

Public Health & Communities

# Inequalities & Cancer Suffolk 2023

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## Key points

- 1. Cancer is one of the biggest contributors to inequalities in life expectancy. In Suffolk, cancer is estimated to contribute 16.8% to the 7-year life expectancy gap between the most and least deprived areas for males, and 22.1% to the 5.4-year gap for females.
- 2. Cancer is more common in older adults. Suffolk's population projected to increase significantly particularly for those aged 65 years and over. Suffolk's population is ageing, meaning there will likely be increased demand for cancer services in the county over the coming years.
- 3. In 2020/21, Suffolk had 247 excess deaths from cancer because of existing inequalities (if the most deprived 20% of the population had the same cancer mortality rate as the least deprived 20% of the population in Suffolk).
- 4. GP practice populations in Suffolk's more deprived areas typically have fewer individuals attending cancer screening for bowel, cervical, and breast cancers (more information in earlier diagnosis (routes and screening) chapter).
- 5. Those living in communities where deprivation is higher, have an increased likelihood of getting cancer, being diagnosed at a later stage, and dying from the disease.

## Introduction to cancer inequalities

Cancer inequalities are systematic differences between social groups that influence:

• An individual's risk of developing cancer.

- The likelihood that an individual receives effective and timely (or any) treatment for the cancer.
- Whether an individual survives.
- Whether an individual has access to palliative care.

Cancer Research found that 20,000 additional new cases of cancer each year are in the most deprived areas within the UK<sup>1</sup>, and in Suffolk, 2020/21, 247 excess deaths from cancer were associated with existing inequalities. Therefore, it is essential that attention is directed towards inequalities to reduce the burden of disease, supporting the improvement of cancer experiences and outcomes within the county.

This chapter outlines how inequalities influence Suffolk resident's cancer experiences and outcomes and highlights factors that could influence the future burden of disease and demand for services within Suffolk. Inequalities can occur on many axes<sup>2</sup>; however, this profile focuses on the impacts of:

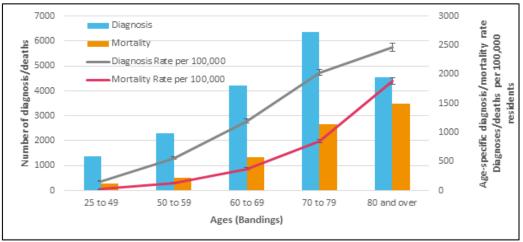
- <u>Age</u>
- <u>Gender</u>
- <u>Ethnicity</u>
- <u>Deprivation</u>

### Age

Our cells get damaged over time. This damage can then build up as we age, increasing our risk of most types of cancer. The national cancer institute states that half of all cancer diagnoses are in people aged 66 years and older. A similar pattern is shown for many common cancer types, with median age at diagnosis identified as 62 years for breast cancer, 67 years for colorectal cancer, 71 years for lung cancer, and 66 years for prostate cancer. Although this pattern is shown across many cancer types, diagnosis can still occur at any age. For example, bone cancer is most frequently diagnosed in children and adolescents (people under age 20<sup>3</sup>).

In Suffolk, cancer incidence and mortality has been shown to increase with age. Figure 1 shows the cancer incidence and mortality rates per 100,000 across different age bands within Suffolk and North East Essex Integrated Care Board (SNEE ICB) between 2018-20. Results show that cancer incidence and mortality rates are highest for those aged 80 or over, with almost 8 in 10 (79.9%) diagnoses occurring in individuals aged 60 and above. During the same period, individuals under the age of 25 accounted for 0.8% of all new cancer cases in SNEE ICB.

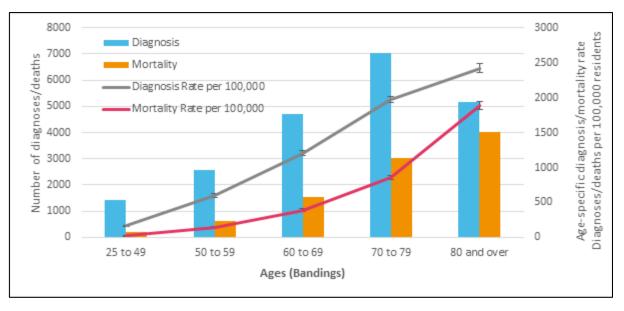
Figure 1. Number of cancer diagnoses (all malignant cancers excluding non-melanoma skin cancer) for Suffolk and North East Essex ICB (age-specific rate per 100,000) between 2018-2020 by age group.



