



PUBLIC HEALTH REPORT

CANCER

Introduction

Our body's organs and tissues are made up of cells. These cells are able to receive signals from the body, which indicates to them when to grow and when to divide to make new cells¹. This process enables our bodies to grow and heal. Some cells receive signals from the body to stop working, eventually these cells become old, damaged and die.

Unfortunately, some signals can go wrong eventually leading to the cell becoming abnormal. These abnormal cells may continue to divide resulting in more abnormal cells¹. The product from this process is a lump, otherwise known as a tumour.

Now, not all tumours are cancerous. To examine whether the tumour is cancerous, doctors take a small sample of cells (known as a biopsy). This biopsy is examined visually under a microscope to observe for cancer cells. A benign tumour (non-cancerous tumour) is not able to spread to other parts of the body and usually only causes a problem if it grows and pushes up against nearby organs. A malignant tumour (a cancerous tumour) is able to spread into other areas of the body from the primary site¹. This type of tumour usually travels around the body through the lymphatic system. When these cancer cells reach other parts of the body, they may grow and form another tumour resulting in a secondary cancer or a metastasis¹.

There are some forms of cancer which begin in the blood cell. These abnormal cells build up in the blood and sometimes the bone marrow (where blood cells are made). This is known as blood cancers.

There are more than 200 different types of cancer. The most common cancers are lung, breast (in women), prostate (in men) and bowel (otherwise known as colorectal cancer). These four types of cancers account for more than half of all cancer diagnosed in this country and in Harrow.

¹ Macmillan.org.uk. (2019). What is cancer?. Available at: <https://www.macmillan.org.uk/information-and-support/understanding-cancer/what-is-cancer.html> [Last accessed 24 Oct. 2019].

Cancer is the biggest cause of death in Harrow. According to Cancer Research UK, 1 in 2 people will develop cancer at some point in their lives². As life expectancy is increasing globally, people are living for longer and consequently more people will be diagnosed with cancer in their lifetime. Because of this global transition there is an urgent need to strengthen health and social care services to collaborate to manage the needs of the growing population. Therefore, better methods of diagnosis, treatments and earlier diagnosis outlined in the National Cancer Strategy³. Prevention plays a critical role in the effort needed to reduce cancer in future.

The ability to positively influence cancer incidence and outcomes sits across health and social care domains, including public health, primary, community and secondary health care services, and social care.

Policy Context

The National Cancer Strategy 2015-2020⁴ developed by the NHS formulated key objectives. The key objectives are the following:

- Prevention of Cancer: through supporting population approaches to healthy behaviour and increasing screening uptake
- Increasing survival from cancer: through earlier detection, improving referral and diagnostic pathways and ensuring access to optimal treatment
- Reducing inequalities in outcomes from cancer: by reducing variation in access to optimal diagnosis and treatment across population groups and localities
- Improving patient experience: through integration of health and social care services, ensuring that patients and families are better informed, empowered and involved in decisions around their care
- Improving the health, wellbeing and quality of life for patients after treatment and at the end of life through commissioning services based on health and wellbeing outcomes, with a population focus. This includes secondary prevention to reduce recurrence of cancer and the impact of the side effect of treatment.

² Cancer Research UK. (2019). 1 in 2 people in the UK will get cancer. [online] Available at: <https://www.cancerresearchuk.org/about-us/cancer-news/press-release/2015-02-04-1-in-2-people-in-the-uk-will-get-cancer> [Accessed 24 Oct. 2019].

³ Achieving World Class Cancer Outcomes: Taking the strategy forward May 2016
<https://www.england.nhs.uk/wp-content/uploads/2016/05/cancer-strategy.pdf> [Accessed 24 Oct. 2019].

⁴ NHS England May 2016 Achieving world class cancer outcomes: taking the strategy forward
<https://www.england.nhs.uk/wp-content/uploads/2016/05/cancer-strategy.pdf> [Last accessed 24 Oct. 2019].

