Cancer Service Transformation – Indicator metrics

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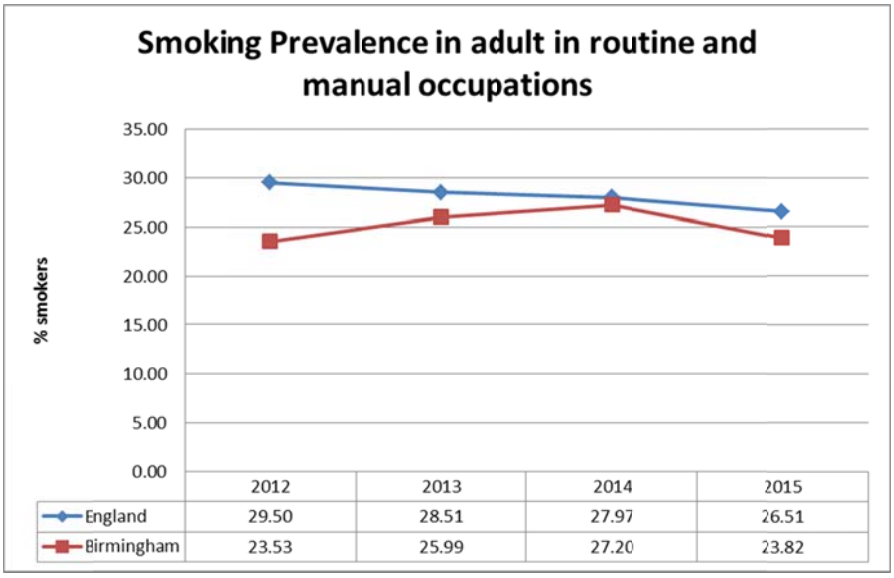
PN1 – Strengthen existing tobacco controls and smoking cessation services, in line with reducing smoking prevalence to below 13% nationally 2020

Smoking prevalence in routine and manual occupations

Name	Percentage 2015	LCL	UCL
England	26.5%	26.1%	26.9%
Birmingham	23.8%	19.1%	28.5%

Source: Annual Population Survey via Public Health Outcomes Framework



In 2015 prevalence of smoking for adults in routine and manual occupations is lower than England but not at a statistically significant level. National prevalence has decreased (significantly) between 2012-2015.

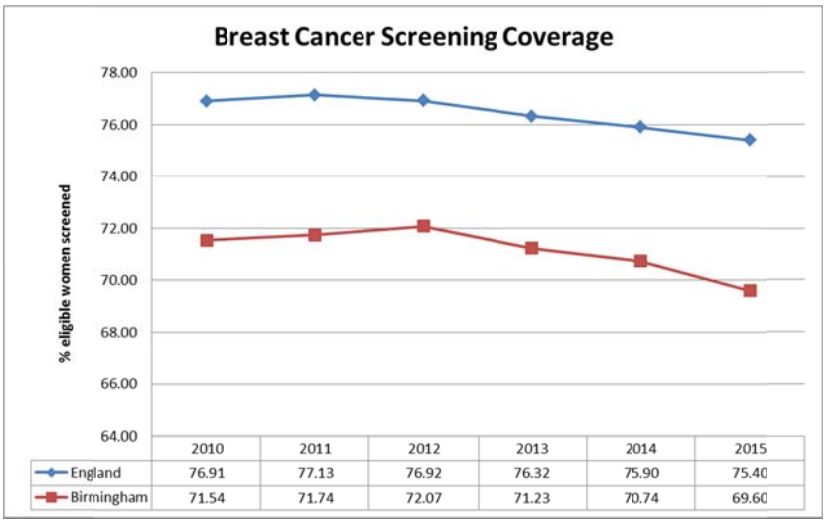
Smoking is the most important cause of preventable ill health and premature mortality in the UK. Smoking is a major risk factor for many diseases, such as lung cancer, chronic obstructive pulmonary disease (COPD) and heart disease. It is also associated with cancers in other organs, including lip, mouth, throat, bladder, kidney, stomach, liver and cervix. Smoking is a modifiable lifestyle risk factor; effective tobacco control measures can reduce the prevalence of smoking in the population.

PN2 / ED3 – Cancer screening uptake rates: Breast, cervical, bowel

Name	Cancer screening group	Percentage 2015	LCL	UCL	Age range
England	**Breast**	75.4%	75.4%	75.4%	53-70
Birmingham	**Breast**	69.6%	69.3%	69.9%	53-70
England	**Cervical**	73.45%	73.43%	73.47%	25-64
Birmingham	**Cervical**	67.06%	66.88%	67.23%	25-64
England	**Bowel**	57.09%	57.06%	57.13%	60-74
Birmingham	**Bowel**	48.67%	48.39%	48.95%	60-74

