness	16	7.9	4.9	12.5		
Mid Ross	16	7.4	4.6	11.7		
Nairn and Nairnshire	7	7.0	3.3	14.3		

Definition: Number of live births before 37 weeks gestation
Source: Public Health Scotland (SMR02)

Figure 17: Percentage of premature births, 3 year aggregates, 2002/03-2004/05 to 2018/19-2020/21



Definition: Percentage of live births before 37 weeks gestation
 Source: Public Health Scotland (SMR02)
 Data from 2002/03-2004/05 to 2018/19-2020/21, by financial year; 3-year aggregates

Healthy birth weight

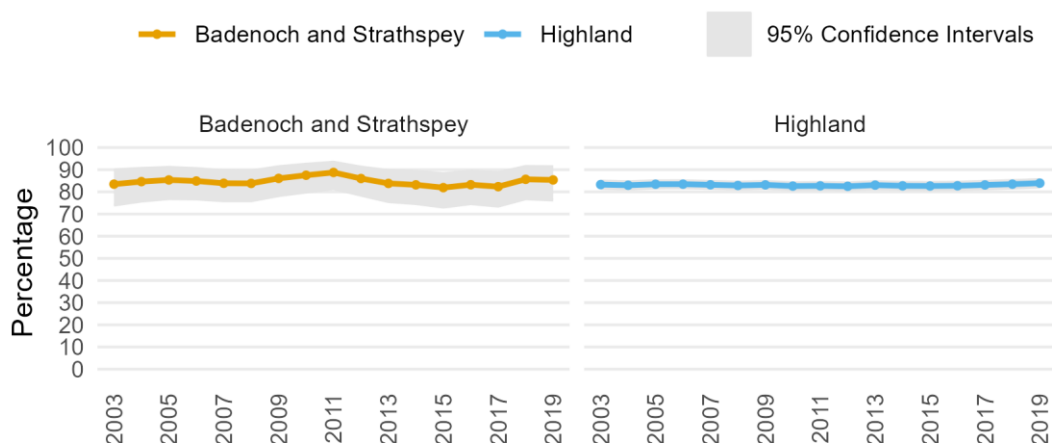
A baby’s weight at birth reflects both their gestation and how well they have grown whilst in the womb. Healthy birth weight differentiates between babies who are light because they are preterm and those who are inappropriately light after adjustment for gestational age at birth. Babies who are both preterm and small for their gestational age may be more at risk for many health problems compared to infants of normal weight.

Table 15: Percentage of births at healthy birth weight, 2019

	Average number	Percentage	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	1,433	83.9	82.1	85.6		
NHS Highland	1,893	84.4	82.8	85.8		
Scotland	36,862	84.2	83.8	84.5		
East Ross	167	87.5	82.1	91.5		
Nairn and Nairnshire	72	86.3	77.3	92.1		
Caithness	159	85.9	80.2	90.2		
Badenoch and Strathspey	72	85.4	76.3	91.4		
Inverness	569	83.7	80.7	86.3		
Lochaber	114	83.1	76.0	88.5		
Mid Ross	163	82.2	76.2	86.9		
Sutherland	46	79.7	67.5	88.0		
Skye, Lochalsh and West Ross	74	78.4	69.0	85.5		

Definition: Number of healthy weight (5 to 95 percentile) live full-term (at least 37 weeks) singleton births
 Source: Public Health Scotland (SMR02)

Figure 18: Percentage of births at healthy birth weight, 3 year aggregates, 2002/03-2004/05 to 2018/19-2020/21



Definition: Number of healthy weight (5 to 95 percentile) live full-term (at least 37 weeks) singleton births
 Source: Public Health Scotland (SMR02)
 Data from 2002/03-2004/05 to 2018/19-2020/21, by financial year; 3-year aggregates

Early childhood development

Babies exclusively breastfed at 6-8 weeks

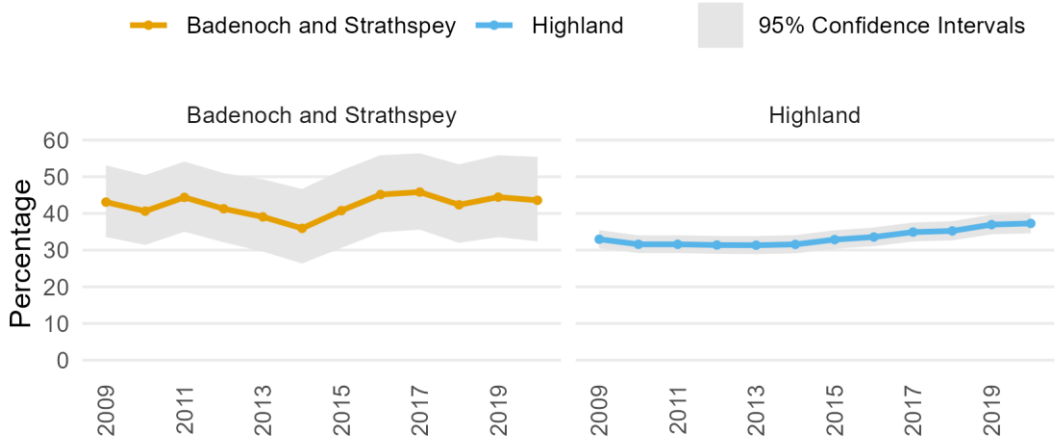
Breastfeeding is part of the natural reproductive process and an essential public health activity that should be encouraged. There is strong evidence of the short-term and lifelong health benefits of breastfeeding for both mothers and infants¹⁵. There is clear economic evidence that investing in improving breastfeeding practices are cost saving preventative actions¹⁶. The Scottish Government has adopted as policy World Health Organisation guidance recommending exclusive breastfeeding for the first six months of an infant's life.