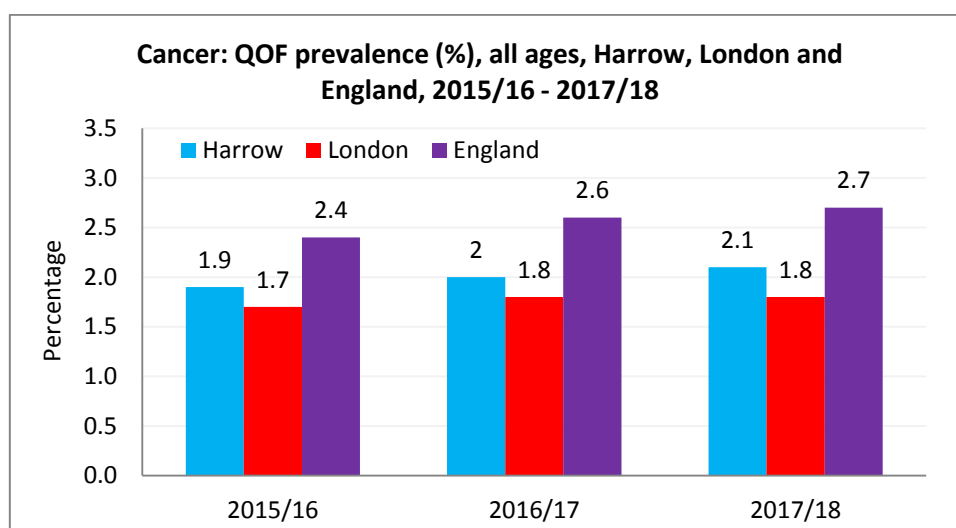
Local Context

Prevalence

Cancer prevalence is a count of people still alive who have been diagnosed with cancer in the past. There are an estimated 1.9 million people living with or beyond cancer in the UK today. By 2030 it is estimated that there will be 3.1 million. At the end of 2015, around 6,586 people in Harrow CCG were living up to 21 years after a cancer diagnosis. This could rise to an estimated 10,630 by 2030. Quality and Outcome Framework (QOF) reported prevalence of cancer all ages for Harrow in 2017/18 was 5,673 people (2.1% of the Harrow populations). Harrow's cancer prevalence in 2017/18 was similar to ten most similar boroughs (Nearest Neighbours-NNs), significantly higher than the London average of 1.8% but it was significantly lower than the England average of 2.7% (Fig 1).

The prevalence rate reflects trends in cancer incidence, mortality and survival, as well as advances in cancer treatment and detection.

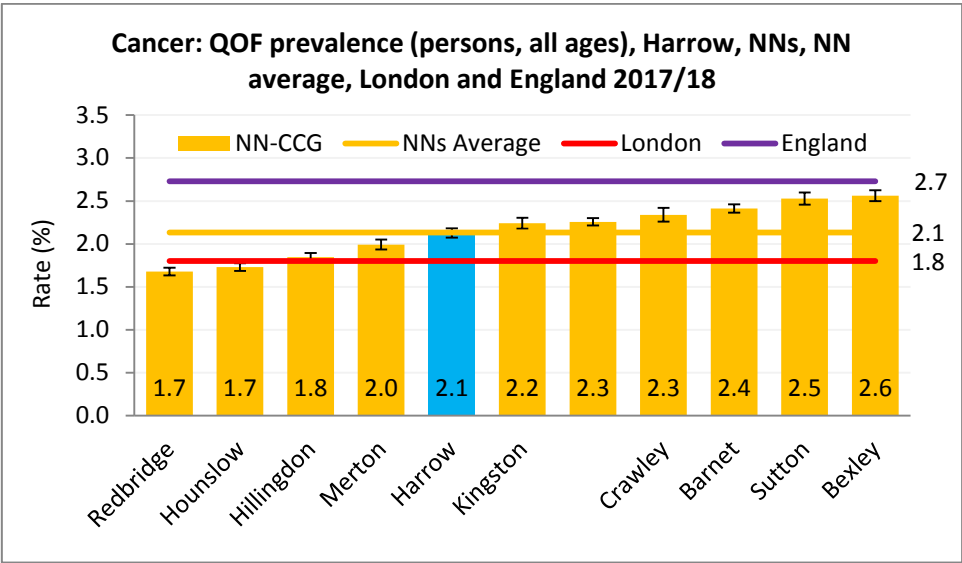
Figure 1: Cancer QOF prevalence (%), all ages, Harrow, London and England, 2015/16 – 2017-18



Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

QOF cancer prevalence (persons, all ages), Harrow, ten Nearest Neighbours (NN), NN average, London and England 2017/18 is presented in Fig 2.

