NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

NICE indicator validity assessment

Assurance date: August 2023

Review date: August 2026

# Indicator IAP00017

# Under 75 mortality from cardiovascular disease.

(See also IAP00072 CCG Outcomes Indicator Set version)

# Indicator type

National Library of Quality Indicators.

# Importance

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| **Considerations** | **Assessment** |
| Indicator is part of the [NHS outcomes framework](https://digital.nhs.uk/data-and-information/publications/statistical/nhs-outcomes-framework) (NHS OF) domain 1 – preventing people from dying prematurely (indicator 1.1).  The [NHS Long Term Plan](https://www.longtermplan.nhs.uk/) identifies cardiovascular disease as a clinical priority. | The indicator reflects a specific priority area identified by NHS England. |
| Nationally rates have been falling over time, from a directly age-standardised rate per 100,000 of 138.2 in 2003 to 73.8 in 2020. Deprivation data is available from 2009 onwards and shows significantly higher rates in the most deprived deciles. Regional breakdowns are also available, with gender splits for all breakdowns and age splits at England level only. ([NHS OF data for indicator 1.1](https://digital.nhs.uk/data-and-information/publications/statistical/nhs-outcomes-framework/march-2022/domain-1---preventing-people-from-dying-prematurely-nof/1.1-under-75-mortality-rate-from-cardiovascular-disease), March 2022 release). | The indicator relates to an area where there is known variation.  The indicator addresses under-treatment. |
| Indicator is part of the NHS outcomes framework section 1 focussing on prevention of premature mortality, with the aim of lowering the numbers to improve health outcomes. | The indicator will lead to a meaningful improvement in patient outcomes. |

# Evidence base

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| **Considerations** | **Assessment** |
| From [supporting documentation for indicator IAP00017](https://www.nice.org.uk/standards-and-indicators/nlindicators/under-75-mortality-from-cardiovascular-disease-nhsof): Cardiovascular disease (CVD) is one of the major causes of death in under 75s in England. There have been huge gains over the past decades in terms of better treatment for CVD and improvements in lifestyle, but to ensure that there continues to be a reduction in the rate of premature mortality from CVD, there needs to be concerted action in both prevention and treatment.  [NICE’s quality standard QS100](https://www.nice.org.uk/guidance/qs100) includes quality statements on identifying and assessing cardiovascular disease in adults and treatment to prevent cardiovascular disease.  The [NHS Long Term Plan](https://www.longtermplan.nhs.uk/) identifies cardiovascular disease as a clinical priority. | The indicator is derived from a high-quality evidence base.  The indicator aligns with the evidence base. |

# Specification

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| **Considerations** | **Assessment** |
| Numerator: Number of deaths for which cardiovascular disease (ICD10 I00-I99) is given as the underlying cause of death, based on the original cause recorded on the death certificate.  Denominator: Mid-year population estimates.  Calculation: Directly age-standardised rates.  Exclusions: None.  Definitions: Cardiovascular disease uses codes ICD10 I00-I99.  Geography: England, regions, deprivation decile.  Data source: Specification says Primary Care Mortality Database (PCMD), but then refers to ONS Mortality data. It is the same source but could be clearer that this is the case. ONS mid-year population estimates.  Disclosure control: None due to region being lowest geography level published. | The indicator has defined components necessary to construct the indicator, including numerator, denominator and exclusions. |

# Feasibility

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| **Considerations** | **Assessment** |
| Both numerator and denominator come from reliable sources which will continue. | The indicator is repeatable. |
| Data is available from ONS:   * ONS mortality data * ONS mid-year population estimates. | The indicator is measuring what it is designed to measure.  The indicator uses existing data fields. |

# Acceptability

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| **Considerations** | **Assessment** |
| The [NHS OF quality statement for indicator 1.1](https://digital.nhs.uk/data-and-information/publications/statistical/nhs-outcomes-framework/march-2022/domain-1---preventing-people-from-dying-prematurely-nof/1.1-under-75-mortality-rate-from-cardiovascular-disease) (May 2020) notes that not all deaths from cardiovascular disease are amendable to healthcare and include contributions from public health, social care and other contributions. | The indicator assesses performance that is attributable to or within the control of the audience. |
| Rates are published each year by NHS England as part of the NHS Outcomes Framework (indicator 1.1).  Overall rates have dropped over time, however in the most deprived deciles improvement seems to have stalled in recent years. | The results of the indicator can be used to improve practice |

# Risk

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| **Considerations** | **Assessment** |
| Changes in methods for the underlying data may impact comparability of data over time.  Changes in the software used to code death registrations in England and Wales may result in changes in cause of death. In 2014 the ONS made changes to the way cause of death is categorised (using IRIS ICD10 coding change). For cardiovascular disease it was estimated a 0.7% decrease in deaths would be the result of this change, so the decrease between 2013 and 2014 would be greater than if the changes hadn’t taken place.  The [Public Health Outcomes Framework publishes indicator E04a](https://fingertips.phe.org.uk/profile/public-health-outcomes-framework): under 75 mortality rate from all cardiovascular diseases. The indicator source is the Office for Health Improvement and Disparities but this uses ONS data. This notes the adjustment of deaths up to 2019 to take account of the [MUSE ICD10 coding change](https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/causeofdeathcodinginmortalitystatisticssoftwarechanges/january2020) introduced in January 2020. The ONS reports an estimated -0.8% change from previous for diseases of the circulatory system.  ONS mid-year population estimates for 2020 were superseded by newer versions that use the same population estimates but incorporate new measures of statistical uncertainty. Census 2021 affects population estimates and so previous indicator data may not be comparable ([Public Health Outcomes Framework, indicator 40401; indicator definitions and supporting information 7 March 2023](https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/6/gid/1000044/pat/159/par/K02000001/ati/15/are/E92000001/iid/40401/age/163/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1)).  Statistics from 2020 mortality data should be interpreted with care as they may have been impacted by the COVID-19 pandemic.  Similar indicators are included in the [Public Health Outcomes Framework](https://fingertips.phe.org.uk/profile/public-health-outcomes-framework) (PHOF) and the CCGOIS (IAP00072). Methodology should match but risk of two indicators saying different things. | The indicator has an acceptable risk of unintended consequences. |

# NICE indicator advisory committee recommendation

The NICE indicator advisory committee approved renewal of this indicator.

**NHS Digital Indicator Reference:**

NHS Outcomes Framework - 1.1 Under 75 mortality rate from cardiovascular disease