Source: Public Health Outcomes Framework - November 2016

Breast Cancer

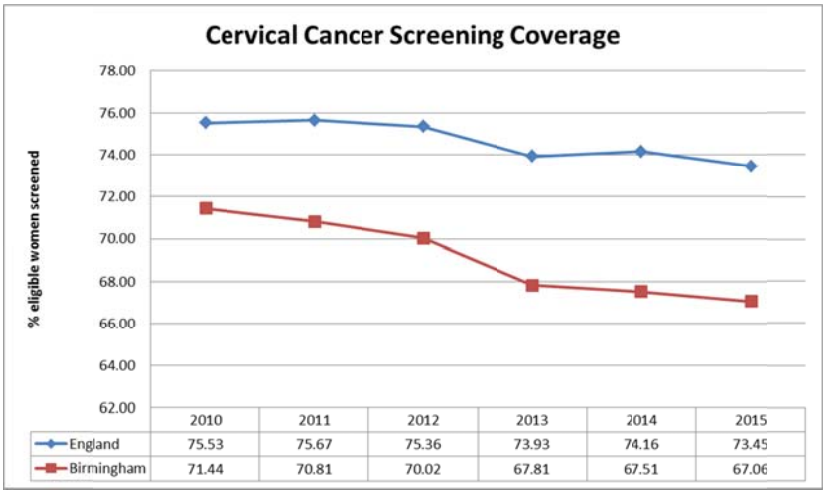


Source: Public Health Outcomes Framework, January 2017

The table and chart show the percentage of eligible women aged 53–70 with a screening test result recorded in the previous three years. Birmingham significantly lower percentage than England being screened. Birmingham has significantly lower percentage of screening than for England. The trend chart shows reducing coverage locally and nationally.

The NHS Breast screening Programme uses breast X-rays (mammograms) to screen all women aged 50-70 registered with a GP. Women may be called as early as age 47 and as late as 73 depending on the screening round. Invitations for screening are sent every 3 years. Breast screening supports early detection of cancer and is estimated to save 1,400 lives in England each year. Improvements in coverage would mean more breast cancers are detected at earlier, more treatable stages.

Cervical Cancer



Source: Public Health Outcomes Framework, January 2017

The table and chart show the percentage of women aged 25-49 with an adequate screening test in the previous 3.5 years plus the number of women aged 50-64 with an adequate screening test in the previous 5.5 years. Birmingham has significantly lower percentage of screening than for England. The trend chart shows reducing coverage locally and nationally.

Women between the ages of 24 and 64 are offered cervical screening through the NHS every 3-5 years. Women aged 25 and 49 are screened every 3 years whilst women aged 50 -64 are tested every 5 years. Cervical cancer screening supports detection of symptoms that may become cancer and is estimated to save 4,500 lives in England each year. Improvements in coverage would mean more cervical cancer is prevented or detected at earlier, more treatable stages.

Bowel Cancer

The table shows the percentage of people aged 60–74 with a screening test result recorded in the previous 2½ years. Data is only available for 2015. Birmingham has significantly lower percentage of screening than for England.

About one in 20 people in the UK will develop bowel cancer during their lifetime. It is the third most common cancer in the UK, and the second leading cause of cancer deaths, with over 16,000 people dying from it each year (Cancer Research UK, 2005. Cancerstats).

Regular bowel cancer screening has been shown to reduce the risk of dying from bowel cancer by 16% (Cochrane Database of Systematic Reviews, 2006. Screening for colorectal cancer using the faecal occult blood test: an update).

The NHS Bowel Cancer Screening Programme (BCSP) offers screening every 2 years to all men and women aged 60 to 74. Eligible people are first sent an invitation and explanatory leaflets followed by another letter containing all the necessary materials to carry out and

return an a faecal occult blood (FOB) screen. People with a positive test are offered a colonoscopy.

Bowel cancer screening aims to detect bowel cancer at an early stage (in people with no symptoms), when treatment is more likely to be effective. Bowel cancer screening can also detect polyps. These are not cancers, but may develop into cancers over time. They can easily be removed, reducing the risk of bowel cancer developing.

ED1 – Implementing NICE referral guidelines, which reduce the threshold of risk which should trigger an urgent cancer referral

Record of Stage at diagnosis

Name	Percentage 2014	LCL	UCL
England	75.9%	75.7%	76.0%
NHS Birmingham South Central CCG	76.1%	73.2%	78.8%
NHS Birmingham Crosscity CCG	80.2%	78.8%	81.5%
NHS Sandwell & West Birmingham CCG	79.7%	78.0%	81.4%

Source: Public Health England's National Cancer Intelligence Network: Cancer Analysis System

