HEALTH AND SOCIAL CARE

Long-term Monitoring of Health Inequalities

January 2020 report

Supplementary data tables are available in the supporting files section.

Summary

Introduction
This report presents a range of indicators selected in order to monitor health inequalities over time.

With the exception of the Healthy Birthweight indicator, significant health inequalities persist for each indicator covered in the report.

Changes in the gap between the most and least deprived areas in Scotland
In a number of indicators, absolute inequalities (the gap between the most and least deprived areas) have narrowed over the longer term:

- **Coronary Heart Disease (CHD) Mortality** - the gap is currently the lowest across the time series and less than half what it was at its peak in 1998.

- **Alcohol-Related Admissions** - the gap has reduced by 46% since the start of the time series in 1996 and is currently at its lowest level.

- **Alcohol-Specific Mortality** – the gap has reduced by 60% since its peak in 2002 and is currently the third lowest in the time series.

The gap in **premature mortality** rates has increased to its highest point since 2008, although the gap remains lower than at the start of the time series.

Whilst the gap for **all-cause mortality (aged 15-44)** reduced to its lowest level in 2013, it has increased in each of the last five years and is currently 34% higher than at the start of the time series in 1997.

The gap for **drug-related hospital admissions** has increased in each of the last five years and it has almost tripled since the start of the time series in 1996/97.

The gap for **low birthweight** has reduced from its widest point in 2004. However, the gap has fluctuated in recent years, and is currently only 8% lower than at the start of the time series in 1996.

For the other indicators in the report, there has either been little change or long term trends in the absolute gap are less clear:

- **Heart attack Admissions**
- **Cancer Incidence**
- **Cancer Mortality**
- **Healthy Birthweight**

Relative inequalities

The relative index of inequality (RII) indicates the extent to which health outcomes are worse in the most deprived areas compared to the average throughout Scotland. It is possible for absolute inequalities to improve, but relative inequalities to worsen.

There are three **morbidity indicators** for which the RII can reasonably be compared with one another: alcohol-related hospital admissions; heart attack hospital admissions; and cancer incidence.

Amongst these, relative inequalities in alcohol-related hospital admissions have remained highest over the longer term. Relative inequalities in heart attack admissions have increased in recent years and cancer incidence inequalities have remained relatively stable.

Amongst the three comparable **mortality indicators** (CHD deaths, alcohol-specific deaths, and cancer deaths), relative inequalities in both CHD mortality and cancer mortality have increased over the long term whilst the RII in alcohol-specific deaths have shown more year to year fluctuation and is currently the lowest in the time series. However, relative inequalities in alcohol-specific deaths remain higher than the other comparable mortality indicators.

Of the other indicators in the report, the two indicators relating to premature mortality (under 75 and aged 15-44) have both shown increases in RII over time.

Contents

Background

A Ministerial Task Force on Health Inequalities led by the Minister for Public Health was established in 2007 to identify and prioritise practical actions to reduce the most significant and widening health inequalities in Scotland. The Task Force recognised the need to monitor progress in tackling health inequalities in the longer term as well as managing short and medium term progress.

A technical advisory group was set up in early 2008 to advise the Task Force on long-term monitoring of health inequalities. The group recommended a range of indicators to be monitored over time, as reflected in this report.

The technical advisory group most recently convened in 2019 to review proposed changes to some existing indicators and discuss the inclusion of a new indicator to monitor drug-related hospital admissions. This indicator is presented in this report for the first time.

Indicators

The indicators monitored by this report series are:

Headline indicators of health inequalities

- Healthy Life Expectancy

- Premature Mortality from all causes (aged under 75 years)

- Mental Wellbeing of adults (aged 16+)

Indicators of inequalities in morbidity and mortality

- Coronary Heart Disease: first ever hospital admission for heart attack (aged under 75 years)

- Coronary Heart Disease: deaths (aged 45-74 years)

- Cancer: incidence (aged under 75 years)

- Cancer: deaths (aged 45-74 years)

- Alcohol: first hospital admissions (aged under 75 years)

- Alcohol: deaths (aged 45-74 years)

- All-cause mortality (aged 15-44 years)

- Low birthweight

- Healthy birthweight

- Self-assessed health of adults (aged 16+)

- Limiting long-term conditions amongst adults (aged 16+)

- Drugs: hospital admissions (aged under 75 years)

This year's report does not include results for the Healthy Life Expectancy (HLE) indicator. The methodology used to calculate HLE in Scotland changed in 2018 and the data necessary for this report is not currently available. For more information about the change in methodology please see here:
https://nationalperformance.gov.scot/healthy-life-expectancy.
This indicator will be included in the next report and then annually going forward.

This year's report does not include results for mental wellbeing, self-assessed health or limiting long-term conditions indicators, as these are produced every second year and were included in the previous report.

The definition of alcohol deaths included in this report has changed from previous years and is now based on alcohol-specific deaths rather than alcohol-related deaths, following the introduction of a new definition of alcohol deaths by NRS towards the end of 2017. Please see appendix 2 for more information about this change.

Following discussions with the technical advisory group a new indicator monitoring drug-related hospital admissions has been included in this report for the first time and will be included annually going forward.

Supplementary tables showing the most up-to-date trends in relative and absolute inequalities for all indicators are available in the supporting files section.

Methods

The report uses a combination of measures of health inequalities to give a fuller understanding of the different aspects of inequalities. These are:

- <u>Scale: How big is the problem?</u> This measure describes the underlying scale of the problem, puts it into context and presents past trends at Scotland level.

- <u>Relative Index of Inequality (RII): How steep is the inequalities gradient</u>*?* This describes the gradient of health observed across the deprivation scale, relative to the mean health of the whole population. Unless explicitly explained, the RII indicates the extent to which health outcomes are better in the least deprived areas, or worse in the most deprived areas, compared to the mean.

- <u>Absolute range: How big is the gap?</u> This measure describes the absolute difference between the extremes of deprivation.

Following recommendations from the expert group, an area-based index derived from the income and employment domains of the Scottish Index of Multiple Deprivation (SIMD) is used to define deprivation. This reflects the absence of individual-level data on socio-economic circumstance.

The index is referred to as the Income and Employment Index (IEI).

These indicators and measures were recommended for long-term monitoring of deprivation-related health inequalities at Scotland level. Monitoring health inequalities due to other factors, such as age, gender and ethnicity, and indicators at a local level, may require different indicators and measures. Further information on the methods is provided in Annex 1.

Headline indicator of Health Inequalities

Premature Mortality (under 75 years)

In 2018, the gap in premature mortality rates between the most and least deprived areas increased to its highest point since 2008, although the gap remains lower than at the start of the time series. Relative inequalities, however, have widened over the long term.

In 1997, premature mortality rates were 3 times higher in the most deprived areas compared to the least deprived; in 2018, rates were 4 times higher in the most deprived areas.

Trends in premature mortality

Just over 21,500 people in Scotland died before the age of 75 in 2018.

Over the long term there has been a reduction in the mortality rate among under-75s. The age-standardised mortality rate among under-75s in 2018 was 432.0 per 100,000 people, a reduction of 34 per cent since 1997 (651.9 per 100,000).

Table 1.1: Trends in premature mortality (under 75 years), 1997-2018

Year	Number of deaths	Target population size	Rate per 100,000 (EASR)
1997	26,081	4,740,269	651.9
1998	25,857	4,729,975	643.3
1999	25,491	4,721,298	632.5
2000	24,593	4,708,667	607.3
2001	24,168	4,703,661	593.1
2002	24,219	4,701,958	588.9
2003	23,789	4,702,431	573.4
2004	22,896	4,714,233	546.2
2005	22,441	4,735,320	530.3
2006	22,237	4,752,425	520.4
2007	22,359	4,783,452	516.8
2008	22,005	4,811,453	501.3
2009	21,229	4,835,007	477.0
2010	20,997	4,858,058	467.4
2011	20,685	4,888,316	456.1

2012	20,446	4,895,114	445.3
2013	20,344	4,903,074	437.5
2014	19,961	4,914,362	423.2
2015	20,988	4,935,283	440.5
2016	21,313	4,962,391	439.7
2017	20,992	4,976,829	425.2
2018	21,601	4,983,364	432.0

Inequalities in premature mortality, 2018

In 2018, the premature mortality rate in the most deprived areas was 820.0 per 100,000, four times higher than the rate in the least deprived areas (210.6 per 100,000).

Figure 1.1

All cause mortality amongst those aged <75y by Income-Employment Index Scotland 2018 (European Age-Standardised Rates per 100,000)
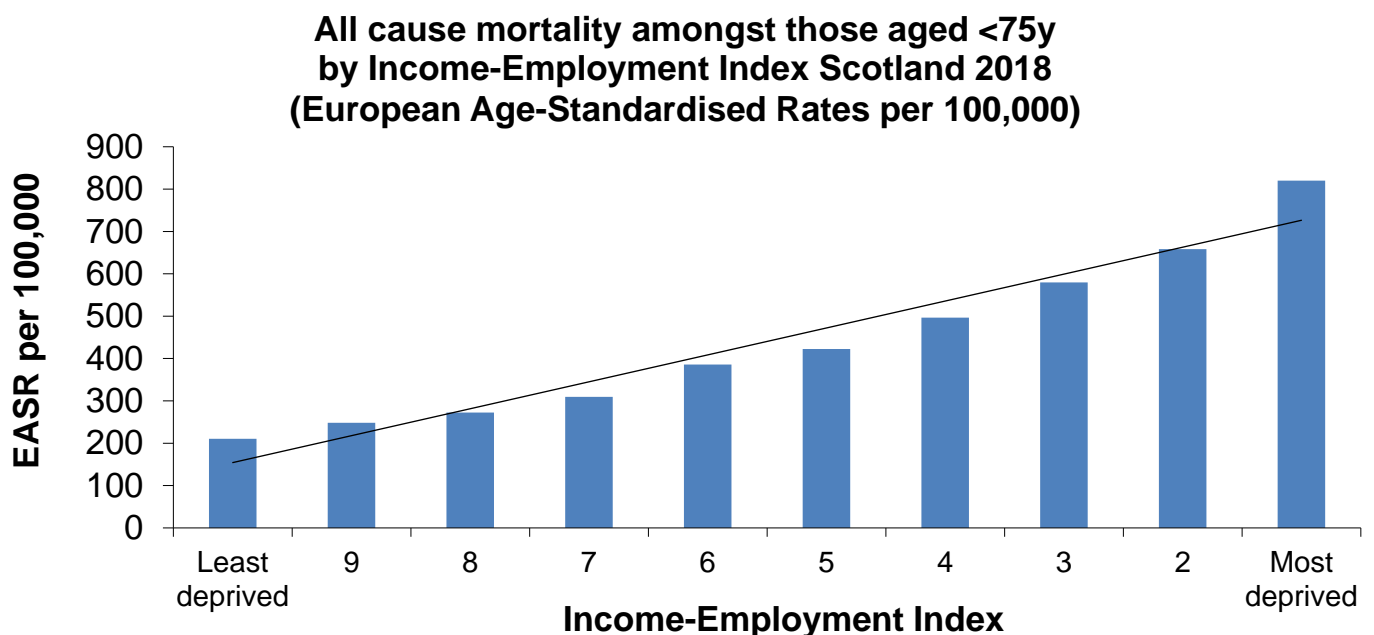
Trends in relative inequalities

Over the longer term, relative inequalities have increased. The RII for 2018 is the highest on record at 1.48, compared with 1.00 at the start of the time series in 1997.

Between 1997 and 2018, premature mortality rates declined by 45% in the least deprived areas, but by only 20% in the most deprived areas in Scotland.

Figure 1.2

Relative Index of Inequality (RII): All cause mortality <75y
Scotland 1997-2018
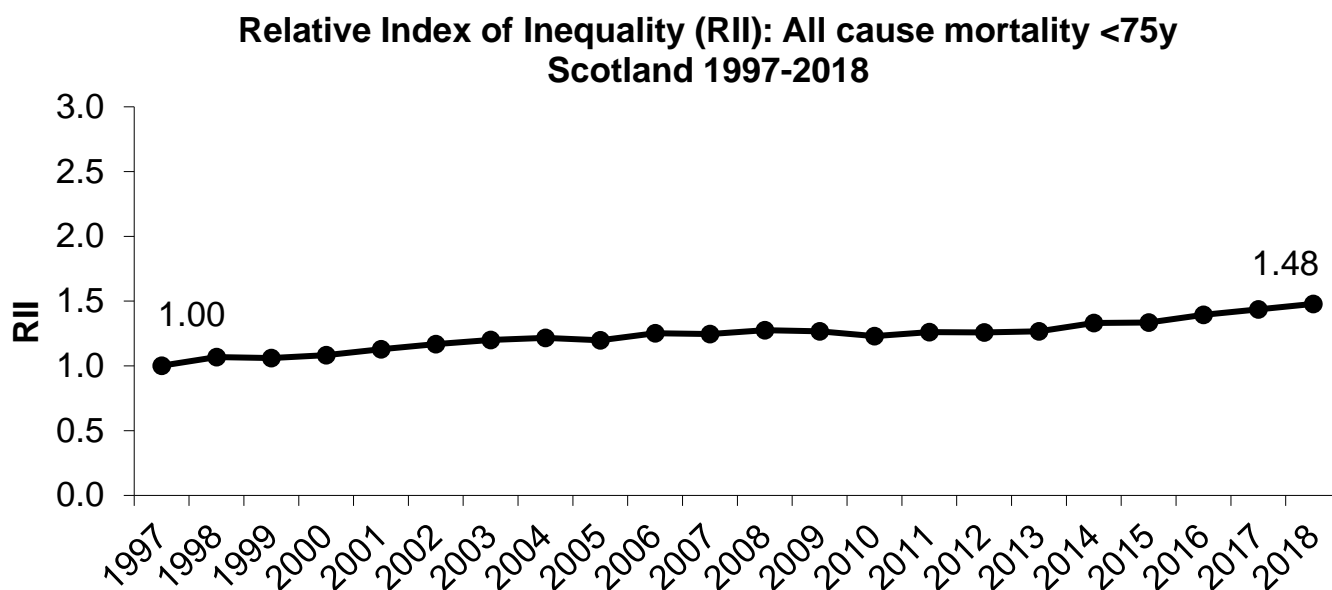
In 1997, premature mortality rates were three times higher in the most deprived areas compared to the least deprived; in the last four years premature mortality rates have been four times higher in the most deprived areas.

Trends in absolute inequalities

Absolute inequalities in premature mortality reached a peak in 2002. Between 2002 and 2013 there was a general downward trend. Most notably, the absolute gap between the most and least deprived areas reduced every year between 2007 and 2013.

Since 2013 the gap has increased, and is currently at its highest point since 2008 at 609.4 per 100,000.

Figure 1.3

**Absolute Gap: All cause mortality <75y, Scotland 1997-2018
(European Age-Standardised Rates per 100,000)**
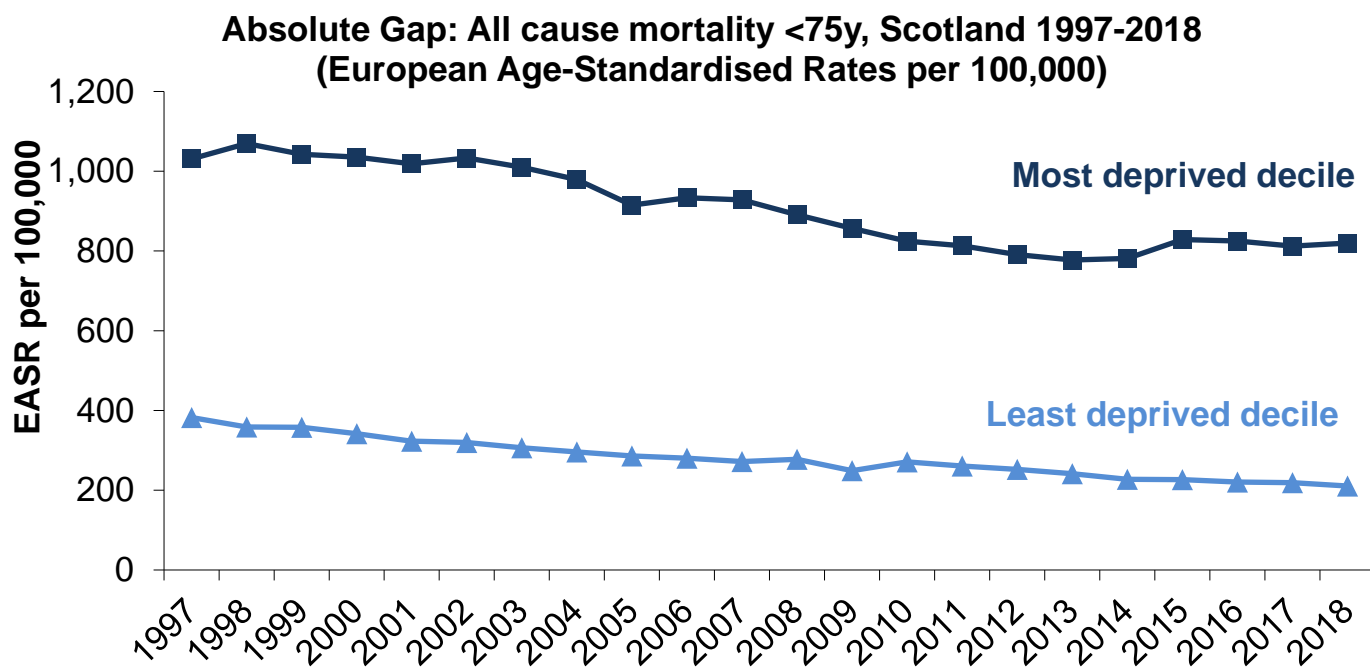
Inequalities in morbidity and mortality indicators

The relative index of inequality (RII) indicates the extent to which health outcomes are worse in the most deprived areas compared to the average throughout Scotland. While comparisons of RII between indicators are possible, they should be made with some caution, in particular where absolute values are significantly higher or lower in the compared indicators or where the measurement scale differs.

The following charts group indicators in this report into broadly comparable categories: the first shows hospital admissions and incidence of conditions for people belonging to the under 75 age group; while the second shows mortality rates in the 45-74 age group for three causes of death.

Although relative inequalities in heart attack hospital admissions have increased in recent years, inequalities have remained highest in alcohol-related admissions throughout the period covered by this report. Inequalities in cancer incidence have remained relatively stable.