Table 16: Percentage of babies exclusively breastfed at 6-8 weeks, 2019/20-2021/22

	Average number	Percent age	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	622	37.3	35.0	39.6	+	
NHS Highland	834	37.5	35.5	39.5	+	
Scotland	13,966	31.9	31.4	32.3		-
Sutherland	34	53.8	41.5	65.6	+	+
Skye, Lochalsh and West Ross	56	53.5	44.0	62.9	+	+
Badenoch and Strathspey	32	43.6	32.8	55.0	+	
Mid Ross	90	43.3	36.8	50.1	+	
Lochaber	53	40.1	32.1	48.6		
Nairn and Nairnshire	29	37.1	27.1	48.3		
Inverness	232	36.2	32.5	40.0	+	
East Ross	52	28.1	22.1	35.0		
Caithness	48	24.8	19.2	31.4	-	-

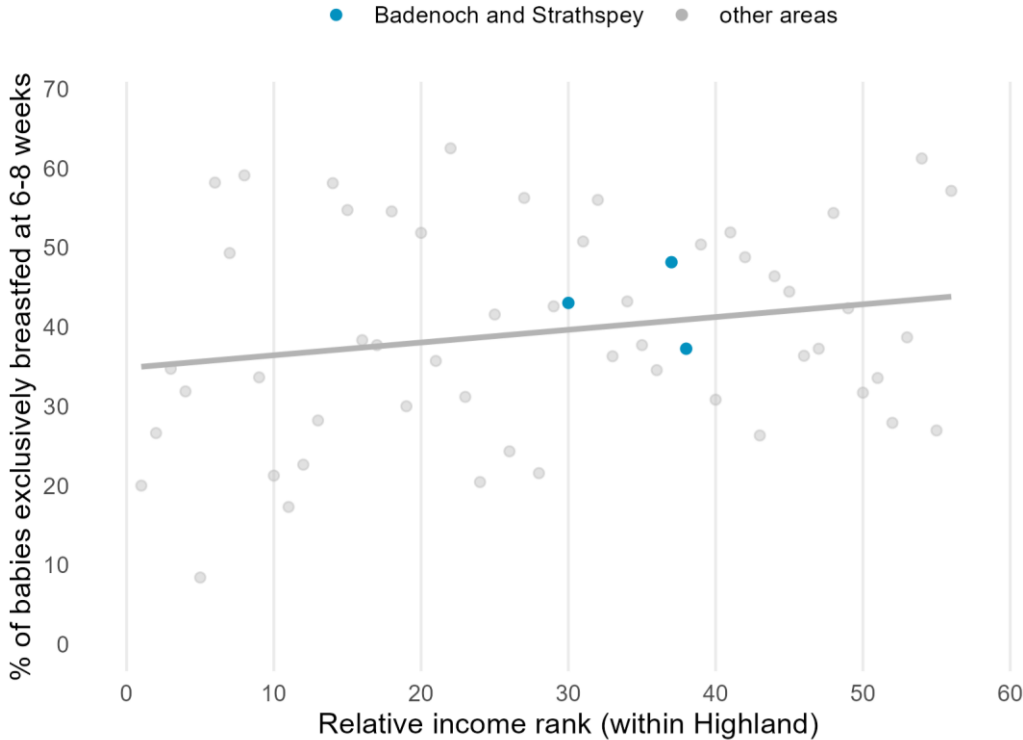
Definition: Number of babies reported as being exclusively breastfed at 6-8 week review
 Source: Child Health Systems Programme Pre-school (CHSP-PS), Public Health Scotland

Figure 19: Percentage of babies exclusively breastfed at 6-8 weeks, 3 year aggregates, 2008/09-2010/11 to 2019/20-2021/22



Definition: Percentage of babies reported as being exclusively breastfed at 6-8 week review
 Source: Child Health Systems Programme Pre-school (CHSP-PS), Public Health Scotland
 Data from 2008/09-2010/11 to 2019/20-2021/22, by financial year; 3-year aggregates

Figure 20: Variation in percentage of babies exclusively breastfed at 6-8 weeks associated with relative income deprivation by intermediate geography



Income rank based upon the DWP Relative Low Income data where the area ranked 1 has the highest proportion of children and young people with relative low income deprivation.
 Each point represents an intermediate geography.
 A line of best fit shows the correlation between income deprivation rank and the measure of health.

Developmental concerns at 27-30 months

Biological factors (such as being born prematurely) and environmental factors (such as the parenting and opportunities for play and exploration children receive) influence early child development.

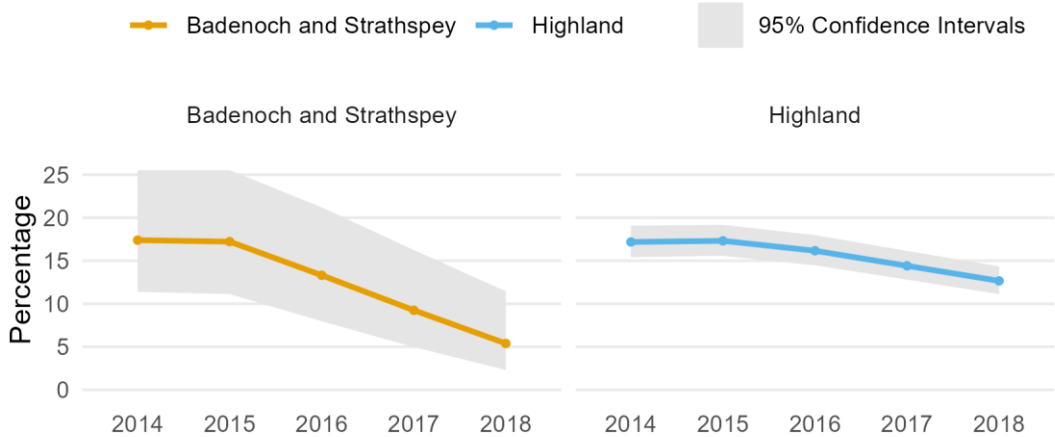
Identifying early child development problems is crucial as they are strongly associated with long-term health, educational, and social difficulties. Early identification gives the best opportunity to support children and families to improve outcomes¹⁷. All children are offered a series of child health reviews between birth and starting school as part of the nationally agreed child health programme.

Table 17: Developmental concerns at 27-30 months, 2017/18-2019/20

	Average number	Percent age	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	261	12.7	11.3	14.2	-	
NHS Highland	342	12.8	11.6	14.1	-	
Scotland	7,357	14.7	14.4	15.1		+
Mid Ross	39	16.9	12.6	22.2		
Nairn and Nairnshire	18	16.5	10.7	24.7		
Inverness	107	13.9	11.6	16.5		
Skye, Lochalsh and West Ross	19	12.5	8.1	18.8		
Sutherland	10	11.6	6.4	20.3		
Caithness	25	11.2	7.7	16.0		
Lochaber	18	10.1	6.4	15.6		
East Ross	22	9.7	6.5	14.4	-	
Badenoch and Strathspey	6	5.4	2.5	11.3	-	-

Definition: Number of children with 1 or more developmental concern recorded at 27-30 month review
Source: Child Health Systems Programme Pre-school (CHSP-PS), Public Health Scotland

Figure 21: Developmental concerns at 27-30 months, 3 year aggregates, 2013/14-2015/16 to 2017/18-2019/20



Definition: Number of children with 1 or more developmental concern recorded at 27-30 month review
 Source: Child Health Systems Programme Pre-school (CHSP-PS), Public Health Scotland
 Data from 2013/14-2015/16 to 2017/18-2019/20, by financial year; 3-year aggregates

Childhood immunisations

Immunisation programmes for children are effective in reducing the burden of disease. They aim to protect the individual child from many serious infectious diseases and prevent the spread of disease in the wider population¹⁸.