#### Source: CancerData

Additionally, figure 2 shows the cancer incidence and mortality rates per 100,000 across different age bands within Norfolk and Waveney ICB between 2018-20. Akin to SNEE ICB, Norfolk and Waveney rates for diagnosis and mortality increased with age, both highest in the 80 and over age groups. Over 1 in 3 of all new cancer diagnoses (33.4%) were amongst individuals aged 70 to 79 and over 2 in 5 cancer mortalities (42.5%) were amongst individuals aged 80 and over.

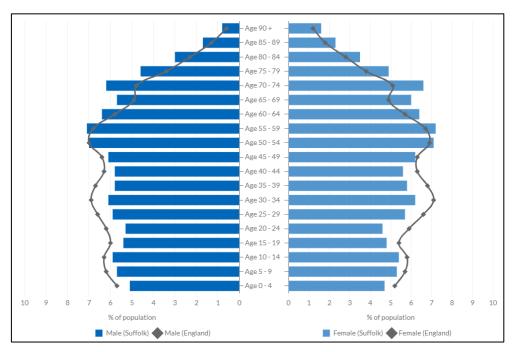
Figure 2. Number of cancer diagnosis (all malignant cancers excluding non-melanoma skin cancer) for Norfolk and Waveney ICB (age-specific rate per 100,000) between 2018-2020 by age group.



#### Source: CancerData

Moreover, across Suffolk the burden of this disease is expected to increase as Suffolk's population ages. Suffolk has a population of 760,700, reported at the time of the 2021 Census<sup>4</sup>. Figure 3 shows the age-sex breakdown of Suffolks population. Results show that children and young people (aged between 0 and 15 years) account for 17.1% of Suffolk residents, 1.4 percentage points lower than England estimates (18.5%). The adult population (aged between 16 and 64 years) account for 59.3%, 3.9 percentage points lower than England estimates (63.2%). 23.6% of Suffolk residents are 65 years or over, five percentage points higher than the England average (18.6%).

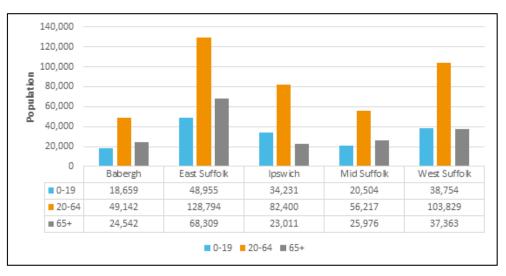




Source: Suffolk Observatory

Furthermore, figure 4 shows the population by selective age groups across Suffolk's districts and boroughs, reported at the time of the 2021 Census. Results show that East Suffolk district has the largest population with 246,058 residents and Babergh district has the smallest with a count of 92,343. East Suffolk also has the highest proportion of residents aged 65 and over with a proportion of 27.8%, 4.2 percentage points higher than Suffolk, and 9.2 percentage points higher than England estimates. Ipswich has the lowest proportion of residents aged 65 and over, with a proportion of 16.5%, 7.1 percentage points lower than Suffolk, and 2.1 percentage points lower than England estimates.

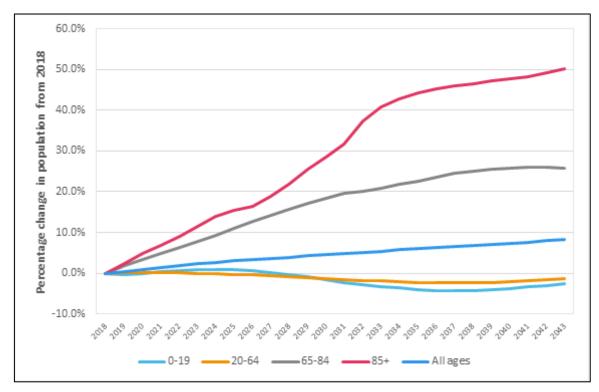
Figure 4. Population estimates for Suffolk boroughs/districts by selected age groups, as reported by the 2021 Census.