Figure 2.1

Relative Index of Inequality (RII)
Selected morbidity indicators (ages <75 years)
Scotland 1997-2018
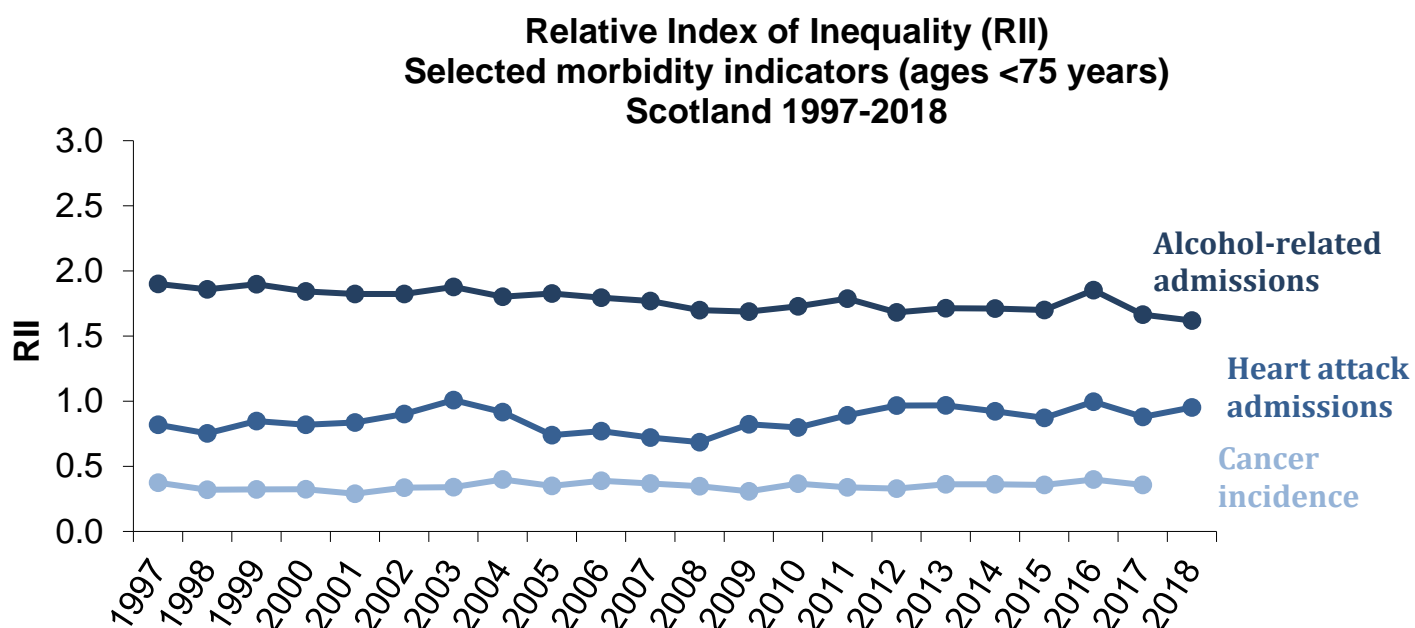
Relative inequalities in CHD mortality among adults aged 45-74 have increased over the long term. Relative inequalities for alcohol-specific deaths have shown more year on year fluctuation over the same period and are currently the lowest in the time series at 1.79.

Although RII in cancer mortality has increased slightly over the longer term, inequalities remain highest in alcohol-specific and coronary heart disease deaths .

Figure 2.2
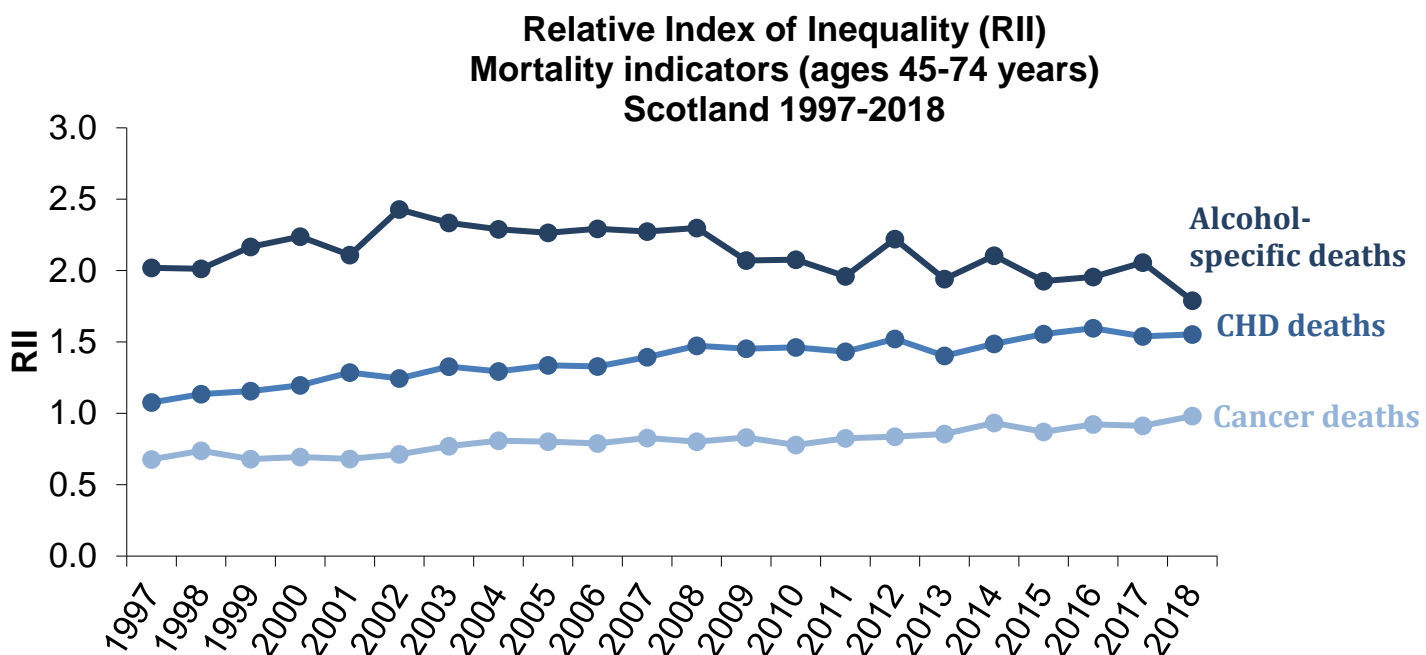
Relative Index of Inequality (RII)
Mortality indicators (ages 45-74 years)
Scotland 1997-2018

Coronary Heart Disease - first ever hospital admission for heart attack aged under 75 years

Trends in heart attack hospital admissions

In 2018, around 4,200 new cases of heart attack (for those aged under 75 years) were recorded in Scottish hospitals.

The rate of admissions is currently 42% lower than in 1997. Whilst there were increases in the rate of hospital admissions between 2007 and 2012, (rising from 80.4 per 100,000 to 100.8 per 100,000), in 2018 the rate of hospital admissions was the third lowest on record (83.9 per 100,000).

Table 3.1: Trends in heart attack hospital admissions (aged <75), 1997-2018

	Total admissions	Population	Rate per 100,000 (EASR)
1997	5,764	4,740,269	145.1
1998	5,676	4,729,975	141.5
1999	5,101	4,721,298	126.6
2000	4,812	4,708,667	118.4
2001	4,776	4,703,661	116.9
2002	4,833	4,701,958	116.6
2003	4,569	4,702,431	109.0
2004	4,413	4,714,233	103.9
2005	4,047	4,735,320	94.2
2006	3,750	4,752,425	86.4
2007	3,549	4,783,452	80.4
2008	3,655	4,811,453	81.7
2009	3,851	4,835,007	84.9
2010	4,377	4,858,058	95.4
2011	4,537	4,888,316	97.7
2012	4,747	4,895,114	100.8
2013	4,697	4,903,074	98.8
2014	4,503	4,914,362	93.4
2015	4,521	4,935,283	92.8
2016	4,521	4,962,391	91.5
2017	4,738	4,976,829	94.8
2018	4,233	4,983,364	83.9

Inequalities in hospital heart attack hospital admissions, 2018

In 2018, the admission rate in Scotland's most deprived areas was more than twice that of those living in the least deprived (132.4 cases per 100,000 compared to 55.1 per 100,000).

Figure 3.1

Hospital admissions for heart attack among those aged <75y by Income-Employment Index, Scotland 2018 (European Age-Standardised Rates per 100,000)
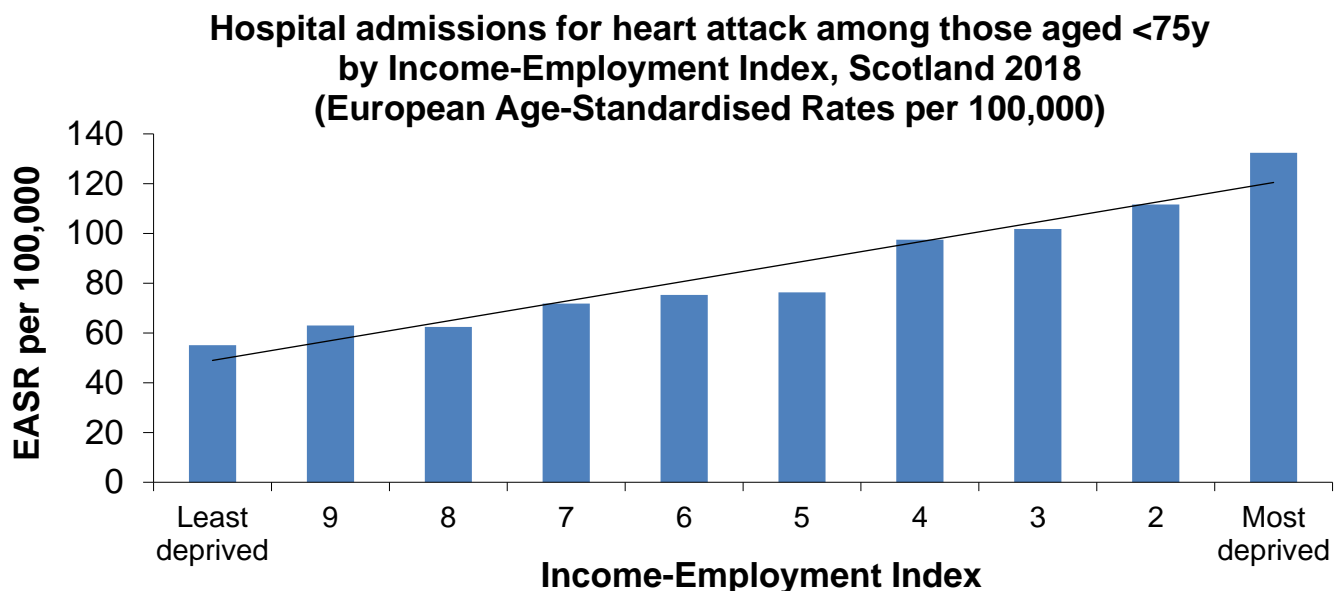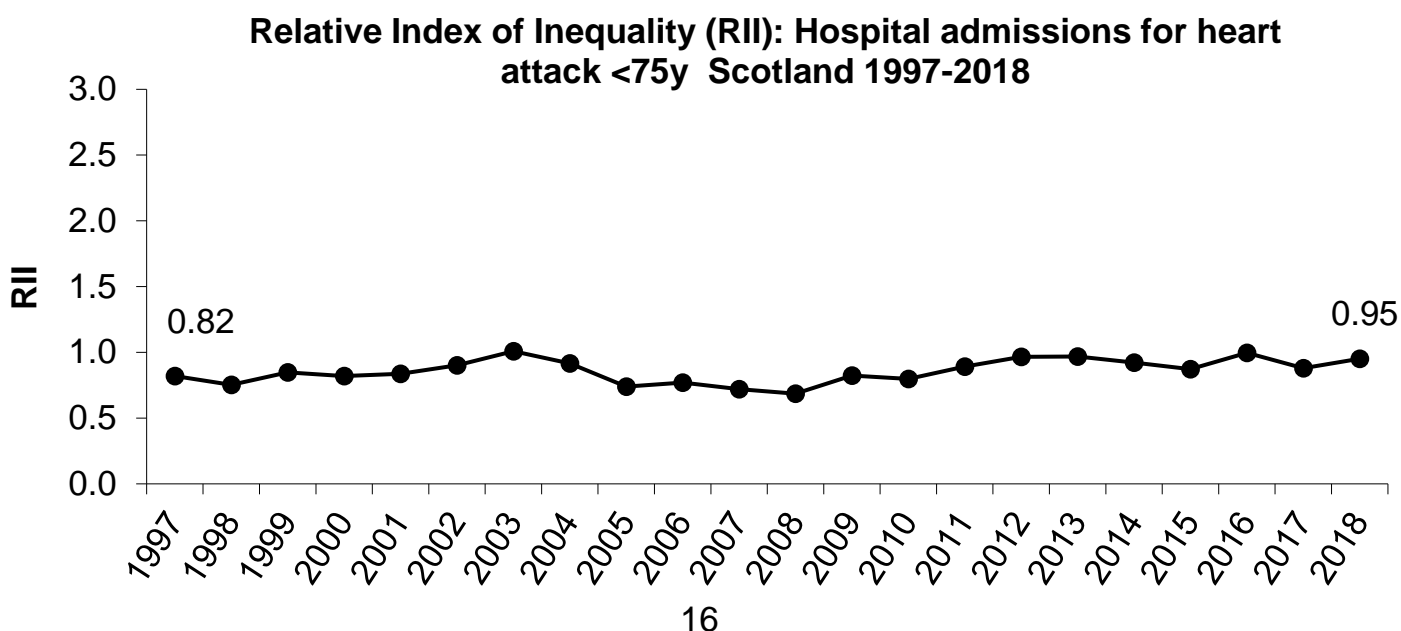

Trends in relative inequalities

Relative inequality levels for heart attack hospital admissions have fluctuated over time, ranging from 0.69-1.01. The RII for 2018 (0.95) is higher than that at the start of the time series (0.82).

Figure 3.2

Relative Index of Inequality (RII): Hospital admissions for heart attack <75y Scotland 1997-2018

Heart attack hospital admission rates (aged <75) have been 2-3 times higher in the most deprived areas compared to the least deprived areas across the time series.

Trends in absolute inequalities

The absolute gap in hospital admissions between those living in the most and least deprived areas was 77.3 per 100,000 in 2018, lower than at the start of the times series in 1997 when the gap was at its largest (114.6 per 100,000).

However, absolute inequalities have fluctuated over that time, with the gap at its narrowest between 2006 and 2008.

Figure 3.3

Absolute Gap: Hospital admissions for heart attack <75y
Scotland 1997-2018
(European Age-Standardised Rates per 100,000)
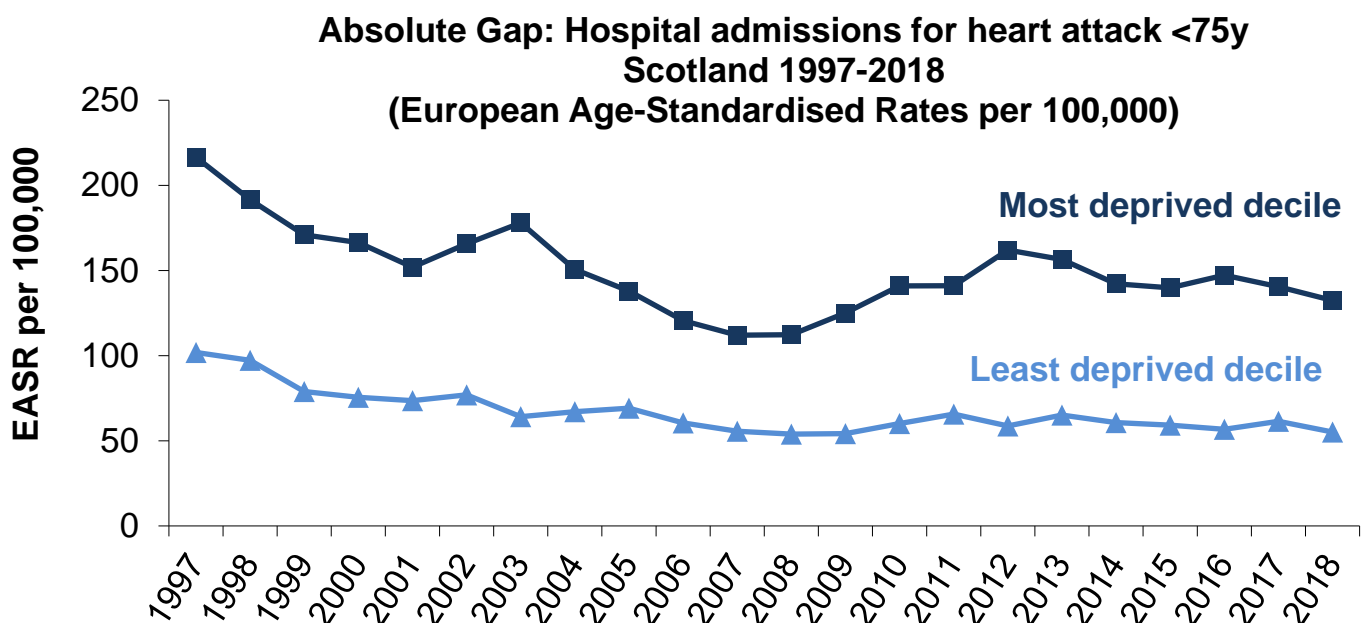
Coronary Heart Disease (CHD) Mortality - deaths aged 45-74 years

Trends in CHD deaths

In 2018, around 2,400 deaths amongst those aged 45-74 years were attributed to CHD.

Since 1997, there has been a considerable decrease in CHD mortality amongst the population aged 45-74 years. In 2018, the death rate for this age group was 117.6 per 100,000, less than one third what it was in 1997 and the lowest figure on record.
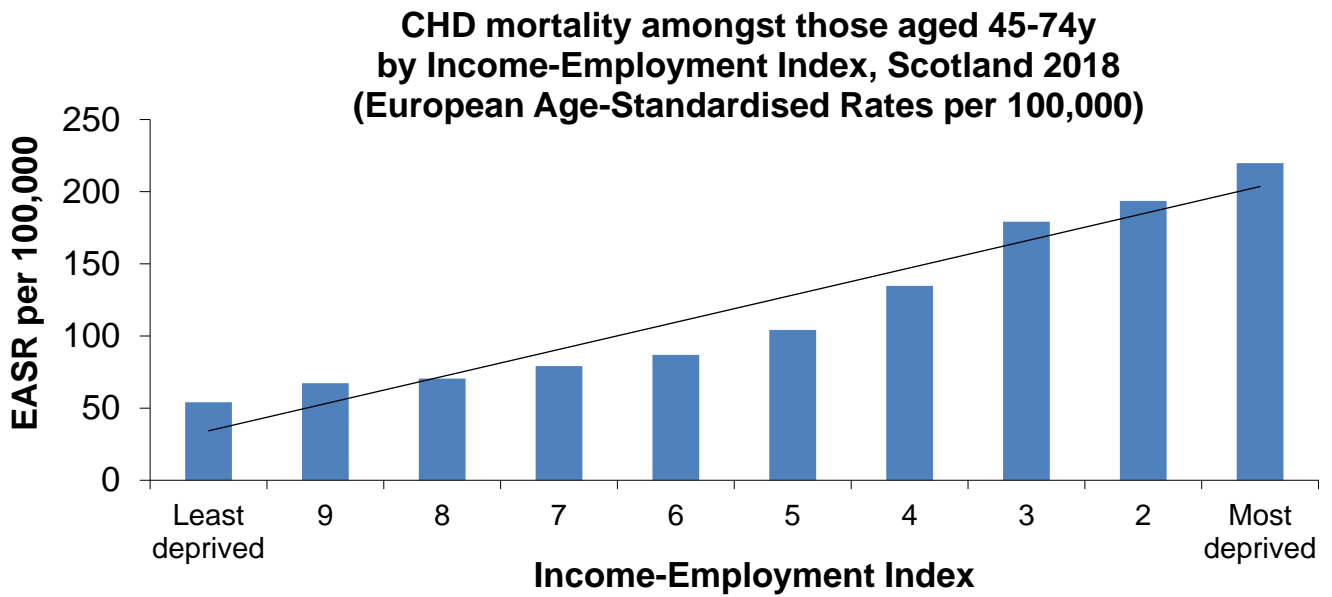
Table 4.1: Trends in coronary heart disease deaths (aged 45-74), 1997-2018

	Number of deaths	Target population size	Rate per 100,000 (EASR)
1997	5,887	1,635,590	372.5
1998	5,675	1,646,711	357.9
1999	5,389	1,658,124	338.9
2000	4,858	1,670,660	303.9
2001	4,483	1,687,422	279.3
2002	4,310	1,706,141	265.9
2003	4,197	1,727,112	256.3
2004	3,840	1,751,037	232.3
2005	3,721	1,774,865	222.3
2006	3,393	1,799,382	200.8
2007	3,374	1,827,320	196.6
2008	3,155	1,856,874	180.9
2009	2,857	1,885,693	160.7
2010	2,811	1,914,226	156.6
2011	2,592	1,941,253	142.6
2012	2,584	1,964,203	139.7
2013	2,515	1,986,202	133.7
2014	2,358	2,007,988	123.1
2015	2,463	2,026,210	127.4
2016	2,467	2,047,858	124.7
2017	2,476	2,064,612	122.2
2018	2,416	2,073,318	117.6

Inequalities in CHD deaths, 2018

In 2018, the CHD mortality rate was more than four times greater in Scotland's most deprived areas compared to the least deprived (219.8 compared to 54.0 deaths per 100,000 population).