Fig 2 QOF prevalence (persons, all ages), Harrow, NNs, NN average, London and England 2017/18

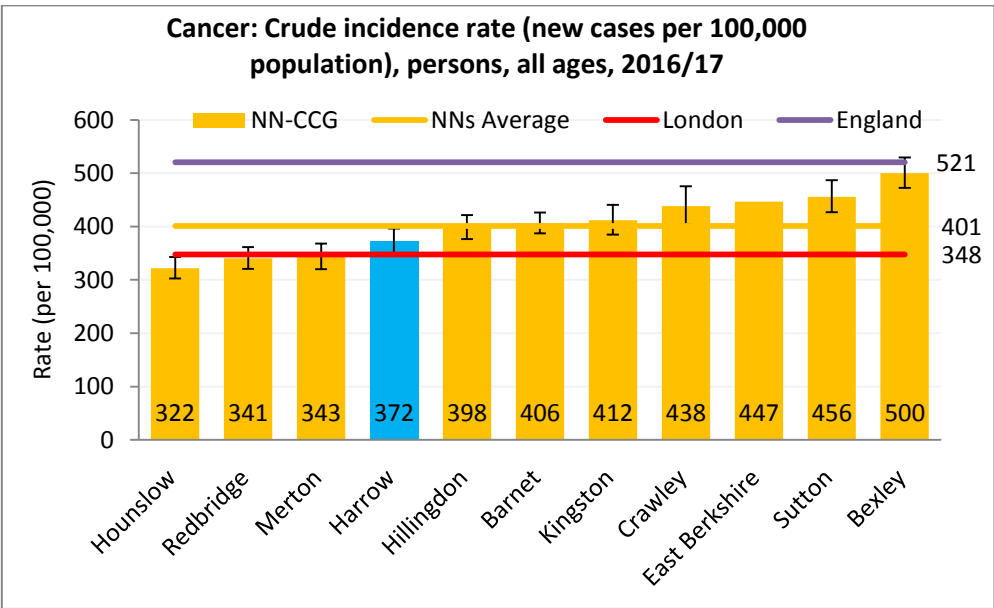


Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

Incidence

Cancer incidence can be affected by the characteristics of a population. According to the National Cancer Registration Service, there were 980 new cancer diagnoses in Harrow in 2016/17 which accounts for an average of 372 new cancer diagnoses per 100,000 people in Harrow CCG. This is significantly higher than London average of 348 but significantly lower than the NN average of 401 and England average of 521 per 100,000 people. The chart below (Fig 3) shows the crude incidence rate per 100,000 of populations in Harrow, Harrow’s NNs, London and England in 2016/17.

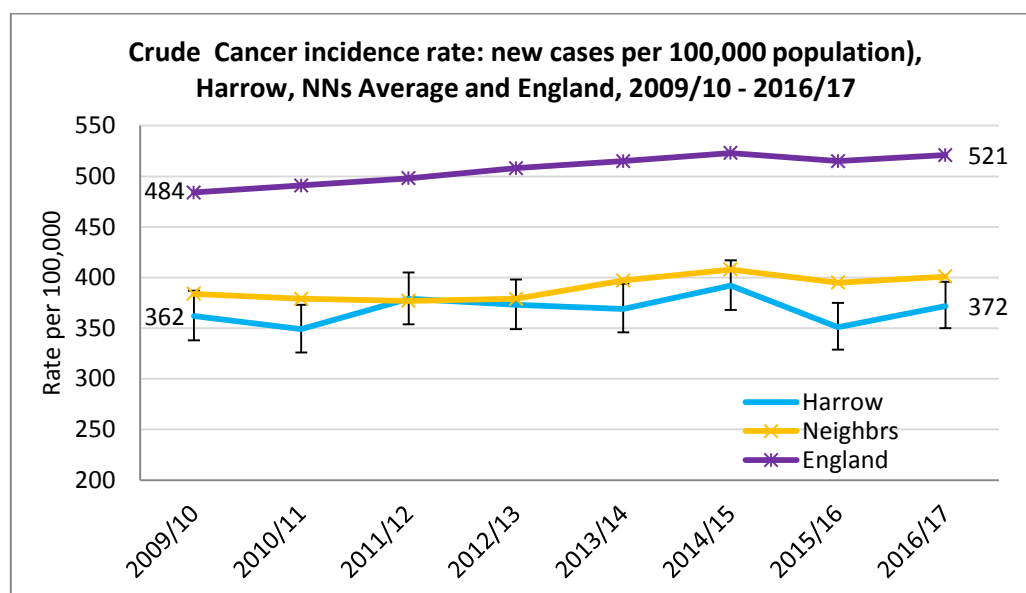
Figure 3 Cancer crude incidence rate (new cases per 100,000 population), persons, all ages, Harrow, Harrow’s NNs, London and England, 2016/17



Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

Trend in crude incident cancer rate (new cases per 100,000 populations) in Harrow, NNs Average and England from 2009/10 to 2016/17 is presented in Fig 4.