#### Source: Population and household estimates, 2021 Census

Additionally, the proportion of Suffolk residents 65 years old and over is expected to grow over the next 20 years. Figure 5 shows Suffolk's projected population growth until 2043, for age bands 0-19, 20-64, 65-84 and 85+. Results show that the 85 years and over age band is expected to see the

steepest increase, with a percentage increase in population of 50.3% from 2018 to 2043. The proportion of Suffolk residents aged 65 to 84 is also expected to increase, with a percentage increase of 25.8% from 2018 to 2043. Overall, the proportion of Suffolk's residents 65 years or over is expected to grow from one in four, in 2020 to one in three by 2043. Furthermore, the proportion of young people (aged 0-19 years) and working age adults (aged 20 -64 years) are expected to marginally decrease with percentage decreases of 2.5% and 1.3% respectively.





#### Source: Population projections, 2021 Census

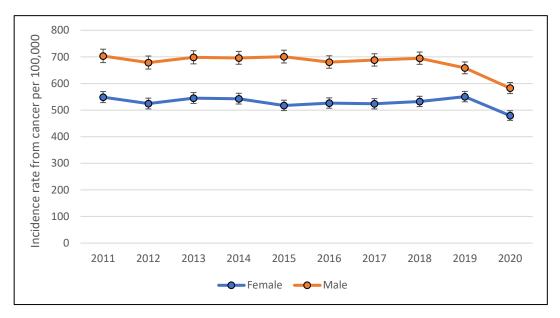
Overall, with 23.6% of Suffolk residents 65 years or older, projections showing a significant increase in this proportion over the next 20 years, and cancer incidence and mortality higher in populations aged 65 and over, there may be an increased demand for cancer services across the county.

### Gender

It is known that for the 10 most common cancers affecting both men and women, incidence and mortality rates are highest among men. The cause of this gender inequality is not fully understood, but it is suggested that differences in lifestyle factors such as smoking and physical activity, as well as occupational exposure to risk factors are likely to be major contributors<sup>5</sup>.

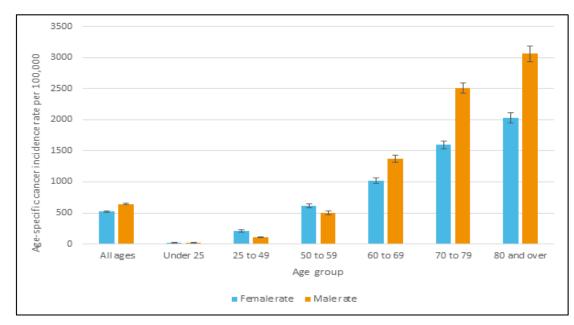
Figure 6 shows male and female cancer incidence rates per 100,000 from all malignant cancer types in Suffolk and North East Essex ICB between 2011 to 2020. For each year since 2011, males have had a statistically significantly higher cancer incidence rate than females within SNEE ICB. Male cancer incidence rates have remained statistically similar from 2011 (703.4 per 100,000) to 2019 (658.6 per 100,000), as have female cancer incidence rates in 2011 (548.8 per 100,000) to 2019 (550.5 per 100,000). The male cancer incidence rate within SNEE ICB in 2020 (582.6 per 100,000) was 21.6% higher than the female cancer incidence rate in 2020 (479.3 per 100,000).

Figure 6. Male and female cancer incidence rates per 100,000 from all cancer types in Suffolk and North East Essex ICB, between 2011 to 2020.



Recent research also has found that almost two in three of total cancer cases in young adults between the ages of 20-49 years are diagnosed in women. This is, in part, due to breast cancer, cervical cancer, and thyroid cancer, all of which affect exclusively or predominantly women and contribute to the total cancer burden in young adults<sup>6</sup>.

Additionally, cancer incidence rates for both males and females increase with age. Figure 7 shows the male and female cancer incidence rates for all cancers (excluding non-melanoma skin cancer) in Suffolk and North East Essex ICB, by ae groups between 2018-20. In SNEE ICB between 2018-20, male cancer incidence rates were statistically significantly higher for the older adult age groups (60 to 69, 70 to 79 and 80 and over), as well as for all ages when compared to females. Moreover, females had a statistically significant higher cancer incidence rate when compared to males between the ages of 25 to 49 and 50 to 59. Males and females under the age of 25 had statistically similar cancer incidence rates.

