

Bristol JSNA Chapter 2017-18

Cancer in Bristol

Prevention, Early Intervention, Living Well with
and Beyond Cancer and Inequalities

Chapter information	
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Linked JSNA chapters	

Executive Summary

Cancer is a condition where abnormal cells divide in an uncontrolled way. Some cancers may eventually spread into other tissues. There are more than 200 different types of cancer. 1 in 2 people in the UK will get cancer in their lifetime (CRUK 2016). Around half of these diagnoses will be of the most common cancers – lung, colorectal, breast, and prostate (Independent Cancer Taskforce, 2015). Cancer is the biggest cause of death from illness or disease in every age group, from the very youngest children through to old age, with death significantly higher in men than in women.

Cancer is the leading cause of early death in Bristol. Cancer also makes the largest contribution, nearly a third, to the difference in life expectancy between those who are the most and the least deprived in Bristol, and is therefore a significant contributor to health inequality.

Bristol has a high rate of early death (under 75) from cancer compared to England, due in part to factors such as deprivation, which is associated with health risk behaviours which increase cancer risk (smoking, being overweight, alcohol, poor diet), lower screening uptake, and lower proportions of cancers diagnosed at an earlier stage.

This JSNA chapter considers the health needs related to prevention, screening, and early diagnosis of cancer, as well as inequalities related to cancer incidence, outcomes, early death and living well with and beyond cancer. The focus of the chapter will be on the four cancers with the highest incidence; lung, colorectal, breast and prostate. Lifestyle risks for cancer such as smoking, obesity, physical activity and alcohol are not explored in detail in this chapter. Treatment for individual cancer types and end of life care are beyond the scope of this chapter.

Key issues and gaps (summary of section 8)

Early death from cancer and early death from cancers considered to be preventable are both statistically higher in Bristol than the England average.

The poorest people in Bristol have the highest cancer early death rates and the rate gets steadily lower as people become less deprived. The people in the least deprived decile have the lowest cancer early death rates.

Whilst the number of people diagnosed with cancer is statistically similar across Bristol, four wards (Southville, Filwood, Hartcliffe & Withywood, and Avonmouth & Lawrence Weston) have significantly higher early cancer deaths for all cancers than the Bristol overall rate.

Two wards, Hartcliffe & Withywood and Avonmouth & Lawrence Weston) have significantly higher early death for lung cancer than Bristol over all.

Data on those diagnosed with cancer at an early stage (considered an important factor in good cancer outcomes), shows variation across localities, especially in colorectal and lung cancer. However, whether these differences are statistically significant is not known.

Screening coverage rates in Bristol for breast and colorectal cancer are below the England average. Planned national changes to the test used in the bowel screening programme are anticipated to increase screening uptake as a pilot project showed a 7% increase in uptake, and an uptake in groups with low participation.

There are anticipated demographic changes in the populations affected by cancer. In the future we expect increased cancer incidence and prevalence and more women with cancer due in part to rising obesity levels and the link between obesity and women's cancer, and in part due to more women smoking. There is also likely to be more people from BME population being diagnosed with cancer as Bristol's currently younger BME community ages.

Recommendations (summary of section 10)

Work to **reduce inequalities** in early cancer deaths should focus on the Bristol wards with highest rates of early cancer deaths - **Southville, Filwood, Hartcliffe & Withywood, and Avonmouth & Lawrence Weston**.

Local targeting of **cancer symptom awareness campaigns**, including supporting national evaluated campaigns, such as 'Be Clear on Cancer'.

Effective **advice** and **support** to adopt and **maintain healthier lifestyles**, particularly around **smoking, drinking, diet and weight management** should be available with a focus on uptake from those **most at risk** of cancer.

Implement the recommendations of screening focus groups to **improve uptake in bowel, breast and cervical cancer screening**.

Maximise opportunities for delivering prevention and behaviour change messages by making every contact count, including in secondary care settings. This could include as people access cancer screening, or upon discharge when people are found not to have cancer.

Continue to think holistically, and in line with the Cancer Taskforce Strategy, to **meet the needs of people living well with and beyond cancer to maximise positive outcomes and prevent future ill health**. Key to this is patients being actively involved in decision making and self-management. A cultural shift is needed in how we think about cancer to acknowledge it as a long term condition and enable people to take control of their care.

Identify opportunities to **improve ethnicity recording** to improve ability to analyse and plan for changing demographics in cancer data.

JSNA chapter report

A: What do we know?

1) Who is at risk and why?

National cancer incidence, prevalence and death

Nationally in 2015, there were almost 300,000 cancers registered – an equivalent to 822 per day. Breast (15.4%), prostate (13.4%), lung (12.5%) and colorectal (11.6%) cancer continue to account for over half of the malignant cancer registrations in England for all ages combined. Cancer is more common in older people - adults aged 65 and over account for 65.2% of the total cancers registered in 2015 (ONS, 2015).

It is estimated that there are 2.5 million people living with cancer in the UK, rising to 4 million by 2030 (Maddams et al, 2012). This is in most part due to the number of cancer survivors in the UK projected to increase by approximately one million per decade from 2010 to 2040.

Cancer is a major cause of death accounting for 29% of all registered deaths in England and Wales in 2013 (NCIN, 2015). In 2014, 134,360 people died of cancer in the England, which is an age standardised rate (ASR) of 272.8 per 100.000 (ONS, 2015).

Age

Cancer is more common in older people (ONS, 2015), largely due to DNA damage from biological processes or from exposure to risk factors that accumulate over a life time (CRUK, 2016). By 2020 it is estimated there will be nearly two million people aged 65 and over alive following a diagnosis of cancer (NCIN, 2015a).

Gender

Nationally, for all cancers combined (excluding non-melanoma skin, breast, lung and sex specific cancer) age standardised death rate for men is 70% higher than it is for women (NCIN, 2015). Difference in cancer death for men and women can be seen in fig 3. It is predicted that cancer prevalence rates will climb nearly six times faster in women than in men over the next 20 years (CRUK, 2017). See section 6 for more details.

Lifestyle as a risk for cancer

Whilst cancer is complex disease which affects 200 different sites of the body in different ways, 4 in 10 cancer cases could be prevented by simple lifestyle changes (Parkin et al, 2011).

- avoid tobacco,
- keep a healthy weight,
- eat more fruit, veg and fibre,
- drink less alcohol,
- be sun smart,
- eat less red meat and salt, avoid processed meat,
- exercise more.



Figure 1-The lifestyle factors that can reduce the risk of cancer in order of their importance (CRUK, 2016)

Fig 2 shows that an estimated 24,700 cases of cancer could be avoided if everyone in the UK maintained a healthy weight (WCRF, a).

Figure 2 - The approximate number of cases of cancer that could be avoided if everyone in the UK maintained a healthy weight (WCRF, a)

Type of cancer	Amount of cases	
	%	Number
Breast (post-menopausal)	16	6,900
Bowel	14	6,000
Womb (endometrium)	38	3,300
Kidney	19	2,100
Oesophagus (adenocarcinoma)	31	1,700
Pancreas	15	1,400
Liver	20	1,100
Prostate (advanced)	9	940
Stomach (cardia)	19	660
Gallbladder	17	300
Ovary	4	280
Total	17	24,700

Data Source: Obesity statistics come from the [Health Survey for England 2015](#), the [Welsh Health Survey](#) 2015 for adults and 2013 for children, the [Scottish Health Survey 2015](#), and the [Health Survey Northern Ireland 2015/16](#). These data were combined with estimates of cancer risk as calculated by the World Cancer Research Fund (b)

Socioeconomic deprivation

Some risk factors for cancer, especially smoking, are strongly influenced by socioeconomic status, meaning people living in poverty are more likely to develop cancer (NCIN, 2015).

Age standardised death rates in the most deprived populations are 50% higher than in the least deprived. Other factors that may influence cancer death rates include people living in more deprived areas are more likely to be diagnosed at a more advanced stage of disease, in poorer general health (such as comorbid cardiovascular or respiratory disease), and receive variations in treatment (Lyratzopoulos, 2015).

Fig 3. Shows that men and women living in the most deprived areas of England are 2.7 -2.8 times more likely to die of lung cancer than those living in the least deprived. Overall, both men and women are more likely to die of cancer if they live in a more deprived area (1.6 times and 1.5 times respectively) (NCIN, 2015).

	ASR least deprived	ASR most deprived	Rate Ratio
Breast (F)	24.6	26.1	1.1
Colorectal (M)	18.5	24.0	1.3
Colorectal (F)	12.1	14.0	1.2
Lung (M)	29.6	80.1	2.7
Lung (F)	18.6	51.3	2.8
Prostate	23.2	24.0	1.0
All cancers* (M)	164.1	262.0	1.6
All cancers* (F)	123.7	182.7	1.5

* Excluding non-melanoma skin cancer (NMSC)

Source: NCIN-CRUK, Cancer by Deprivation in England.

Figure 3- Age standardised death rates and rate ratios by deprivation and sex selected cancer types, England, 2007-11

NB. A rate ratio is a measure of relative difference, a rate ratio of 1 would show no relative difference between the least and most deprived. The higher, or lower if less than 1, the rate ratio, the greater the difference between the two measures.

However, there are exceptions to the link between high cancer death and low socioeconomic status, with breast and prostate cancers showing little difference in death rates between the most and least deprived.

Ethnicity

Due to small numbers of cancer incidence in specific ethnic groups, and poor ethnicity recording, the data around cancer and ethnicity is not a complete picture. Data on cancer death rate by ethnicity is currently not available.

Fig 4 shows the number of cancers (all cancers combined and by main cancer types) for males and females in each ethnic group. Some of the variation between groups will be due to the different age structures. As many of the ethnic groups have ageing populations, the number of patients being diagnosed with cancer is likely to rise in the future. Prostate cancer makes up over 40% of the cancers among Black males, compared with around 15% of the cancers among Chinese men, and 25% of cancers among men overall (NCIN, 2015).

Ethnic group	Breast	Colorectal		Lung		Prostate	All cancers*	
	Females	Males	Females	Males	Females	Males	Males	Females
White	180,702	82,886	66,263	85,452	66,721	149,549	599,979	584,157
Asian	4,381	1,217	831	1,213	433	2,308	11,154	11,992
Black	2,944	944	859	879	373	4,905	10,979	8,516
Chinese	450	188	129	159	108	177	1,127	1,372
Mixed	694	204	139	160	110	511	1,857	1,904
Other	1,594	461	397	595	407	959	4,542	4,860
Unknown	9,649	3,409	3,490	5,833	4,629	7,927	32,143	33,449
Total	200,414	89,309	72,108	94,291	72,781	166,336	661,781	646,250
% unknown	4.8%	3.8%	4.8%	6.2%	6.4%	4.8%	4.9%	5.2%

* Excluding non-melanoma skin cancer (NMSC)

Source: NCIN, March 2014.

Figure 4 - Number of cases by ethnicity and sex, selected cancer types, England, 2006 to 2010

Lifestyles Risk by cancer site

Lung cancer

Smoking is the main avoidable risk factor for lung cancer, linked to an estimated 86% of lung cancer cases in the UK. Research shows that men who smoked 25 cigarettes a day have over 24 times the risk of dying from lung cancer compared to men who have never smoked (Doll et al, 2004).