Fig 4 Trend in crude cancer incidence rate per 100,000 populations, Harrow, NNs Average and England, 2009/10 - 2016/17

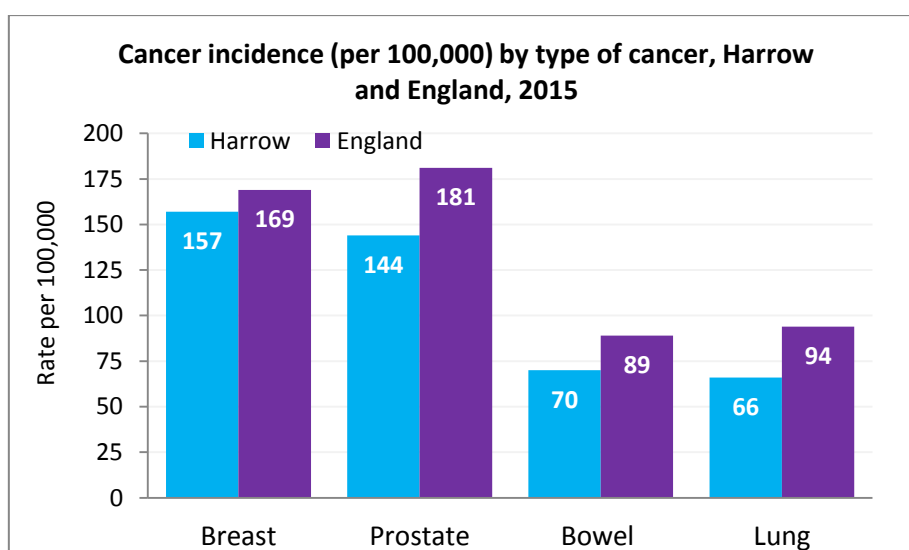


Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

The above graph doesn't show a significant increase of cancer incident rate for Harrow CCG since 2010/11, but in the same period of time the cancer incident rate for England increased by 8%.

The charts below (Fig 5) show the cancer incidence rate (per 100,000 of populations) in 2015 by four main type of cancer in Harrow and England.

Figure 5: Cancer incidence (per 100,000) by type of cancer, Harrow and England 2015

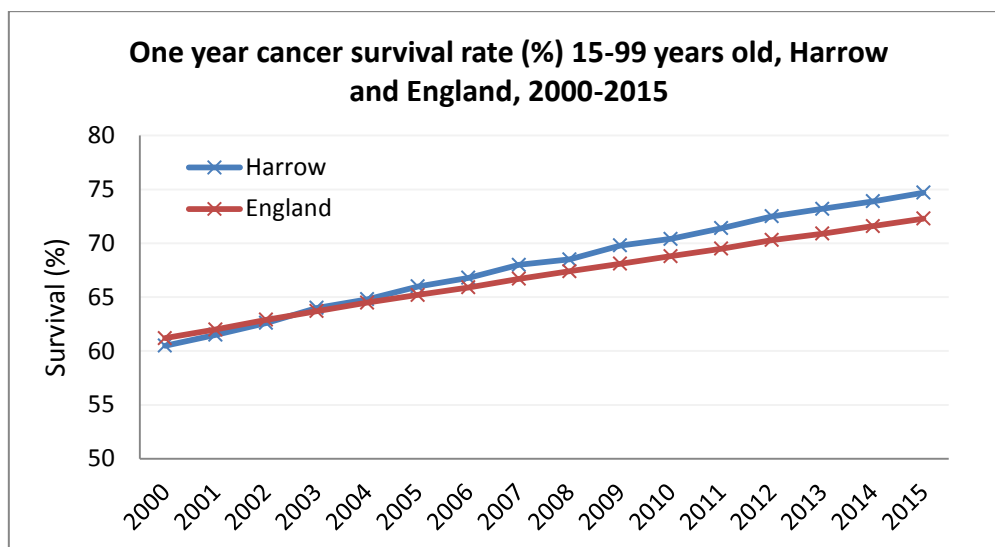


Source: Local Cancer Intelligence, NCIN & MacMillan Cancer Support <http://lci.cancertoolkit.co.uk/Prevalence>

Survival

One year survival is a good indicator of whether cancer is diagnosed early and whether people have rapid access to optimal treatment. Fig 6 shows the 1-year cancer survival rate in Harrow has increased over the past decade for all cancers combined. One-year cancer survival is 74.7% in Harrow. This is higher than the England rate of 72.8%.