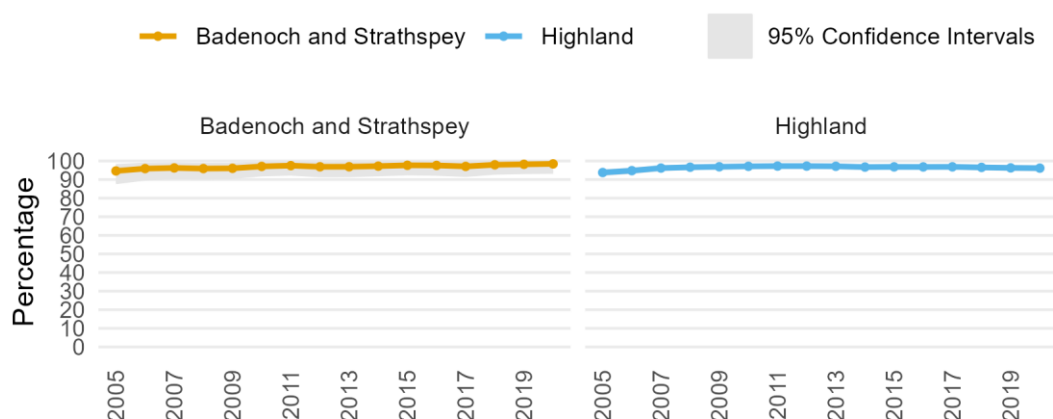
The European Region of the World Health Organization (WHO) recommends that on a national basis, at least 95 percent of children are immunised against diseases preventable by immunisation and targeted for elimination or control. These include diphtheria, tetanus, pertussis, polio, Haemophilus influenzae type b (Hib), measles, mumps and rubella. There is an expectation that all UK routine childhood immunisations that are evaluated up to five years of age achieve the 95 percent coverage in line with the WHO target.

Table 18: Childhood immunisation uptake (6-in-1) at 24 months, 2019-2021

	Average number	Percentage	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	1,991	96.2	95.2	96.9	-	
NHS Highland	2,652	96.1	95.3	96.8	-	
Scotland	50,528	97.1	97.0	97.2		+
Badenoch and Strathspey	105	98.4	93.9	99.6		
Mid Ross	226	98.0	95.2	99.2		
Caithness	209	97.1	93.8	98.6		
Skye, Lochalsh and West Ross	130	96.1	91.3	98.3		
Lochaber	170	96.0	92.0	98.1		
Inverness	760	96.0	94.4	97.2		
Nairn and Nairnshire	96	95.7	89.7	98.2		
East Ross	225	94.1	90.4	96.5	-	
Sutherland	73	94.0	86.4	97.5		

Definition: Number of children receiving the 5-in-1 or 6-in-1 (from October 2017) vaccination course by 24 months of age.
 5-in-1 protects against Diphtheria, Pertussis, Tetanus, Polio, Hib
 6-in-1 also protects against Hepatitis B
 Source: Scottish Immunisation & Recall System (SIRS), Public Health Scotland

Figure 22: Percentage uptake of childhood immunisations (6-in-1) at 24 months, 3 year aggregates, 2004-2006 to 2019-2021



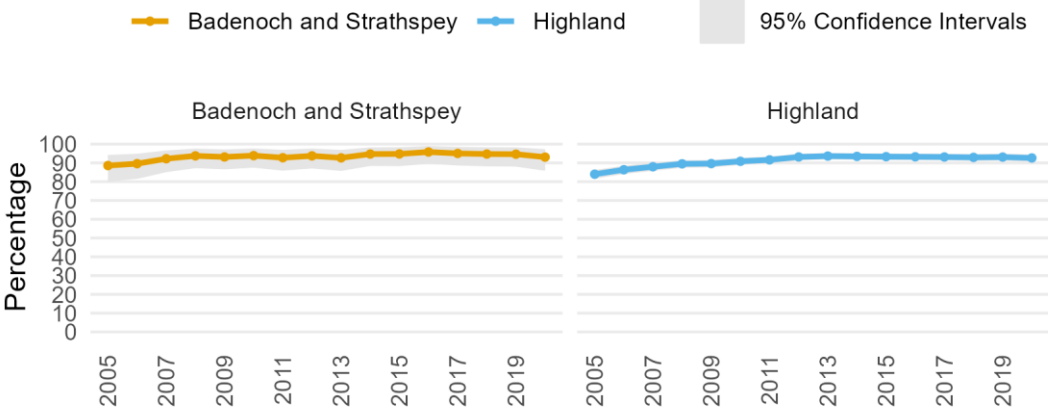
Definition: Percentage of children receiving the 5-in-1 or 6-in-1 (from Oct 2017) vaccination course by 24 months of age.
 5-in-1 protects against Diphtheria, Pertussis, Tetanus, Polio, Hib. 6-in-1 also protects against Hepatitis B
 Source: Scottish Immunisation & Recall System (SIRS), Public Health Scotland
 Data from 2004-2006 to 2019-2021, by calendar year; 3-year aggregates

Table 19: Childhood immunisation uptake (MMR) at 24 months, 2019-2021

	Average number	Percentage	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	1,918	92.6	91.4	93.7	-	
NHS Highland	2,566	93.0	92.0	93.9	-	
Scotland	49,134	94.4	94.2	94.6		+
Mid Ross	220	95.7	92.2	97.6		
Skye, Lochalsh and West Ross	129	95.1	90.0	97.6		
Inverness	737	93.1	91.1	94.7		
Badenoch and Strathspey	99	93.1	86.6	96.5		
Nairn and Nairnshire	93	92.3	85.4	96.1		
Lochaber	162	91.7	86.7	94.9		
Caithness	198	91.6	87.2	94.7		
Sutherland	71	91.4	83.1	95.8		
East Ross	212	88.7	84.0	92.1	-	

Source: Scottish Immunisation & Recall System (SIRS), Public Health Scotland

Figure 23: Percentage uptake of childhood immunisations (MMR) at 24 months, 3 year aggregates, 2004-2006 to 2019-2021



Definition: Percentage of children receiving the MMR (measles, mumps and rubella) vaccination course by 24 months of age
 Source: Scottish Immunisation & Recall System (SIRS), Public Health Scotland
 Data from 2004-2006 to 2019-2021, by calendar year; 3-year aggregates

Primary and Secondary school age

Child healthy weight

Monitoring healthy weight in childhood is a way of seeing how well the needs of children are being met. Maintaining a healthy weight throughout childhood is associated with many health and wellbeing benefits. The early years are critical for establishing good nutrition and healthy eating habits and for reducing the likelihood of children becoming overweight or experiencing obesity in later life. Obesity and being overweight in childhood are associated with health problems including type 2 diabetes and cardiovascular disease. Child height and weight are measured in Primary 1 children and used to monitor those at risk of unhealthy weight.