A diet high in fruit and vegetables may protect against lung cancer – insufficient fruit and vegetables intake is linked to an estimated 9% of lung cancer cases in the UK (Parkin et al, 2011).

Colorectal cancer

An estimated 54% of colorectal cancers in the UK are linked to lifestyle factors including red and processed meat consumption (21%), overweight and obesity (13%), alcohol (12%), smoking (8%) and ionising radiation (2%). Fibre consumption and physical activity protect against colorectal cancer - inadequate levels are linked to an estimated 12% and 3% respectively of colorectal cancer cases in the UK (Parkin et al, 2011).

Breast cancer

An estimated 27% of female breast cancers in the UK are linked to lifestyle factors including overweight and obesity (9%) (Parkin& Boyd, 2011), alcohol (6%) (Parkin, 2011), and certain occupational exposures (5%) (Parkin, 2011 a). Breastfeeding and physical activity protect against breast cancer. Breastfeeding each child for less than 6 months, and physical inactivity, are each linked to an estimated 3% of female breast cancer cases in the UK (Parkin, 2011b).

Prostate cancer

Prostate cancer is not clearly linked to any preventable risk factors. No modifiable factors have been conclusively linked with prostate cancer risk, though many factors have been studied.

Cancer stage at diagnosis

Early diagnosis of cancer is generally associated with better outcomes for patients. Data from 2012-2014 shows that 83% of lung cancer patients survived for at least a year if diagnosed at the earliest stage compared to around 17% for people who are diagnosed late (ONS, 2016).

For colorectal cancer 98% of people who are diagnosed at the earliest stage survived their disease for at least one year, compared with less than 40% of people who are diagnosed at the latest stage (ONS, 2016).

For breast cancer 100 percent of women diagnosed at the earliest stage survived their cancer for at least one year after diagnosis, compared to 63% of women who are diagnosed at the latest stage (ONS, 2016).

When diagnosed at its earliest stage, all men with prostate cancer are likely to survive their disease for at least one year, compared with 85% when diagnosed at the latest stage (ONS, 2016).

Older people are more likely to have their cancer diagnosed at a late stage (NCIN, 2015a).

There are a number of reasons for delays in cancer diagnosis, for example (CRUK, 2016; Robb et al, 2009):

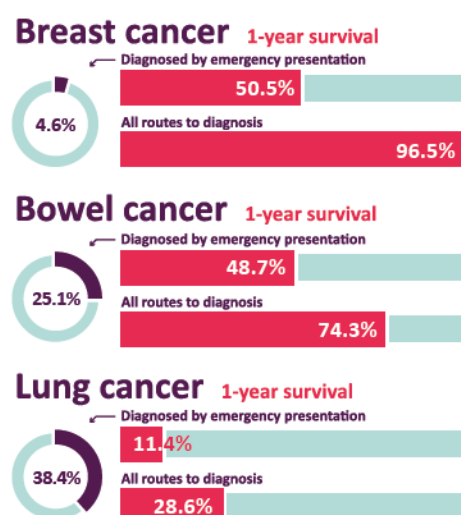
- Low awareness of cancer signs and symptoms can mean that people don't see the GP as soon as they might which could delay a diagnosis.
- Some people might delay because they're worried about what the doctor might find or they don't want to waste the doctor's time.
- There can be delays, for many reasons, in GPs referring patients on for tests or treatment and it may take several appointments for a GP to have sufficient information to refer patient on for tests or treatment.
- Delays can occur in getting/attending an appointment at the hospital for diagnosis.

Survival with diagnosis through emergency admission

Around 1 in 4 of cancers in the UK are diagnosed as a result of emergency admission to hospital and survival rates for people diagnosed via emergency routes are considerably lower than for people diagnosed via other routes (NCIN, 2010).

Fig 5 shows the variation in route to diagnosis for the main cancers. In each case one year survival is lower for people who are diagnosed through emergency presentation than through other routes.

Fig 5 Proportion of diagnosis and impact on one-year survival by emergency presentation (NHS, 2016)



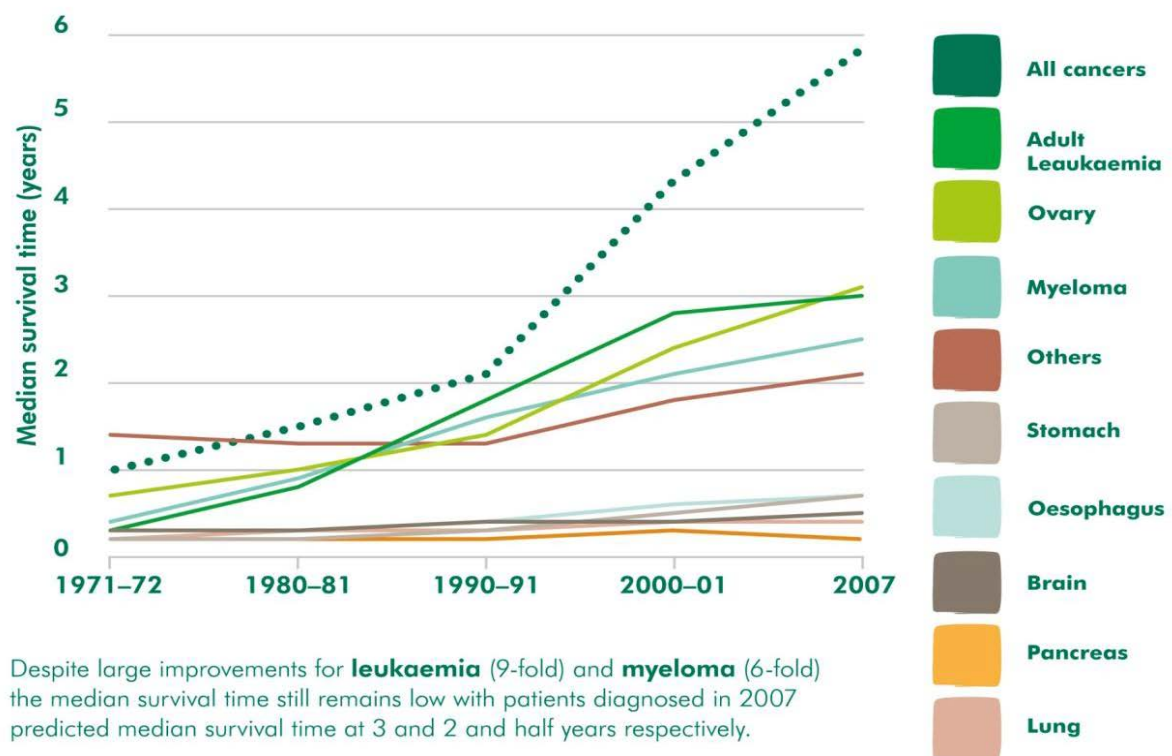
Data source: Hospital Episode Statistics data linked with Cancer Waiting Times data, data from the cancer screening programmes and cancer registration data from 2006-2008.

A socio-economic gradient is observed in cancer diagnosis at emergency admissions to hospital, with more affluent patients being less likely to present as emergencies (Independent Cancer Taskforce, 2015).

Differences in survivorship by cancer site

In general more people are surviving cancer than ever. However, as fig 6 shows the picture is variable with some types of cancer such as ovarian cancer showing rapid improvements and some such as pancreatic cancer showing no improvements over the years (Macmillan Cancer Support, 2011).

Fig 6 Median survival time (years), by year of diagnosis and cancer type



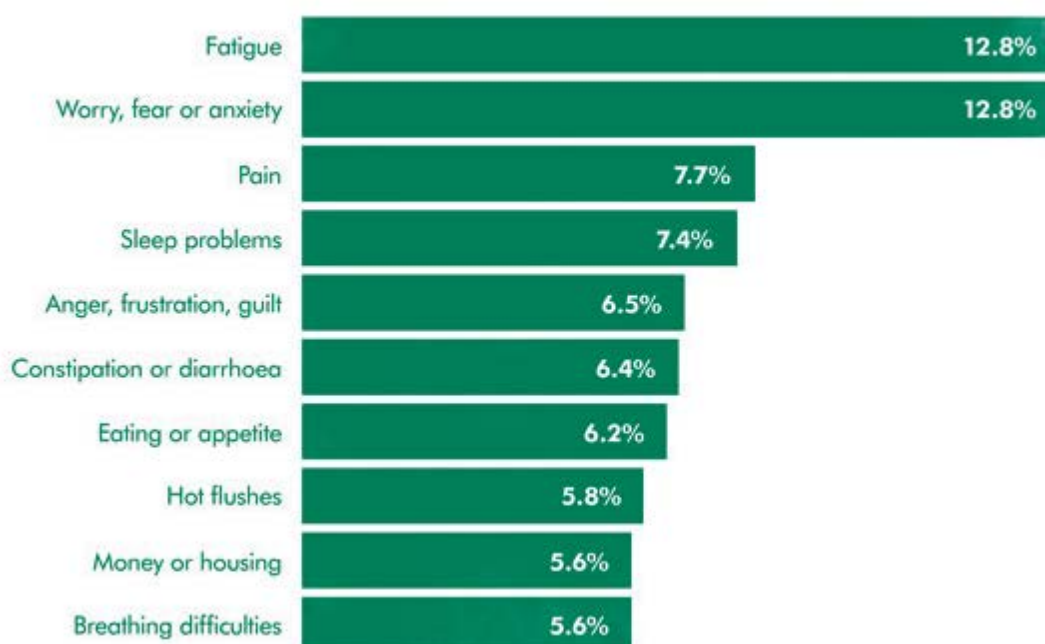
Data Source: The Cancer Research UK Cancer Survival Group at the London School of Hygiene and Tropical Medicine research.

Supporting people to live well with and beyond cancer

As more people are living with and beyond their cancer, understanding grows on the impact of cancer on all aspects of people's lives. Intelligence gathered from the National Cancer Survival Initiative (Department of Health, 2014) indicated that cancer survivors have unmet needs, particularly post treatment.

Using data from 17,000 electronic Holistic Needs Assessments (Fig 7), Macmillan Cancer Support (2016) present the most common concerns expressed by people with a cancer diagnosis are fatigue (12.8%), worry, fear or anxiety (12.8%) and pain (7.7%). This data is not representative of the whole population as the majority of people using electronic holistic needs assessments are young, newly diagnosed and female. The biggest concern for 18-29 year olds is money and housing and for those between 70-89 years old it is breathing difficulties. Other impacts reported include sexual dysfunction, long term financial difficulties, difficulty returning to work and persisting emotional and psychological problems.

Figure 7 Most common concerns for cancer patients collected from electronic Holistic Needs Assessments (n=17,384)



Data source: NHS electronic Holistic Needs Assessment Database 2015.

Traditional secondary care outpatient follow-up models are based on the medical model and clinicians do not necessarily have the skills or time to identify and support peoples' holistic needs. In addition, It is estimated that 70% of cancer patients have at least one other long-term condition that needs managing and over a quarter have at least three other such conditions (Macmillan Cancer Support , 2015).

There are also a wide range of long-term physical and psychosocial changes that seem to be associated with cancer and its treatment, and sometimes these occur a long time after diagnosis and treatment. These symptoms are often called 'consequences of treatment or late effects'. The late effects depend on the type of cancer and type of treatment as well as the individual receiving treatment. Examples of consequences of treatment are changes in bowel function, early menopause, cardiovascular disease and depression conditions (Macmillan Cancer Support , 2014). There is a need for more research in this area, especially in how to give patients information for patients about the risks of long-term consequences before deciding on their treatment options.