Fig 6: One year cancer survival rate (%) 15-99 years old, Harrow and England, 2000 -2015

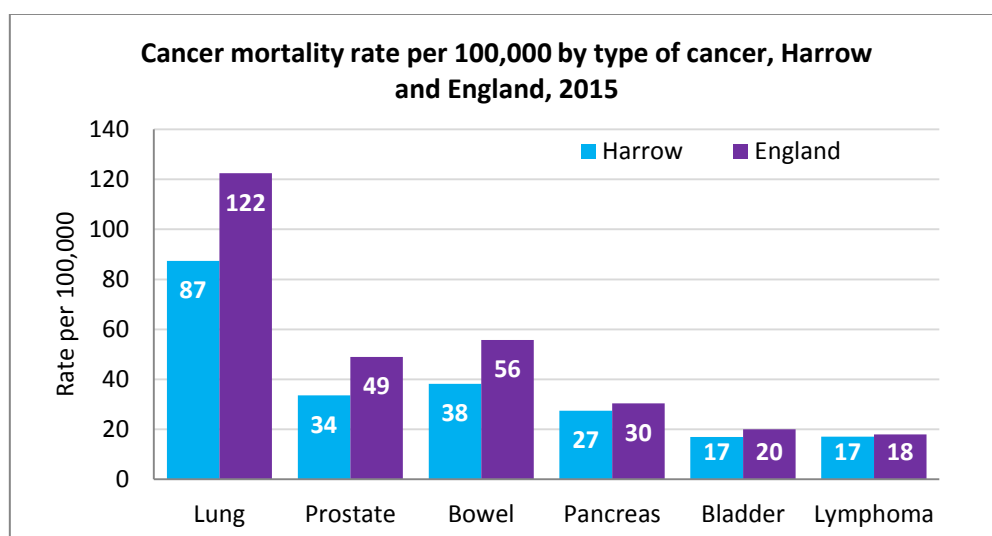


Source: Local Cancer Intelligence, NCIN & MacMillan Cancer Support <http://lci.cancertoolkit.co.uk/Prevalence>

Cancer mortality

The most recently published age standardised mortality rate from cancer shows there were 440 cancer related deaths in Harrow in 2015. This is equivalent to 220 deaths per 100,000 people per year which is lower than the England rate (285 per 100,000 people). Fig 7 compares the cancer mortality rate per 100,000 of populations by type of cancer in Harrow and England in 2015.

Fig 7: Cancer mortality rate per 100,000 by type of cancer, Harrow and England, 2015



Prevention

Prevention is a crucial component of both the London and national cancer strategies. More than 4 in 10 cases could be prevented through making certain lifestyle changes such as quitting smoking, maintaining a healthy body weight, reducing alcohol consumption, maintaining a healthy diet and engaging in physical activity⁵. Adapting to such changes could aid in preventing recurrence of cancer and in general improve health and wellbeing of individuals living with cancer and beyond.

A survey conducted by Cancer Research UK observed that only 3% of people they received results from knew that being overweight or obese could increase their risk of cancer⁶. Smoking is recognised as one of the most significant risk factors for cancer, responsible for 19% - or around 64,500 cases – of all new cancer cases per year in the UK. Both the London and national cancer strategies have emphasised that the prevention of cancer is not only the responsibility of the NHS organisations, but is rather a shared responsibility across local government, employers and the wider community.

Detection

Diagnosing cancer at an early stage enables greater treatment options and an increased chance of full recovery. For example, over 93% of bowel cancer patients diagnosed with the earliest stage of disease survive at least five years compared with less than 7% of those diagnosed with the most advanced stage disease. The pattern is true for lung cancer, breast cancer, and for many cancers, common or rare.

Detecting cancer at an early stage can be complex and this proved to be a challenge for both health professionals and the wider public. Inequalities are unfortunately present, with some groups of patients associated with a higher likelihood of being diagnosed at a later stage.