Figure 4.1

**CHD mortality amongst those aged 45-74y
by Income-Employment Index, Scotland 2018
(European Age-Standardised Rates per 100,000)**

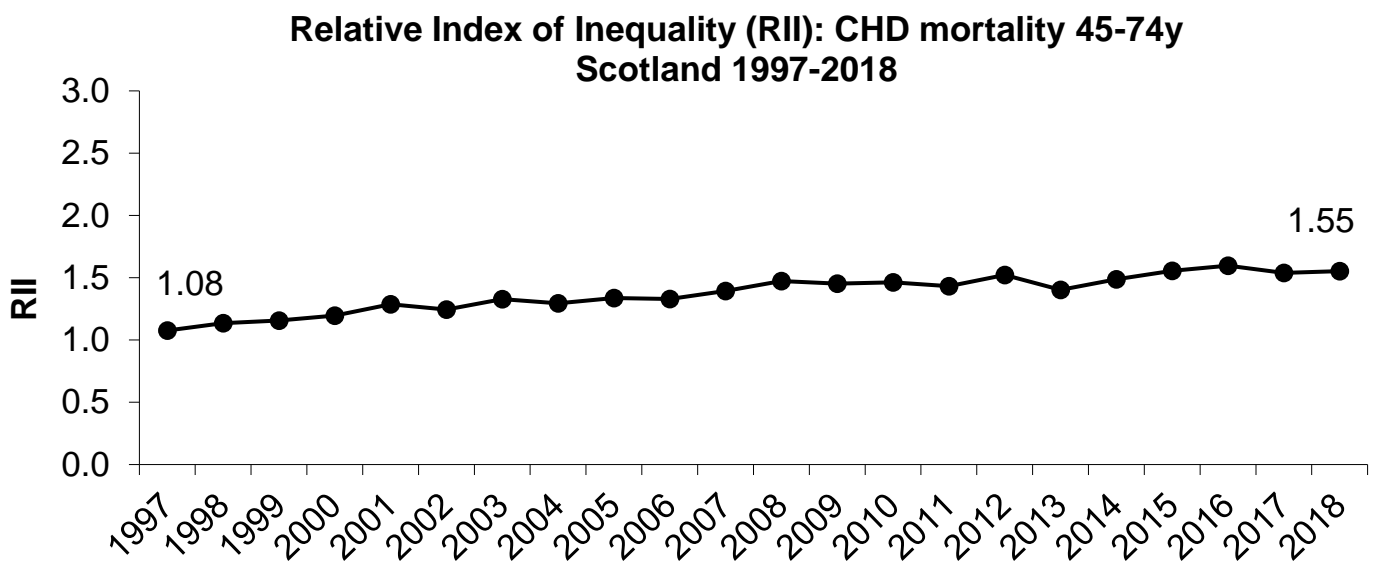**Trends in relative inequalities**

Relative inequalities in CHD mortality have increased over the longer term. The RII figures for the last four years have been the highest in the time series, ranging from 1.54-1.60.

Figure 4.2

**Relative Index of Inequality (RII): CHD mortality 45-74y
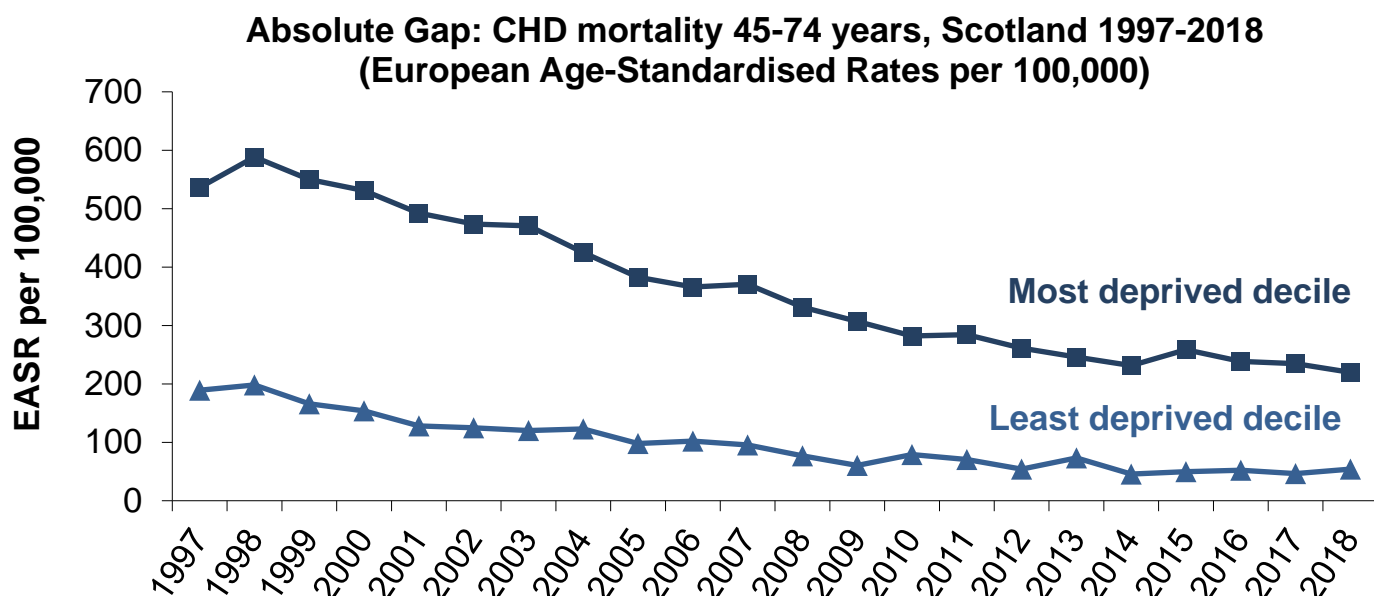Scotland 1997-2018**

In the last ten years, CHD mortality rates have typically been 4-5 times higher in the most deprived areas compared to the least deprived areas. This is higher than at the start of the times series when CHD mortality rates were typically 3-4 times higher.

Trends in absolute inequalities

In contrast to relative inequality, absolute inequality between those living in the most deprived areas and those living in the least deprived areas has reduced over the longer term from a high of 390.1 per 100,000 in 1998. The current gap is the lowest across the series and less than half what it was in 1998 (165.8 per 100,000 in 2018).

Figure 4.3

Absolute Gap: CHD mortality 45-74 years, Scotland 1997-2018 (European Age-Standardised Rates per 100,000)

Cancer incidence rate aged under 75 years

Trends in cancer incidence

In 2017, there were around 21,200 new cases of cancer among people aged under 75. Figures for 2018 are not currently available and will be included in the next report.

Cancer incidence among people aged under 75 has fluctuated over the time series. It showed a general decrease from a high of 452.7 per 100,000 in 1996 to 417.5 per 100,000 in 1999, before showing an overall increase until 2009 (446.6 per 100,000). Since then cancer incidence has decreased overall and was 426.5 per 100,000 in 2017.
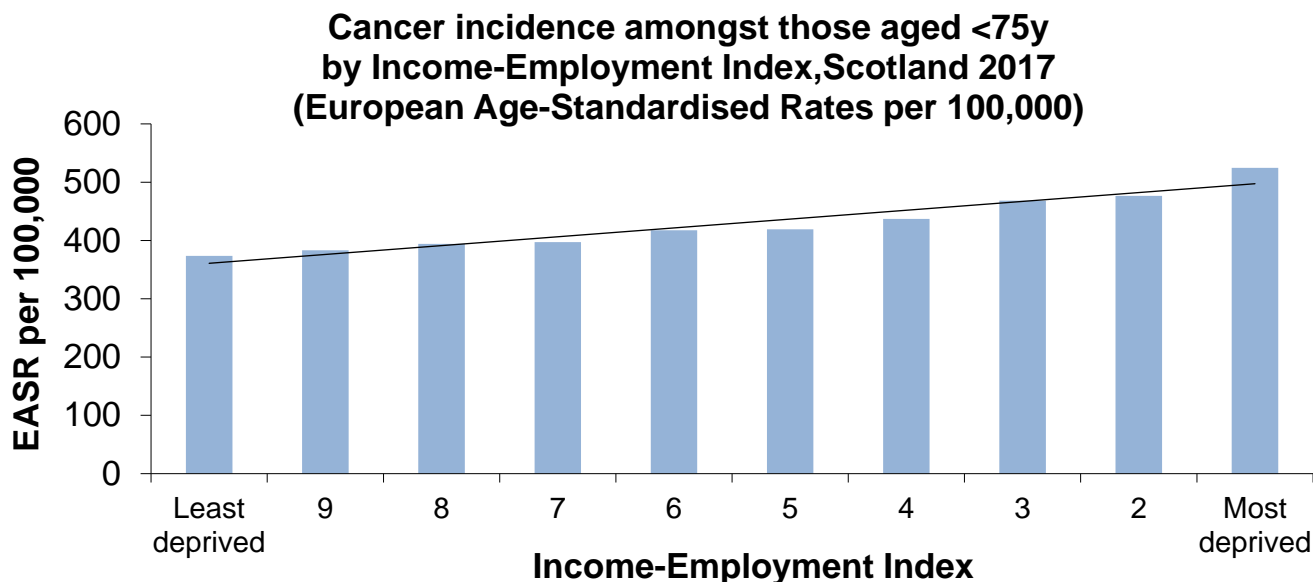
Table 5.1: Trends in cancer incidence (aged < 75), 1996-2017

	Number of new cases	Target population size	Rate per 100,000 (EASR)
1996	18,128	4,754,906	452.7
1997	17,167	4,740,269	427.4
1998	17,109	4,729,975	424.3
1999	16,914	4,721,298	417.5
2000	17,138	4,708,667	420.6
2001	17,147	4,703,661	418.9
2002	17,530	4,701,958	423.6
2003	17,574	4,702,431	420.8
2004	18,159	4,714,233	430.3
2005	17,987	4,735,320	421.9
2006	18,167	4,752,425	423.3
2007	18,775	4,783,452	430.8
2008	19,449	4,811,453	439.7
2009	19,999	4,835,007	446.6
2010	20,015	4,858,058	441.9
2011	20,208	4,888,316	441.3
2012	20,296	4,895,114	436.8
2013	20,598	4,903,074	437.7
2014	21,064	4,914,362	442.4
2015	20,888	4,935,283	433.5
2016	20,980	4,962,391	429.2
2017	21,187	4,976,829	426.5

Inequalities in cancer incidence, 2017

In 2017, there were 524.5 cases of cancer per 100,000 people in the most deprived areas, compared to 373.6 cases per 100,000 in the least deprived areas.

Figure 5.1

Cancer incidence amongst those aged <75y by Income-Employment Index, Scotland 2017 (European Age-Standardised Rates per 100,000)

Cancer incidence is more common in the most deprived areas of Scotland. However, this is not the case for all types of cancer[1]. This is driven in part by variations in screening uptake, leading to socially patterned rises in cancer incidence and, in turn, cancer survival for some types of cancer in the least deprived areas.

As has been the case in previous years, of the most common types of cancer, the absolute gap between most and least deprived areas was largest for cancer of the trachea, bronchus and lung (2017 rates were 129.6 and 26.3 per 100,000 population in the most and least deprived areas respectively).

Trends in relative inequalities

Changes in the relative index of inequality over time have been minimal and show no clear pattern, with the rate fluctuating between 0.29 and 0.40.

---

[1] Web tables accompanying this publication include incidence inequality data for prostate cancer, breast cancer, cancer of the trachea, bronchus and lung, and colorectal cancer.

Figure 5.2

Relative Index of Inequality (RII): Cancer incidence <75y Scotland 1996-2017
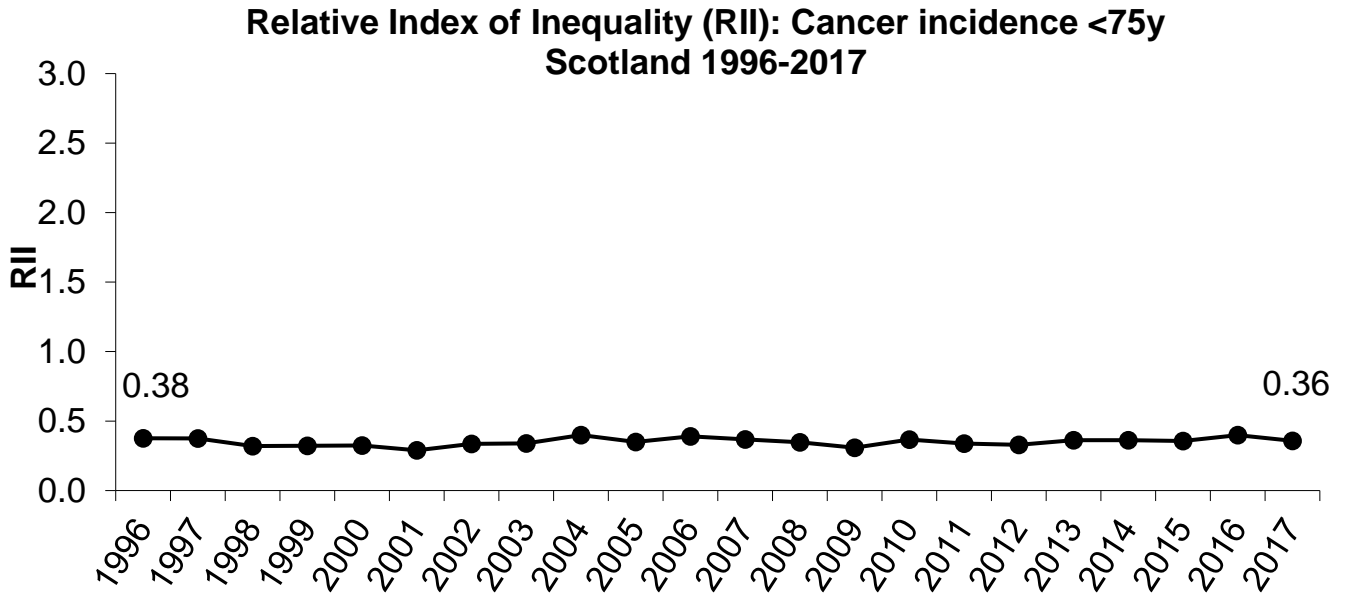
Incidence rates have typically been 30-50% higher in the most deprived areas in Scotland compared to the least deprived (40% in 2017).

Trends in absolute inequalities

Absolute inequality levels in cancer incidence have fluctuated over time, with a gap ranging from 122.1 to 178.2 per 100,000 population. Rates in both the least and most deprived areas of Scotland have shown no clear pattern.

Figure 5.3

Absolute Gap: Cancer incidence <75y, Scotland 1996-2017 (European Age-Standardised Rates per 100,000)
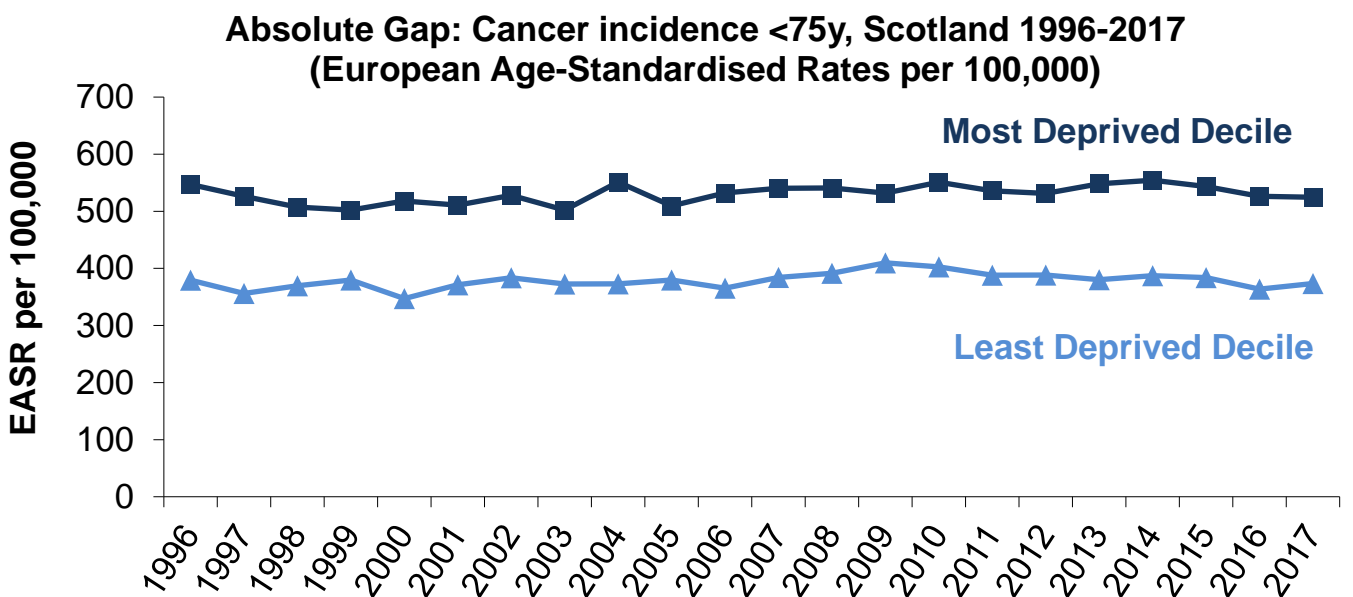
The gap was widest in 2004 (rates of 551.1 per 100,000 and 372.9 per 100,000 in the most and least deprived areas, respectively) but the adjacent years of 2003 and 2005 displayed relatively narrow gaps. The gap was lower in 2017 (150.9 per 100,000) than at the start of the time series (167.7 per 100,000).