Percentage of cancers detected at Stage 1 and 2

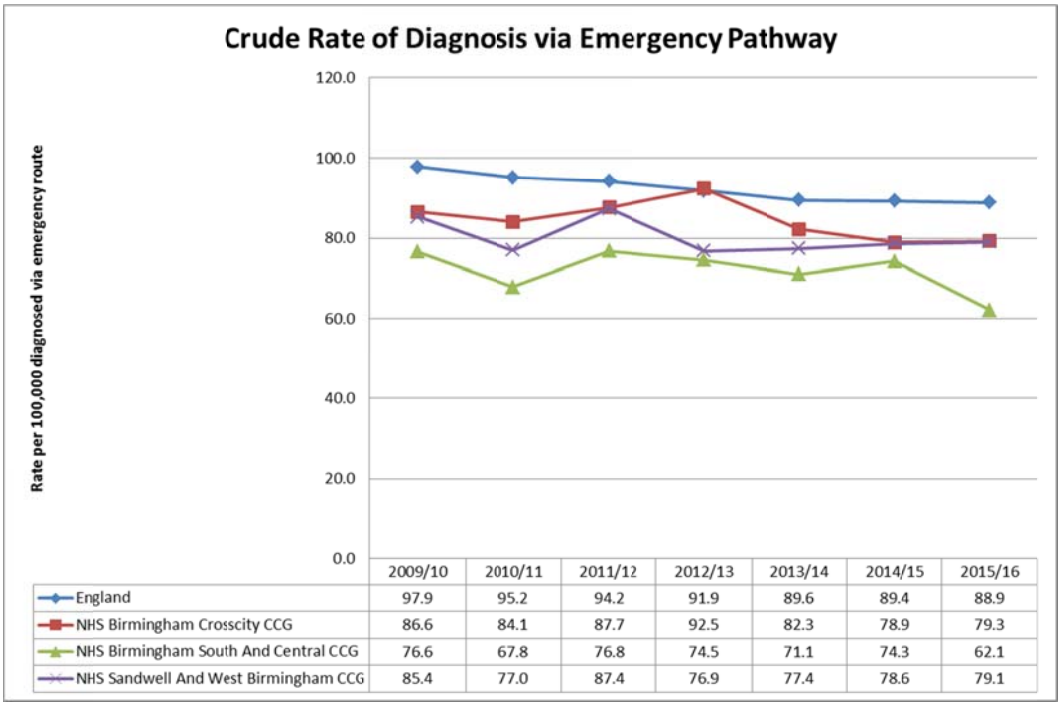
Name	Percentage 2014	LCL	UCL
England	50.7%	50.4%	50.9%
NHS Birmingham South Central CCG	52.8%	48.8%	56.7%
NHS Birmingham Crosscity CCG	54.4%	52.4%	56.4%
NHS Sandwell & West Birmingham CCG	53.6%	51.1%	56.1%

Source: Public Health England's National Cancer Intelligence Network: Cancer Analysis System

ED4 – Avoid diagnosis via emergency pathways

Diagnosis via emergency pathways

Emergency presentation is linked to lower short term survival in newly diagnosed patients. However is strongly affected by case-mix: more emergency presentations can be expected in older practice populations and the mix of tumour types is also highly significant (for example, lung cancers have a higher fraction of emergency presentations while breast cancers have a low fraction of emergency presentations). More emergency presentations can therefore be expected in practices with an older or more deprived population. This indicator is based on small numbers as such the random-chance variation is higher and the indicator should be interpreted with caution.



	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
England	97.9	95.2	94.2	91.9	89.6	89.4	88.9
NHS Birmingham Crosscity CCG	86.6	84.1	87.7	92.5	82.3	78.9	79.3
NHS Birmingham South And Central CCG	76.6	67.8	76.8	74.5	71.1	74.3	62.1
NHS Sandwell And West Birmingham CCG	85.4	77.0	87.4	76.9	77.4	78.6	79.1

Source: PHE – Cancer services

The rates of emergency presentations are generally decreasing and are lower in Birmingham than England.

Emergency admissions with cancer

Name	2015/16 Per 100,000 pop	LCL	UCL
England	537.75	535.86	539.65
NHS Birmingham South Central CCG	369.29	348.40	391.42
NHS Birmingham Crosscity CCG	465.39	449.85	481.48
NHS Sandwell & West Birmingham CCG	449.88	432.8	467.63

Source: PHE – Cancer services

The table shows the crude rate per 100,000 persons of all emergency admissions with an invasive, in-situ, uncertain or unknown behaviour, or benign brain cancer (ICD-10 C00-C97, D00-D09, D33, and D37-48) present in any of the first three diagnostic fields (HES inpatient database) per total patients. These may occur at any stage of the cancer pathway and will include persons diagnosed with cancer in prior years. This indicator may be expected to be higher in practices with an unusually high fraction of persons of 65+ years of age, due to the higher incidence of cancer at these ages.

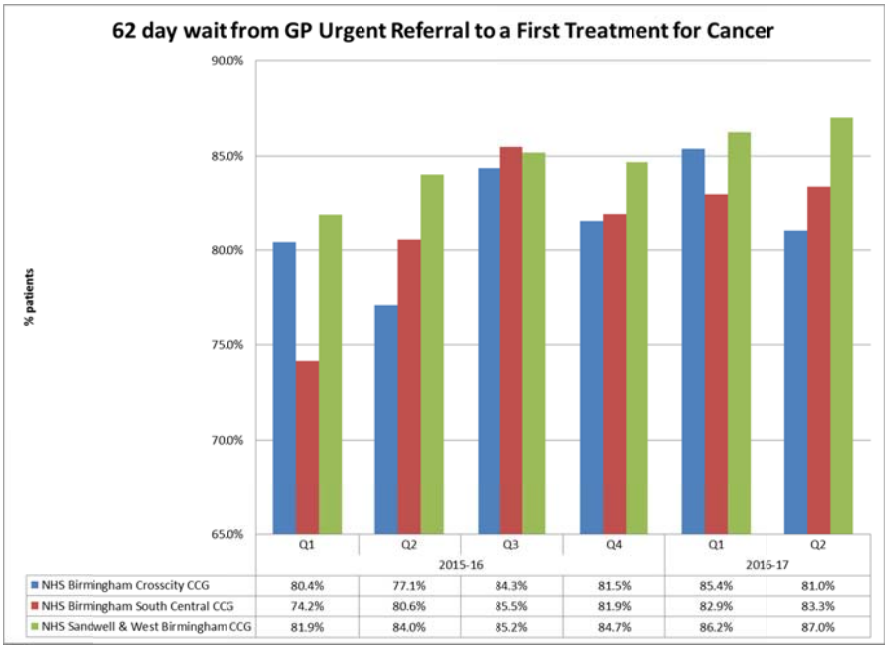
DC1 – Identifying any 2017/18 diagnostic capacity gaps

62-day cancer waiting times (percentage seen after referral)

Waiting times of people referred by their GP with suspected cancer or breast symptoms and those subsequently diagnosed with and treated for cancer by the NHS in England. The operation standard is 85% of patients should have a 2 month wait from GP urgent referral to first treatment for cancer.

