NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

NICE indicator validity assessment

Assurance date: August 2023

Review date: August 2026

# Indicator IAP00090

Under 75 mortality from cancer.

(See also IAP00124 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) domain 1 – preventing people from dying prematurely (indicator 1.4).  The [NHS Long Term Plan](https://www.longtermplan.nhs.uk/) identifies cancer 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 165.8 in 2003 to 125.1 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. ([NHSOF data for indicator 1.4](https://digital.nhs.uk/data-and-information/publications/statistical/nhs-outcomes-framework/march-2022/domain-1---preventing-people-from-dying-prematurely-nof/1.4-under-75-mortality-rate-from-cancer), March 2022 release). | The indicator relates to an area where there is known variation in practice.  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.  From [supporting documentation for indicator IAP00090](https://www.nice.org.uk/standards-and-indicators/nlindicators/patient-safety-incident-reporting-nhsof):  This indicator has been introduced to demonstrate that the NHS can make a contribution to improving preventable as well as amenable cancer mortality. | The indicator will lead to a meaningful improvement in patient outcomes. |

# Evidence base

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| **Considerations** | **Assessment** |
| Approximately 23% of cancer deaths thought to be amenable to prevention as a result of health care timeliness and effectiveness. There are multiple contributions to variation in mortality rates from population level contributions such a lifestyle and community interventions (e.g., smoking, alcohol, obesity), clinical patient variables (co-morbidity, disease stage) patient behaviour (e.g., presenting to health care, treatment adherence), health systems effects (e.g., screening, early referral, early treatment). Some cancers are more amenable than others to health system impact on mortality). | 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 cancer (ICD10 C00-C97) 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: Cancer uses codes ICD10 C00-C97.  Geography: England, regions, deprivation decile.  Data Source: Specification says Primary Care Mortality Database (PCMD), but then refers to ONS Mortality data. It’s the same source but could be clearer that this is the case. ONS mid-year population estimates.  Disclosure control: None due to region being the 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 1.4](https://digital.nhs.uk/data-and-information/publications/statistical/nhs-outcomes-framework/march-2022/domain-1---preventing-people-from-dying-prematurely-nof/1.4-under-75-mortality-rate-from-cancer) notes a healthcare, public health and social care contribution to improvements in this indicator but also highlights that incidence of disease is greatly affected by demographic and cohort effects, therefore consideration should be given to external factors when reviewing the progress of this indicator. | 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 1.4).  Overall rates have dropped over time, however there is significant variation by region and deprivation decile. | The results of the indicator can be used to improve practice. |

# Risk

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| **Considerations** | **Assessment** |
| 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 cancer it was impossible to determine exactly how much these changes had affected the data, however it is unlikely to have made a big impact.  The [Public Health Outcomes Framework publishes indicator E05a](https://fingertips.phe.org.uk/profile/public-health-outcomes-framework): under 75 mortality rate from cancer. This indicator source here 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 0.5% change from previous for neoplasms.  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 E05a](https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/6/gid/1000044/pat/159/par/K02000001/ati/15/are/E92000001/iid/40501/age/163/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1); indicator definitions and supporting information 7 March 2023).  Similar indicators included in the Public Health Outcomes Framework (PHOF) and the CCGOIS (IAP00124). 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 - 1.4 Under 75 mortality rate from cancer.