

Health inequalities



The most significant health inequalities in Scotland are described in the [Long-term Monitoring of Health Inequalities](#) annual report. These include:

- Mortality rates for the leading causes of death
- Heart attack hospital admissions
- Alcohol-related hospital admissions
- Low birthweight
- Mental wellbeing
- Healthy life expectancy

These health outcomes have a strong association with area deprivation.

Measuring inequalities

The Long-term Monitoring of Health Inequalities report uses two different measures to give a fuller understanding of area-based health inequalities:

- **Absolute inequality**, measured using the absolute range
- **Relative inequality**, measured using the Relative Index of Inequality (RII)

Absolute range

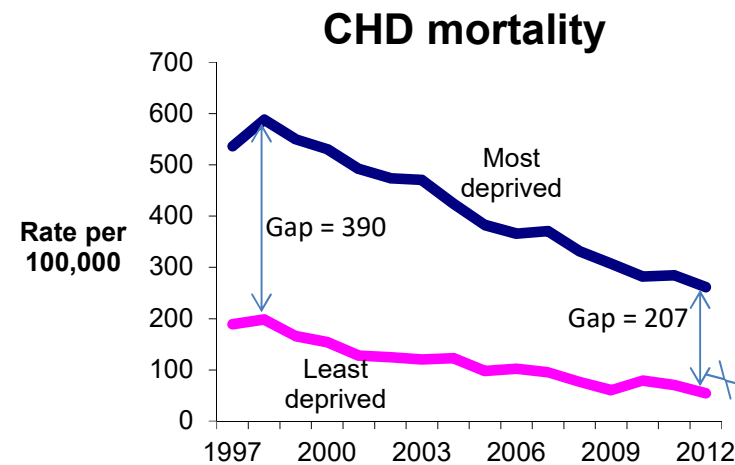
This is the gap in the measure between the most and least deprived areas.

Advantage

- Easily understood.

Disadvantage

- Does **not** take account of the full population- only the extremes of deprivation.
- It cannot be used to compare different indicators.



The absolute gap in CHD mortality has reduced over time

Relative Index of Inequality (RII)

RII describes inequality across the full population relative to the mean. It is an **index** number, suited to measuring trends over time and making comparisons between health outcomes

Advantage

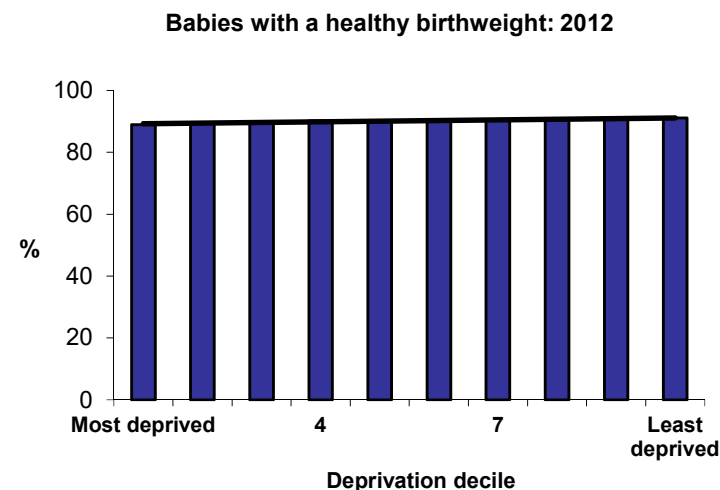
- It is comparable between indicators which are based on similar measures (e.g. age-standardised rates).
- We can conclude which indicators have the greatest inequalities.
- It is also based on data about the whole population, not just the extremes of deprivation.

Disadvantage

- Its interpretation is not straightforward.
- It assumes a linear relationship between the health measure and deprivation.
- Sensitive to absolute levels.

Relative Index of Inequality (RII): Interpretation

- RII tells you the magnitude of inequality in relation to the mean.
- If $RII = 0$, there is no inequality, though there still may be some variation between deprivation deciles.
- The natural upper limit on RII is 2.0, assuming a linear relationship between the measure and deprivation.
- Higher RII = greater inequality relative to the mean