Cancer deaths aged 45-74 years

Trends in cancer deaths

The cancer mortality rate amongst those aged 45-74 years has fallen by 31% since 1996 (from 529.8 to 367.0 per 100,000 population in 2018). The number of deaths each year has also reduced in this period, from around 8,400 to 7,500.
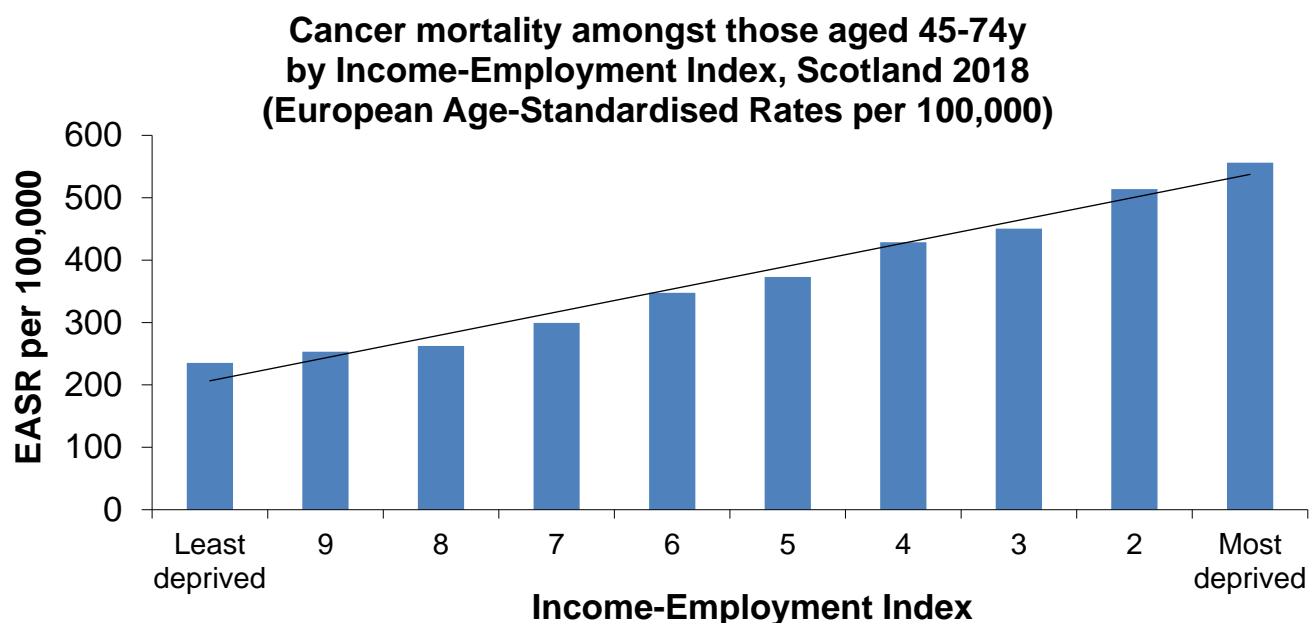
Table 6.1: Trends in cancer mortality (aged 45-74), 1996-2018

	Number of deaths	Target population size	Rate per 100,000 (EASR)
1996	8,402	1,631,224	529.8
1997	8,068	1,635,590	509.1
1998	7,995	1,646,711	501.9
1999	7,904	1,658,124	494.4
2000	7,776	1,670,660	484.8
2001	7,903	1,687,422	489.2
2002	7,850	1,706,141	481.2
2003	7,706	1,727,112	467.4
2004	7,678	1,751,037	460.9
2005	7,606	1,774,865	451.8
2006	7,486	1,799,382	441.3
2007	7,569	1,827,320	439.5
2008	7,536	1,856,874	431.0
2009	7,481	1,885,693	421.2
2010	7,394	1,914,226	411.1
2011	7,428	1,941,253	408.5
2012	7,514	1,964,203	406.2
2013	7,520	1,986,202	399.8
2014	7,445	2,007,988	389.6
2015	7,621	2,026,210	392.9
2016	7,385	2,047,858	373.5
2017	7,342	2,064,612	363.6
2018	7,531	2,073,318	367.0

Inequalities in cancer deaths, 2018

Of people in the 45-74 year age group, those in Scotland's most deprived areas are more than twice as likely to die of cancer than those in the least deprived areas (556.2 deaths per 100,000 population compared to 235.3 per 100,000 population, in 2018).

Figure 6.1

**Cancer mortality amongst those aged 45-74y
by Income-Employment Index, Scotland 2018
(European Age-Standardised Rates per 100,000)**

As is the case for cancer incidence, inequality levels vary when examining deaths by cancer type[2]. As described in the previous section, variations in screening uptake may lead to socially patterned rises in cancer incidence and, in turn, cancer survival (therefore having a possible effect on mortality) for some types of cancer.

The largest differences between rates in the most and least deprived areas are again observed for cancer of the trachea, bronchus and lung (191.6 compared to 41.4 per 100,000 population in 2018).

Trends in relative inequalities

Relative inequalities for this indicator have increased over time and the RII in 2018 (0.98) was the highest recorded across the time series. This compares with a range of 0.68-0.81 seen in the years between 1996 and 2006.

---

[2] Web tables accompanying this publication include mortality inequality data for prostate cancer, breast cancer, cancer of the trachea, bronchus and lung, and colorectal cancer.

Figure 6.2

Relative Index of Inequality (RII): Cancer mortality 45-74y
### Scotland 1996-2018
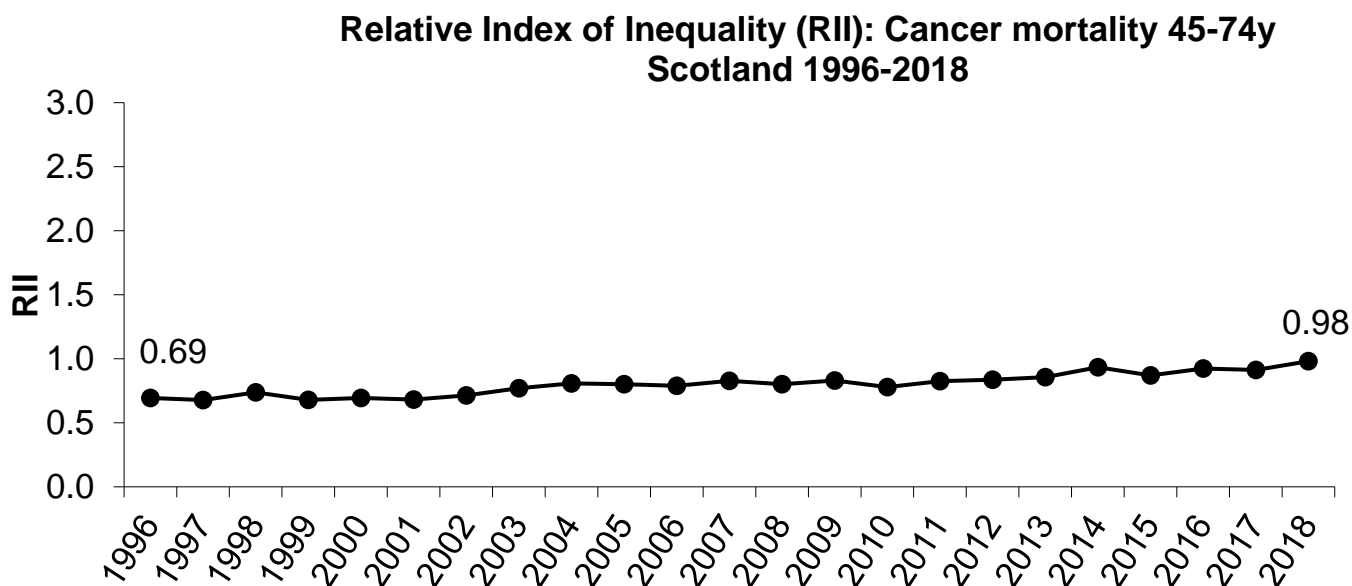
Cancer mortality rates (aged 45-74) have consistently been twice as high in the most deprived areas compared to least deprived areas over the time series.

Trends in absolute inequalities

Levels of absolute inequality for cancer deaths have fluctuated since 1996, with a absolute gap between the most and least deprived areas ranging from 304.8 to 395.3 per 100,000 population. In 2018 the gap was 320.9 per 100,000.

Figure 6.3

Absolute Gap: Cancer mortality 45-74y, Scotland 1996-2018
(European Age-Standardised Rates per 100,000)
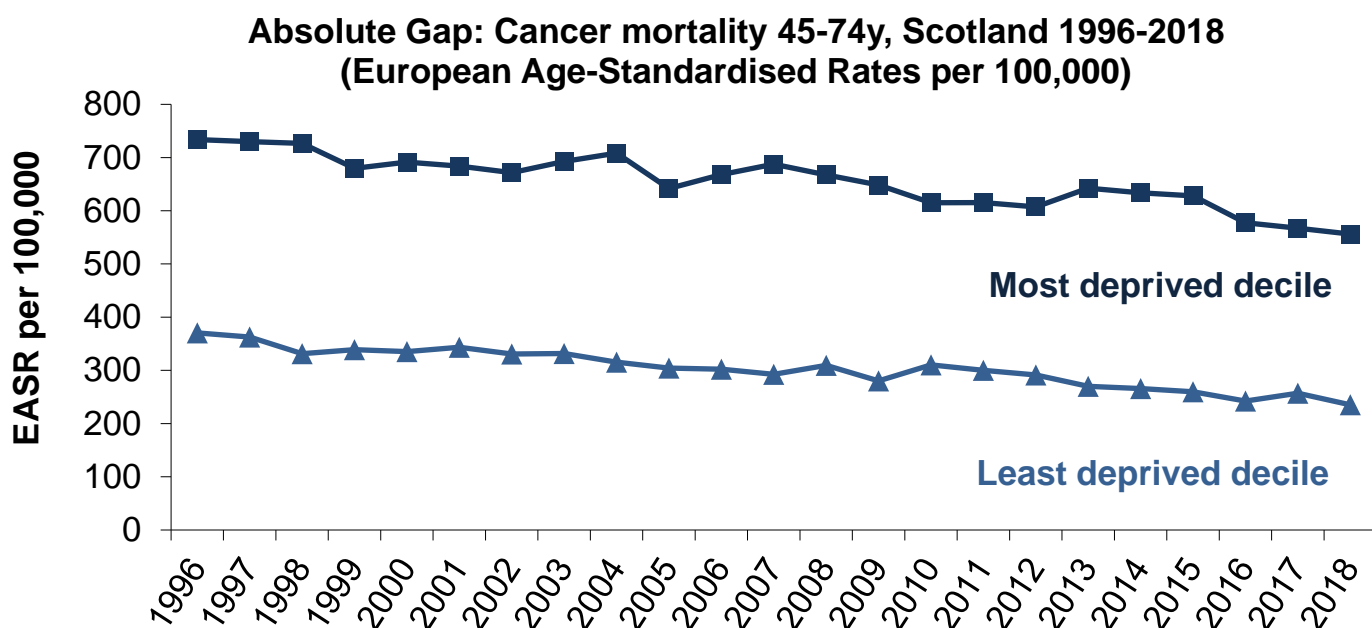
Alcohol-related hospital admissions aged under 75 years

Trends in alcohol-related admissions

The hospital admission rate for alcohol-related conditions amongst those aged under 75 years has fallen over time, with a 25% decrease between 1996 and 2018 (289.8 and 217.5 cases per 100,000 respectively).
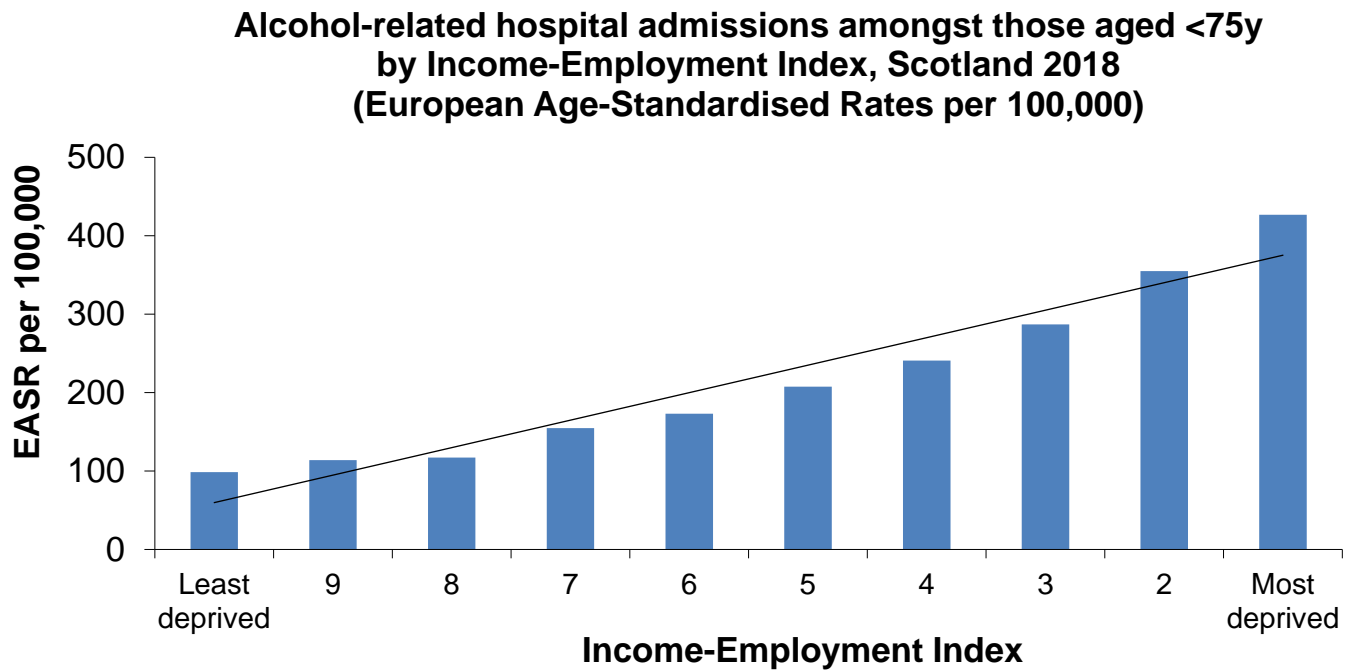
Table 7.1: Trends in alcohol-related hospital admissions (aged < 75), 1996-2018

	Number of admissions	Target population size	Rate per 100,000 (EASR)
1996	12,787	4,754,906	289.8
1997	12,918	4,740,269	292.6
1998	13,316	4,729,975	300.7
1999	13,217	4,721,298	298.2
2000	12,786	4,708,667	286.6
2001	13,469	4,703,661	300.3
2002	13,492	4,701,958	299.9
2003	12,996	4,702,431	290.0
2004	14,084	4,714,233	312.5
2005	13,346	4,735,320	293.8
2006	13,595	4,752,425	295.3
2007	14,641	4,783,452	313.5
2008	14,222	4,811,453	302.3
2009	12,891	4,835,007	272.9
2010	12,307	4,858,058	258.7
2011	12,264	4,888,316	256.2
2012	11,556	4,895,114	240.9
2013	11,225	4,903,074	236.8
2014	10,776	4,914,362	223.6
2015	10,467	4,935,283	216.2
2016	10,767	4,962,391	219.4
2017	10,644	4,976,829	218.0
2018	10,656	4,983,364	217.5

Inequalities in alcohol-related hospital admissions, 2018

In 2018, alcohol-related admissions were 4 times higher in the most deprived areas of Scotland compared to the least (426.8 compared to 98.6 cases per 100,000).

Figure 7.1

Alcohol-related hospital admissions amongst those aged <75y by Income-Employment Index, Scotland 2018 (European Age-Standardised Rates per 100,000)

Trends in relative inequalities

There has been a general downward trend observed in relative inequalities for alcohol-related hospital admissions since 1996. However, there has been some fluctuation including an increase in 2016 when the RII was 1.85, the highest rate since 2003. The figure for 2018 is the lowest in the series at 1.62.

Figure 7.2

Relative Index of Inequality (RII): Alcohol-related hospital admissions <75y Scotland 1996-2018
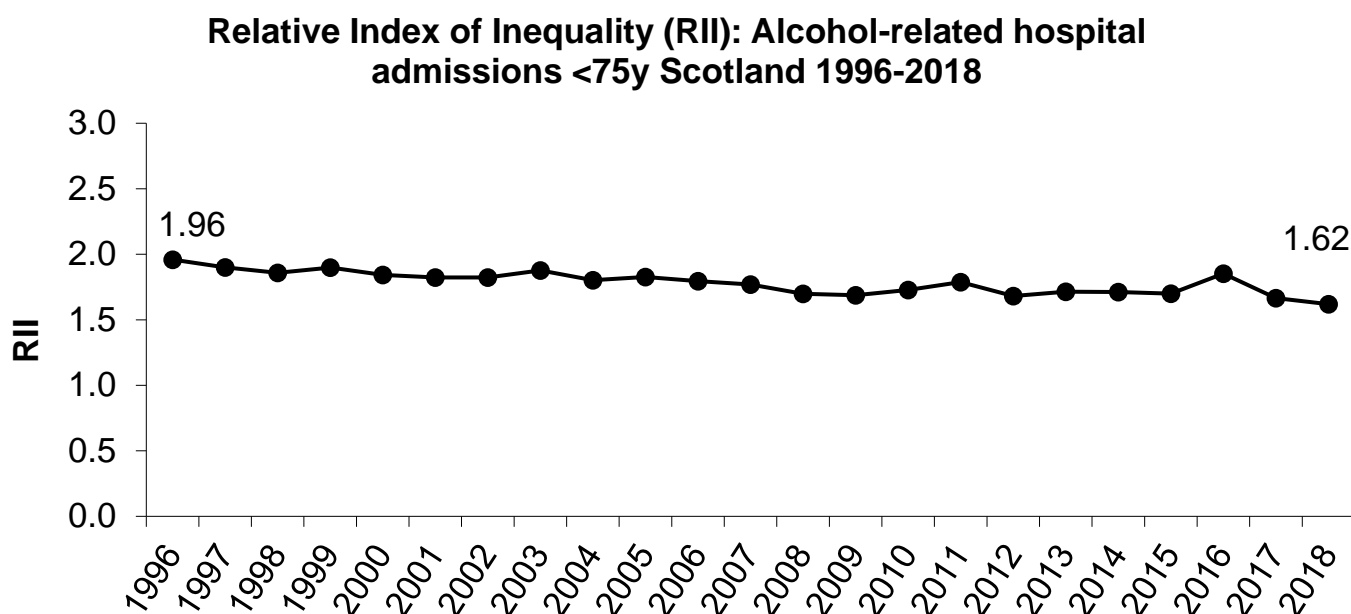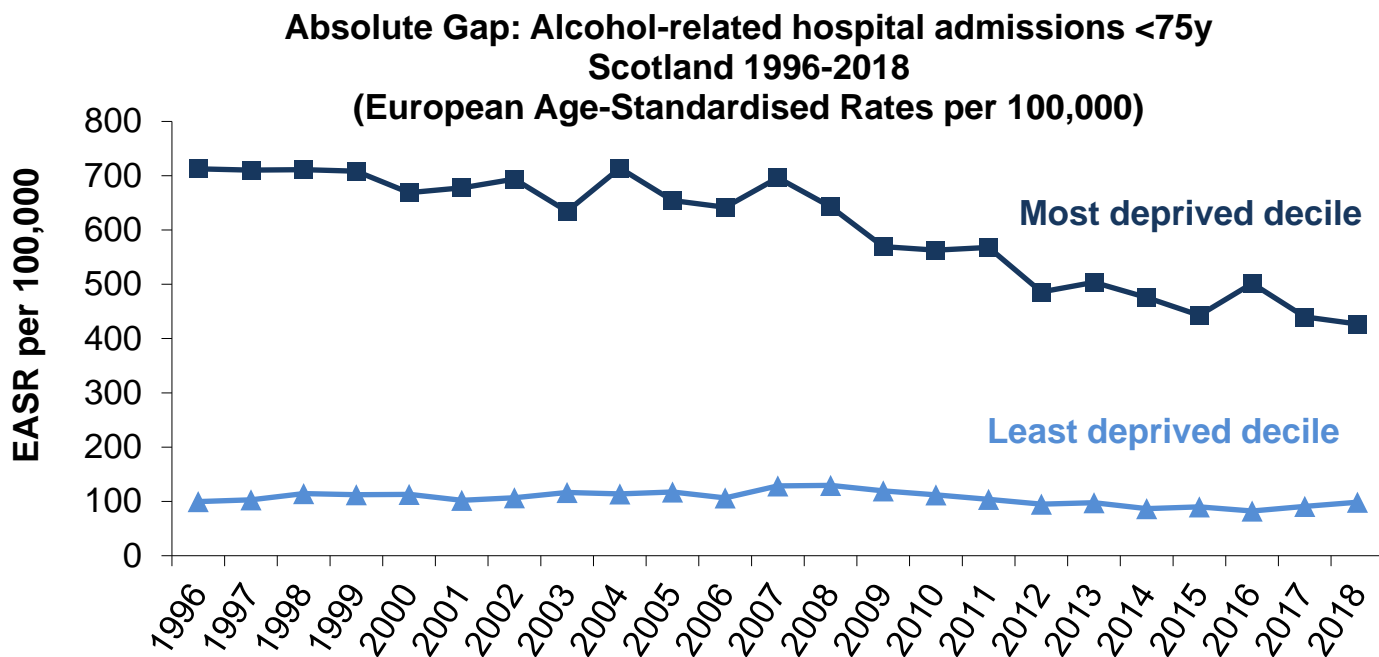

In 1996, alcohol-related admission rates were 7 times higher in the most deprived areas compared to the least deprived. These rates have ranged between 5 and 6 times higher since 2003 and declined to 4 times higher for the first time in 2018.