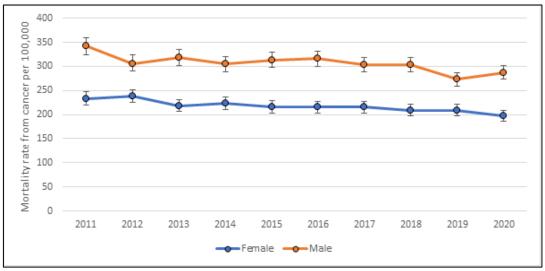


#### Figure 7. Male and female cancer incidence rates per 100,000 for all cancers (excluding nonmelanoma skin cancer) in Suffolk and North East Essex ICB, by age groups between 2018-20.

#### Source: CancerData

Figure 8 shows the male and female cancer mortality rates per 100,000 from all cancer types in Suffolk and North East Essex ICB, between 2011 to 2020. In Suffolk, since 2011, males in SNEE ICB have had a statistically significantly higher cancer mortality rates compared to females. In 2020, 1,525 males died from cancer compared to 1,231 females. However, cancer mortality rates for both males and females have improved in SNEE ICB. Compared with cancer mortality rates from 2011, the cancer mortality rates in 2021 are statistically significantly lower, showing progress over this 10-year period.

Figure 8. Male and female cancer mortality rates per 100,000 from all cancer types in Suffolk and North East Essex ICB, between 2011 to 2020.





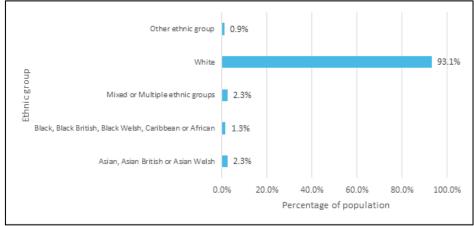
## Ethnicity

Cancer incidence varies between ethnic groups in England. Ethnic minorities in England generally have lower cancer risk than the White population<sup>7</sup>. White people in England have been shown to be more than twice as likely to get certain types of cancer, including melanoma skin cancer, oesophageal, bladder and lung cancer compared to individuals from Black, Asian, or Mixed ethnic backgrounds<sup>8,9</sup>. However, there are exceptions. Prostate cancer, myeloma (a type of blood cancer) and womb cancer are all more common in Black people. There are also existing inequalities in patient experience, including people from minority ethnic groups reporting worse experiences of cancer care and lower survival for specific cancer types<sup>9</sup>.

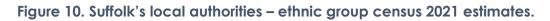
Additionally, in England, a lower uptake of screening is shown among ethnic minority groups irrespective of socio-economic status. Specifically, in England, 45% of women from minority ethnic groups between the age of 50 and 70 have never attended any screening<sup>5</sup>.

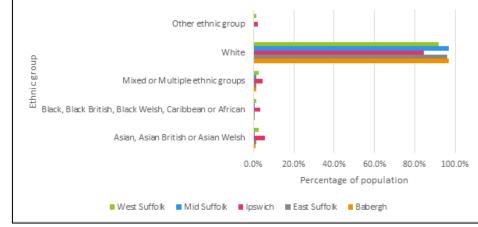
Figures 9 and 10 summarise broad ethnic groups for Suffolk residents as reported in the 2021 census. In Suffolk, 93.1% of the population were classified as White. However, a significant variation across lower-tier local authority areas was shown, with Ipswich having the lowest percentage of White population at 84.3% and Mid Suffolk having the highest percentage of White population at 96.8%.

Figure 9. Suffolk ethnic group census 2021 estimates.