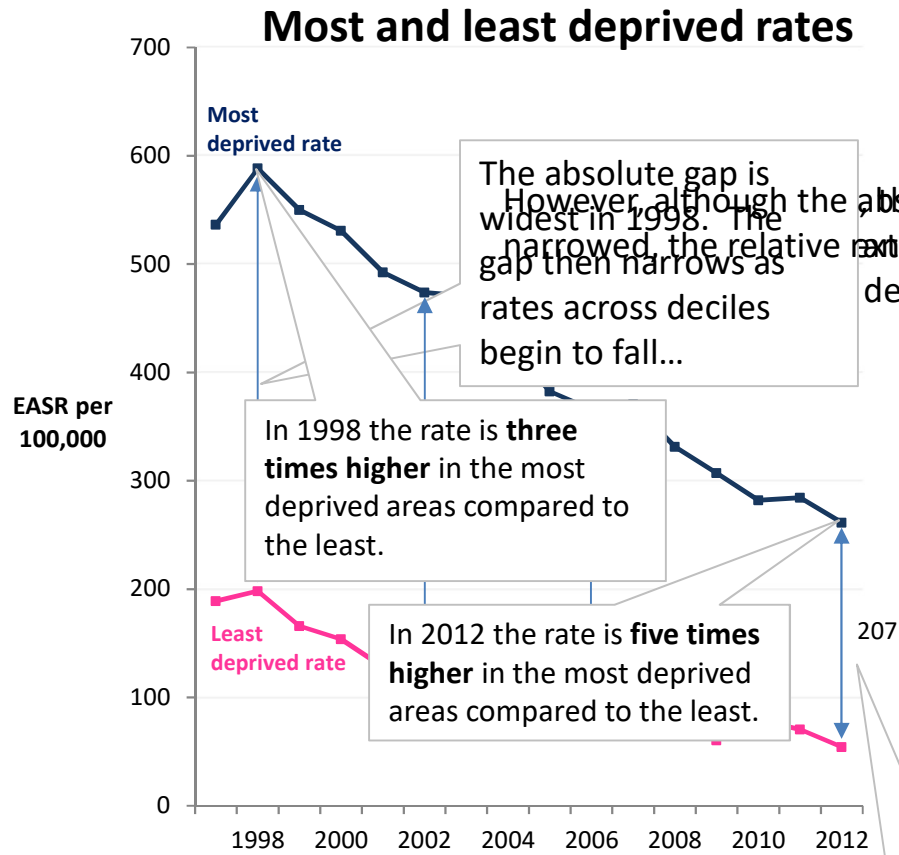


Relative and absolute inequalities are very close to zero in the example above.

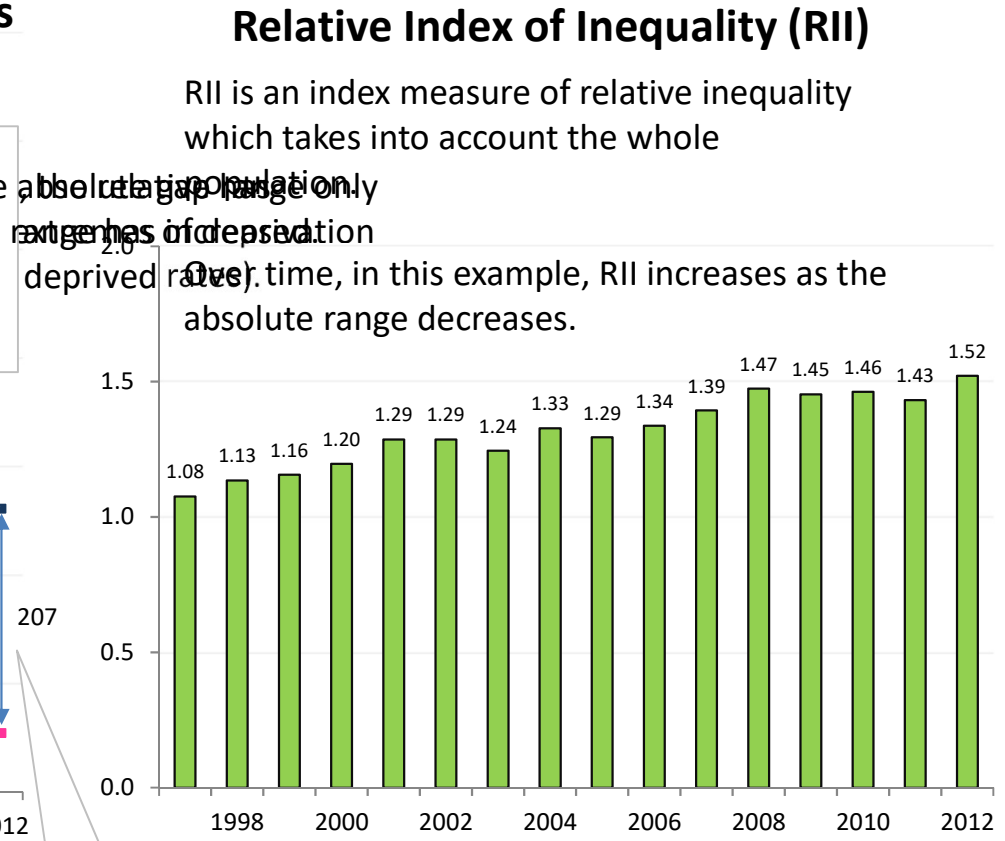
How do the absolute range and RII relate to each other?

- A linear model is fitted to the data such that
Absolute range = RII * mean
- Most mortality and incidence **mean** rates are declining over time.
 - If the gap between most and least deprived remains the same, inequality relative to the mean will generally **increase**.

Worked example: CHD mortality 45-74 years



CLICK HERE TO PLAY/REPLAY ANIMATION



The absolute gap has narrowed since 1998.

But despite reduced inequality in absolute terms, inequality relative to the mean has continued to increase. In 2012, RII is higher than in any other year.

More information

- [Background](#) to health inequalities indicators
- [Results and publications](#), including links to reports, web tables and [interactive charts](#)
- [Methodology](#), with a more detailed explanation of the measures presented in the publications and charts
- [Contacts](#)