Trends in absolute inequalities

Absolute inequality in alcohol-related admissions has generally reduced over time, due to a reduction in admissions in the most deprived areas. The gap was widest at the start of the time series in 1996 (613.0 per 100,000) and is currently at its lowest level (328.3 per 100,000 in 2018).

Figure 7.3

**Absolute Gap: Alcohol-related hospital admissions <75y
Scotland 1996-2018
(European Age-Standardised Rates per 100,000)**

Alcohol-specific deaths aged 45-74 years

Trends in alcohol-specific deaths

The alcohol-specific death rate among those aged 45-74 years has fluctuated over the time series. There was an overall increase between 1997 and 2006 (increasing from 38.5 per 100,000 to 61.3 per 100,000) followed by a general downward trend until 2011 (38.2 per 100,000) when the rate was similar to the start of the time series. Since 2011, the alcohol-specific mortality rate has increased slightly, ranging from 38.6-44.0 per 100,000. The rate in 2018 was 43.2 per 100,000, 12.2% higher than at the start of the time series in 1997.
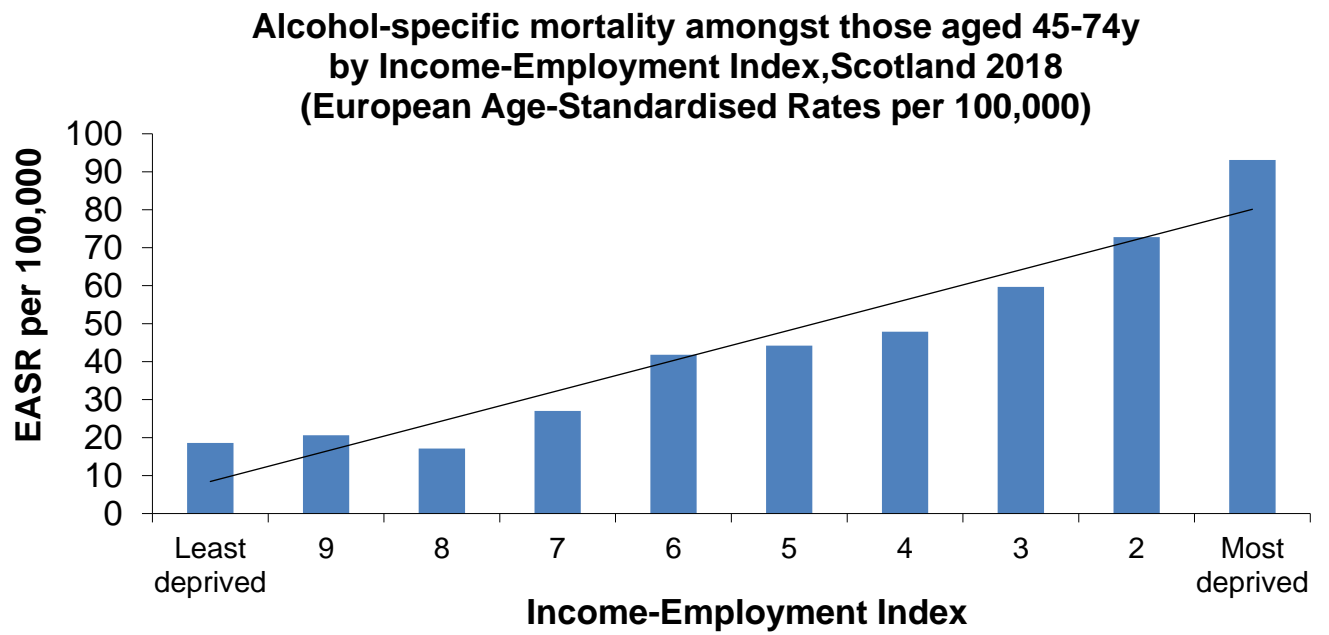
Table 8.1: Trends in alcohol-specific deaths (aged 45-74), 1997-2018

	Number of deaths	Target population size	Rate per 100,000 (EASR)
1997	636	1,635,590	38.5
1998	695	1,646,711	41.9
1999	761	1,658,124	45.2
2000	873	1,670,660	52.1
2001	957	1,687,422	56.7
2002	1,049	1,706,141	61.3
2003	1,053	1,727,112	60.9
2004	1,015	1,751,037	57.6
2005	1,056	1,774,865	59.3
2006	1,105	1,799,382	61.3
2007	1,002	1,827,320	54.6
2008	1,019	1,856,874	54.8
2009	905	1,885,693	47.9
2010	927	1,914,226	48.3
2011	871	1,941,253	45.1
2012	752	1,964,203	38.2
2013	769	1,986,202	38.6
2014	808	2,007,988	40.2
2015	840	2,026,210	41.4
2016	898	2,047,858	43.7
2017	910	2,064,612	44.0
2018	898	2,073,318	43.2

Inequalities in alcohol-specific deaths, 2018

The alcohol-specific death rate (for those aged 45-74 years) in Scotland's most deprived areas is 5 times higher than that observed in the least deprived areas (93.1 compared to 18.6 per 100,000 population).

Figure 8.1

Alcohol-specific mortality amongst those aged 45-74y
by Income-Employment Index, Scotland 2018
(European Age-Standardised Rates per 100,000)

Trends in relative inequalities

Relative inequalities in alcohol-specific deaths have fluctuated since the start of the series in 1997. The RII in 2018 is the lowest in the series (1.79).

Figure 8.2

Relative Index of Inequality (RII): Alcohol-specific mortality 45-74y Scotland 1997-2018
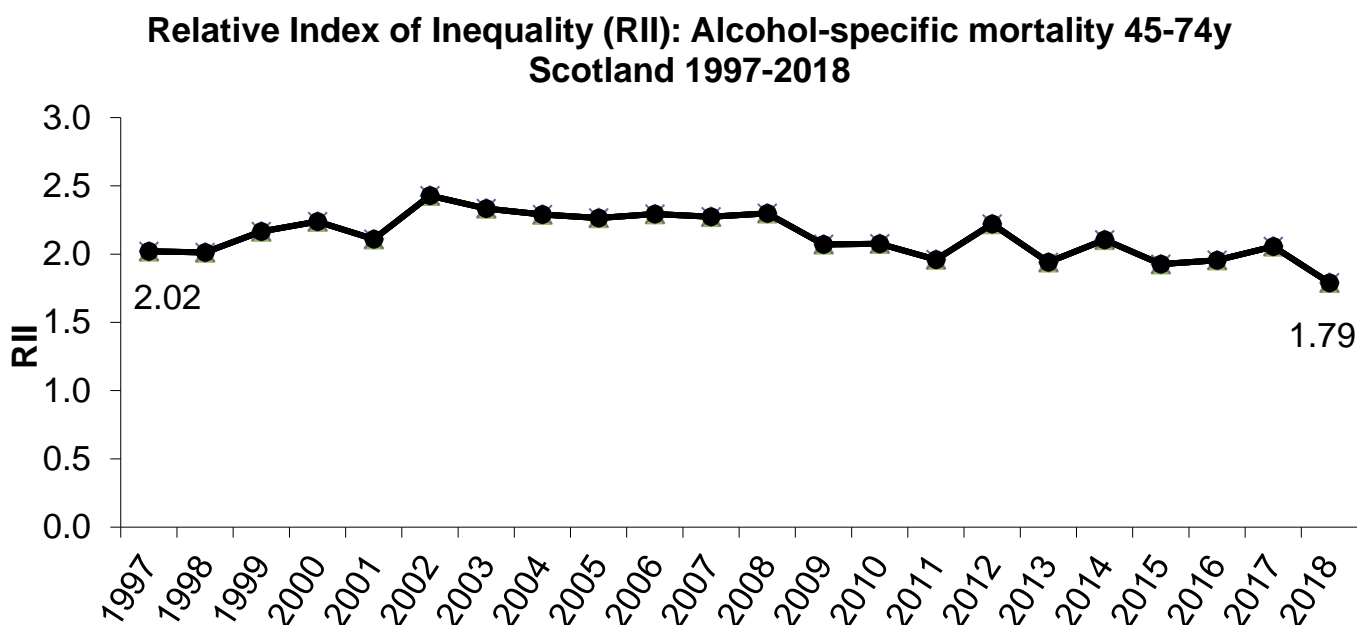

Over time the relative range between the most and least deprived areas has fluctuated, peaking in 2002 when death rates were fourteen times higher in the most deprived areas. In 2018, death rates were five times higher in the most deprived areas, the lowest in the time series.

Trends in absolute inequalities

Although the rate of alcohol-specific deaths in the least deprived areas has remained reasonably static since 1997, there has been considerable change in the rate in the most deprived areas. This has largely driven changes in the absolute gap.

Following an increase from 104.4 to 198.8 per 100,000 between 1997 and 2002, there was a general decrease in the alcohol-specific mortality rate in the most deprived areas until 2013 (83.2 per 100,000). Since then, the rate has fluctuated between 93.1 and 114.7 per 100,000, with the rate for 2018 (93.1 per 100,000) being the second lowest in the time series.

Figure 8.3

**Absolute Gap: Alcohol-specific mortality 45-74y
Scotland 1997-2018
(European Age-Standardised Rates per 100,000)**
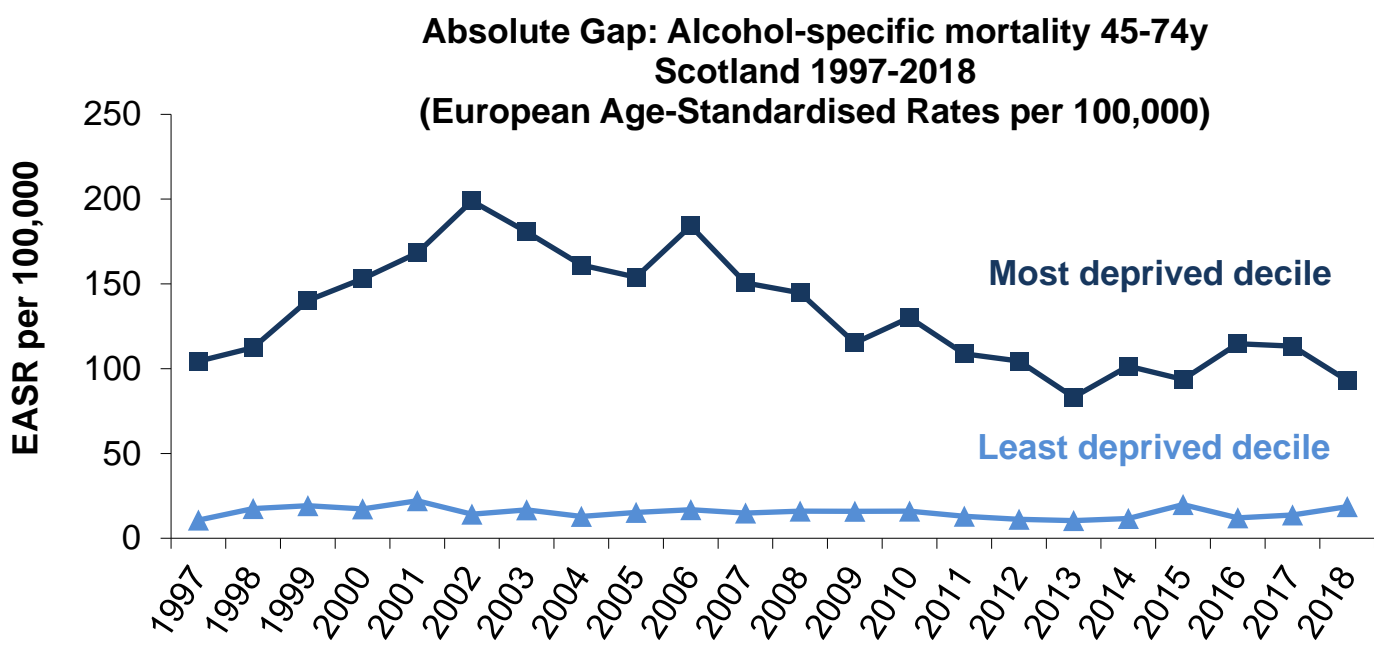
All-cause mortality aged 15-44 years

Trends in all-cause mortality aged 15-44

There were a total of 2,220 deaths of people aged 15-44 in Scotland in 2018.

There was an overall decrease in the mortality rate from the start of the time series to 2014, when rates reached a low of 96.8 per 100,000. Since then, the mortality rate of those aged 15-44 has risen and in 2018 it was similar to the rate in 1997 (114.5 per 100,000 and 116.3 per 100,000 respectively).

Table 9.1: Trends in all-cause mortality (aged 15-44), 1997-2018

	Number of all-causes deaths	Target population size	Rate per 100,000 (EASR)
1997	2,440	2,158,030	116.3
1998	2,507	2,142,787	119.4
1999	2,507	2,129,794	119.0
2000	2,501	2,118,568	118.7
2001	2,509	2,111,242	119.0
2002	2,566	2,102,670	122.0
2003	2,461	2,094,408	116.9
2004	2,409	2,088,563	114.7
2005	2,305	2,091,415	109.3
2006	2,482	2,091,581	118.3
2007	2,461	2,097,902	117.5
2008	2,443	2,096,495	117.5
2009	2,389	2,092,065	115.1
2010	2,229	2,087,635	108.6
2011	2,262	2,092,311	110.8
2012	2,071	2,077,902	102.8
2013	1,990	2,064,867	100.1
2014	1,904	2,053,897	96.8
2015	1,976	2,053,401	101.2
2016	2,194	2,054,055	112.5
2017	2,068	2,048,063	107.1
2018	2,220	2,044,305	114.5

The 2,220 deaths of those age 15-44 in 2018 included: 370 probable suicides, 28 deaths from assault and 723 drug-related deaths. While the rates of probable suicide in this age group had generally been declining in recent years there was an increase in 2018 to 18.28 per 100,000, the highest figure since 2012 (18.34 per 100,000). Rates of death from assault have increased slightly from a low of 1.04 per 100,000 in 2014, but have generally been lower in the last decade that at the start of the series. Drug-related deaths have shown large increases since the beginning of the time series in 1997. In 2018, the drug-related death rate was 37.33 per 100,000, this compares with 8.91 per 100,000 in 1997.
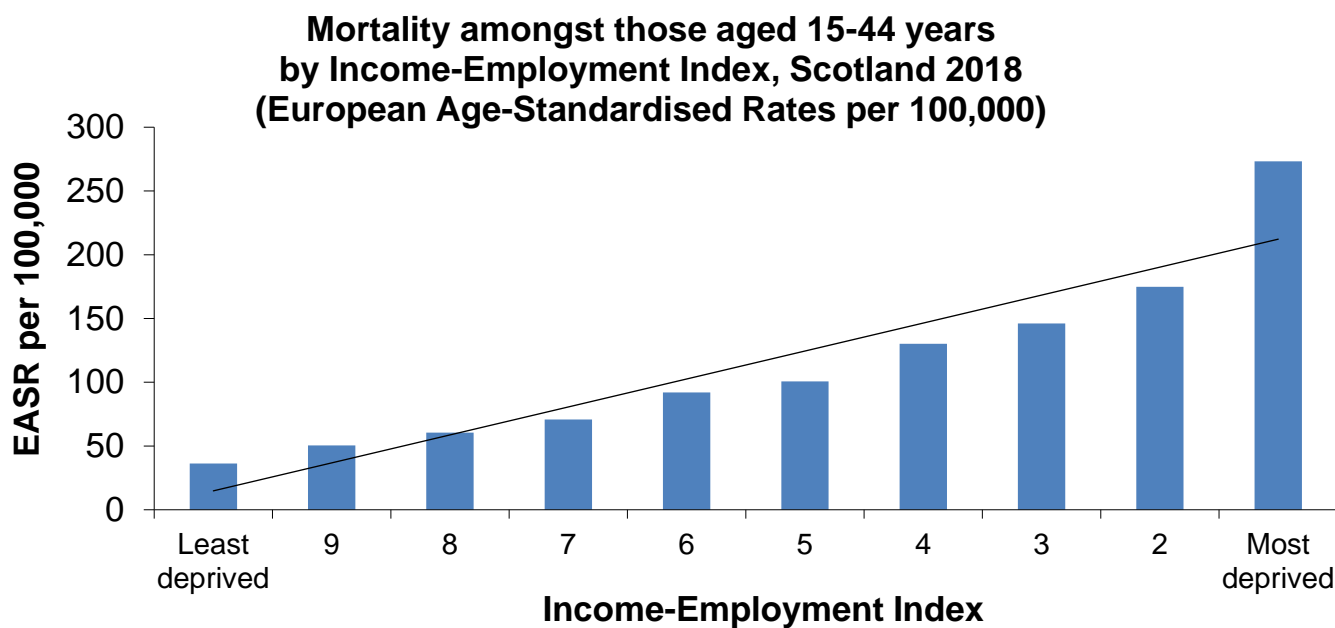
Table 9.2: Trends in deaths from assault, drugs and suicide (aged 15-44), 1997-2018

	Deaths from assault		Drug related deaths		Suicides	
	Number	EASR per 100,000	Number	EASR per 100,000	Number	EASR per 100,000
1997	56	2.6	196	8.9	518	23.9
1998	65	3.0	227	10.6	526	24.4
1999	86	4.0	274	12.9	529	24.7
2000	60	2.9	268	12.7	541	25.6
2001	63	3.0	289	13.8	531	25.3
2002	76	3.6	345	16.7	539	25.7
2003	71	3.4	282	13.6	456	21.8
2004	78	3.8	311	15.2	475	22.7
2005	50	2.4	277	13.4	436	21.0
2006	83	4.0	350	17.1	435	20.9
2007	54	2.6	392	19.1	453	21.8
2008	53	2.5	477	23.3	480	23.4
2009	47	2.3	436	21.3	432	20.8
2010	54	2.6	384	18.9	423	20.5
2011	53	2.6	454	22.5	420	20.5
2012	37	1.9	416	20.8	375	18.3
2013	35	1.7	354	17.9	356	17.7
2014	22	1.0	416	21.1	309	15.4
2015	28	1.4	442	22.8	306	15.3
2016	34	1.7	568	29.2	329	16.2
2017	40	2.0	581	30.1	305	15.1
2018	28	2.0	723	37.3	370	18.3

Inequalities in all-cause mortality aged 15-44, 2018

The mortality rate amongst people aged 15-44 years is 8 times higher in the most deprived areas (273.3 per 100,000) compared to the least deprived (36.3 per 100,000).