2) What is the size of the issue in Bristol?

Bristol all age cancer incidence, prevalence and death rate

In 2014, 630 people per 100,000 were diagnosed with cancer in Bristol, this is approximately 2,011 people. This is similar to the England average of 608 per 100,000. Of this number 828 are of working age (15 – 65 years) (NHS England and Public Health England, 2017).

In Bristol CCG's population the prevalence of people living with and beyond cancer for up to 20 years after diagnosis is expected to increase from 11,200 in 2010 to 21,700 by 2030 (Public Health England, 2017). These people will all need different levels of support to prepare for their treatment, feel as well as possible and feel in control and able to self-manage their condition.

Fig 8 shows the 4 major sites of cancer for all ages. Age is a major risk factor for cancer, which results in all-age death rate having different trends than early cancer death rate (death under 75 years of age). The most common type of cancer diagnosis is prostate cancer. This will be affected by age, as age is the highest risk for prostate cancer. Breast cancer is the most common cancer diagnosis for women. However, lung cancer is the most common cause of death by cancer for women and men. As shown in red, Bristol has significantly higher lung cancer incidence than England for men and women, and higher lung cancer death rate for men than England.

Fig 8 Age standardised rates of cancer incidence and death per 100,000 for all ages in Bristol and England 2010-2014

		Incidence		Death rate	
		Female	Male	Female	Male
Colorectal cancer	England	58.1	89.9	21.8	34.8
	Bristol	60.5	89.1	23.6	37
Breast cancer	England	167.7	1.4	36.1	-
	Bristol	171	1.3	34.9	-
Prostate cancer	England	-	180.1	-	49.3
	Bristol	-	176.3	-	47.9
Lung cancer	England	64.4	94.8	48.6	75.8
	Bristol	77.1	107.2	53.7	87.1

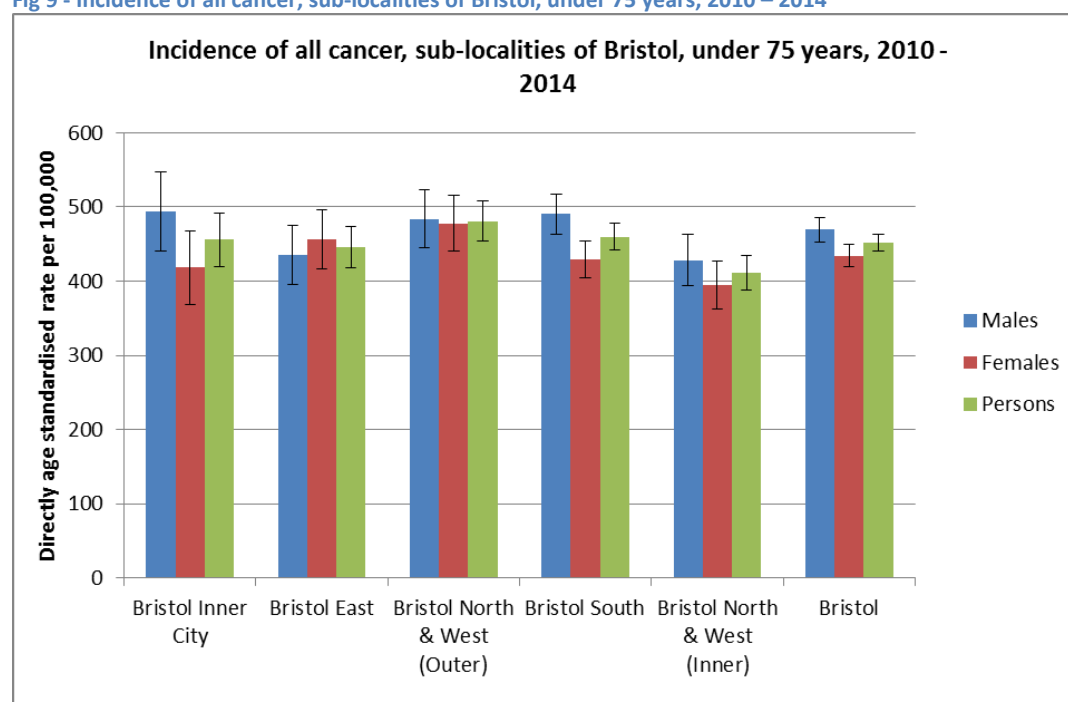
Data Source- Public Health England, National Cancer Registration and Analysis Service

The rest of this JSNA chapter focusses on early, rather than all age cancer statistics.

Incidence of early cancer (under 75 yrs)

Whilst there are some differences in cancer incidence across Bristol localities as in fig 9 below, none of these are statistically significant.

Fig 9 - Incidence of all cancer, sub-localities of Bristol, under 75 years, 2010 – 2014

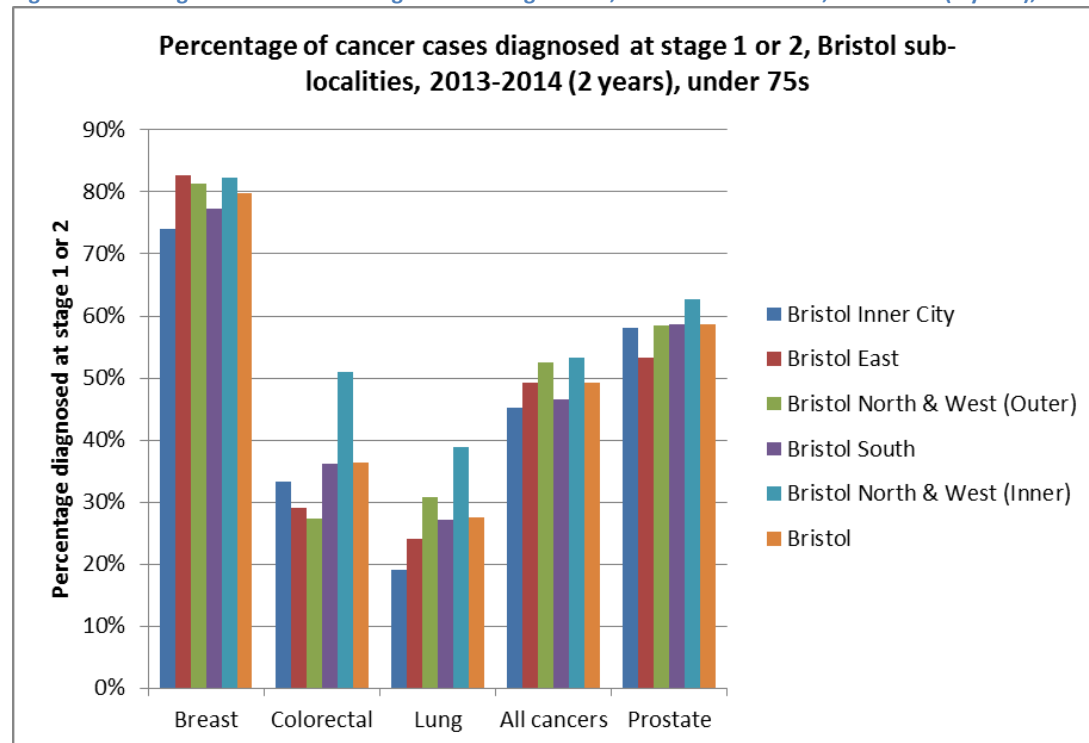


Source: Public Health Intelligence Unit, Bristol City Council, data from Public Health England

Stage of cancer at diagnosis

As described in section 2, early diagnosis is important for good cancer outcomes. Fig 10 shows the percentage of cancer diagnoses made at stages 1&2, which is considered early diagnosis. There are large variations in stage of diagnosis by cancer site, with most breast cancer diagnosed early compared to less than half of lung and colorectal cancers. However, the data does not currently have any measure of statistical significance so we cannot rule out that there are chance variations in the data.

Fig 10 - Percentage of cancer cases diagnosed at stage 1 or 2, Bristol sub-localities, 2013-2014 (2 years), under 75s



Source: Public Health Intelligence Unit, Bristol City Council, data from Public Health England

The lowest percentage of early diagnosis is for lung cancer in Bristol Inner City (19%), followed by Bristol East (24%). Variations in early diagnosis are most apparent for lung cancer and colorectal cancer, with North West Inner having the highest proportion diagnosed early for both cancers.

Early cancer death (under 75 yrs)

Between 2011- 2015, on average 434 people died early of cancer in Bristol per year (Public Health England, 2017).

Fig 11 shows cancer as the leading cause of early deaths in Bristol. In Bristol, the highest numbers of cancer deaths (under 75 years) are due to lung cancer (122 per year), followed by cancer of digestive organs (colorectal cancer) (109 per year), then breast cancer (32 per year) Prostate cancer isn't in this figure, but would be the 4th leading cause of early death by cancer (13 per year).

Figure 11- The Main Causes of Early Death in Bristol

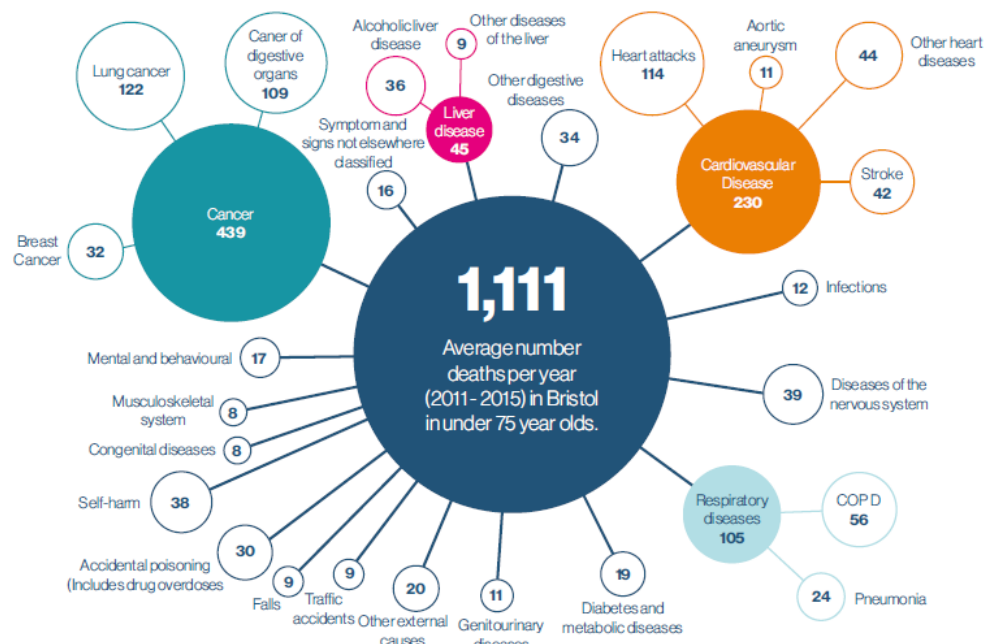
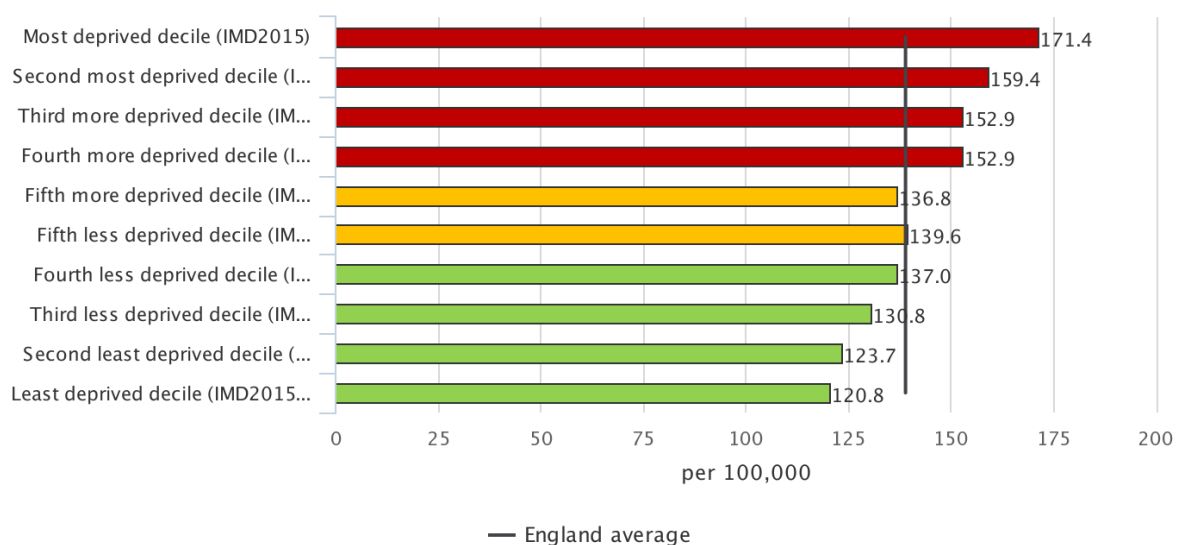