The National Awareness and Early Diagnosis Initiative (NAEDI) reported that both Public Health and NHS have a role to play in tackling late diagnosis and their progress will be measured through indicators in their Outcome Frameworks⁷.

Screening

Cancer screening is important in the early detection of cancer. The three national cancer screening programmes are based on internationally recognised principles of screening. Screening identifies

⁵ Parkin DM, Boyd L and Walker LC. The fraction of cancer attributable to lifestyle and environmental factors in the UK in 2010. Summary and conclusions. British Journal of Cancer 2011

⁶ Cancer Research UK. Perception of Risk Survey 2008 http://www.cancerresearchuk.org/prod_consump/groups/cr_common/@nre/@hea/documents/generalcontent/014219.pdf [Last accessed 24 Oct. 2019].

⁷ National Awareness and Early Diagnosis Initiative (NAEDI) <http://www.cancerresearchuk.org/health-professional/early-diagnosis-activities/national-awareness-and-early-diagnosis-initiative-naedi> [Last accessed 24 Oct. 2019].

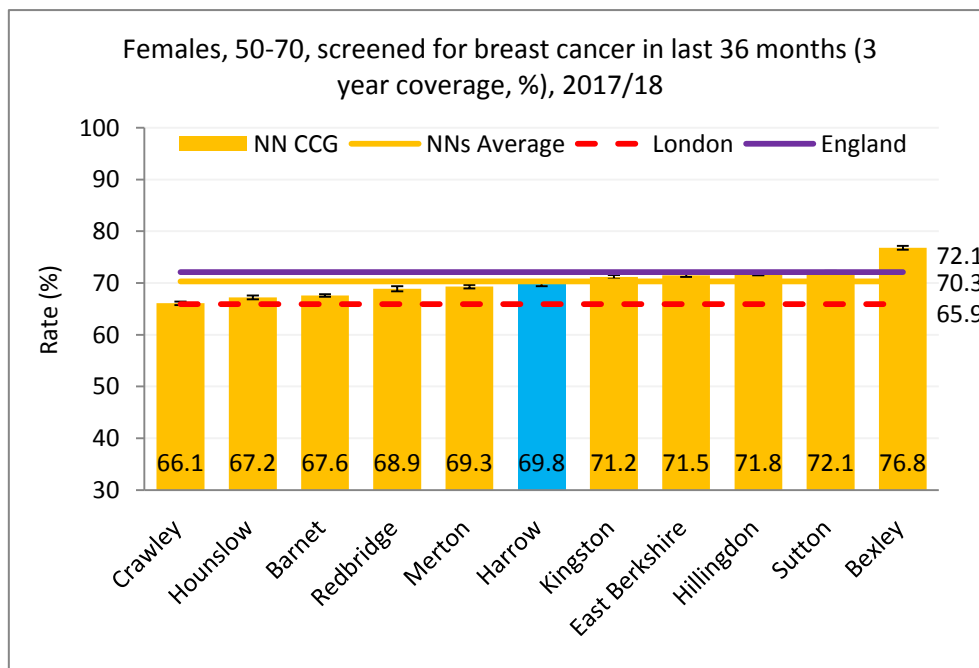
individuals who may be at higher risk of a disease or condition amongst large populations of healthy people. Once identified, those individuals can consider further tests, and healthcare providers can offer them interventions of benefit. A screening programme needs to offer more benefit than harm, at a reasonable cost to the NHS⁸.

The cancer screening strategy for London identifies the need to (i) increase public awareness of screening, (ii) increase engagement with primary care and improve reliability of data, (iii) improve quality; capacity and patient experience of provider services to optimise coverage and uptake and (iv) to facilitate high quality research to further inform strategies to improve coverage and uptake in London.

Breast Screening for women aged 50-70 years

Breast screening can identify cancer before symptoms are noticed. It is one of the best methods to detect breast cancer earlier. Women have a higher likelihood of surviving breast cancer if it is diagnosed at an early stage. The national minimum standard for coverage of women is 70% and national target is 80%. Breast screening coverage (50-70 years) in Harrow Local Authority area is 69.8% higher than the London average of 65.9% and lower than the England average of 72.1% (Fig 8).