#### Source: Ethnicity, 2021 Census





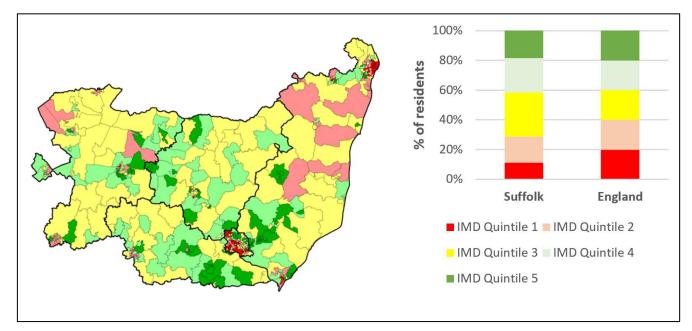
Source: Ethnicity, 2021 Census

## Deprivation

The English Index of Multiple Deprivation (IMD) was published in 2019. The IMD provides a way of comparing relative deprivation across England using seven domains: income, employment, health and disability, education, crime, barriers to housing and services, and the living environment. Relative deprivation shows how deprived an area is relative to other areas in England, so an area may become more or less deprived even if the absolute level of deprivation remains the same. This is different to absolute deprivation, which defines a minimum level of need enabling a person to subsist and to participate actively in society.

Figure 11 maps the IMD scores across all Lower Super Output Areas (LSOAs) in Suffolk and provides a comparison of the proportion of the population in specific levels of deprivation to that of England. The IMD quintile 1, shown in red, represents local areas in the most deprived 20% within England and the IMD quintile 5, shown in green, represents local areas in the least deprived 20% within England. Results show that over a quarter (29.7%) of Suffolk residents fall within IMD Quintile 3. However, 11.3% of LSOAs fall within the IMD Quintile 1 and these Suffolk LSOAs within this top 20% most deprived areas nationally are situated primarily within Lowestoft and Ipswich.





#### Source: English indices of deprivation 2019

The Office for Health Improvement and Disparities <u>Local Inequalities Explorer Tool 2023</u> details local health inequalities for many cancer indicators available through Fingertips. The tool splits ward level data within selected geographies (ICB/sub-ICB or county) into quintiles, visualising wards with the highest rates of cancer deaths, and incidence rates for all cancers, and selected cancer types.

#### Modifiable risk factors

It is estimated that around 1 in 3 deaths from cancer are due to modifiable risk factors such as tobacco use, high body mass index, alcohol consumption, low fruit and vegetable intake, and lack of physical activity.

There is strong evidence that high levels of deprivation is associated with modifiable risk factors<sup>5</sup>. For example, smoking has been identified as the biggest single cause of inequalities in death rates between rich and poor in the UK. It accounts for over half the differences in risk of premature death between social classes<sup>5</sup>. Far fewer people in affluent groups smoke (19%) compared to those in the most disadvantaged groups (29%)<sup>5</sup>. Additionally, smoking is the main preventable cause of cancer. In Suffolk, 2021, over 1 in 10 adults (13.2%) were current smokers, and in Ipswich, an area known to be more deprived, smoking prevalence doubles to over 1 in 5 adults (22%).

Table 1 describes the prevalence of an array of modifiable risk factors across Suffolk local authorities, and England. Results show that none of the listed modifiable risk factors for Suffolk are statistically significantly worse than the national average, with statistically significantly better values for Year 6 excess weight (36.0%), and the proportion of adults meeting the recommended '5-a-day' (61.0%) than national averages. Ipswich has several modifiable risk factors that are statistically significantly worse than national averages, including adult smoking prevalence (22.0%), adults classified as overweight or obese (68.2%), 4/5-year-old excess weight (including obesity) (24.7%), the percentage of physically inactive adults (34.2%) and the percentage of physically active adults (54.1%). Both Babergh and Mid Suffolk report statistically significantly better scores than national averages for Year 6 excess weight including obesity, the percentage of adults meeting '5-a-day' guidelines and lower percentages of physically inactive adults. Therefore, it is essential that we support deprived areas in Suffolk to reduce the prevalence of modifiable risk factors of cancer to assist the improvement of health and health outcomes.