Name	Percentage Q2 2016-17
England	82.2%
NHS Birmingham South Central CCG	81.0%
NHS Birmingham Crosscity CCG	87.0%
NHS Sandwell & West Birmingham CCG	83.3%

Source: NHS England Cancer Waiting Times



Source: NHS England Cancer Waiting Times

The cancer waiting times chart shows variance in percentage by quarter.

DC1– Percentage of cancers detected at Stage 1 and 2

Name	Percentage 2014	LCL	UCL
England	50.7%	50.4%	50.9%
NHS Birmingham South Central CCG	52.8%	48.8%	56.7%
NHS Birmingham Crosscity CCG	54.4%	52.4%	56.4%
NHS Sandwell & West Birmingham CCG	53.6%	51.1%	56.1%

Source: Public Health England's National Cancer Intelligence Network: Cancer Analysis System

DC1– Activity trajectories – forecast growth in total admissions to 2020

The forecasting work has been carried out by the Strategy Unit at Midlands and Lancashire CSU based on population projections and trends in the rates of cancers.

Birmingham Crosscity– forecast growth in total admissions to 2020

	Baseline	Forecast	Diff.	%
Cancer	**2013**	**2020**		**Growth**
Breast	2,297	2,617	320	14.0%
Colorectal	1,504	839	-665	-44.2%
Lung	937	1,134	197	21.1%
Prostate	776	921	145	18.7%
Upper GI	679	394	-285	-42.0%
Urological	1,637	2,080	443	27.1%
Other	8,072	9,048	976	12.1%
Invasive	**15,902**	**17,034**	**1,132**	**7.1%**
DCIS	119	186	67	56.7%

Source: Midlands and Lancashire CSU

Birmingham South Central – forecast growth in total admissions to 2020

	Baseline	Forecast	Diff.	%
Cancer	**2013**	**2020**		**Growth**
Breast	245	310	65	26.5%
Colorectal	265	373	108	40.6%
Lung	129	142	13	10.4%
Prostate	127	197	70	54.8%
Upper GI	114	139	25	21.8%
Urological	131	128	-3	-2.0%
Other	1,681	2,110	429	25.5%
Invasive	**2,692**	**3,398**	**706**	**26.2%**
DCIS	31	50	19	62.1%

Source: Midlands and Lancashire CSU

Sandwell & West Birmingham – forecast growth in total admissions to 2020

	Baseline	Forecast	Diff.	%
Cancer	**2013**	**2020**		**Growth**
Breast	1,717	2,680	963	56.1%
Colorectal	1,145	2,054	909	79.4%
Lung	803	1,029	226	28.1%
Prostate	576	792	216	37.5%
Upper GI	331	263	-68	-20.5%
Urological	613	737	124	20.2%
Other	6,194	7,581	1,387	22.4%
Invasive	**11,379**	**15,135**	**3,756**	**33.0%**
DCIS	85	151	66	77.8%