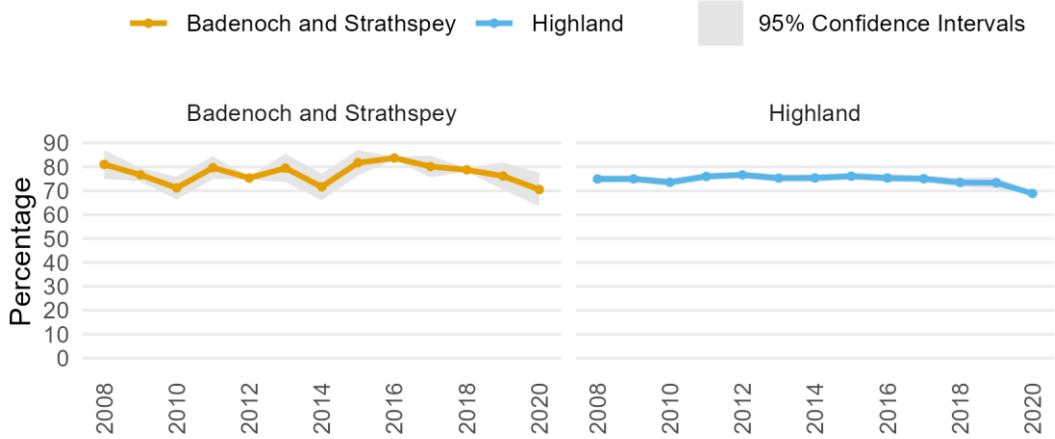
Table 20: Children with a healthy weight in Primary 1, 2020

	Number	Percent age	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	1,677	68.9	68.9	68.9	-	
NHS Highland	2,122	68.5	67.8	69.1	-	
Scotland	14,666	69.8	69.2	70.3		+
Sutherland	10	76.9	54.8	99.1		
Skye, Lochalsh and West Ross	123	75.5	75.5	75.5	+	+
Lochaber	111	75.0	69.9	80.1		+
Nairn and Nairnshire	91	73.4	68.7	78.1		
Inverness	702	71.8	71.8	71.8	+	+
Badenoch and Strathspey	67	70.5	64.2	76.8		
Mid Ross	226	66.3	66.3	66.3	-	-
East Ross	210	62.5	62.5	62.5	-	-
Caithness	137	57.8	53.9	61.7	-	-

Definition: Primary 1 children (with a valid height and weight recorded) whose BMI is between the 5% and 95% of the 1990 UK reference range for their age and sex

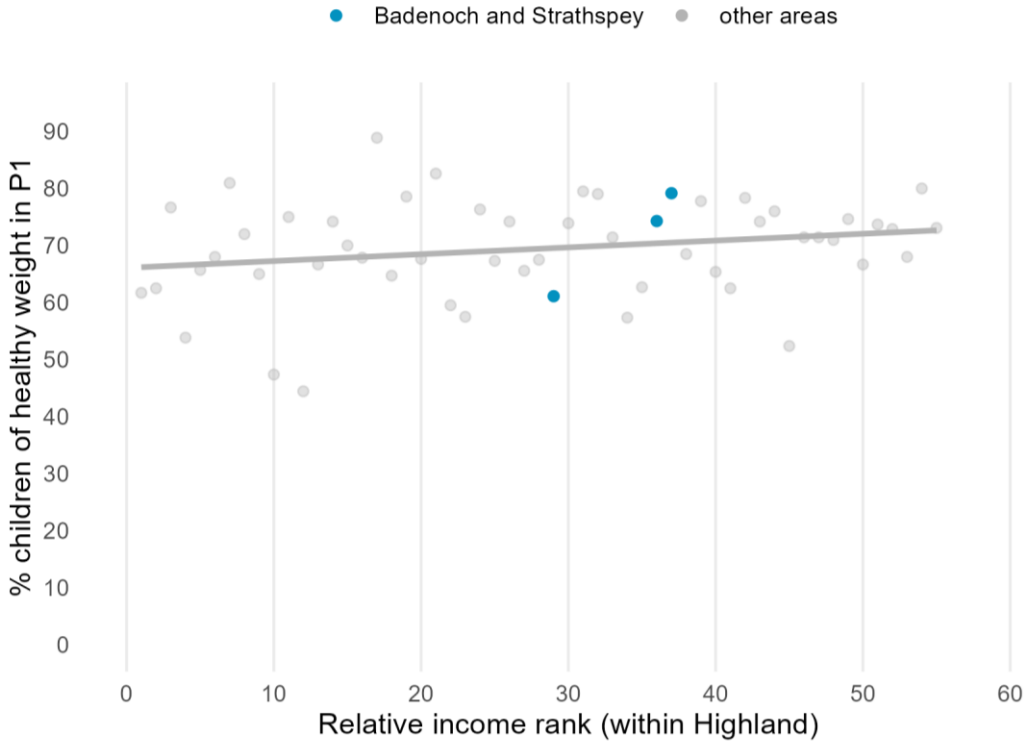
Source: Child Health Systems Programme Pre-school (CHSP-PS), Public Health Scotland

Figure 24: Percentage of children with a healthy weight in Primary 1, 2008/09 to 2020/21



Definition: Primary 1 children whose BMI is between the 5% and 95% of the reference range for their age and sex
 Source: Child Health Systems Programme Pre-school (CHSP-PS), Public Health Scotland
 Data from 2008/09 to 2020/21, by financial year

Figure 25: Variation in percentage of children of healthy weight in Primary 1 associated with relative income deprivation by intermediate geography



Income rank based upon the DWP Relative Low Income data where the area ranked 1 has the highest proportion of children and young people with relative low income deprivation.
 Each point represents an intermediate geography.
 A line of best fit shows the correlation between income deprivation rank and the measure of health.

Oral health

Good oral health is essential for general wellbeing and eating, speaking, and socialising properly. Poor oral health can be associated with pain, disfigurement, infection, school absences and poor nutrition and weight. Dental caries is one of the most common diseases of childhood, yet it is entirely preventable. Dental neglect can be an indicator of other unmet needs.