## Table 1. Prevalence of modifiable risk factors of cancer for Suffolk districts and Boroughs and England.

Risk Modifiers	England	Suffolk	Babergh	East Suffolk	Ipswich	Mid Suffolk	West Suffolk
Smoking Prevalence in adults (18+) - current smokers (APS), 2021	13.0	13.2	9.8	12.1	22.0	11.7	10.6
Smoking prevalence in adults in routine and manual occupations (18-64) - current smokers (APS), 2020	24.5	27.2	15.1	26.8	36.4	25.8	27.6
Percentage of adults (18+) classified as overweight or obese, 2020/21	63.5	62.9	63.8	61.9	68.2	60.4	60.7
Reception: Prevalence of overweight (including obesity) (4-5 yrs). 2021/22	22.3	22.3	21.4	24.0	24.7	16.7	20.9
Year 6: Prevalence of overweight (including obesity) (10- 11 yrs), 2021/22	37.8	36.0	32.6	39.0	39.4	33.7	31.9
Proportion of the population meeting the recommended '5-a-day' on a 'usual day' (adults/16+ yrs),	55.4	61.0	60.0	64.8	51.9	60.3	63.3
Percentage of physically inactive adults (19+ yrs), 2020/21	23.4	23.8	16.6	19.5	34.2	19.5	28.7
Percentage of physically active adults (19+ yrs), 2020/21	65.9	65.2	73.6	67.4	54.1	68.7	63.8
Percentage of physically active children and young people (5-16 yrs), 2021/22	47.2	48.3	58.0	45.9	*	*	45.9

Compared to England average:

Better Similar

Source: Fingertips: Public health data

Worse

#### Incidence

Nationally, age-standardised cancer incidence is higher for both males and females living in the most deprived areas. In 2019, cancer incidence decreased consistently for each deprivation quintile from most deprived to least deprived. Although, males living in the least deprived areas still had a higher rate (649 per 100,000 people) than females living in the most deprived areas (621 per 100,000 people<sup>10</sup>).

The gap between the least and most deprived quintiles was greater for males than females. The age-standardised cancer incidence rate was 16% higher for males living in the most deprived areas (765 per 100,000 people) compared to the least deprived areas (649 per 100,000 people). For females, the rate was 20% higher for those living in the most deprived areas (621 per 100,000 people) compared to the least deprived areas (519 per 100,000 people). Additionally, in 2020, Cancer Research UK found that there are 20,000 additional new cancer cases of each year in more deprived areas within the UK<sup>1</sup>.

In Suffolk, 2020/21, 247 excess deaths from cancer were associated with existing inequalities. Table 2 shows the comparison of Suffolk's cancer incidence, between 2015 and 2019, and alcohol related cancer incidence, between 2017 and 2019, to England averages. Suffolk typically performs statistically similarly or statistically significantly better than the England averages. However, incidence of prostate cancer, between 2015 and 2019, across Suffolk was statistically significantly worse than the England average.

## Table 2. Incidence of cancer in Suffolk between 2015-2019 and 2017-2019 compared to England estimates.

Indicator		Suffolk		Region England		England			
	Period	Recent Trend	Count	Value	Value	Value	Worst	Range	Best
Incidence of all cancers, standardised incidence ratio (Persons, All ages)	2015 - 19	) – (	24,599	96.0	-	100.0	116.6		72.6
Incidence of breast cancer, standardised incidence ratio (Female, All ages)	2015 - 19	ə —	3,457	95.7	-	100.0	152.2		73.9
Incidence of colorectal cancer, standardised incidence ratio (Persons, All ages)	2015 - 19	9 –	3,039	102.2	-	100.0	120.5		65.6
Incidence of lung cancer, standardised incidence ratio (Persons, All ages)	2015 - 19	9 –	2,643	79.9	-	100.0	206.2		45.1
Incidence of prostate cancer, standardised incidence ratio (Male, All ages)	2015 - 19	- 9	4,015	106.8	-	100.0	145.4		63.7
Incidence rate of alcohol-related cancer (Persons, 16+ yrs)	2017 - 19	ə —	915	36.17	36.48	38.00	48.11		29.15
Incidence rate of alcohol-related cancer (Male, 16+ yrs)	2017 - 19	9 –	445	36.93	36.57	39.36	57.89		28.05
Incidence rate of alcohol-related cancer (Female, 16+ yrs)	2017 - 19	9 –	470	35.73	36.64	37.09	42.33		28.73
Compared to England: Statistically lower/worse	Statist	ically sim	ilar 🔵	S	Statistica	lly higher/	'better 🔵	)	