Fig 8 Females, 50-70, screened for breast cancer in last 36 months (3 year coverage, %), Harrow and NNs, NNs Average, London and England, 2017/18

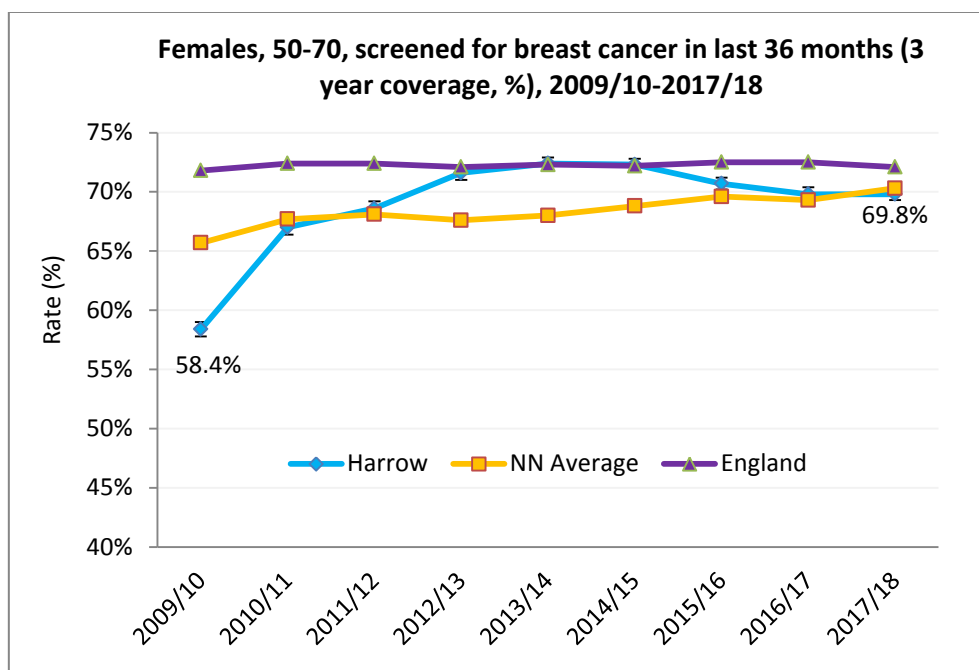


Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

⁸ GOV.UK. (2019). Evidence and recommendations: NHS population screening. Available at: <https://www.gov.uk/guidance/evidence-and-recommendations-nhs-population-screening> [Last accessed 24 Oct. 2019].

Trends in breast cancer screening from 2009/10 to 2017/18 shows there has been a significant increase for Harrow in the first three years (up to 2012/13) from 58.4% to over 72% but it has declined to under 70% after 2015/16 (Fig 9).

Figure 9: Breast screening coverage in last 36 months (3 year coverage, %), women aged 50-70, Harrow, neighbours and England, 2009/10 – 2017/18



Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

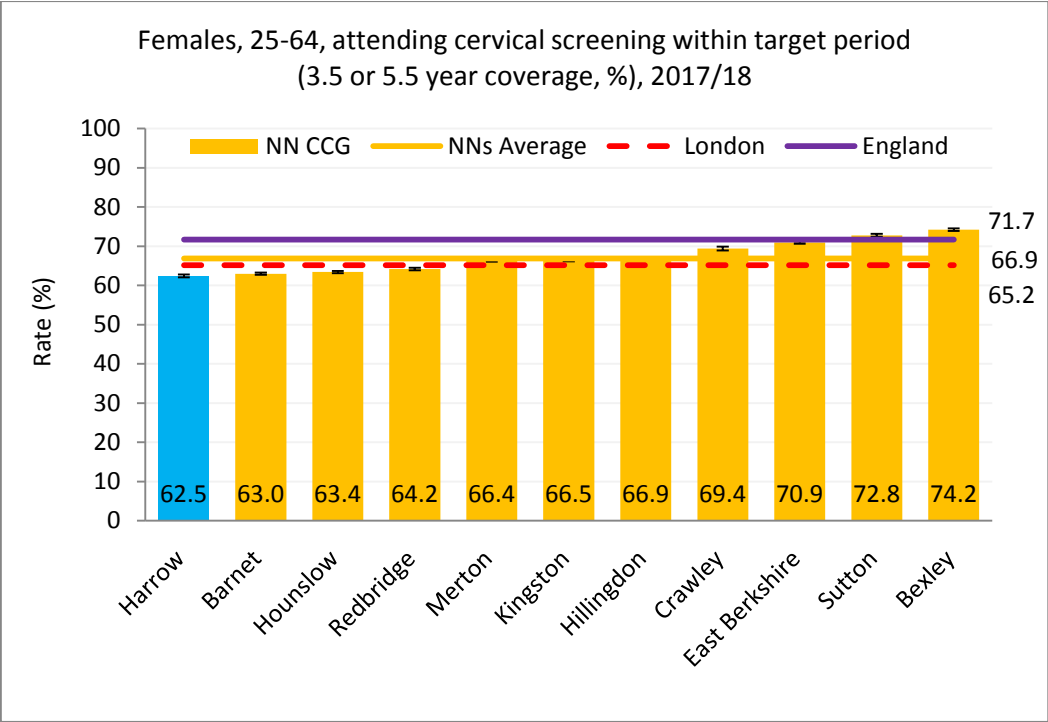
Females, 50-70, screened for breast cancer within 6 months of invitation (Uptake, %): Data published by PHOF shows the percentage of females registered to the Harrow practices aged 50-70 invited for screening in the previous 12 months (prior to 2017/18) who were screened within 6 months of invitation was 70.5%, the 3rd highest rate between NNs, was significantly higher than the NNs average of 70% and London average of 65% but significantly lower than England average of 71.7%.