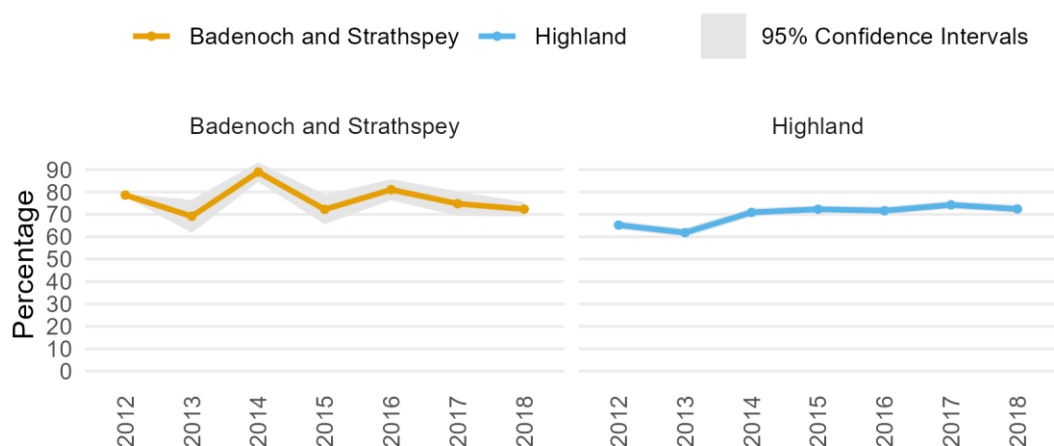
Child dental health in Primary 1

Table 21: Child dental health in Primary 1, 2018/19

	Number	Percent age	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	1,481	72.4	71.2	73.6		
NHS Highland	2,055	74.0	73.0	75.0	+	
Scotland	36,204	71.5	71.3	71.8		
Skye, Lochalsh and West Ross	117	83.6	79.5	87.6	+	+
Sutherland	63	79.8	73.6	85.9	+	
Nairn and Nairnshire	74	77.9	72.3	83.5	+	
Inverness	586	73.2	71.4	75.1		
Badenoch and Strathspey	81	72.3	69.8	74.9		
Mid Ross	160	71.8	68.4	75.1		
Caithness	157	69.8	66.3	73.3		
East Ross	139	65.6	61.3	69.8	-	-
Lochaber	104	65.4	60.6	70.2	-	-

Definition: Primary 1 children with no obvious decayed, missing and filled primary teeth at basic inspection
Source: National Dental Inspection Programme (NDIP), Public Health Scotland

Figure 26: Percentage of children with no obvious decay at basic inspection in Primary 1, 2012/13 to 2018/19



Definition: Primary 1 children with no obvious decayed, missing and filled primary teeth at basic inspection
 Source: National Dental Inspection Programme (NDIP), Public Health Scotland
 Data from 2012/13 to 2018/19, by school year

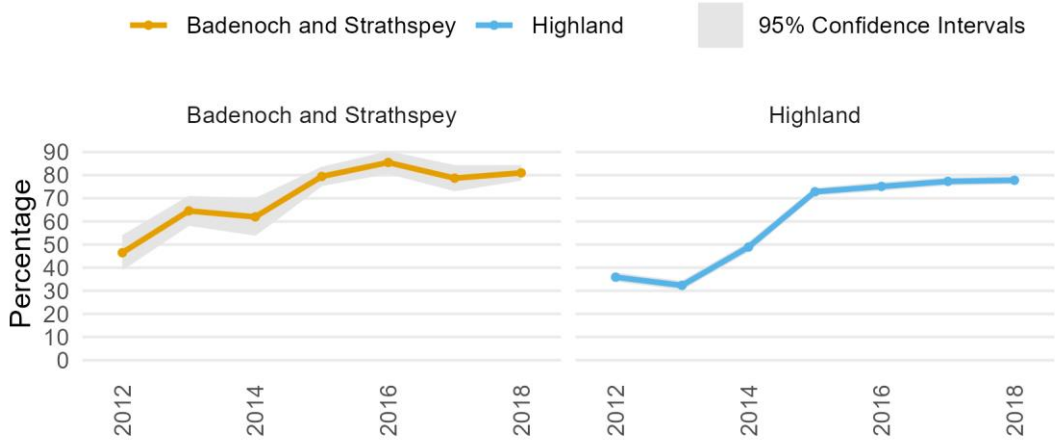
Child dental health in Primary 7

Table 22: Child dental health in Primary 7, 2018/19

	Number	Percent age	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	1,775	77.8	76.8	78.8	+	
NHS Highland	2,432	80.8	80.0	81.7	+	+
Scotland	37,648	72.9	72.7	73.1		-
Nairn and Nairnshire	98	83.0	79.9	86.2	+	+
Skye, Lochalsh and West Ross	112	81.8	77.6	85.9	+	
Badenoch and Strathspey	115	81.0	78.2	83.8	+	
Caithness	206	79.2	76.8	81.7	+	
Sutherland	75	79.0	73.3	84.6	+	
Inverness	634	77.4	75.7	79.2	+	
Mid Ross	196	77.2	73.7	80.6	+	
Lochaber	155	77.1	73.4	80.9	+	
East Ross	184	71.9	71.9	71.9	-	-

Definition: Primary 7 children with no obvious decayed, missing and filled primary teeth at basic inspection
 Source: National Dental Inspection Programme (NDIP), Public Health Scotland

Figure 27: Percentage of children with no obvious decay at basic inspection in Primary 7, 2012/13 to 2018/19



Definition: Primary 7 children with no obvious decayed, missing and filled primary teeth at basic inspection
 Source: National Dental Inspection Programme (NDIP), Public Health Scotland
 Data from 2012/13 to 2019/20, by school year

HPV immunisation in Secondary 3 girls

The Human Papillomavirus (HPV) is a common virus which usually has no symptoms. Most people who become infected with HPV clear the virus from their body. Others may develop a range of cancers (including cervical, anogenital and head and neck) in later life. The most common HPV-related cancer is cervical cancer.

The schools-based HPV immunisation programme in Scotland started in 2008, with immunisation offered to females in secondary school. The programme is currently offered to all pupils in their first (S1) and second (S2) years of secondary school. Eligible pupils who have not started or completed the course of immunisations are given other opportunities to be vaccinated in Secondary 3 (S3) and Secondary 4 (S4).