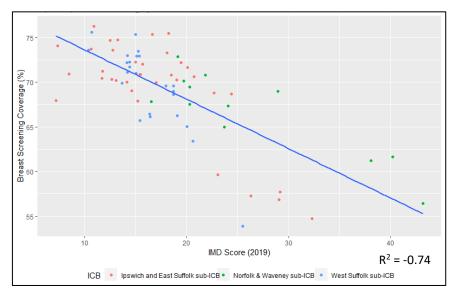
#### Source: Fingertips: Public health data

#### Screening

Some individuals and groups within society are less likely to attend cancer screening. Numerous studies have demonstrated that breast screening uptake is lower in areas of social deprivation<sup>11,12</sup>. Studies have also suggested that uptake is lower in ethnic minority communities, particularly South Asian women. Both social deprivation and ethnicity have an impact on breast screening uptake<sup>13</sup>. Additionally, bowel cancer screening uptake is lower in Asian populations, with Asian individuals half as likely as others to take up screening. Bowel cancer screening rates are also lower among men.

To further explore the link between cancer screening coverage and deprivation, a series of statistical tests were run between screening coverage and the IMD/deprivation score for each of Suffolk's general practices (GPs) areas. Results showed that the coverage of all screening programmes in Suffolk have a negative correlation with 2019 IMD score. Therefore, implying that the more deprived a GP area is, the lower the coverage of screening coverage for individuals between the age of 50 to 70 shown in figure 12. Similarly, both bowel cancer screening coverage for the 60-74 year age group and cervical cancer screening coverage for both the 25-49 years and 50-64 years age groups also had negative correlations, although the relationship was not as strong as for breast cancer screening.

Figure 12. Breast Screening Coverage (%) against IMD Score (2019). Each point represents a GP surgery within ICB sub-locations in Suffolk. The line of best fit represents the correlation across all 3 sub-ICB locations in Suffolk.



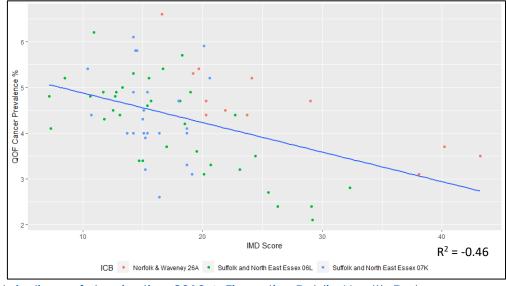
Source: English indices of deprivation 2019 & Fingertips Public Health Data

Moreover, the same series of statistical tests were run between screening uptake, and the IMD/deprivation score for each Suffolk general practice (GP). Results showed that areas with higher levels of deprivation had lower cancer screening coverage and up-take. The national NHS England approach, Core20PLUS5 identifies early cancer diagnosis as a key clinical focus requiring accelerated improvement. Specifically, the approach gives a target of 75% of cancer cases diagnosed at stage 1 or 2 by 2028. Therefore, it is essential that areas with high levels of deprivation and areas with residents at high risk in the population are prioritised to reach this goal. Tackling this is critical to achieving the government's commitment of gaining five extra years of Healthy Life Expectancy by 2035, and the levelling up mission to narrow the gap in Healthy Life Expectancy by 2030.

#### Prevalence

Cancer prevalence is the percentage of patients living with cancer, recorded on practice disease registers. Incidence is the number of new cancers occurring in the population over a period, typically expressed per 100,000 population. Figure 13 shows the correlation between IMD scores (2019) for all Suffolk GP areas and the cancer quality outcomes framework (QOF) prevalence percentage for 2021/22. Results show that there is a negative correlation between cancer prevalence and IMD score. This indicates that cancer prevalence is higher in more affluent areas. This could be due to factors, such as better screening uptake in areas of lower deprivation, lower prevalence of modifiable risk factors, and longer survival times for those living in less deprived areas.

Figure 13. Cancer QOF Prevalence (Suffolk GP areas) against IMD Score. Each point represents a GP are within sub-ICB location. The line of best fit represents the correlation across all 3 Suffolk sub-ICB locations.