Figure 6: Main causes of premature death in Bristol (average per year 2011 - 15). Source: calculated by Bristol Public Health Knowledge Service using ONS mortality data.

Source: Director Public Health Annual Report 2016

Fig 12 shows early cancer death rates by deprivation decile across Bristol. It displays the population of Bristol divided into 10 categories (deciles), most, to least deprived. It shows that the most deprived people in Bristol have the highest cancer early death rates and that rates get steadily better moving up the deprivation deciles. Those in the least deprived decile have the lowest cancer early death rates.

Fig 12 - Under 75s death rate (ASR) from cancer (persons) in Bristol by deprivation decile in England (IMD2015)



Data source: Public Health Outcomes Framework.

The section below looks at cancer variations within Bristol, but most of the variations in the data are not statistically significant. This is because many of Bristol's geographic communities are made up of a diverse population who will experience different levels of deprivation and have different risks for cancer. Also, when looking at data sets with small numbers, statistical significance is less likely than in larger data sets.

Early cancer death in Bristol localities (all cancers combined)

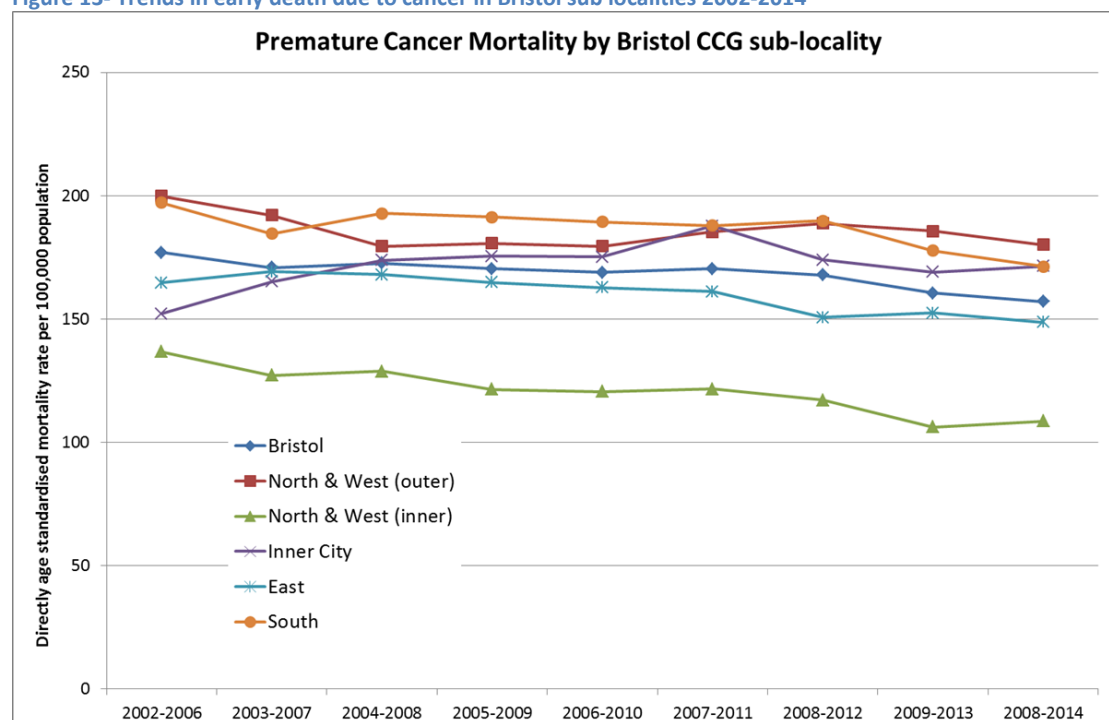
Fig 13 shows that rates of early cancer death (under 75 years) across Bristol overall have fallen slowly since 2003. However, between localities the picture is mixed.

In the Inner City, early death from cancer has risen overall since 2003.

Rates in Bristol South have begun to decline (since 2008-2012) after very little change for a number of years, and Bristol North and West (Outer) has declined very little.

This is in contrast with the inner North and West which has declined consistently with a slight rise in the last time period. The gap between the highest and lowest (North West Inner and North West Outer) appears to be widening.

Figure 13- Trends in early death due to cancer in Bristol sub localities 2002-2014

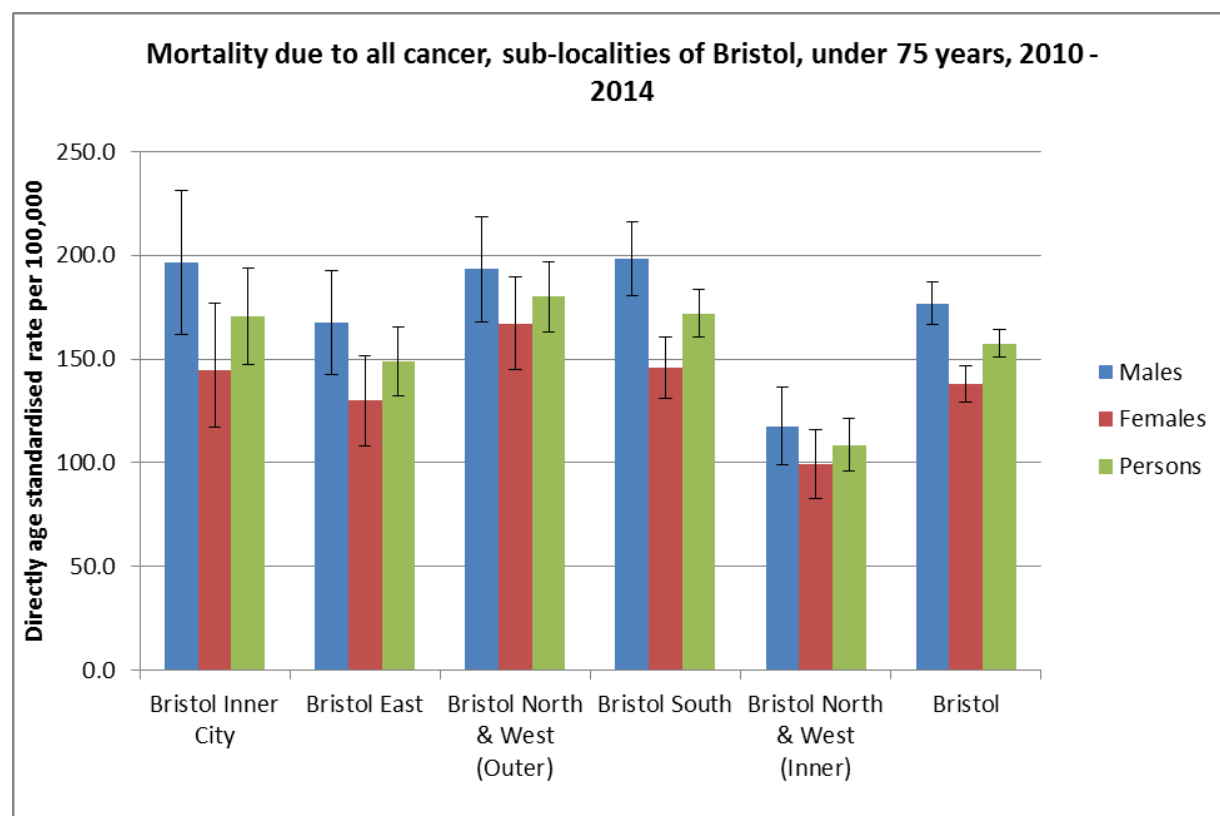


Source: Public Health Intelligence Unit, Bristol City Council, data from Public Health England

Fig 14 shows that whilst there are differences in cancer deaths across Bristol localities, they are not statistically significant, which means they could be due to chance. The exception to this is Bristol North & West (Inner), which has significantly lower cancer deaths than Bristol overall.

The highest rates of all cancers early death for all persons are in Bristol North & West (Outer) (ASR 180.1), followed by Bristol South (ASR 172.0), then Bristol Inner City (ASR 170.6). These data show that men have significantly higher rates of early death due to all cancers than women in Bristol.