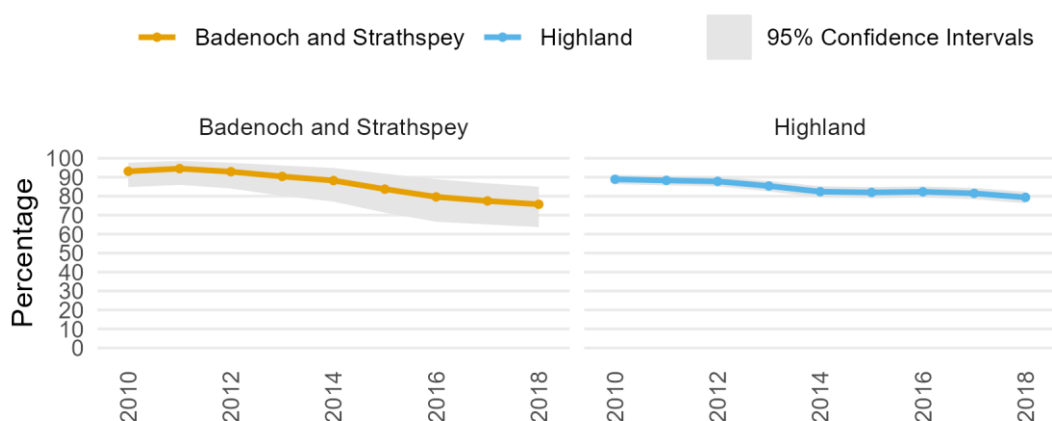
Table 23: Uptake of the HPV vaccine in Secondary 3 girls, 2018

	Average number	Percentage	Lower bound	Upper bound	Significance	
					Scotland	Council
Highland	950	79.4	77.0	81.6	-	
NHS Highland	1,262	79.4	77.3	81.3	-	
Scotland	22,978	84.8	84.4	85.2		+
Caithness	115	86.6	79.8	91.4		
Sutherland	46	84.7	72.8	91.9		
East Ross	85	82.7	74.2	88.8		
Mid Ross	111	80.0	72.6	85.8		
Inverness	341	78.6	74.5	82.2	-	
Lochaber	90	77.2	68.8	83.9	-	
Skye, Lochalsh and West Ross	67	76.3	66.4	84.0	-	
Badenoch and Strathspey	53	75.7	64.5	84.2	-	
Nairn and Nairnshire	45	70.7	58.5	80.5	-	

Definition: Number of girls completing HPV vaccination course by end of S3

Source: Scottish Immunisation & Recall System (SIRS), Child Health Systems Programme School (CHSP-School), Public Health Scotland.

Figure 28: Uptake of the HPV vaccine in Secondary 3 girls, 2009/10-2011/12 to 2017/18-2019/20

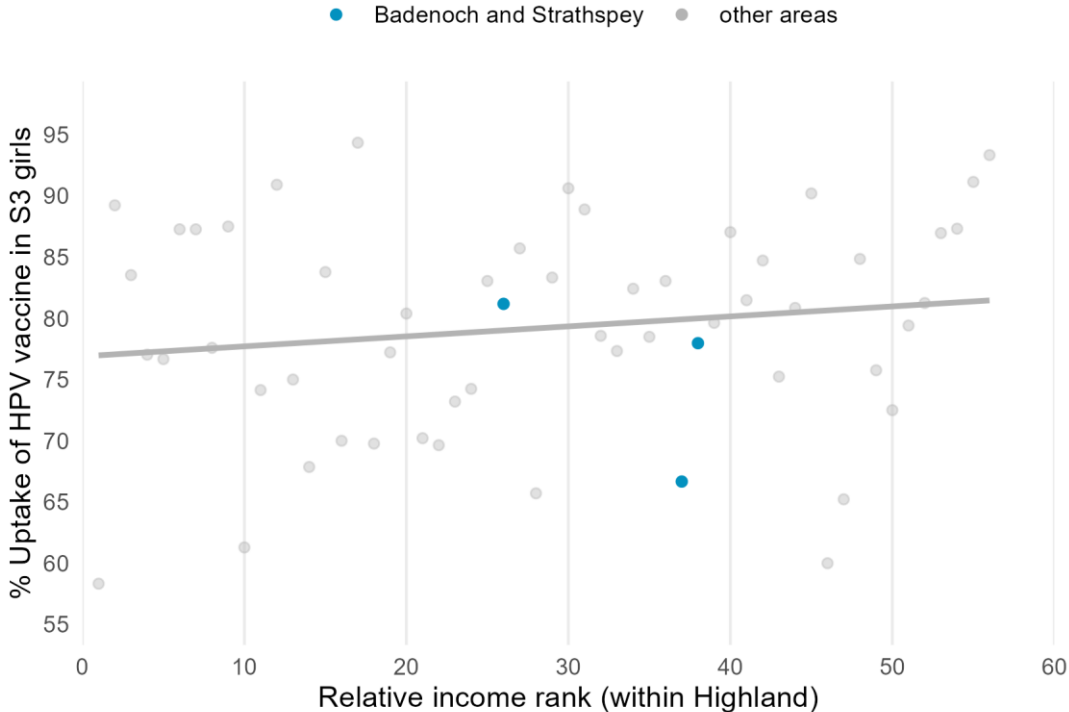


Definition: Percent of girls completing HPV vaccination course by end of S3

Source: Scottish Immunisation & Recall System (SIRS), Child Health Systems Programme School (CHSP-School), Public Health Scotland.

Data from 2009/10-2011/12 to 2017/18-2019/20, by 3-year aggregates

Figure 29: Variation in uptake of the HPV vaccine in S3 girls associated with relative income deprivation by intermediate geography



Income rank based upon the DWP Relative Low Income data where the area ranked 1 has the highest proportion of children and young people with relative low income deprivation.
 The vertical-axis does not start at zero.
 Each point represents an intermediate geography.
 A line of best fit shows the correlation between income deprivation rank and the measure of health.

Further information

This section provides links to further resources on children and young people's health and wellbeing. The resources provide data and evidence collected from local authority or national data sources that are not available at the partnership level.

Local Plans: The [Argyll and Bute Children and Young People's Services Plan 2023-2026](#) and the [Highland Childrens Services Plan 2023-2026](#) and [Joint Strategic Needs Assessment](#) set out local plans to improve outcomes for children, young people and families.

Scottish Public Health Observatory: ScotPHO publish children and young people's data that are nationally comparable and available at local level for local authorities as [children and young people's profiles](#). These include indicators that relate to the eight aspects of wellbeing set out in the United Nations Convention on the Rights of the Child (UNCRC) and summarised as SHANARRI (Safe, Healthy, Achieving, Nurtured, Active, Respected, Responsible, and Included).

Mental Health and Wellbeing: In 2022, Public Health Scotland (PHS) published an updated set of [mental health indicators for children and young people](#). These aim to identify information, at local and national level, about mental health and wellbeing outcomes and the determinants of these outcomes.

Drugs and Alcohol: The [Scottish Schools Adolescent Lifestyle and Substance Use Survey](#) (SALSUS) included questions on substance use and factors relating to mental health. The final SALSUS ran in 2018 and has been replaced by a new [Health and Wellbeing Census](#). The first Health and Wellbeing Census took place during the 2021/22 academic year. Neither Argyll and Bute Council or Highland Council participated in the survey.

Planet Youth: Planet Youth, also known as the Icelandic Prevention Model, is an evidence based primary prevention approach that aims to reduce and delay alcohol, tobacco and other drug use among young people. The approach works by increasing protective factors for substance use, the kind of things that, if part of a young person's life, can reduce the risk.