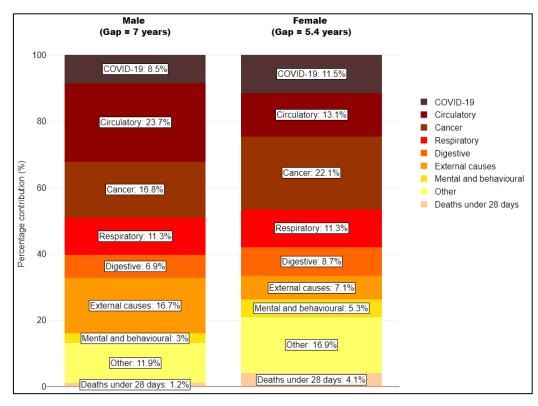


Source: English indices of deprivation 2019 & Fingertips Public Health Data

#### Life expectancy gap

The Office for Health Improvement and Disparities (OHID) segment tool provides information on the causes of death and age groups that are driving inequalities in life expectancy at local area level<sup>14</sup>. Figure 14 shows the life expectancy gap between the most and least deprived quintiles in Suffolk by cause of death between 2020 and 2021. Results highlight that there is a 7-year life expectancy gap when comparing males living in the most and least deprived areas of Suffolk. Similarly, there is a 5.4 year gap when comparing females living in the most and least deprived areas of Suffolk. Similarly, there is a 5.4 year gap when comparing females living in the most and least deprived areas of suffolk. Similarly, there is a 5.4 year gap for females. Therefore, more attention on the cancer continuum in deprived areas is needed to support the reduction of the life expectancy gap. Tackling this is critical to achieving the government's commitment of gaining five extra years of Healthy Life Expectancy by 2035<sup>15</sup>, and the levelling up mission to narrow the gap in Healthy Life Expectancy by 2030<sup>16</sup>.

Figure 14. Life expectancy gap between the most and least deprived quintiles of Suffolk by cause of death, 2020 to 2021.



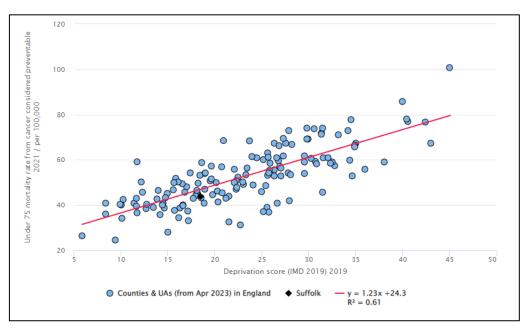
#### Source: Suffolk Core20PLUS5

#### Mortality

Deaths from cancer have been shown to increase with deprivation. Cancer Registration Statistics have shown that the age-standardised cancer mortality rate in 2020 was highest for both males and females living in the most deprived areas. The mortality rate decreased consistently for each deprivation quintile from the most deprived to the least deprived. The gap between the least and most deprived quintiles was similar for males and females. The age-standardised mortality rate was 53% higher for males living in the most deprived areas (391 per 100,000) compared to the least deprived areas (255 per 100,000 people). For females, the rate was 55% higher for those living in the most deprived area (282 per 100,000 people) compared to the least deprived areas (182 per 100,000 people). In 2019 the mortality rate was 49% higher for both females and males in the most deprived areas compared to the least deprived areas. Overall implying that the inequalities within cancer mortalities are growing<sup>17</sup>.

Figure 15 shows the correlation between under 75 mortality rate from cancer that is considered preventable in 2021, and deprivation score (IMD 2019) for all counties and unitary authorities (from April 2023) in England, with Suffolk highlighted as a black diamond. Results show that under 75 mortality rate from cancer considered preventable is higher for those in deprived areas when compared to affluent areas. Suffolk has a under 75 mortality rate of 43.7 per 100,000 people for cancers considered preventable. Equally, the same pattern is shown for under 75 mortality rate from all cancer, with Suffolk, in 2021, having a rate of 110.6 per 100,000 people<sup>18</sup>.

Figure 15. Correlation between under 75 mortality rate from cancer that is considered preventable in 2021, and deprivation score (IMD 2019) for all counties and unitary authorities (from April 2023) in England.



#### Source: Fingertips Public Health Data

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