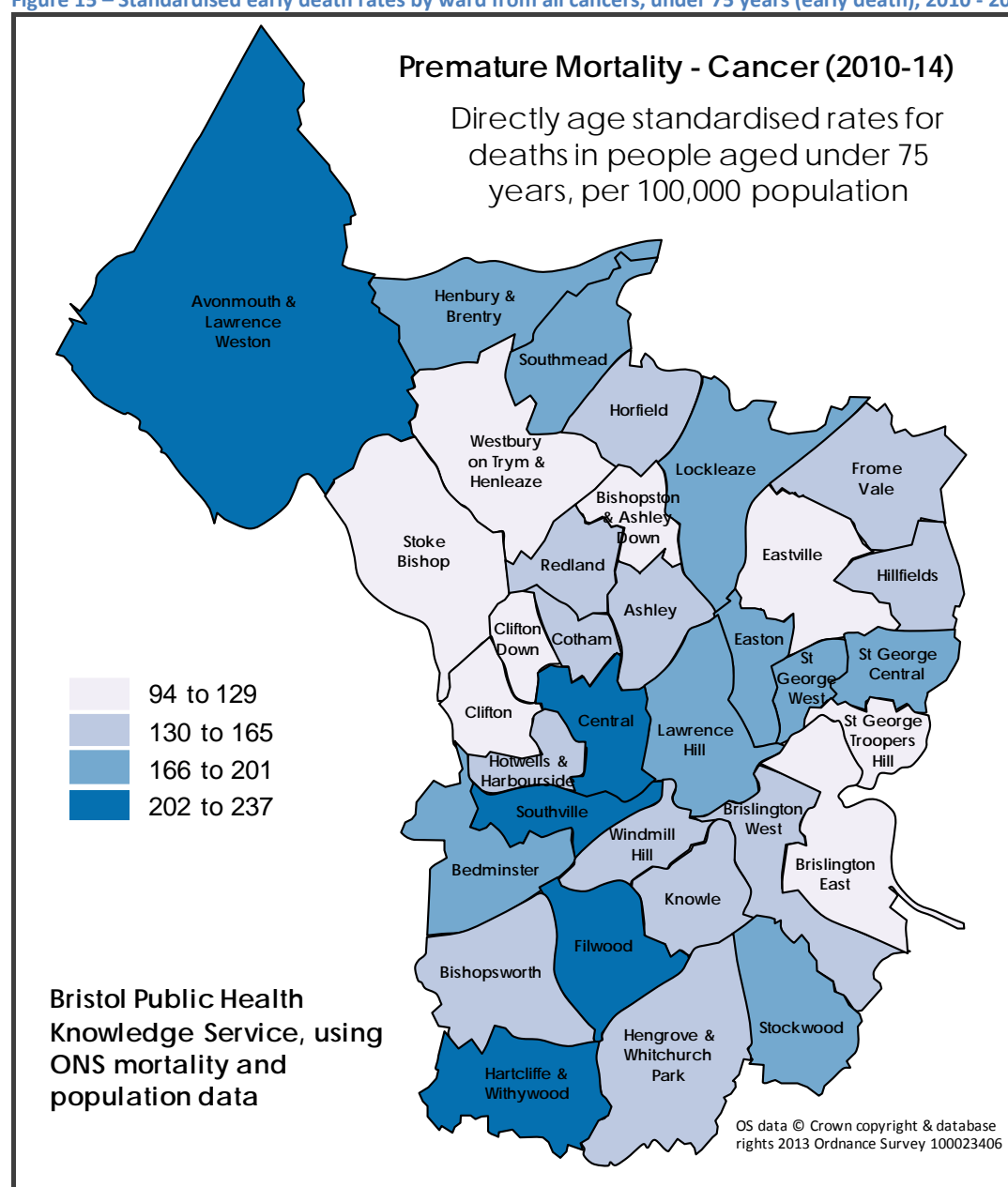
Figure 14 – Early all cancer death rates by Bristol sub-locality



Source: Public Health Intelligence Unit, Bristol City Council, data from Public Health England

Analysing data by ward level allows for focus on smaller areas and gives us more clarity on the difference between communities than sub locality area data can. Fig 15 shows that Southville (237.3), Filwood (230.5), Hartcliffe & Withywood (223.8), and Avonmouth & Lawrence Weston (210.3) are the four wards with the highest early death rates for all cancers. These wards all have a significantly higher rate of early death for all cancers than Bristol as a whole (157.1).

Figure 15 – Standardised early death rates by ward from all cancers, under 75 years (early death), 2010 - 2014

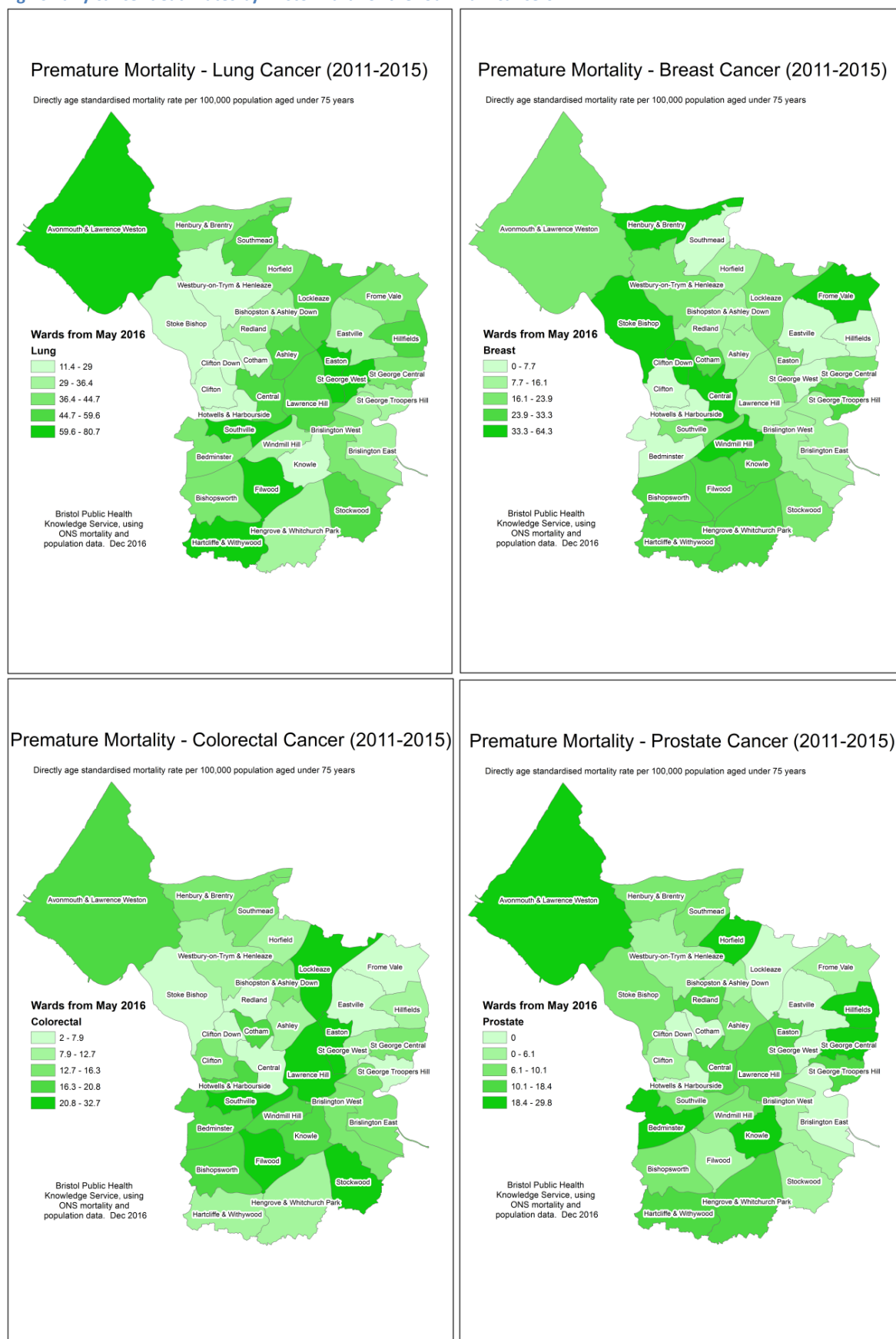


Source: Public Health Intelligence Unit, Bristol City Council

Variation in early cancer deaths across Bristol wards

Analysis of early death rates from the 4 main cancers (lung, colorectal, breast and prostate) by Bristol ward (Fig 16) shows geographical variations in cancer early death rates. However, the only statistically significant differences are seen in lung cancer.

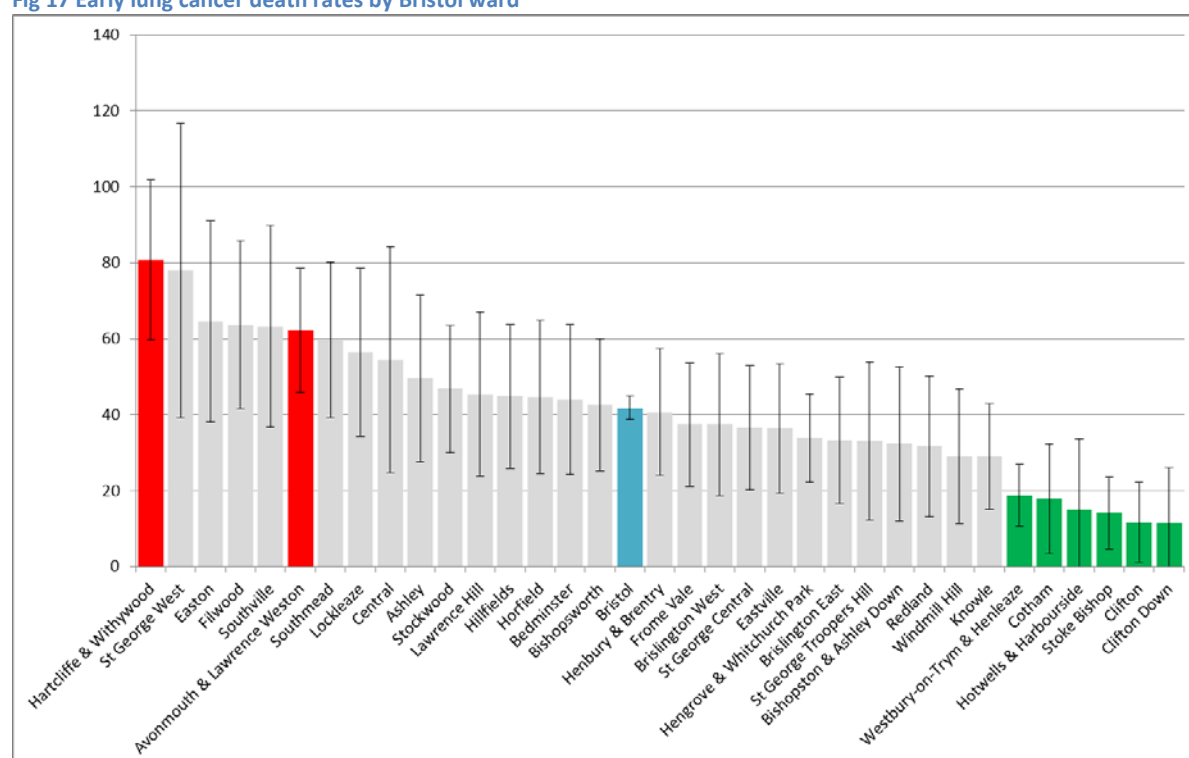
Fig 16 Early cancer death rates by Bristol ward for the four main cancers



Source: Public Health Intelligence Unit, Bristol City Council, data from Public Health England

Fig 17 shows the two wards - Hartcliffe and Withywood, and Avonmouth and Lawrence Weston which have a significantly higher early lung cancer death rate than Bristol overall.

Fig 17 Early lung cancer death rates by Bristol ward



Source: Public Health Intelligence Unit, Bristol City Council, data from Public Health England

Supporting people to live well with and beyond cancer in Bristol

There were 48 different concerns mentioned through the holistic needs assessments carried out in Bristol. Figure 18 shows some of the most common concerns that were expressed by cancer patients in Bristol as recorded on their electronic holistic needs assessments. The largest number of concerns were around questions about diagnosis/treatment (99), tiredness (77), and feelings, emotions and wellbeing (72).

Figure 18 - The top 10 concerns of cancer patients in Bristol based on 833 electronic holistic needs assessments.