Argyll and Bute and Highland are both partner areas for [Planet Youth in Scotland](#) (further information available upon request).

Unintentional injury: Unintentional injuries are a common cause of death and hospital admission among children and young people. Public Health Scotland publish [summary data on unintentional injuries](#) by location, diagnosis and cause for local authorities and health board areas in Scotland.

Child Protection and Corporate Parenting: The Scottish Government publish [Children's Social Work Statistics](#) for local authorities in Scotland. These include data on children on the child protection register, as well as children and young people looked after, in continuing care, eligible for aftercare, and in secure care accommodation.

Youth Justice and community harm: The Children's Hearing System plays a key role in child protection, child welfare, and justice. The [Scottish Children's Reporter Administration](#) (SCRA) produce an online statistical dashboard and local authority reports for at-risk children and young people. The Scottish Government publish information on [justice social work activity](#) in local authority areas involving young people.

Education and attainment: A range of [statistics on school education](#) for local authorities in Scotland are published, including pupil and teacher characteristics, and attainment and qualification results. School-level summary statistics and interactive dashboards on pupil and school characteristics for each publicly funded school in Scotland are also available.

Glossary

Term	Description
Access deprivation	Access deprivation, as defined in the SIMD, is the population weighted average time taken to reach key services by driving or public transport. Geographic access to services includes GP surgery, post office, retail centre, primary school, secondary school, and petrol station.
Birth rate	The birth rate is a standard measure of fertility. It is expressed as the number of live births and the crude rate per 1,000 population.
Body Mass Index (BMI)	Body mass index (BMI) is calculated by dividing an individual's weight (in kilograms) by their height squared (in metres). BMI cut off values can be used to assign an individual to a weight category. For most adults, an ideal BMI is in the 18.5 to 24.9 range. For children and young people aged 2 to 18, the BMI weight category also takes into account an individual's age and gender.
Child dental health	Child dental health is a measure of children recorded with no obvious decayed, missing or filled primary teeth at basic inspection at P1 and P7 stages carried out by the National Dental Inspection Programme (NDIP).
Child healthy weight	Child health weight, as used in this profile, is classified as Primary 1 children (with a valid height and weight recorded) whose BMI is between the 5% and 95% of the 1990 UK reference range for their age and sex.
Child poverty	A child (aged 0-15) is considered to be growing up in poverty if they live in a household whose income is below 60% of the average (median) income for that year. Data on child poverty is available both before and after housing costs are taken into account.
Confidence Interval	A confidence interval (CI) is a range of values that describes the uncertainty around a point estimate of a quantity, for example a mortality rate, arising from either random or 'natural' variation. Confidence intervals quantify the uncertainty in point estimates: the wider the confidence interval the greater the uncertainty. The width of the confidence interval depends upon the size of the population from which an estimate is derived, the degree of variability in the indicator being measured, and the required level of confidence. In public health the conventional practice is to use 95% confidence intervals.
Crime deprivation	Crime deprivation, as defined in the SIMD, is the recorded crime rate for selected crimes of violence, sexual offences, domestic housebreaking, vandalism, drug offences and common assault.
Deprivation deciles or quintiles	The SIMD deprivation analyses in this report rank datazones from 1 (most deprived) to 6,976 (least deprived). These are then split into five deprivation quintiles with 20% of the datazones in each quintile. Deprivation deciles have 10% of the datazones in each decile.
Datazone	The datazone is the standard national small area geography used in the production of statistics. There are 6,976 datazones in the 2011 release (125 in Argyll and Bute and 312 in Highland local authorities). Nationally datazones are used as the 'building bricks' for higher level geography such as intermediate zones and are the smallest spatial area that population estimates are published for in the inter-census period. Datazones are used routinely to provide 'best fit' populations for local geographies such as Community Partnerships. Details of the mapping are available in the Scottish Health and Social Care Open Data platform.

Developmental concerns	Developmental concerns, assessed by health visitors during child health reviews. The review captures the outcome of developmental assessment for 8 domains of child development: speech, language and communication; gross motor; fine motor; problem solving; personal/social; emotional/behavioural; vision; and hearing.
Exclusive breastfeeding	Exclusive breastfeeding, babies recorded as only being fed breast milk in the 24 hours prior to the health visitor review at 6 to 8 weeks.
Healthy birth weight	Healthy birthweight, babies identified as an appropriate weight for their gestational age are those with a birthweight between the 5th and 95th percentiles of the UK-WHO Child Growth Standards developed by the Royal College of Paediatrics and Child Health.
Intermediate zone	Intermediate zones (also referred to as intermediate geographies or neighbourhoods) are constructed from aggregations of data zones and provide a small area geography that is more suitable for the release of potentially sensitive data and for reporting routine measures of population health. The intermediate zone is the standard spatial unit of analysis used in the Scottish Public Health Observatory online profiles tool.
Income deprivation	Income deprivation, as defined in the SIMD, is a measure of the percentage of the population (adults and their dependents) in receipt of Income Support, Employment and Support Allowance, Job Seekers Allowance, Guaranteed Pension Credits, and Child and Working Tax Credits.
Immunisation 6-in-1	The 6-in-1 vaccine protects children against six serious diseases: diphtheria, whooping cough (pertussis), tetanus, polio, <i>haemophilus influenzae</i> type b (Hib), and hepatitis B.
Immunisation MMR	The MMR vaccine protects children against three serious diseases: measles, mumps and rubella.
Immunisation HPV	The HPV vaccine protects against the most high-risk strains of the Human Papillomavirus (HPV), including ones which cause cervical, mouth and genital cancers. The most common HPV-related cancer is cervical cancer.
Lower and Upper bounds	The lower and upper bounds are the lower and upper limits of a 95% confidence interval. They represent the range of values between which the true value of a point estimate is expected to fall within.
Low income	Low income families are households in receipt of out-of-work benefits or in receipt of child tax credits (reported income is less than 60% of UK median).
Maternal obesity	Maternal obesity, where the BMI of pregnant women recorded at the antenatal booking appointment is in the obese range (BMI of 30 or more).
National Records of Scotland	National Records of Scotland (NRS), a national agency established on 1 April 2011, following the merger of the General Register Office for Scotland and the National Archives of Scotland.
Population estimates	The size of the population estimated on an annual basis, using 30th June (mid-year) as a reference point. Scotland's Census is used as a base for the population estimates, with annual adjustments made for the number of births, deaths and estimates of migration. National Records of Scotland (NRS) are responsible for producing official population figures for Scotland.
Population projections	Population projections are informed by past trends in births, deaths and migration. They give an indication of what the future population, by age and sex structure, might be if recent local levels of fertility, mortality and migration continue, and take no account of policy or