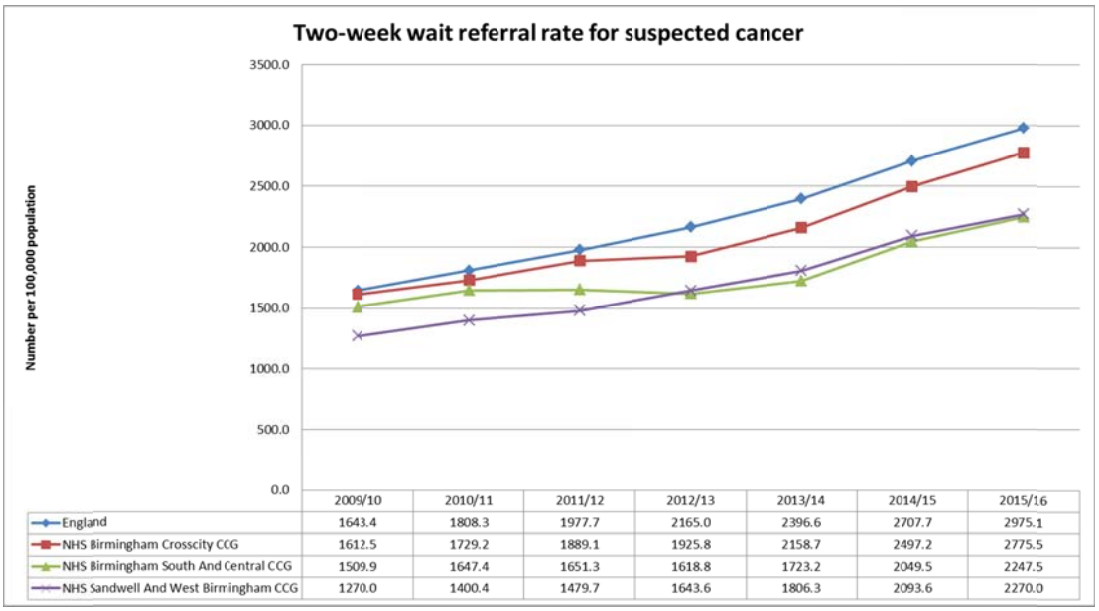
Source: Midlands and Lancashire CSU

DC1 – Diagnostic Waiting Times

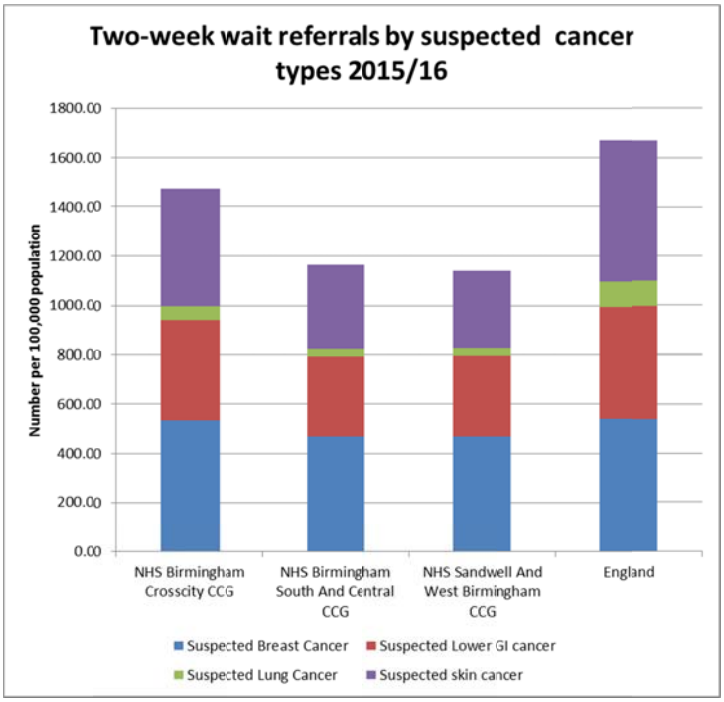
Two Week Wait Referrals

The earlier a diagnosis is made, the better the outcome for the patient but this is reliant on the patient presenting with symptoms early. The Cancer Plan 2000 gave patients whose GP suspects a cancer diagnosis, the right to be seen by a specialist team within 14 days of referral.

The trend chart shows general increases in referral rates per 100,000 persons locally and nationally. Birmingham rates are consistently lower than the national rate across the 3 CCGs.



Source: NHS England Cancer Waiting Times Database via PHE Cancer Services



Source: NHS England Cancer Waiting Times Database via PHE Cancer Services

The chart shows that TWW referrals for suspected breast, lower GI, lung and skin cancers are lower in Birmingham than nationally for all 4 of these main cancers.

Two-week referrals resulting in a diagnosis of cancer
(Conversion rate: as % of all TWW referrals)

Only a proportion of referrals for suspected cancer will result in an actual diagnosis so the conversion rate i.e. the number of referrals that result in a cancer diagnosis, gives more insight into clinical practice. The 'conversion rate' is the number of Two Week Wait referrals resulting in a diagnosis of cancer in the year divided by the total number of Two Week Wait referrals in the year.

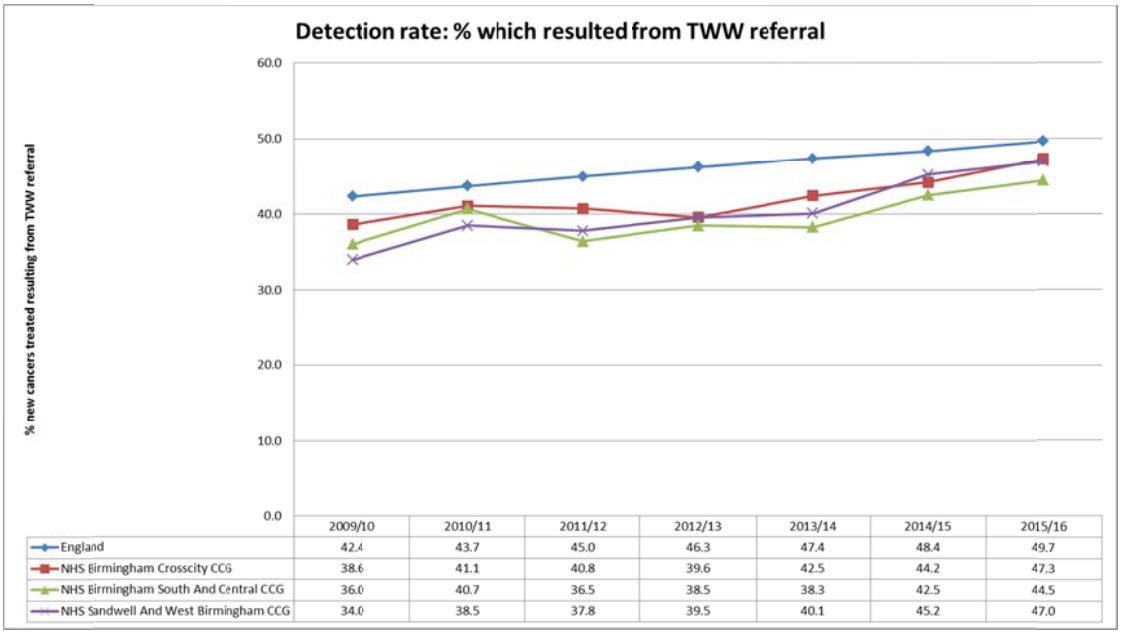
Area	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
NHS Birmingham Crosscity CCG	9.16	9.16	9.49	8.97	8.34	7.16	7.03
NHS Birmingham South Central CCG	7.35	7.24	6.84	7.25	6.85	6.63	6.21
NHS Sandwell & West Birmingham CCG	9.30	9.74	9.30	8.40	7.38	7.15	6.12
England	10.83	10.30	10.03	9.45	9.03	8.19	7.77