Concern	Number of people
Anger or frustration/sadness or depression/worry/fear/anxiety	72
Pain	37
Changes in weight	31
Eating or appetite	38
Hot flushes/sweating	42
I have questions about my diagnosis/treatment	99
Passing urine	34
Sex/intimacy/fertility	30
Sleep problems	38
Tired/exhausted or fatigued	77

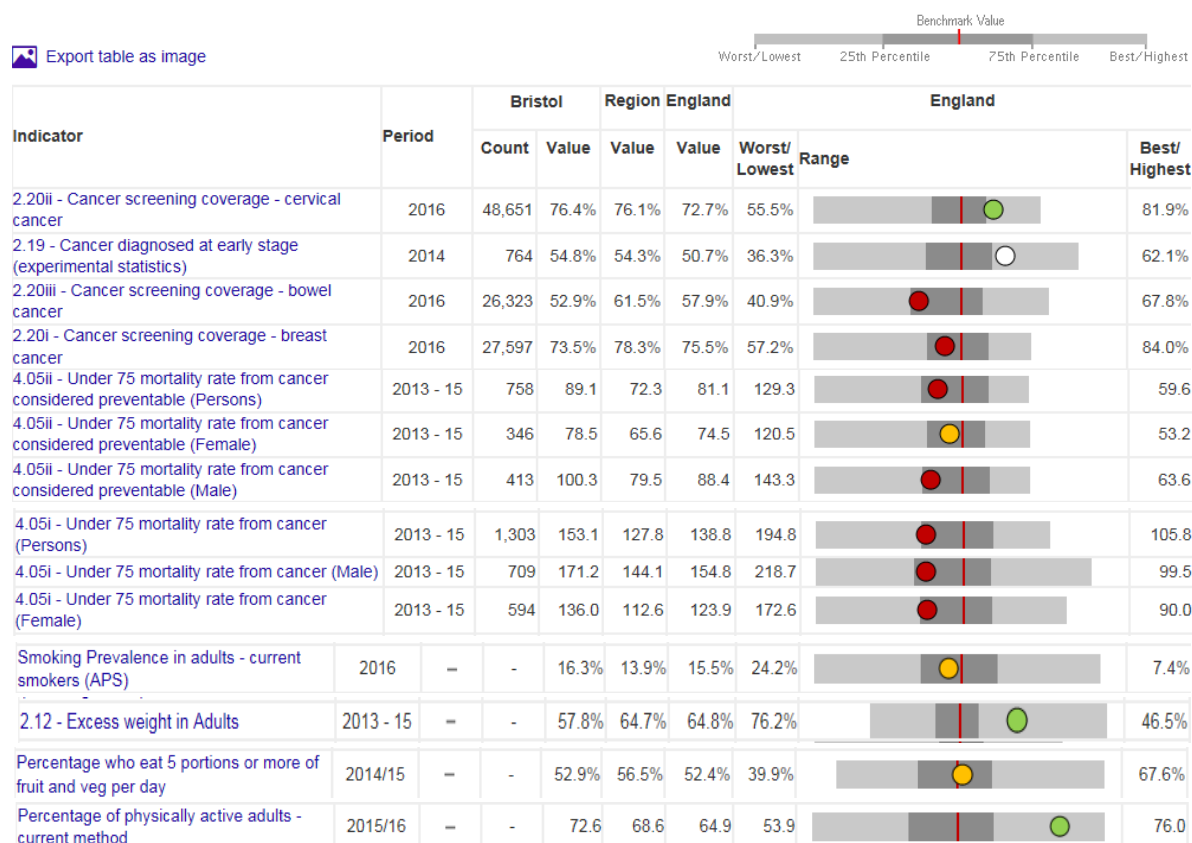
Data source: NHS electronic Holistic Needs Assessment Database 2015.

3) What are the relevant national outcome frameworks indicators and how do we perform?

Public Health Outcomes Framework

Fig 19 shows a selection of Public Health Outcomes Framework indicators (PHE, 2017a) for cancer outcomes, screening coverage and lifestyle factors linked with cancer such as smoking, being overweight and physical activity.

Fig 19 Public Health Outcomes Framework cancer indicators



Data Source: Public Health Outcomes Framework

Screening coverage

Bristol performs significantly worse than the England average for bowel and breast cancer screening coverage, but significantly better for cervical cancer coverage.

Cancer death rates

Bristol performs significantly worse than England for all measures of early cancer death rates, except early death rates from cancers considered preventable for females- for which Bristol is similar to the England average.

Lifestyle risk factors for cancer

Bristol has similar levels of smoking and people who eat the recommended portion of fruit and veg per day to the England average, but better level of physical activity and lower levels of excess weight.

Fig 20 Shows that Bristol ranks 7th highest for early cancer deaths, out of 16 areas that it is considered to be similar to (Public Health England, 2017a).

Figure 20- Bristol and similar local authorities under 75 cancer death rates

4.05i - Under 75 mortality rate from cancer (Persons) 2013 - 15 Directly standardised rate - per 100,000

Area	Neighbour Rank	Count	Value	95% Lower CI	95% Upper CI
England	-	186,273	138.8	138.2	139.4
Newcastle upon Tyne	9	996	170.9	160.4	182.0
North Tyneside	12	913	170.4	159.5	181.9
Portsmouth	3	705	166.2	154.0	179.1
Medway	13	1,019	159.3	149.6	169.5
Leeds	7	2,593	155.2	149.2	161.3
Southampton	1	724	154.8	143.7	166.6
Bristol	-	1,303	153.1	144.8	161.8
Sheffield	4	1,911	153.0	146.2	160.1
Plymouth	2	951	150.5	141.0	160.4
Coventry	6	1,025	149.1	140.1	158.6
Bolton	11	1,018	147.5	138.5	156.9
Swindon	8	724	146.6	136.0	157.8
Brighton and Hove	5	796	146.4	136.2	157.1
Derby	10	788	143.6	133.7	154.0
Southend-on-Sea	14	640	143.5	132.5	155.1
Kirklees	15	1,484	141.3	134.2	148.7

Source: Public Health England (based on ONS source data)

Note: CIPFA neighbours are local authorities that are similar to Bristol taking into account of a list of 20 socio-demographic indicators (including population size, social renting households, house prices and unemployment rate).

NHS Mandate and Outcomes Framework

NHS England's mandate from Government sets out specific deliverables in the NHS Outcomes Framework (Department of Health, 2016). This mandate states that a priority for NHS England will be to improve early diagnosis, services and outcomes for cancer patients, as outlined in Achieving World-Class Cancer Outcomes: A strategy for England 2015-20.

Achieving World Class Cancer Outcomes - Cancer Taskforce strategy 2015-2020

This document, published by an Independent Cancer Taskforce (2015), aims to improve survival rates and save thousands of lives. The taskforce responded to the vision set out in the NHS Five Year Forward View. These include:

- Spearhead a radical upgrade in prevention and public health
- Drive a national ambition to achieve earlier diagnosis
- Establish patient experience as being on a par with clinical effectiveness and safety
- Transform our approach to supporting people living with and beyond cancer
- Make the necessary investments required to deliver a modern high-quality service
- Overhaul processes for commissioning, accountability and provision.

The first recommendation in their report was for the creation of a National cancer dashboard (Fig. 21). This would bring together, and make more readily accessible, data across the whole cancer pathway at Clinical Commissioning Group (CCG), provider and national levels.

Fig 21 Cancer dashboard for Bristol – incidence and death rate indicators



Data source Public health England, Cancer Dashboard

The National cancer dashboard (NHS England and Public Health England, 2017) gives local areas an overview of their performance on a range of cancer outcomes compared to the England average. At the time of writing (March 2017), the cancer dashboard showed that Bristol is better than, or similar to the England average performance on all measure except

- Under 75s death rates for all cancer
- Under 75s death rates for all cancer considered preventable

Both of which were significantly higher than England.

NHS Operational Planning and Contracting Guidance 2017-2019

This document explains how the NHS operational planning and contracting processes will now change to support Sustainability and Transformation Plans (STPs) and the 'financial reset'. It reaffirms national priorities and sets out the financial and business rules for both 2017/18 and 2018/19. Cancer is one of '9 must do's' for the NHS, specifically to:

- Work through Cancer Alliances and the National Cancer Vanguard, implement the cancer taskforce report.
- Deliver the NHS Constitution 62 day cancer standard, including by securing adequate diagnostic capacity, and the other NHS Constitution cancer standards.
- Make progress in improving one-year survival rates by delivering a year-on-year improvement in the proportion of cancers diagnosed at stage one and stage two; and reducing the proportion of cancers diagnosed following an emergency admission.
- Ensure stratified follow up pathways for breast cancer patients are rolled out and prepare to roll out for other cancer types.
- Ensure all elements of the Recovery Package are commissioned, including ensuring that:
 - o all patients have a holistic needs assessment and care plan at the point of diagnosis;
 - o a treatment summary is sent to the patient's GP at the end of treatment; and
 - o a cancer care review is completed by the GP within six months of a cancer diagnosis.

Waiting time for diagnosis and first treatment

As stated in section one early diagnosis is an important determinant of cancer outcomes. The NHS Constitution sets out the right to be seen by a cancer specialist within a maximum of two weeks from GP referral for urgent referrals where cancer is suspected.

Fig 22 shows the percentage of first appointments that were achieved within the 2 week wait guidelines. Generally, Bristol is achieving the 2 week wait target, however there are some variations, with an increased wait time seen during August-September 2016.

Fig 22 - Bristol CCG compliance to 2 week wait target

	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	2016/17
	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
Bristol CCG	94.40%	94.61%	93.31%	94.56%	89.88%	91.97%	93.56%	93.21%	93.57%	94.09%	94.63%	95.61%	93.63%

Data Source- BNSSG Cancer Performance Report

Two month (62-day) is the maximum wait from referral for suspected cancer to the first definitive treatment for all cancers. Fig 23 above shows that whilst there have been some fluctuations in performance over the last year, the last five months of the year have met the 85% National target.

Fig 23 - Bristol CCG GP referral to 62 day target

	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	2016/17
	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
Bristol CCG	83.91%	80.91%	81.63%	83.33%	85.48%	80.51%	83.33%	87.72%	86.32%	89.09%	90.53%	88.89%	85.15%

Data Source- BNSSG Cancer Performance Report

4) What is the evidence of what works (including cost effectiveness)?

NICE state that it is the combined effects of differences in cancer incidence, stage of diagnosis and treatment that result in inequalities in cancer death rates (NICE, 2015)

Prevention

Prevention through effective support to adopt and maintain healthier lifestyles, particularly around smoking, drinking, and diet will be covered in separate JSNA chapters.

Early diagnosis

Stage at diagnosis is a key predictor of overall cancer outcome and delays in diagnosis and treatment can lead to avoidable deaths. Reducing cancer death rates may be most effectively achieved by diagnosing all cancers before they progress to stage 4. But evidence also suggests that there are additional benefits in outcomes for each stage earlier that lung cancer is diagnosed. Early-stage presentation is (marginally) less likely in the more income-deprived (McPhail et al, 2015).

Late diagnosis can also cause considerable anxiety for patients and carers and increase the likelihood of developing other illnesses. Treating late stage patients is also almost always more expensive than treating patients with early stage cancer. For example, an early stage colon cancer patient would incur approximately £3,400 in NHS treatment costs on average, whereas a late stage patient would incur £12,500 (Cancer Research UK, 2014).