Figure 9.1

**Mortality amongst those aged 15-44 years
by Income-Employment Index, Scotland 2018
(European Age-Standardised Rates per 100,000)**

Trends in relative inequalities

There has been an overall increase in relative inequalities over time and they are currently at their highest point in the time series (1.97).

Figure 9.2

**Relative index of inequality (RII): mortality aged 15-44y
Scotland 1997-2018**
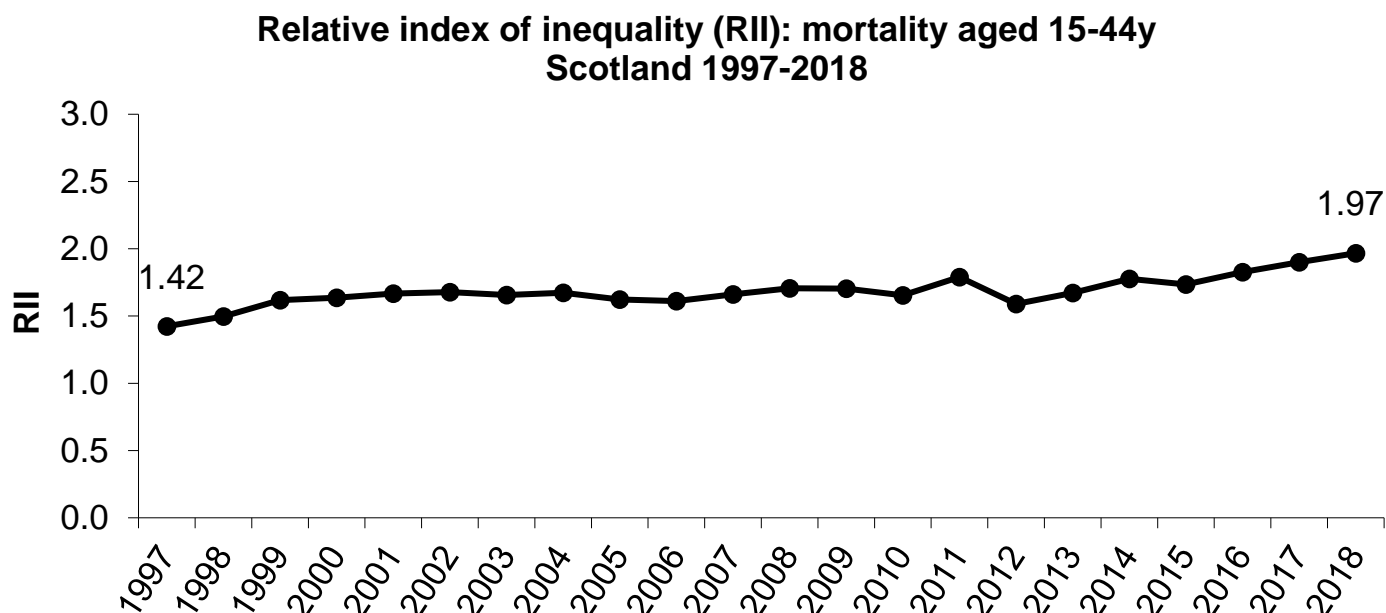
Between 1997 and 2017, death rates ranged from 4-7 times higher in the most deprived areas compared to the least deprived. In 2018 deaths for those aged 15-44 years were 8 times higher in the most deprived areas compared to the least deprived areas.

Trends in absolute inequalities

The absolute gap between the most and least deprived areas in all-cause mortality between ages 15 and 44 reached its lowest level in 2013 (a gap of 159.6 per 100,000). In each year since 2013, the mortality rate between ages 15 and 44 in the most deprived areas increased and the gap between the most and least deprived areas widened to 237 per 100,000 in 2018.

Figure 9.3

Absolute Gap: Mortality 15-44y, Scotland 1997-2018
(European Age-Standardised Rates per 100,000)
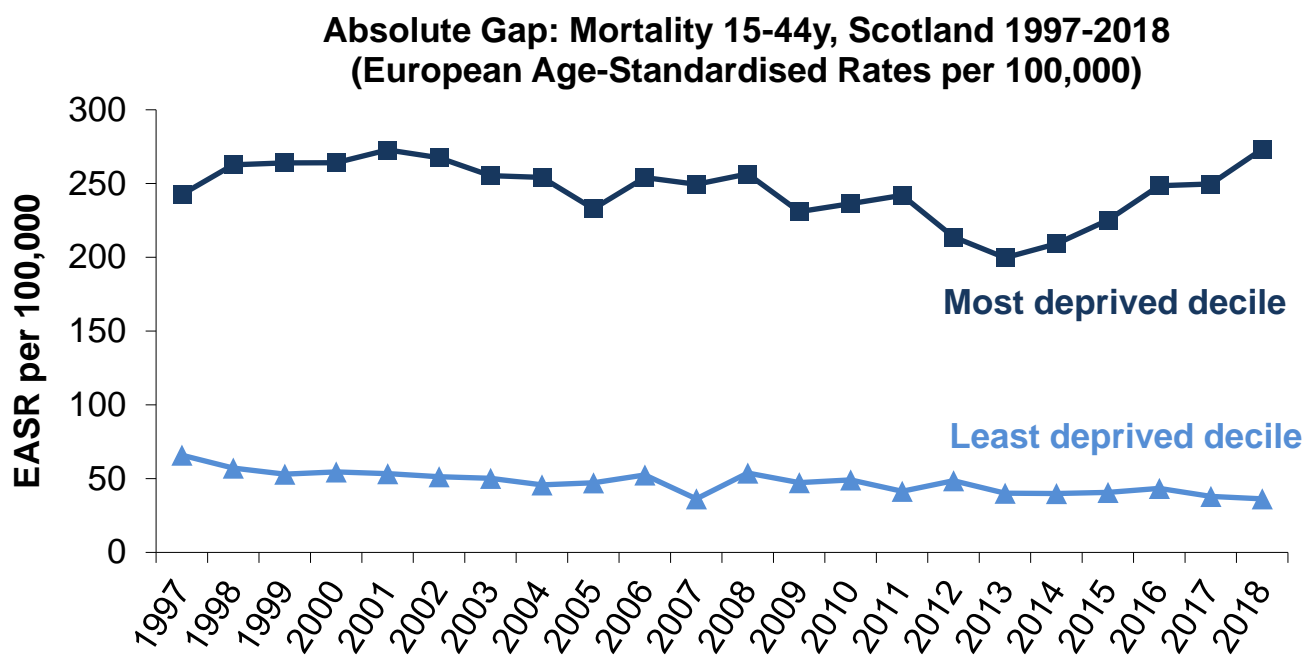
Low Birthweight

Trends in low birthweight

Almost 2,700 low birthweight babies were born in Scotland in 2018.

The percentage of babies born with a low birthweight has fluctuated slightly since 1996. Between 1996 and 2007 the percentage of babies born with a low birthweight ranged between 5.5% and 6.0%. Since 2008 the figures have generally been lower, ranging from 5.0% to 5.6%.

Table 10.1: Trends in low birthweight, 1996-2018

	Number of low birthweight babies	Target population size	% of live singleton births
1996	3,057	55,683	5.5
1997	3,132	56,787	5.5
1998	3,087	54,987	5.6
1999	3,083	52,591	5.9
2000	2,888	50,911	5.7
2001	2,832	49,625	5.7
2002	2,894	48,798	5.9
2003	3,006	49,925	6.0
2004	3,016	51,709	5.8
2005	3,049	51,309	5.9
2006	2,919	52,298	5.6
2007	3,079	55,131	5.6
2008	3,124	56,793	5.5
2009	2,878	55,854	5.2
2010	2,798	55,914	5.0
2011	2,926	55,808	5.2
2012	2,765	55,124	5.0
2013	2,676	53,042	5.0
2014	2,766	54,265	5.1
2015	2,807	52,703	5.3
2016	2,755	52,307	5.3
2017	2,820	50,625	5.6
2018	2,666	49,049	5.4

Inequalities in low birthweight 2018

In 2018, 8.1% of live singleton births in the most deprived areas were recorded as low birthweight. This is more than double the percentage in the least deprived areas (3.9%).

Figure 10.1

**Low birthweight babies in Scotland
by Income-Employment index 2018
(as percentage of live singleton births)**
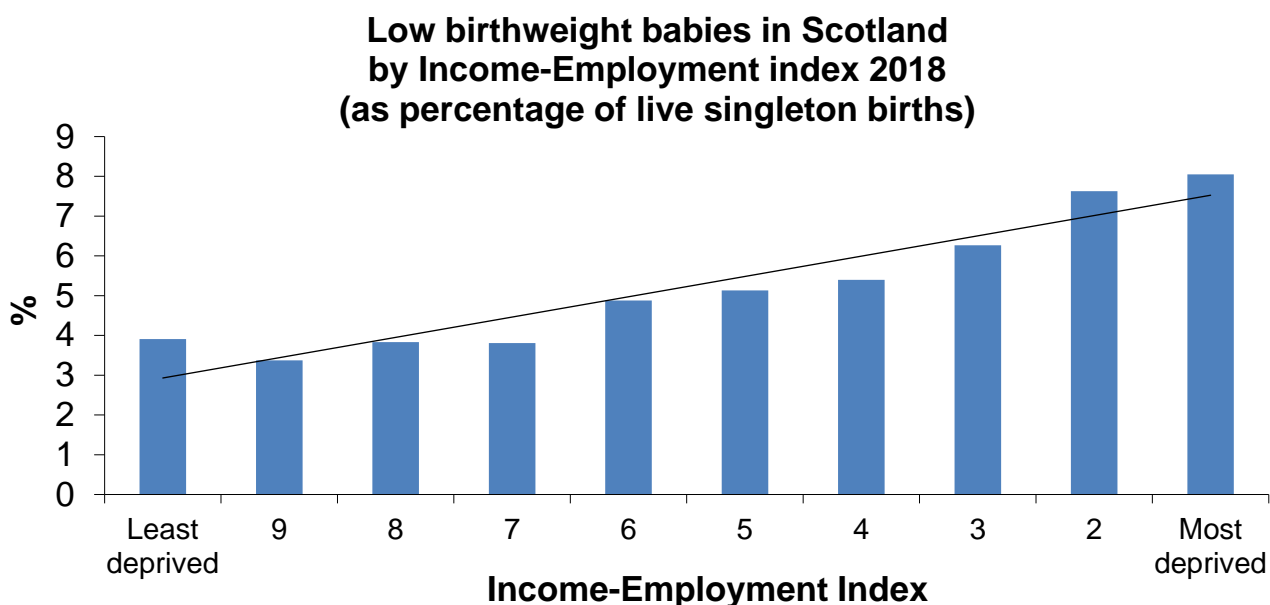
Trends in relative inequalities

Relative inequalities in low birthweight were higher in 2018 than those observed at the start of the time series (0.99 and 0.84 respectively). The RII values between 1997 and 2006 tended to be higher than those observed in the last decade, however, the RII in 2018 was the highest since 2006.

Figure 10.2

Relative index of inequality (RII): Low birthweight babies in Scotland 1996-2018
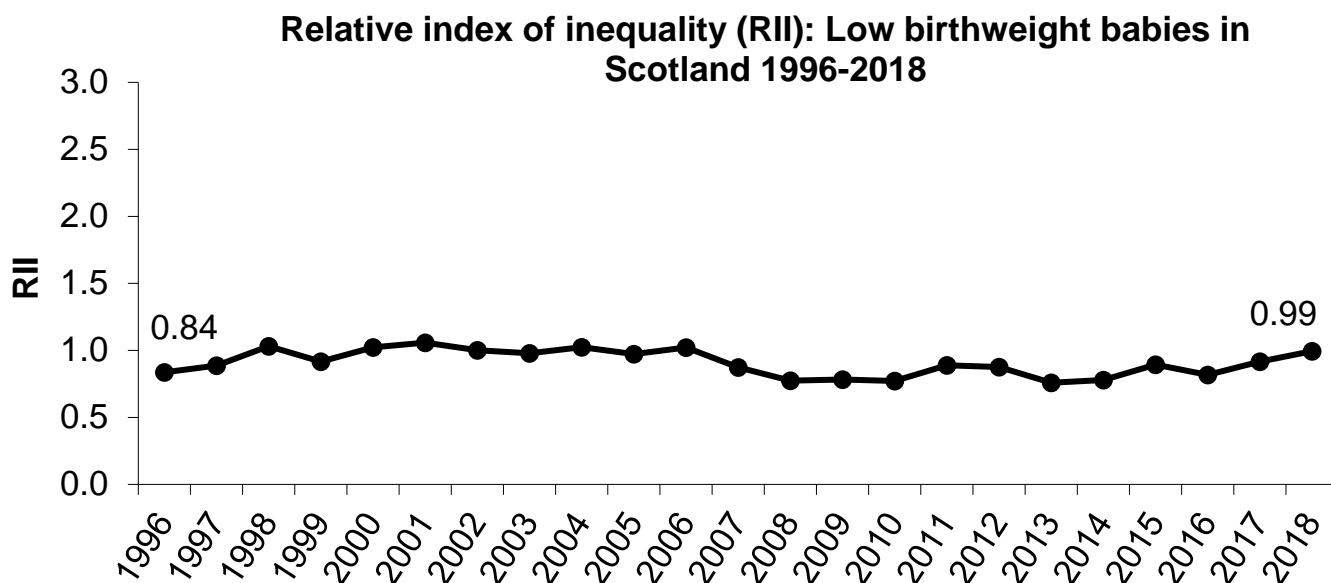

Trends in absolute inequalities

Overall, the absolute gap between the most and least deprived areas has reduced from its widest point in 2004 (5.7 percentage points). However, the gap has fluctuated in recent years, ranging from 3.1-4.3 percentage points over the last 10 years.

The narrowing and widening of the gap has tended to be driven by changes in the most deprived decile, as the least deprived decile has remained broadly stable since the beginning of the time series.

Figure 10.3

Absolute Gap:Low birthweight babies in Scotland 1996-2018
(as percentage of live singleton births)

Most deprived decile

Least deprived decile
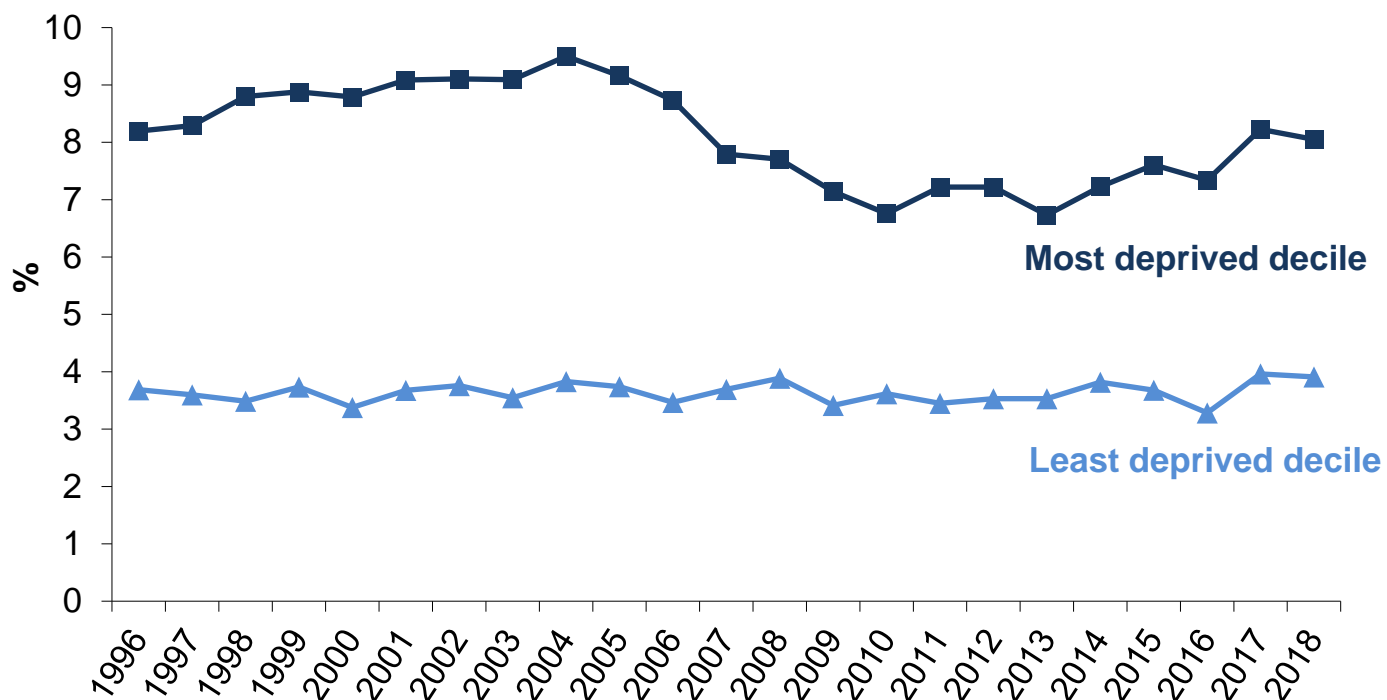
Healthy Birthweight

Trends in healthy birthweight babies

In each year of the time series, either 89% or 90% of babies have been of healthy birthweight. For the past seven years the value has been 90%.