Source: NHS England Cancer Waiting Times Database via PHE Cancer Services

The table shows a decreasing trend in TWW referrals resulting in a diagnosis of cancer locally and nationally.

Detection Rate from TWW referral

The proportion of new cancer cases treated who were referred through the Two Week Wait referral route. This is calculated as the number of new cancer cases treated in the year who were referred through the Two Week Wait referral route divided by the total number of patients registered at the practice who have a date of first treatment in the financial year on the Cancer Waiting Times system.



Source: NHS England Cancer Waiting Times Database via PHE Cancer Services

The chart shows increasing trend in detection of new cancer cases via the TWW referral.

Forecasting epidemiological demand to 2020

Epidemiological demand is a summary measure used to represent the potential demand of the population of cancer patients; it is the sum of incidence, 1 year prevalence and 2-5 year prevalence. The forecasting work has been carried out by the Strategy Unit at Midlands and Lancashire CSU based on population projections and trends in the rates of cancers.

Birmingham Cross City CCG

	Baseline	Forecast	Diff.	%
Cancer	**2013**	**2020**		**Growth**
Breast	2,419	2,731	312	12.9%
Colorectal	1,569	1,867	298	19.0%
Lung	998	1,255	257	25.7%
Prostate	2,299	2,840	541	23.5%
Upper GI	434	485	51	11.7%
Urological	759	924	165	21.7%
Other	4,450	5,461	1,011	22.7%
Invasive	**12,928**	**15,563**	**2,635**	**20.4%**
DCIS	357	493	136	38.2%

Source: Midlands and Lancashire CSU

Birmingham South Central CCG

	Baseline	Forecast	Diff.	%
Cancer	**2013**	**2020**		**Growth**
Breast	635	753	118	18.6%
Colorectal	393	519	126	32.1%
Lung	285	377	92	32.3%
Prostate	493	631	138	28.0%
Upper GI	101	118	17	16.7%
Urological	174	263	89	51.3%
Other	1,113	1,450	337	30.3%
Invasive	**3,194**	**4,111**	**917**	**28.7%**
DCIS	84	105	21	25.3%