There is evidence that early diagnosis can be increased through public campaigns aiming to raise awareness of the symptoms of cancer, encourage people to seek help, educate and empower for earlier presentation and can be used to increase early diagnosis by encouraging people to recognise the signs and symptoms of cancer as well as understanding why it is important to act upon their concerns (Austoker, J. *et al*, 2009).

Not recognising a potential cancer symptom is a common reason given by cancer patients for delays in seeking help. A study found that recognition of warning signs was associated with anticipating faster help-seeking for potential symptoms of cancer and that strategies to improve recognition are likely to facilitate earlier diagnosis, although the paper did not explore which strategies might be most effective (Quaife, 2014).

Between 2010 and 2012, Public Health England's 'Be Clear on Cancer' campaigns led to: an increase in public awareness of the headline symptoms of lung cancer and colorectal cancer (Power & Wardle, 2015); increases in attendances for symptoms by individuals aged 50 years and over (Moffat *et al*, 2015); an increase in the number of cancers diagnosed; and a small, but significant, increase in the proportion of lung cancers diagnosed at a stage amenable to surgical resection, and a decline in the proportion of diagnosed at stage 4 (Ironmonger *et al*, 2015).

Targeting of campaigns to reach specific communities of the population may also be an important factor in their impact as there is evidence of differences in the recognition of symptoms and barriers to seeking help. Analysis of a large cancer data set found that the youngest and oldest, the single and participants with the lowest socio economic status recognised the fewest cancer symptoms, and reported most barriers to presentation. Recognition of nine common cancer symptoms was significantly lower, and embarrassment, fear and difficulties in arranging transport to the doctor's surgery were significantly more common in participants living in the most deprived areas than in the most affluent areas. Women were significantly more likely than men to both recognise common cancer symptoms and to report barriers. Women were much more likely compared with men to report that fear would put them off from going to the doctor (Niksic, 2015).

There is also evidence to suggest we should consider linking information on awareness with other health-care activities. A trial that involved offering information about symptoms of breast cancer to women attending breast screening found an increase in the proportion of women who were breast cancer aware from 6% to 21% when assessed 2 years later using a validated questionnaire (Forbes *et al*, 2011).

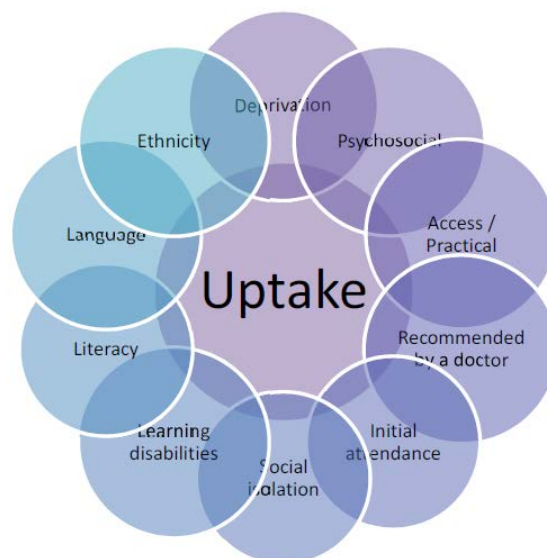
Screening

The three cancer screening programmes (bowel, breast, cervical) are an important part of early detection of cancer:

- It is estimated that the breast screening programmes prevent about 1300 breast cancer deaths a year in the UK (Marmot, 2012),
- Cervical screening prevents nearly 2000 deaths from cancer per year in the UK (Landy, 2016).
- Regular bowel cancer screening has been shown to reduce the risk of dying from bowel cancer by 16 per cent (Hewitson, 2008)

A 2015 literature review conducted by the BNSSG Screening and Immunisation Team, Public Health England and NHS England (2015) found that limited health literacy is a barrier to participating in screening programmes. The literature also indicates that living in a more deprived area, having lower education attainment or a learning disability is associated with lower uptake of breast and cervical cancer screening. Being male, younger age, living in a more deprived area, not having previously undertaken a faecal occult blood test were all associated with lower uptake of bowel cancer screening.

Figure 22 - Factors influencing uptake of cancer screening (Public Health England and NHS England'2015)



The report stated that the strongest evidence from systematic reviews to improve attendance at all cancer screening programmes supports the following interventions:

- Texting reminders of appointments 24 hours beforehand
- Telephone reminders
- GP endorsed individual letters to non-attenders
- Timed appointments
- Longer appointments for people with additional needs
- Opportunistic screening
- Provider audit and feedback

Interventions should include appropriate design of information materials, provision of alternative support, and increased one-on-one interaction with health care professionals (Kobayashi, 2014).

Other initiatives such as home visits, training link workers, peer education e.g. training hairdressers to prompt women have a poorer evidence base but may still have an impact.

Treatment

It is beyond the scope of this document to go into the treatment pathways for cancer. The following NICE guidance set out clear recommendations for the diagnosis of suspected cancer and treatment.

Lung cancer: <https://pathways.nice.org.uk/pathways/lung-cancer>

Colorectal cancer <https://pathways.nice.org.uk/pathways/colorectal-cancer>

Breast cancer <https://www.nice.org.uk/guidance/conditions-and-diseases/cancer/breast-cancer>

Prostate cancer <https://pathways.nice.org.uk/pathways/prostate-cancer>

Supporting people to live well with and beyond cancer

Achieving World Class Cancer Outcomes - Cancer Taskforce strategy 2015-2020 sets out a vision for how to improve support for people affected by cancer. These recommendations are based on work and evidence developed by the National Cancer Survivorship Initiative, NHS Improvement, Macmillan and the Taskforce themselves. The components of improving support can be broadly summarised as:

- Re-designing cancer pathways to stratify patients for follow-up support
- Delivering the recovery package (holistic needs assessment, care plan, cancer care review and treatments summary)
- Information on likely side-effects of treatment and how best to manage these
- A key contact point for rapid re-entry if recurrence markers are experienced
- Access to patient education and support events such as health and wellbeing clinics
- Signposting to rehabilitation, work and financial support services.

This approach to supporting people to live well with and beyond cancer is still relatively new and evidence is emerging as new models are tested around the UK. Some examples of the evidence base are provided below.

Stratified follow up

‘Stratified’ means that the clinical team and the person living with cancer make a decision about the best form of aftercare based on their knowledge of the disease, the treatment and the person. The three forms of aftercare are supported self-management, shared care and complex case management. A NICE Quality and Productivity case study found a mixture of cash savings, improved productivity and a range of quality outcomes including releasing outpatient resources improving access times for new cancer referrals and enabling rapid access back into the system with existing patients with problems (NICE, 2013). A 2002 report for the UK Treasury estimated that for every £100 spent on encouraging self-management around £150 worth of cost benefits for the health service could be delivered (Wanless, 2002).

Recovery package

Macmillan provide evidence for each element of the recovery package [here](#).

Access to patient education and support

Nurses interviewed for a Macmillan study stated that cancer information and support services reduce their workload and cancer patients who are able to speak openly about the impact of cancer on themselves and family are more able to maintain strong relationships within their families (Macmillan Cancer Support, no date).

Signposting

Macmillan funded research has shown that all patients said that benefits received as a result of welfare advice helped to reduce stress levels, which can in turn aid recovery (Macmillan Cancer Support, 2009). Part of the national strategy to improve support to those living with or beyond cancer is redesigning follow-up pathways so that patients are on a pathway appropriate for them, depending on their clinical and individual needs. This includes the development of supported self-management pathways.

Penny Brohn UK have self-published a service evaluation of The Wellness Package- their person-centred holistic support for mind, body, spirit and emotions for people living with cancer. The evaluation observed the impact of the Living Well course, the Follow-Up support and 12 month retrospective views, allowing clients to reflect back on their whole experience of the Wellness Package. The evaluation concluded that self-management was supported and enabled, health related quality of life was significantly improved, and that there is emerging evidence that shows a potential reduction in healthcare service use (Penny Brohn UK, 2016).

5) What services / assets do we have to prevent and meet this need?

BNSSG STP

Bristol, North Somerset and South Gloucestershire (BNSSG) have an established cancer working group which is reflective of its STP footprint. This footprint covers a population of 968,314, with 17.5% of the population living in the most deprived quintile of England.

The cancer programme aims to ensure:

- More cancers are prevented
- Diagnosis is made earlier
- Treatment is carried out within national guidance timeframes
- Patients live well with and beyond cancer
- Patient experience is improved

Prevention and early diagnosis services

See relevant JSNA chapters for smoking, obesity, alcohol, diet and nutrition and physical activity.

Health Improvement Advisors, Public Health, Bristol City Council

Health Improvement Advisors (HIA) work with communities across the city, focussed on the areas of highest health inequality, to build capacity for health improvement. They undertake this work by supporting groups to consider the health needs of their communities and build upon assets to develop health resilience. Examples of this include working with African Caribbean men's groups to discuss cancer risks and how they can spread health promoting messages through their communities. Other examples include raising awareness of screening in community and health centres.

Health Champions

Health Champions are volunteers who are trained by Bristol City Council Public Health team to deliver health promotion messages in their communities. As part of this training CRUK are delivering a 'Talk Cancer' session to enable people to give health promoting messages around cancer prevention and early diagnosis. The Health Champions training is targeted at communities who have higher risks of poor health outcomes, and is designed to build upon the assets within communities. The support network for Health Champions is being developed so that they have the tools that they need to support health improvement effectively.

Cancer Screening Services

Screening is an effective way to detect breast, bowel, and cervical cancer early, giving people the best chance for good outcomes. The Bristol, North Somerset, and South Gloucestershire (BNSSSG) Screening and Immunisation Team, Public Health England, undertook work to identify inequalities in the uptake of bowel, breast and cervical cancer screening among the eligible population across Bristol. The following are highlights of the report (BNSSSG Screening and Immunisation Team, Public Health England and NHS England, 2015)).

Cervical cancer screening

Bristol cervical screening coverage is above the national average. However Inner City and East have persistently lower uptake than Bristol overall and the national average of 78.2%. The majority of practices fail to reach the minimum target of 80% of women screened in past 5 years, and a number of practices are failing to achieve 70% coverage, particularly in the younger age group 25 – 49 year olds. Areas with higher deprivation and ethnically diverse populations have significantly lower coverage. Coverage varies according to age, with the lowest coverage in women under 30 years old and the highest coverage in women between 35 and 55 years old.

Breast cancer screening

Bristol, particularly Inner City and East and South Bristol, has persistently lower uptake than Bristol overall and the national average with a number of practices failing to reach the minimum target of 70%. Areas with higher deprivation and ethnically diverse populations have significantly lower

uptake. The uptake varied according to age group at practice level with some having higher uptake in the 50 – 64 year olds and others in the 65 – 70 year old age group. Uptake of prevalent screens i.e. first time invitations was significantly lower than incident screens i.e. repeat routine invitations in women previously screened indicating that women who have attended once are more likely to attend again.

Bowel cancer screening

Bowel cancer screening coverage across Bristol is below the National rate. There is significantly lower coverage of bowel cancer screening in parts of Inner City and East and South Bristol with a number of practices failing to reach the minimum target of 52%. There is a strong association between deprivation and uptake of bowel cancer screening in Bristol. Practices in Bristol with the lowest uptake of bowel cancer screening all had a relatively high proportion of black, minority and ethnic population groups.

The Bristol and Weston Bowel Cancer Screening Programme have a health promotion programme that works to improve uptake across the city, focussing on supporting the areas that have the lowest uptake.