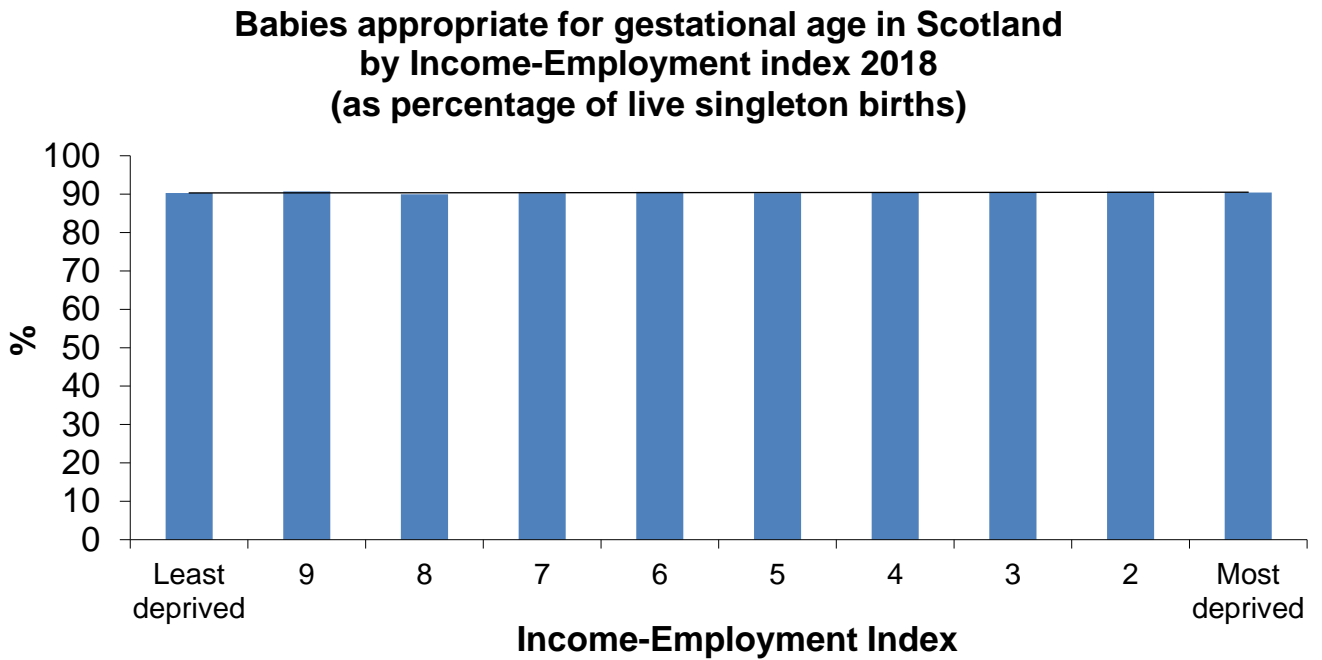### Table 11.1: Trends in healthy birthweight, 1996-2018

	Number appropriate for gestational age[1]	Target population size[1]	% of live singleton births
1996	49,829	55,581	89.7
1997	50,941	56,701	89.8
1998	49,163	54,910	89.5
1999	46,930	52,521	89.4
2000	45,162	50,833	88.8
2001	44,256	49,547	89.3
2002	43,438	48,703	89.2
2003	44,411	49,812	89.2
2004	45,757	51,596	88.7
2005	45,472	51,176	88.9
2006	46,530	52,162	89.2
2007	48,930	54,942	89.1
2008	50,540	56,602	89.3
2009	49,654	55,656	89.2
2010	50,038	55,818	89.6
2011	49,788	55,730	89.3
2012	49,235	55,004	89.5
2013	47,488	52,857	89.8
2014	48,554	53,913	90.1
2015	47,158	52,387	90.0
2016	46,587	51,754	90.0
2017	45,041	50,048	90.0
2018	44,123	48,803	90.4

1. Excludes records that could not be assigned an income employment decile

Inequalities in healthy birthweight babies 2018

In 2018, there was a marginal difference between the least and the most deprived areas in terms of the proportion of healthy births (90.3% versus 90.4% respectively)
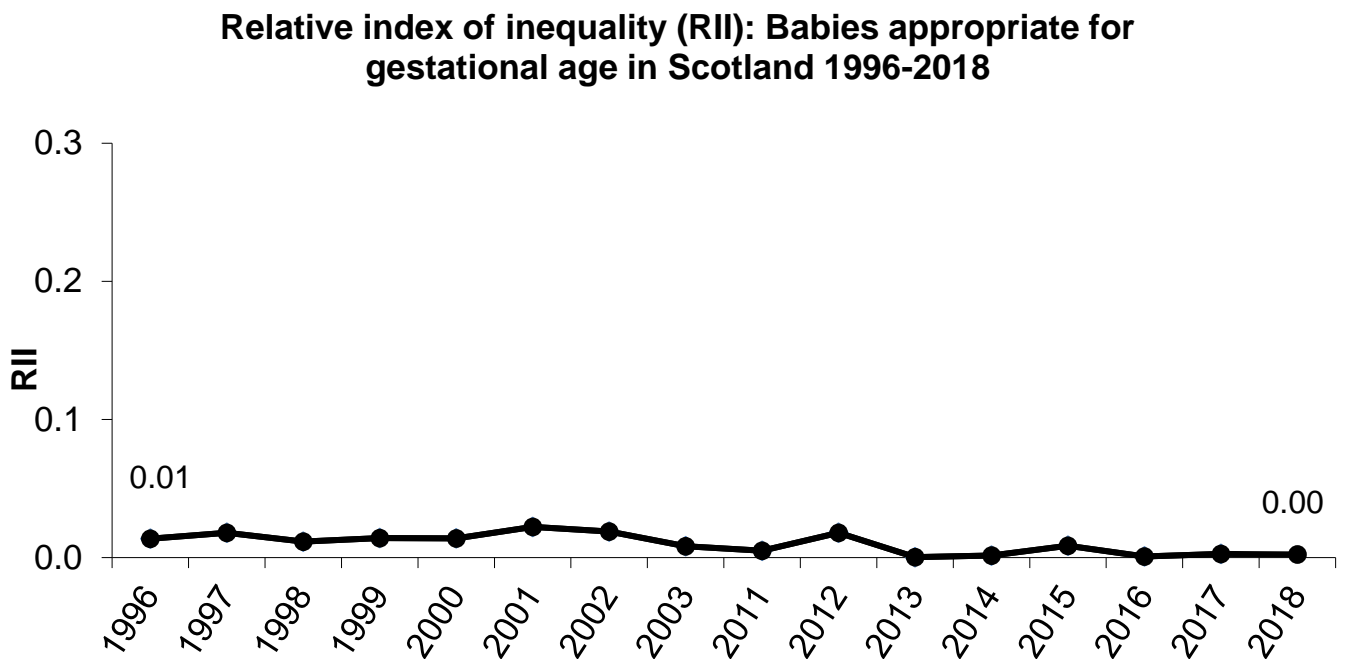
Figure 11.1

Babies appropriate for gestational age in Scotland by Income-Employment index 2018 (as percentage of live singleton births)

Trends in relative inequalities

Relative inequalities have been consistently low over the times series. The RII for 2018 is at 0.00, suggesting that there is no relative inequality for this indicator.
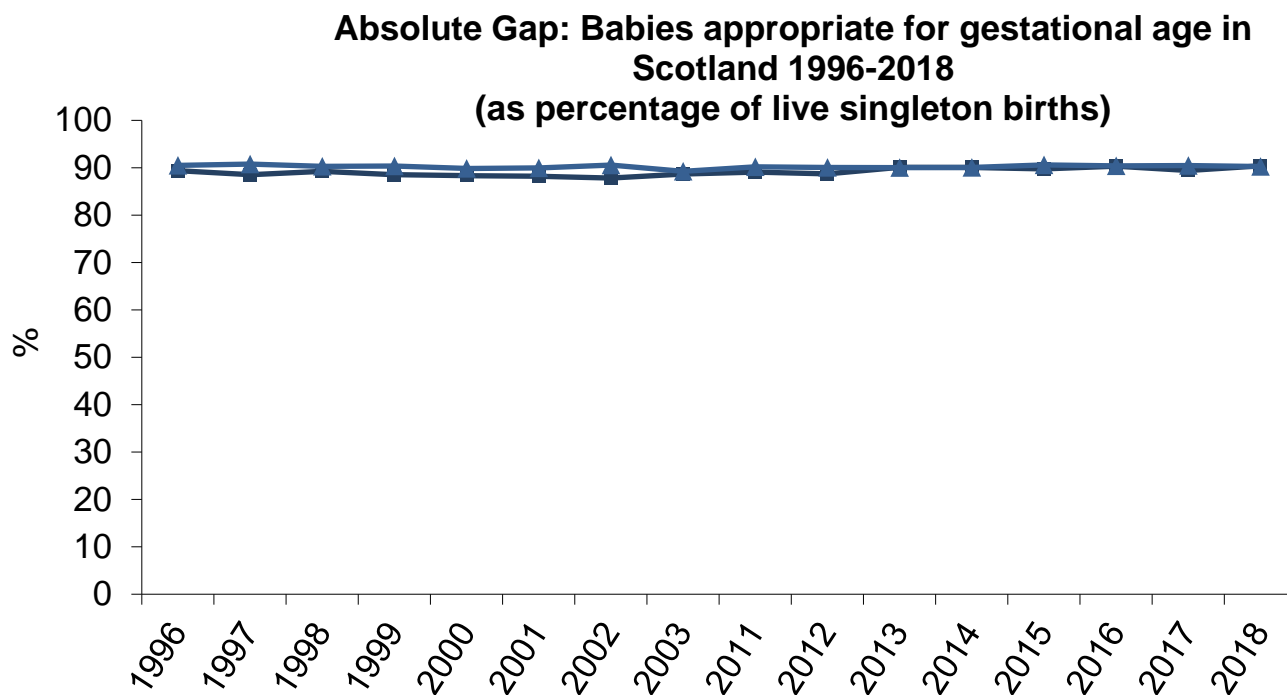
Figure 11.2

Relative index of inequality (RII): Babies appropriate for gestational age in Scotland 1996-2018

Trends in absolute inequalities

The absolute gap between the percentage of healthy birthweight babies in the most and least deprived deciles has been consistently low across the full time series.

Figure 11.3

**Absolute Gap: Babies appropriate for gestational age in Scotland 1996-2018
(as percentage of live singleton births)**

Drug-related hospital admissions aged under 75 years

Trends in drug-related hospital admissions

In 2017/18, 9,270 individuals under the age of 75 were admitted to hospital for drug-related issues.

The rate of drug-related hospital admissions, which is based on the number of patients admitted to general acute and psychiatric specialties for drug misuse in each financial year, has shown a general upward trend since 1996/97 and is currently over three times higher than at the start of the time series.

Table 12.1: Trends in drug-related hospital admissions (aged <75), 1996/97-2017/18
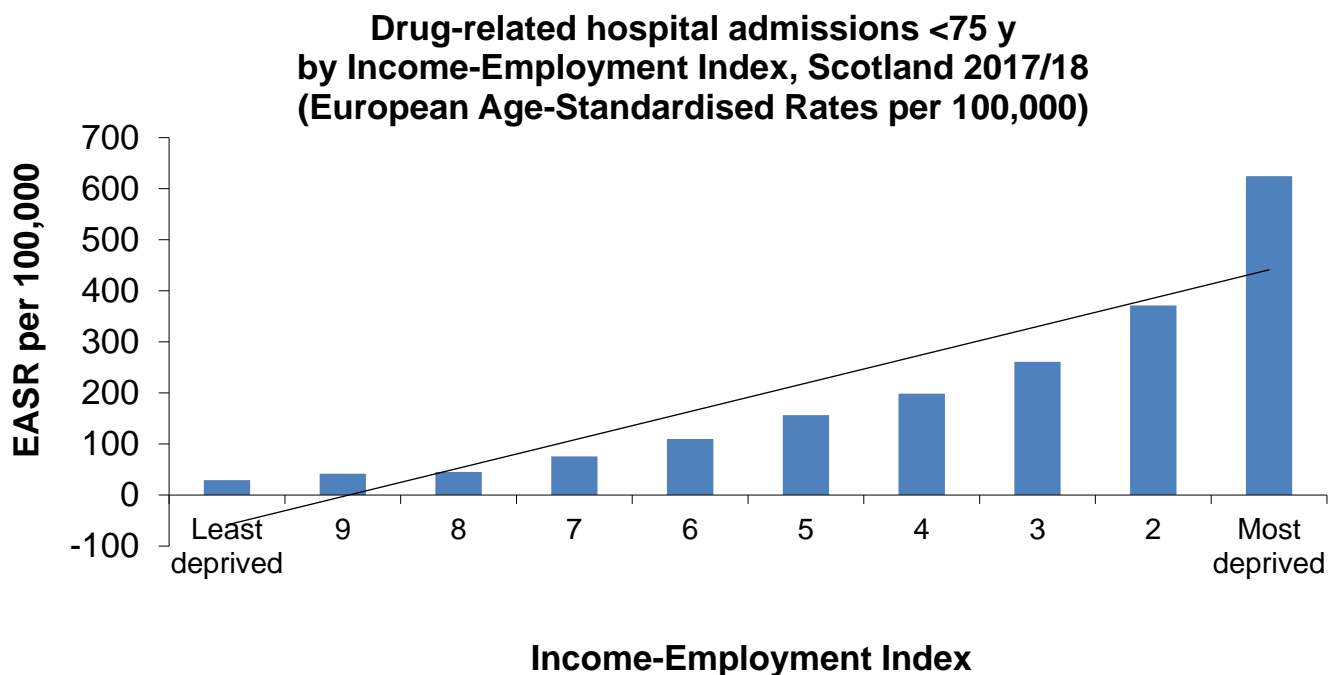
	Number of patients admitted[1]	Population	Rate per 100,000 (EASR)
1996/97	3,366	4,754,906	64.0
1997/98	3,801	4,740,269	73.6
1998/99	4,395	4,729,975	86.2
1999/00	4,734	4,721,298	94.1
2000/01	4,851	4,708,667	97.6
2001/02	5,205	4,703,661	105.7
2002/03	5,415	4,701,958	110.7
2003/04	5,124	4,702,431	106.0
2004/05	5,292	4,714,233	109.7
2005/06	5,019	4,735,320	104.0
2006/07	5,262	4,752,425	108.8
2007/08	5,790	4,783,452	119.3
2008/09	6,120	4,811,453	125.9
2009/10	6,009	4,835,007	124.0
2010/11	6,435	4,858,058	132.6
2011/12	6,384	4,888,316	131.1
2012/13	6,033	4,895,114	124.5
2013/14	6,624	4,903,074	137.5
2014/15	6,984	4,914,362	144.8
2015/16	7,839	4,935,283	162.4
2016/17	8,616	4,962,391	178.6
2017/18	9,270	4,976,829	192.2

1. Patients who have been admitted to hospital for drug misuse multiple times in the same financial year will only be counted once per year.

Inequalities in drug-related hospital admissions, 2017/18

In 2017/18, the admission rate in Scotland's most deprived areas was 21 times greater than that of the least deprived (624.5 cases per 100,000 compared to 29.2 per 100,000).

Figure 12.1

Drug-related hospital admissions <75 y by Income-Employment Index, Scotland 2017/18 (European Age-Standardised Rates per 100,000)

Trends in relative inequalities

Relative inequality levels for patients with drug-related hospital admissions have fluctuated over time. Although they have decreased from a high of 3.05 in 1998/99 they have increased every year for the last five years and the RII for 2017/18 (2.90) is higher than at the start of the time series (2.77).

Figure 12.2

## Relative Index of Inequality (RII): Drug-related hospital admissions <75y Scotland 1996/97-2017/18
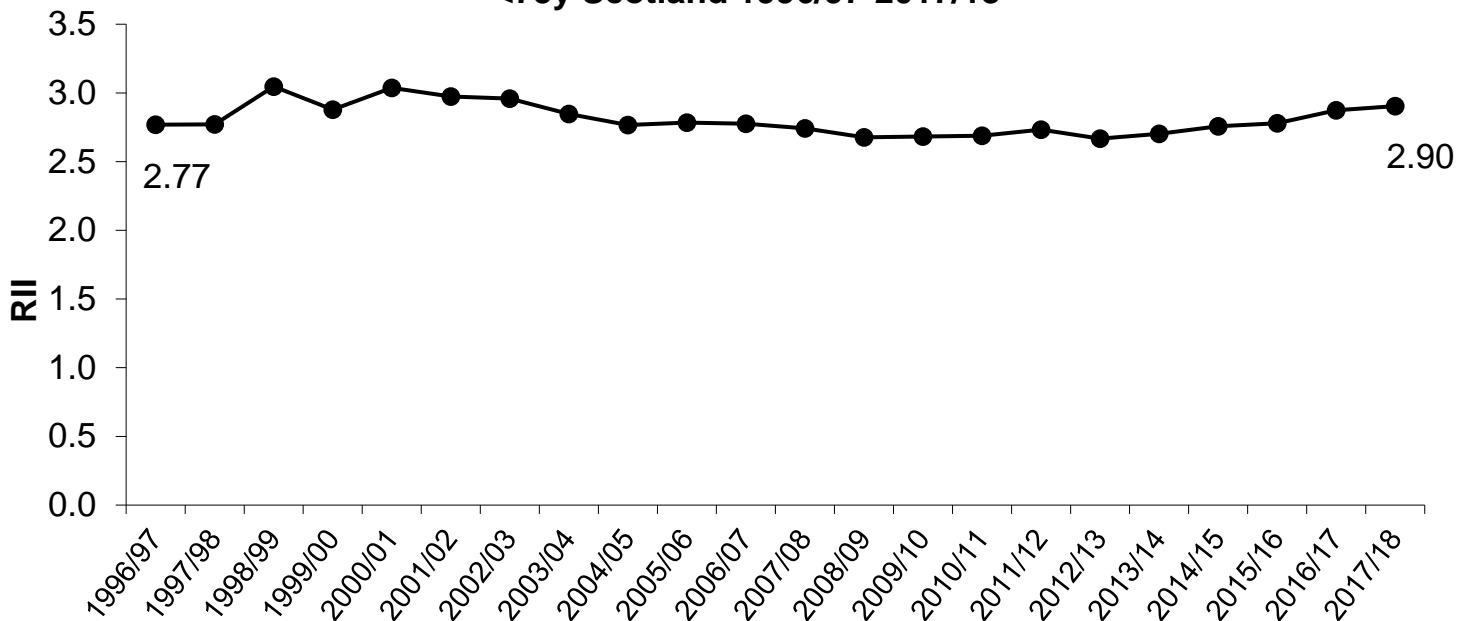
Since 1996/97 admission rates (aged <75) have ranged from 15-28 times higher in the most deprived areas compared to the least deprived areas.

Trends in absolute inequalities

The absolute gap in rates between those living in the most deprived areas and the least deprived areas has increased overall since the start of the time series. After an initial increase between 1996/97 and 1998/99 the absolute gap remained relatively stable, ranging from 309.6 - 385.2 per 100,000 between 1999/00 and 2012/13 before increasing in each of the past five years. In 2017/18 the absolute gap was at its highest level at 595.3 per 100,000. These fluctuations have mainly been driven by changes in drug-related hospital admissions in the most deprived areas, with drug-related hospital admissions in the least deprived areas remaining fairly static over time.