	development aims within local areas. The population projections used are 2018-based.
Premature births	Premature or preterm births are defined as babies born alive before 37 weeks of pregnancy are completed.
Prevalence	Prevalence describes the proportion of a population with a particular disease or health condition at a given point in time or over a specified time period.
Relative Low Income	Relative low-income, a household in low income Before Housing Costs (BHC) in the reference year. A family must have claimed Child Benefit and at least one other household benefit (Universal Credit, tax credits, or Housing Benefit) at any point in the year to be classed as low income in the statistics.
Scottish Public Health Observatory	Scottish Public Health Observatory (ScotPHO), a collaboration led by Public Health Scotland, and includes Glasgow Centre for Population Health, National Records of Scotland, the MRC/CSO Social and Public Health Sciences Unit and the Scottish Learning Disabilities Observatory.
ScotPHO profiles tool	Scottish Public Health Observatory (ScotPHO) online profiles tool presents a range of indicators intended to increase understanding of local health issues. The online profiles and indicator definitions are available at the following URL: https://scotland.shinyapps.io/ScotPHO_profiles_tool/
Scottish Index of Multiple Deprivation (SIMD)	The Scottish Index of Multiple Deprivation (SIMD) identifies small area concentrations of deprivation. The latest version is the SIMD 2020 and is based on small areas called datazones. The SIMD is a measure of relative deprivation and takes account of indicators across seven domains: income, employment, education, health, access to services, crime and housing. The seven domains are combined into a single index score and ranked.
Statistical significance of differences	Confidence intervals are used to interpret whether a measure is statistically higher or lower than another. If the confidence intervals of one particular area have no overlap with a comparison area confidence interval then it is statistically significantly higher/lower than the comparison. If there is overlap then there is no statistically significant difference between them. Statistical significance of differences are indicated by a + or - in the tables in this report.
Scottish Government Urban Rural classification	The Scottish Government Urban Rural (SGUR) classification provides a consistent way of defining urban and rural areas across Scotland. The classification is based upon two main criteria: population, as defined by the National Records of Scotland (NRS), and accessibility, based on drive time analysis to an urban area. The classification is available in multiple forms, including a 6-fold classification which distinguishes between urban, rural, and remote areas through six categories, and an 8-fold classification which further distinguishes between remote and very remote regions. The latest version is the SGUR 2020.
Smoking during pregnancy	Smoking during pregnancy, women with a known smoking status who are recorded as a current smoker at the first antenatal booking appointment. Women with an unknown smoking status are excluded from the calculation.
Teenage pregnancy	Teenage pregnancy refers to all pregnant people aged under 20 years at conception, regardless of whether the person went on to deliver or terminate.

References

- ¹ Scottish Government. Scottish Index of Multiple Deprivation 2020. <https://www.gov.scot/collections/scottish-index-of-multiple-deprivation-2020/>
- ² NHS Health Scotland. Health Inequalities: what are they? How do we reduce them? Edinburgh: NHS Health Scotland; 2016. <https://www.healthscotland.scot/media/1086/health-inequalities-what-are-they-how-do-we-reduce-them-mar16.pdf>
- ³ Thomson J. Rural Deprivation Evidence Summary. Scottish Government. 2016. <https://www.gov.scot/binaries/content/documents/govscot/publications/research-and-analysis/2017/02/scottish-index-of-multiple-deprivation-rural-deprivation-evidence-and-case-studies/documents/rural-deprivation-an-evidence-review/rural-deprivation-an-evidence-review/govscot%3Adocument/rural%2Bdeprivation%2Bevidence%2Breview.pdf>
- ⁴ Association of Public Health Observatories (APHO). Technical Briefing 3: Commonly used public health statistics and their confidence intervals. APHO; 2008. Available at [https://fingertips.phe.org.uk/documents/APHO Tech Briefing 3 Common PH Stats and CIs.pdf](https://fingertips.phe.org.uk/documents/APHO_Tech_Briefing_3_Common_PH_Stats_and_CIs.pdf).
- ⁵ Scottish Public Health Observatory. Online Profiles Tool. https://scotland.shinyapps.io/ScotPHO_profiles_tool/
- ⁶ Children and Young People (Scotland) Act 2014. Edinburgh: Scottish Parliament; 2014
- ⁷ United Nations. Convention on the Rights of the Child. Office of the High Commissioner; 1989. <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child>
- ⁸ Scottish Government. Scottish Government urban/rural classification 2020. Edinburgh: Scottish Government; 2022. <https://www.gov.scot/publications/scottish-government-urban-rural-classification-2020/>
- ⁹ Shucksmith M, Champan P, Glass J, Atterton J. Rural Lives: Understanding financial hardship and vulnerability in rural areas. 2021. <https://www.rurallives.co.uk/rural-lives-final-report.html>
- ¹⁰ Scottish Government. Best Start, Bright Futures: tackling child poverty delivery plan 2022 to 2026. 2022. <https://www.gov.scot/publications/best-start-bright-futures-tackling-child-poverty-delivery-plan-2022-26/documents/>
- ¹¹ Independent Care Review. The Promise. 2022. <https://thepromise.scot/resources/2020/keepthepromise-poverty.pdf>
- ¹² The Improvement Service. A Design Based Approach to Understanding and Tackling Rural Child Poverty. 2022. https://www.improvementservice.org.uk/_data/assets/pdf_file/0022/39820/Rural-Child-Poverty-Report.pdf
- ¹³ Public Health Scotland. Antenatal Booking in Scotland. March 2022. <https://www.publichealthscotland.scot/media/12337/2022-03-29-abc-report.pdf>
- ¹⁴ Public Health Scotland. Births in Scotland. November 2022. https://publichealthscotland.scot/media/16548/2022-11-29_births_report.pdf
- ¹⁵ Scientific Advisory Committee on Nutrition (SACN). The influence of maternal, fetal and child nutrition on the development of chronic disease in later life. 2011. <https://www.gov.uk/government/publications/sacn-early-life-nutrition-report>
- ¹⁶ Rollins N, Bhandari N, Hajeebhoy N, et al. Lancet Breastfeeding Series Group. Why invest, and what it will take to improve breastfeeding practices? The Lancet. 2016; 387(10017):491-504. [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(15\)01044-2.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(15)01044-2.pdf)

¹⁷ Scottish Government. Universal Health Visiting Pathway in Scotland: pre-birth to pre-school. 2015. <https://www.gov.scot/publications/universal-health-visiting-pathway-scotland-pre-birth-pre-school/pages/1/>

¹⁸ Public Health Scotland. Childhood immunisation statistics Scotland - Quarter ending 30 September 2022. <https://publichealthscotland.scot/publications/childhood-immunisation-statistics-scotland/childhood-immunisation-statistics-scotland-quarter-ending-30-september-2022/>