Supporting people to live well with and beyond cancer in Bristol

The Bristol Living Well With and Beyond Cancer Strategy (Bristol CCG , 2015) sets out a mapping exercise of assets (services and organisations) available in the local area to support people affected by cancer. This aimed to establish the level of stability the service had, to ensure that the menu of services was not reliant on unsustainable services and that Bristol CCG was not using charitable funding to commission services to meet their statutory obligations. The results were displayed using Penny Brohn's wellbeing wheel to capture what people need support with to live well with and beyond cancer; relationships, mind, community, body, practical issues, spirit, environment and emotions.

The mapping exercise demonstrated that Bristol has a vibrant and diverse range of organisations and services that support people to live well with and beyond their cancer. However, they often lack formal commissioning or sustainable funding streams, are not able to support all who might benefit and do not provide a holistic service that is greater than the sum of its parts. Bristol CCG is working with Macmillan and providers to develop a commissioning model for living well with and beyond cancer that will enable the provision of ambitious, patient centred and sustainably funded services.

6) What is on the horizon?

Less people will die of cancer

All cancers combined death rates are projected to fall by 15% in the UK between 2014 and 2035, to 280 deaths per 100,000 people by 2035. This includes a larger decrease for males than for females due to increasing proportions of women developing cancer as explained below (Smittenaar, 2016).

More people will be living with and beyond cancer

Nationally, the number of cancer diagnoses is expected to reach over 300,000 a year by 2020, much of this increase is due an ageing population and changing lifestyle factors that can increase the risk of cancer. This places an additional importance on cancer prevention activities. Achieving world

class cancer outcomes sets a clear aim to significantly reduce the 40% of cancers caused by behavioural, lifestyle and environmental factors (Achieving World-Class Cancer Outcomes: Taking the strategy forward, 2016).

Increasing cancer rates among women

It is predicted that cancer rates will climb nearly six times faster in women than in men over the next 20 years. Specific cancer types are leading to this rise in women, including, ovarian, cervical and oral cancers where rates are predicted to rise the most over the next 20 years. Smoking and obesity are part of the reason for the faster rising rates for women as several of the obesity-related cancer types only affect women. Widespread smoking among women happened later than men and smoking continues to have a big effect on the number of cancer cases diagnosed each year (CRUK, 2017).

Increasing cancer incidence and prevalence in different ethnic groups

Many BME groups in England have relatively young populations when compared to the white British population. As BME populations age, there will likely be a rise in the number of patients being diagnosed with cancer from BME communities (NCIN, 2015)

New bowel cancer screening test

The UK National Screening Committee has recommended that the faecal immunochemical test (FIT) should replace the current guaiac faecal occult blood test, as it allows for detection and prevention of more cancers and is easier to use. The need for a single faecal sample is expected to improve the uptake of screening. Results from a recent pilot study showed that overall participation using the FIT test was 61%, compared with 50% using the faecal occult blood test (Wise, 2016). Increased detection may stretch colonoscopy services and this consequence needs further consideration.

Early detection of lung and prostate cancer

There are many research studies underway looking at improving early detection. Examples include looking at use of MRI to detect tumours in men with high Prostate Specific Antigen (PSA) levels (MRC Clinical Trials Unit, 2017), which has been highlighted by NICE for review (NICE, 2016). Decisions on implementing national screening programmes for cancer are made by the National Screening Committee (NSC), based on evidence the benefits to the group offered screening outweigh the harms.

7) Local views

Patient experience survey

88% of people who responded to a Bristol CCG patient experience survey rated their overall cancer care as excellent or very good. The England average is 89%. Various aspects of care are rated e.g. 58% reported that hospital and community staff always worked well together (compared with the England average of 63.5%) (PHE and Macmillan Cancer Support , 2016).

HealthWatch consultations

Bristol HealthWatch have conducted a number of consultations with cancer patients HealthWatch (2015). A consultation at a Macmillan wellbeing centre-breast living well course asked participant a range of questions about diagnosis, treatment and support services for breast cancer. The responses were very positive regarding the process of diagnosis and the support they received from their GP.

During a HealthWatch consultation at North Bristol NHS Trust-Prostate Cancer Living Well Programme patients expressed that professionals need to communicate more effectively with patients and their families. They need to explain why tests are being carried out, what the results mean, what the treatment options are and what will happen after treatment (HealthWatch, 2015a). A HealthWatch consultation was also conducted at Bristol And Avon Chinese Women's Group. Six out of 20 people said they did not know about the symptoms of different types of cancer. The most common reason people gave for not going to see their GP even if they had had a cough for more than three weeks was that the doctor would not speak their language (HealthWatch, 2015b).

Focus group research on bowel screening uptake

Bristol Bowel Cancer Screening Programme conducted focus groups with people from BME backgrounds (Somali men , Somali women, South Asian men, South Asian women, and Afro-Caribbean mixed gender) to understand the barriers to accessing bowel screening, and what might promote uptake (Breistein, 2015) .

Key themes of the focus group included the need to consider how we give out information about screening, both how to access it and also how we support people to understand why they should access it. Some communities have low literacy levels (in their first language), and some would be unable to read in English. The groups suggested that staff in GPs and Pharmacies would be listened to if they promoted and reinforced screening messages to their patients. The groups also recommended that screening was promoted widely in the community, such as through places of worship, community health/care workers, and community groups.

Several cultural barriers to bowel screening were identified, including issues handling faeces and a sense of fatality around cancer.

Living well with and beyond cancer

Feedback at consultation events (with patients, carers and professionals) held to develop the Bristol Living Well With and Beyond Cancer Strategy set out the following to articulate why we need to change how people are supported to live well with and beyond cancer:

“Because everyone needs to know that cancer isn’t necessarily an automatic death sentence – some people live for years even with advanced disease”

“Because, if you have cancer, there are many small things that you, your friends and family can do beyond just “having the treatment”, that can make a big positive difference to your experience and your wellbeing”

“Because, by becoming actively involved you can increase your chances of living as well as possible for as long as possible, so you need to get the right information and support at the right time for you”

B: What does this tell us?

8) Key issues and gaps

- Early death from cancer and early death from cancers considered to be preventable are both statistically higher in Bristol than the England average.
- The numbers of people being diagnosed with cancer is similar across the city localities.
- There are large variations in stage of diagnosis by cancer site, with most breast cancer diagnosed early compared to less than half of lung and colorectal cancers. Variations in early diagnosis are most apparent for lung cancer and colorectal cancer, with North West Inner having the highest proportion diagnosed early for both cancers. The lowest percentage of early diagnosis is for lung cancer in Bristol Inner City, followed by Bristol East. However, this data does not have a test of statistical significance so we must be cautious when using this data.
- The poorest people in Bristol have the highest cancer death rate.
- Four wards (Southville, Filwood, Hartcliffe & Withywood, and Avonmouth & Lawrence Weston) have significantly higher early cancer deaths for all cancers than the Bristol average.
- Two wards (Hartcliffe & Withywood and Avonmouth & Lawrence Weston) have significantly higher early death rates for lung cancer.
- The difference in early cancer death rates is widening between the sub locality with the lowest death rate and the area with the highest death rate (North West Inner and North West Outer).
- In the future we expect increased cancer incidence and prevalence cancer, but less people will be dying of cancer.
- As BME populations age, there will likely be a rise in the number of patients being diagnosed with cancer from BME communities.
- More women will be diagnosed with cancer.
- Screening coverage rates for breast and colorectal cancer are below the England average.
- Planned national changes to the test used in the bowel screening programme are anticipated to increase screening uptake as a pilot project showed a 7% increase in uptake, and an uptake in groups with low participation.
- Following changes to the test used in the bowel screening programme there is potential for increase in bowel screening to increase referrals that will create pressures on colonoscopy services.
- A need for a strategic approach to commissioning for living well with and beyond cancer, based on increase in people living with cancer and a disparate set of services in Bristol.
- A cultural shift required in cancer – to see it as a long term condition, where patients being actively involved in decision making and self-management is key.

9) Knowledge gaps

Whilst undertaking this JSNA concerns were raised that there is a fall in the number of young women attending cervical screening, possibly due to believing they do not need to because of HPV vaccinations. This concern fell outside of the remit of this JSNA, but further investigation could be conducted to establish if the data supports this suggestion.

This chapter has included information broken down by gender, age and ethnicity. However, there are gaps in our understanding of experience and outcomes for people with other protected characteristics such as disability, sexuality etc. Cancer data is not currently available in a way that would make this analysis possible, but this issue could be explored further through focus groups.

Current data recording of ethnicity is poor, leading to a lack of good quality data on the experience of cancer for different ethnic groups.

There is little information in this chapter regarding cost effectiveness of interventions.

More evidence base needs to be gathered (as it is established) for how to implement the recovery package and stratified follow up at a local level.

As treatment of cancer was outside of the scope of the chapter there has not been an exploration of the impact that experience of treatment is having on death rates. Specifically, we do not understand if there are any inequalities in this experience that impact on the growing difference in early cancer death rates between Bristol's communities.

C: What should we do next?

10) Recommendations for consideration

Work to **reduce inequalities** in early cancer deaths should focus on the Bristol wards with highest rates of early cancer deaths - **Southville, Filwood, Hartcliffe & Withywood, and Avonmouth & Lawrence Weston.**

Effective **advice** and **support** to adopt and **maintain healthier lifestyles**, particularly around **smoking, drinking, diet and weight management** is available with a focus on uptake from those **most at risk** of cancer.

Local targeting of **cancer symptom awareness campaigns**, including supporting National evaluated campaigns, such as 'Be Clear on Cancer'

Implement the recommendations of screening focus groups to **improve uptake in bowel, breast and cervical cancer screening**:

- Texting reminders of appointments 24 hours beforehand
- Telephone reminders
- GP endorsed individual letters to non-attenders
- Timed appointments
- Longer appointments for people with additional needs
- Opportunistic screening
- Provider audit and feedback

Identify opportunities for delivering prevention and behaviour change messages by making every contact count in secondary care. This could include as people access cancer screening, or upon discharge when people are found not to have cancer.

Continue to think holistically, and in line with the Cancer Taskforce Strategy, to **meet the needs of people living well with and beyond cancer to maximise positive outcomes and prevent future ill health**. Key to this is patients being actively involved in decision making and self-management.

Identify opportunities to **improve ethnicity recording** to improve ability to analyse and plan for changing demographics in cancer data.

11) Key contacts

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Glossary

Age Standardise Rates (ASR) – Age-standardisation adjusts [rates](#) to take into account the age structure in the population being looked at. When rates are age-standardised, we know that differences in the rates over time or between geographical areas do not simply reflect variations in the age structure of the population. This is important when looking at cancer rates because cancer is more common among older people.

Cancer Incidence - Incidence means how many people are newly diagnosed with a particular type of cancer over a given time period. It is often written as the number of cancer cases per 100,000 people in the general population eg per year.

Premature Death – Is death under the age of 75. This is also described as early death.

Prevalence – The proportion of people in a sample or population who experience a disease or a risk factor (e.g. smoking) at a given time. A prevalence is often written as a rate (2500 per 10,000), fraction (1/4) or percentage (25%).

For a more detailed glossary please visit - <http://www.cancerresearchuk.org/about-cancer/utilities/glossary/index.html>

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