Figure 12.3

**Absolute Gap: Drug-related hospital admissions <75y
Scotland 1996/97-2017/18
(European Age-Standardised Rates per 100,000)**
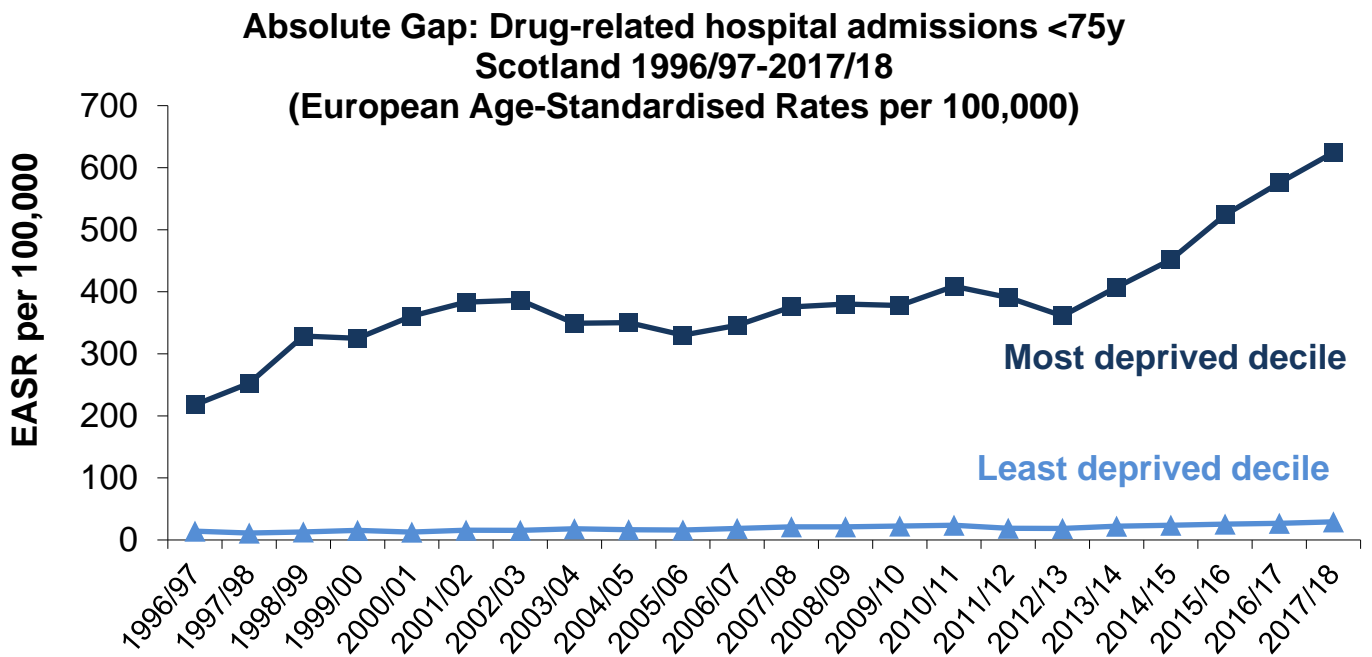
Annex 1: Technical Notes

Measurement of Inequalities

Different measures can give information about different aspects of inequalities. Some measures concentrate on the extremes of deprivation, whilst others include inequalities across the scale, taking into account the whole population. Absolute and relative measures can give quite different interpretations of inequalities. In addition to this, measures based on rates alone will not give insight into the scale of the problem.

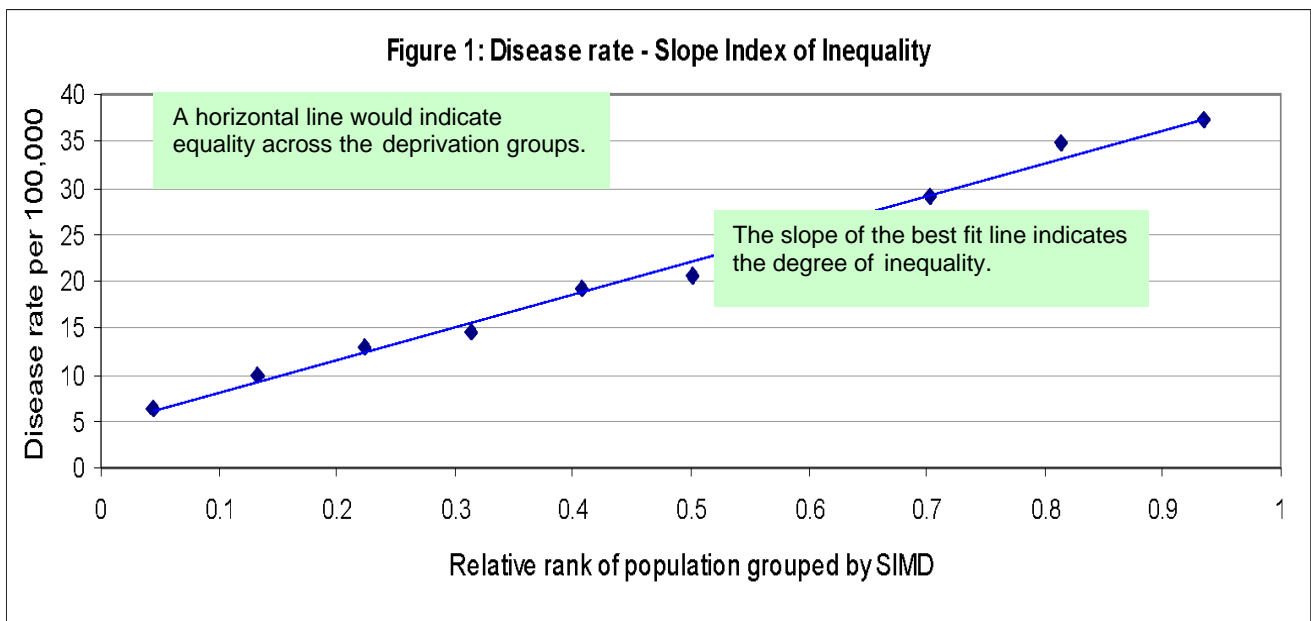Information about different measures of inequality and their calculation was based on work done by the Scottish Public Health Observatory, available at: https://www.scotpho.org.uk/publications/reports-and-papers/measuring-socio-economic-inequalities-in-health-a-practical-guide/

The approach recommended by the expert group and adopted in this report uses a combination of measures, with the aim of giving a fuller understanding of the inequalities concerned.

Relative Index of Inequalities (RII): How steep is the inequalities gradient?

The RII describes the gradient of health observed across the deprivation scale, relative to the mean health of the whole population.

The RII is the slope index of inequality (SII) divided by the population mean rate. The SII is defined as the slope of the "best fit" regression line showing the relationship between the health status of a particular group and that group's relative rank on the deprivation scale. An equal rate across the deprivation categories would give a horizontal line with a slope of zero (SII=0), indicating no inequalities. The larger the absolute value of SII, the greater the inequalities observed (see Figure 1).

Figure 1: Disease rate - Slope Index of Inequality

A horizontal line would indicate equality across the deprivation groups.

The slope of the best fit line indicates the degree of inequality.

Y-axis: Disease rate per 100,000

X-axis: Relative rank of population grouped by SIMD

The SII and RII have the advantage that they are based on data about the whole population, rather than just the extremes, and so take into account inequalities across the scale. They do, however, require a reasonably linear relationship between the health indicator and deprivation (or income). Another disadvantage is that the SII and RII are relatively difficult to interpret for a non-statistical audience.

The technical expert group concluded in 2012 and re-iterated in 2015 that, while there was evidence of non-linearity in some years for some indicators, linear methodology should be retained due to the complexity of non-linear methods, and the need of consistent reporting and general understanding.

The RII and SII for each indicator are available in the supplementary tables, available in the supporting files section.

Absolute range: How big is the gap?

This measure describes the absolute difference between the extremes of deprivation.

This measure has the advantage that it is intuitive and straightforward to explain. It has the disadvantage that, because it focuses only on the extremes of deprivation, it does not take account of patterns of inequalities observed across the intermediate groups.

Scale: How big is the problem?

The aim of this measure is to give insight into the underlying scale of the problem and to put it in context, for example by presenting numbers involved and past trends at Scotland level.

Income-Employment Index

The Technical Advisory Group also addressed the precise way in which deprivation should be defined for this work. The group agreed that the ideal would be to use individually linked records of health and socio-economic indicators, but acknowledged that these are not yet available. The preferred interim approach was to use the latest available versions of the Scottish Index of Multiple Deprivation income and employment domains. The reasoning behind this was that income / poverty / employment are felt to be the best indicators of deprivation for health inequalities analysis and because the possibility of being able to update these domains on a regular basis.

In order to combine the SIMD income and employment domains, each domain was exponentially transformed to reduce averaging effects. Exponential transformation gives greater weighting to the most deprived ranking, so combining a datazone ranked most deprived with a datazone ranked least deprived would give a combined ranking skewed towards the deprived end of the scale. This is the method used to create the SIMD.

The income and employment domains have been given equal weighting when combined in the income-employment Index.

In line with the recommendations of the Technical Advisory Group, the income-employment Index deciles are population based. Datazone based deciles are produced by ranking the datazones in Scotland according to their deprivation score and then dividing them into deciles based on number of datazones. Population-basing the deciles uses the same approach but also takes into account the population sizes involved. The datazones are ranked according to their deprivation score alongside a cumulative total of datazone populations. The cut-off for decile 1 is the point at which 10% of the population has been included, rounded to the nearest whole datazone. Population-basing ensures the deciles contain equally sized populations, which is the best proxy to individual level indicators of deprivation available when using an area-based measure. Equally sized populations in the deciles are considered to be important for the types of inequalities analyses presented in this report.

European age-standardised rates

Rates are age-standardised in order to show patterns over time on a consistent basis, taking account of changes in the age distribution of the Scottish population, therefore more clearly showing any underlying trend. Similarly, age-standardisation allows comparisons of rates for different countries, by taking account of differences in the age distributions in the populations of each country.

The 2013 European Standard Population (ESP) has been used to calculate European age-standardised rates included in this publication.

Annex 2: Data sources and quality

Data quality

Aggregate data is provided by National Records of Scotland for the mortality and alcohol mortality indicators, and by ISD Scotland for all other indicators in this report. Scottish Government statisticians carry out quality assurance checks on the aggregate data, comparing it with past trends and against other published data, such as national level data published by NRS or ISD.

ISD Scotland and NRS are responsible for the quality assurance of their own datasets. Detailed information on the quality control of the relevant ISD datasets is available online[3]. National Records of Scotland have published detailed information on the quality of data on deaths[4]. Analysts at both ISD and NRS are provided with income-employment decile-datazone lookups and population estimates before a request for aggregate data is submitted.

---

[3] http://www.isdscotland.org/Health-Topics/Cancer/Scottish-Cancer-Registry/Quality-Assurance/

[4] http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/deaths-background-information/quality-of-nrs-data-on-deaths

Pre-release access

In accordance with the Pre-release Access to Official Statistics (Scotland) Order 2008, pre-release access to these statistics was provided to Scottish Government policy and communications officials 5 working days before release for the purposes of briefing ministers.

Indicators

Premature Mortality (from all causes, aged under 75 years)

Source: National Records of Scotland.
Definition: European age-standardised rates of deaths from any cause amongst those aged under 75 years.

Coronary Heart Disease - first ever hospital admission for heart attack aged under 75 years

Source: NHS Information Services Division (ISD); SMR01 records (all inpatient and daycase discharges).
Definition: European age-standardised rates of first ever hospital admission for acute myocardial infarction (heart attack) amongst those aged under 75 years. The following World Health Organisation International Classification of Disease coding was used: ICD10 'I21-I22'; ICD9 '410'.

Coronary Heart Disease - deaths aged 45-74 years

Source: NHS Information Services Division (ISD); using deaths data from National Records of Scotland.
Definition: European age-standardised rates of death from coronary heart disease amongst those aged 45-74 years. The following World Health Organisation International Classification of Disease coding was used: ICD10 'I20-I25'; ICD9 '410-414'. Because of the dynamic nature of the linked database, previous years' data are sometimes updated in subsequent publications.

Cancer - incidence rate aged under 75 years

Source: NHS Information Services Division (ISD); Scottish Cancer Registry.
Definition: European age-standardised rates of new cases of cancer amongst those aged under 75 years.
All Cancers- cancer defined as all malignant neoplasms excluding non-melanoma skin cancer. The following World Health Organisation International Classification of Disease coding was used: ICD10 'C00-C96' excluding 'C44' (the Scottish Cancer Registry does not use code 'C97').
Prostate cancer (males only) - ICD-10 C61
Breast cancer (females only) - ICD-10 C50
Cancer of the trachea, bronchus and lung- ICD-10 C33-C34
Colorectal cancer- ICD-10 C18-C20

Cancer - deaths aged 45-74 years

Source: NHS Information Services Division (ISD); Scottish Cancer Registry.
Definition: European age-standardised rates of deaths from cancer amongst those aged under 45-74 years.

All cancers- cancer defined as all malignant neoplasms excluding non-melanoma skin cancer. The following World Health Organisation International Classification of Disease coding was used: ICD10 (2000 onwards) 'C00-C97' excluding 'C44'.
Prostate cancer (males only) - ICD-10 C61
Breast cancer (females only) - ICD-10 C50
Cancer of the trachea, bronchus and lung- ICD-10 C33-C34
Colorectal cancer- ICD-10 C18-C20

Alcohol - first hospital admission aged under 75 years

Source: NHS Information Services Division (ISD).
Definition: European age-standardised rates of first hospital admission for alcohol-related conditions amongst those aged under 75 years.   These rates include hospitals discharges where alcohol-related problems are recorded as either primary or secondary reasons for admission to hospital and will cover first admission in the last ten years. These figures exclude private hospitals, mental illness hospitals, psychiatric units and maternity hospitals and include Scottish residents only. Caution is necessary when interpreting these figures. The recording of alcohol misuse may vary from hospital to hospital. Where alcohol misuse is suspected but unconfirmed it may not be recorded by the hospital. The following revised World Health Organisation International Classification of Disease coding was used: ICD10: F10, K70, X45, X65, Y15, Y90, Y91, E244, E512, G312, G621, G721, I426, K292, K860, O354, P043, Q860, T510, T511, T519, Y573, R780, Z502, Z714, Z721.

Alcohol - deaths aged 45-74 years

Source: National Records of Scotland.
Definition: This indicator changed from alcohol-related deaths to alcohol-specific deaths in this report following the introduction of a new definition of alcohol deaths by NRS towards the end of 2017.

Alcohol-specific deaths
European age-standardised rates of death from alcohol-specific conditions amongst those aged 45-74 years. The definition of alcohol- specific deaths includes deaths which are known to be a direct consequence of alcohol misuse. The following World Health Organisation International Classification of Disease coding was used: ICD10 E24.4, F10, G31.2, G62.1, G72.1 I42.6, K29.2, K70, K85.2, K86.0, Q86.0, R78.0, X45, X65, Y15; ICD9 291, 303, 305.0, 357.5, 425.5, 535.3, 571.0, 571.1, 571.2, 571.3, 790.3, E860.

The figures for alcohol deaths do not include all deaths which may be caused by alcohol – for example, they do not include deaths:
- As a result of road accidents, falls, fires, suicide or violence involving people who had been drinking; or

- From some medication conditions which are considered partly attributable to alcohol, such as certain forms of cancer.

Alcohol-related deaths – definition used in previous reports
The definition of alcohol- related deaths included deaths where there was any mention of alcohol-related conditions on the death certificate, rather than just as the main cause of death. The following World Health Organisation International Classification of Disease coding was used: ICD10 F10, G31.2, G62.1, I42.6, K29.2, K70, K73, K74.0, K74.1, K74.2, K74.6, K86.0, X45, X65, Y15; ICD9 291, 303, 305.0, 425.5, 571.0, 571.1, 571.2, 571.3, 571.4, 571.5, 571.8, 571.9, E860.

The numbers produced using the two definitions show broadly similar patterns of change over the period from 2000 to 2016, with the new definition's figures for Scotland tending to be very roughly 10% lower. For more information about the change of definition please see the NRS website:
https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/alcohol-deaths

All-cause mortality aged 15-44 years

Source: National Records of Scotland.
Definition: European age-standardised rates of deaths from any cause amongst those aged 15-44 years. Specific breakdowns for deaths from assault, drug related deaths and suicide are also provided, as the major causes of death for which there are large inequalities amongst young people. There may be some double counting in these breakdowns. The following World Health Organisation International Classification of Disease coding was used: Assault ICD10 'X85-Y09', 'Y87.1' ICD9 'E960-969'; Drug-related ICD10 'F11-16', 'F19', 'X40-44', 'X60-64', 'X85', 'Y10-Y14'; Suicide (intentional self-harm + undetermined intent) ICD10 'X60-84', 'Y87.0' ICD9 'E950-959', 'E980-989'.

Low Birthweight

Source: NHS Information Services Division (ISD); SMR02 maternity dataset.
Definition: The figures are presented as a percentage of all live singleton births (not including home births or births in non-NHS hospitals). Low birthweight is defined as <2,500g - the standard World Health Organisation definition.

Healthy Birthweight

Source: NHS Information Services Division (ISD); SMR02 maternity dataset.
Definition: A baby is considered to be of healthy birthweight (a weight appropriate for its gestational age) when it lies between the 5th and 95th centile for weight at its gestational age. Gestational age is a way of expressing the age or development of a baby. It is typically based on an antenatal ultrasound scan. However, it may also

be estimated from the number of weeks since the mother's last normal menstrual period.

Data on appropriate birthweight for gestational age are produced using tables based on the UK-WHO child growth standards developed by the Royal College of Paediatrics and Child Health, see: https://www.rcpch.ac.uk/resources/growth-charts

Drug-related hospital admission aged under 75 years

Source: NHS Information Services Division (ISD).
Definition: European age-standardised rates of hospital admissions for drug misuse amongst those aged under 75 years. These rates are based on inpatients and day cases discharged from general acute and psychiatric specialties in Scotland, where drug misuse was mentioned in the records at some point during the patient's hospital stay. Patients admitted to hospital multiple times in the same financial year will only be counted once per year. Patients admitted in multiple financial years will be included once in each year they are admitted. These figures include SMR01 records (general/acute inpatient and day cases) and SMR04 records (mental health inpatient and day cases). Some caution is necessary when interpreting these figures as drug misuse may only be suspected and may not always be recorded by the hospital. The following revised World Health Organisation International Classification of Disease coding was used: ICD10: F11, F12, F13, F14, F15, F16, F17, F18, F19, T40.0, T40.1, T40.3, T40.5, T40.6, T40.7, T40.8, T40.9. For the following T-codes a continuous inpatient stay (CIS) is counted if there is a presence in the same CIS of at least one of the ICD-10 Mental and Behavioural Disorder codes F11-F16, F18 or F19: T40.2, T40.4, T42.3, T43.6, T52.

An Official Statistics publication for Scotland

Official and National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. Both undergo regular quality assurance reviews to ensure that they meet customer needs and are produced free from any political interference.

Correspondence and enquiries
For enquiries about this publication please contact:

Morag Shepherd
Population Health Team
Health Analytical Services
Directorate for Finance, eHealth and Analytics
DG Health and Social Care

Telephone: 0131 244 6165
e-mail: morag.shepherd@gov.scot

For general enquiries about Scottish Government statistics please contact:
Office of the Chief Statistician, Telephone: 0131 244 0442,
e-mail: statistics.enquiries@gov.scot

How to access background or source data

The data collected for this statistical bulletin:

☐ are available in more detail through statistics.gov.scot

☐ are available via an alternative route

☐ may be made available on request, subject to consideration of legal and ethical factors. Please contact scottishhealthsurvey@gov.scot for further information.

☒ cannot be made available by Scottish Government for further analysis as Scottish Government is not the data controller.

Complaints and suggestions
If you are not satisfied with our service or have any comments or suggestions, please write to the Chief Statistician, 3WR, St Andrew's House, Edinburgh, EH1 3DG, Telephone: (0131) 244 0302, e-mail statistics.enquiries@gov.scot.

If you would like to be consulted about statistical collections or receive notification of publications, please register your interest at www.gov.scot/scotstat
Details of forthcoming publications can be found at www.gov.scot/statistics

ISBN 978-1-83960-465-2 (web only)

Crown Copyright
You may use or re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. See:
www.nationalarchives.gov.uk/doc/open-government-licence/