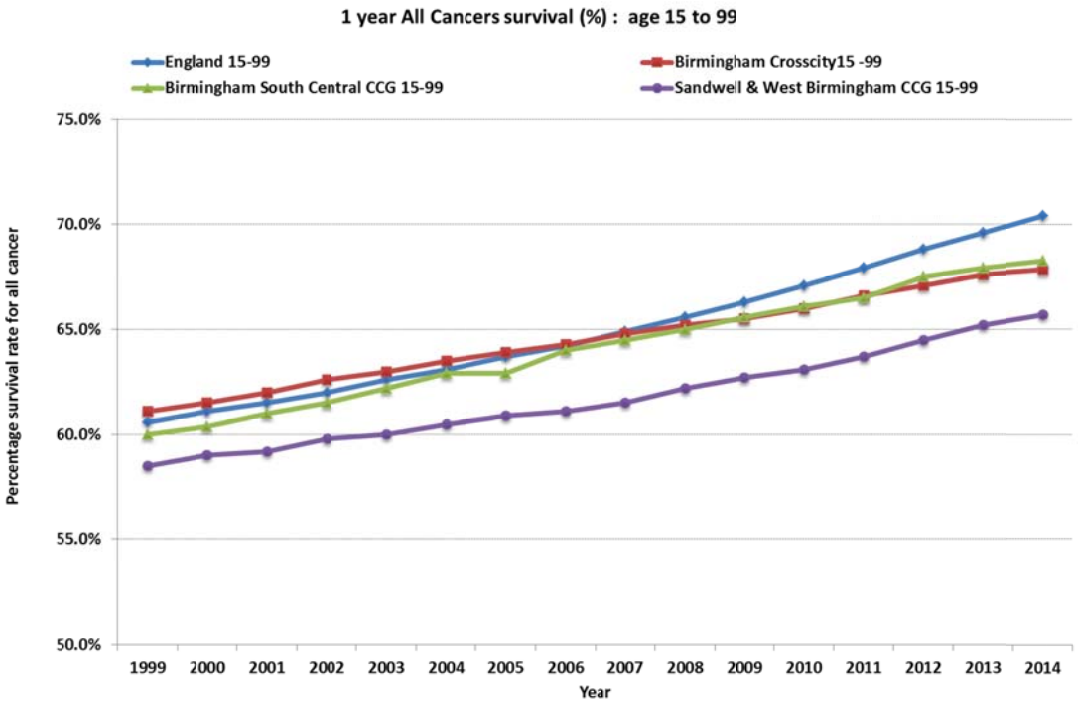
Source: Midlands and Lancashire CSU

Sandwell & West Birmingham CCG

	Baseline	Forecast	Diff.	%
Cancer	**2013**	**2020**		**Growth**
Breast	1,449	1,707	258	17.8%
Colorectal	872	1,018	146	16.7%
Lung	609	777	168	27.7%
Prostate	1,446	1,902	456	31.5%
Upper GI	251	266	15	5.9%
Urological	438	496	58	13.4%
Other	2,590	3,183	593	22.9%
Invasive	**7,655**	**9,349**	**1,694**	**22.1%**
DCIS	236	326	90	38.0%

Source: Midlands and Lancashire CSU

Trends in survival for cancer sites

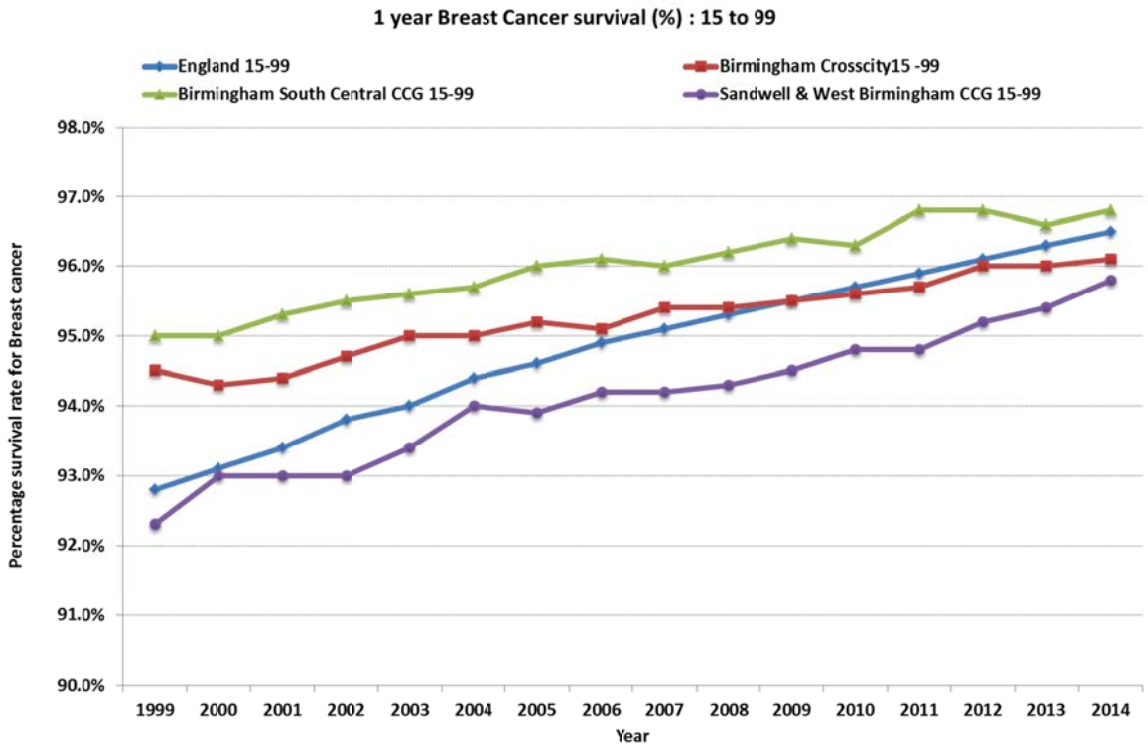


Source: ONS

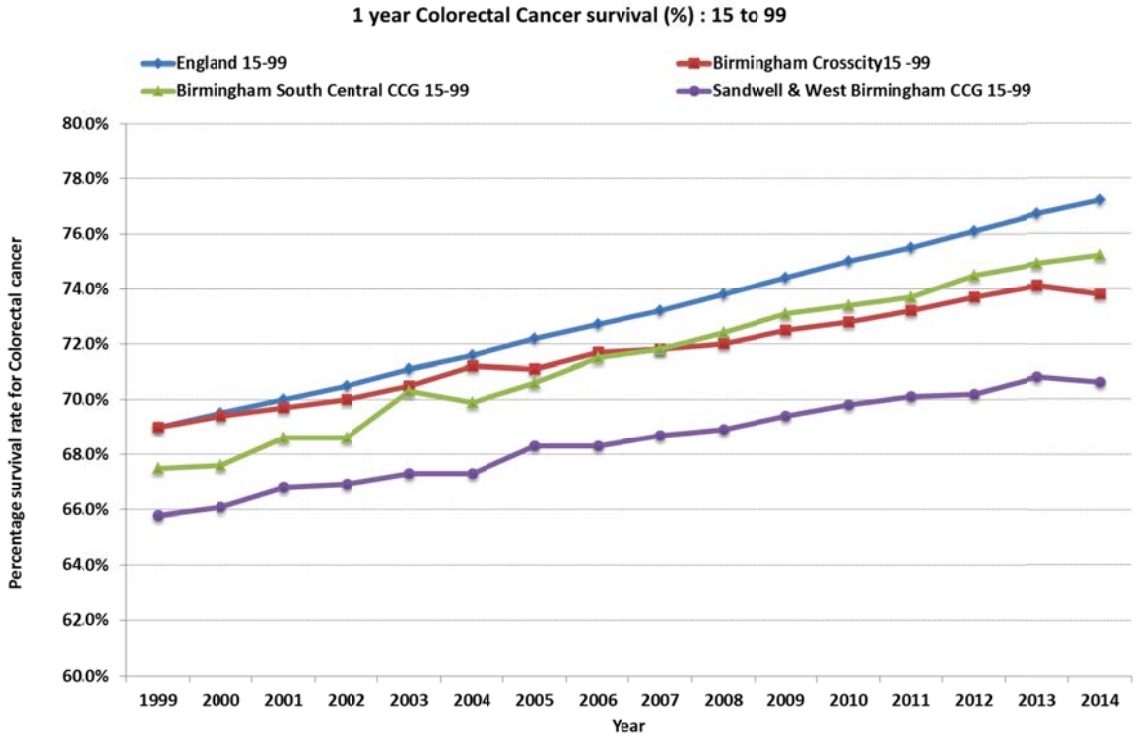
1 year survival rates for all cancers together have improved over time. This is the case for 1 year survival rates for breast, colorectal and lung cancers.

The table shows the 1 year survival percentage for 2014. Survival is lower in the 3 CCGs compared to England with the exception of lung cancer and breast cancer in Birmingham South Central.

1 year survival (ages 15-99) 2014	All cancers	Breast cancer	Colorectal cancer	Lung cancer
NHS Birmingham Crosscity CCG	67.8%	96.1%	73.8%	34.3%
NHS Birmingham South Central CCG	68.2%	96.8%	75.2%	39.2%
NHS Sandwell & West Birmingham CCG	65.7%	95.8%	70.6%	34.7%
England	70.4%	96.5%	77.2%	36.8%



Source: ONS



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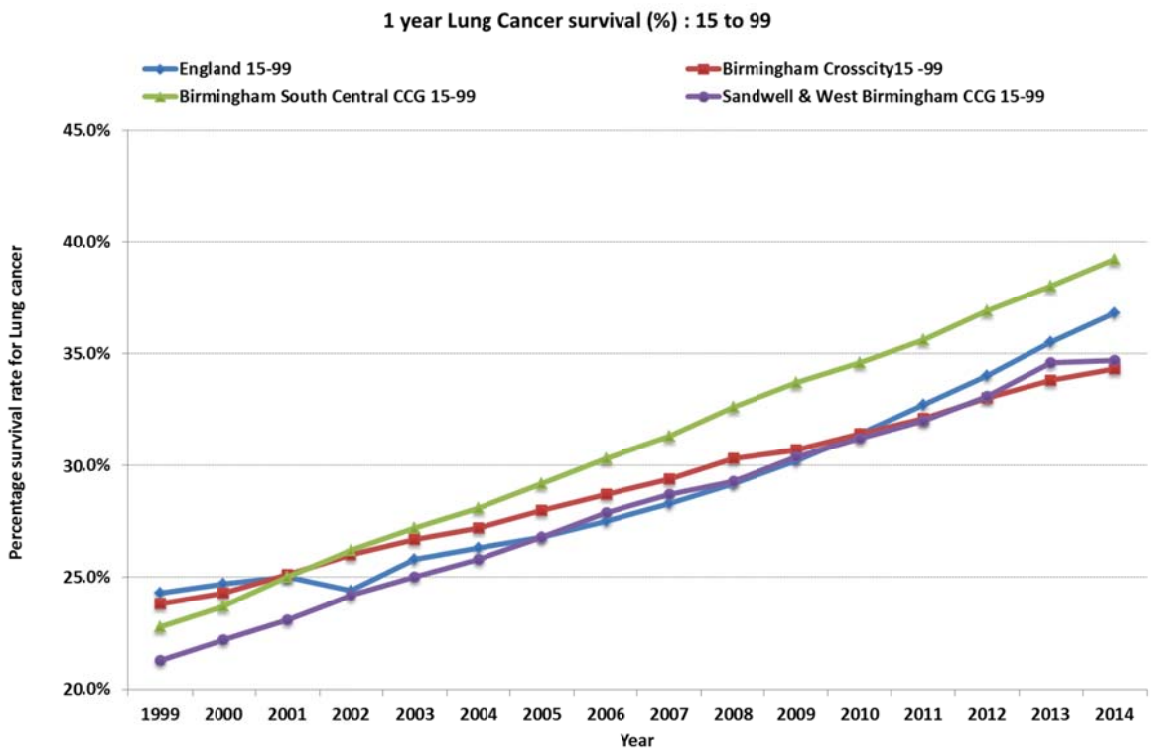
1 year Lung Cancer survival (%) : 15 to 99
England 15-99
Birmingham Crosscity15 -99
Birmingham South Central CCG 15-99
Sandwell & West Birmingham CCG 15-99
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
Percentage survival rate for Lung cancer
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year

Source: ONS