Cervical Cancer Screening in Women aged 25-64 years

Screening within target period 3.5 or 5.5 year coverage: Cervical cancer screening detects changes in cells that may become cancer, so that they can be removed and cancer prevented. Screening is estimates to save 4,500 lives in England each year. The national coverage target for cervical screening is 80%⁹. Coverage in NHS Harrow CCG in 2017/18 was 62.5%, significantly lower than NNs, London and England average of 65.2%, 66.9% and 71.7% in that order (Fig 10).

⁹ Mackie, A. (2019). Health Matters: Making cervical screening more accessible - Public health matters. Publichealthmatters.blog.gov.uk. Available at: <https://publichealthmatters.blog.gov.uk/2017/08/30/health-matters-making-cervical-screening-more-accessible/> [Last accessed 24 Oct. 2019].

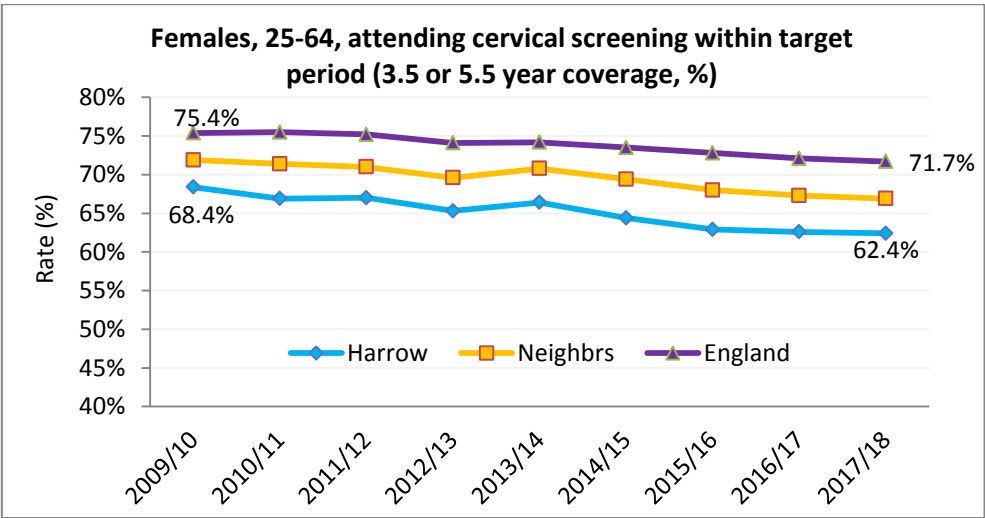
Fig 10 Females, 25-64, attending cervical screening within target period (3.5 or 5.5 year coverage, %), Harrow & NNs, NN Average, London and England, 2017/18



Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

Fig 11 illustrates the trend in cervical screening coverage in Harrow, NNs and England from 2009/10 to 2017/18. Graph below shows Harrow’s cervical screening rate had 6% decline from 68.4% in 2009/10 to 62.4% in 2017/18, compared to 3.7% decline nationally.

Fig 11 Cervical screening coverage, women ages 25-64, Harrow, NNs and England, 2009/10 – 2017/18

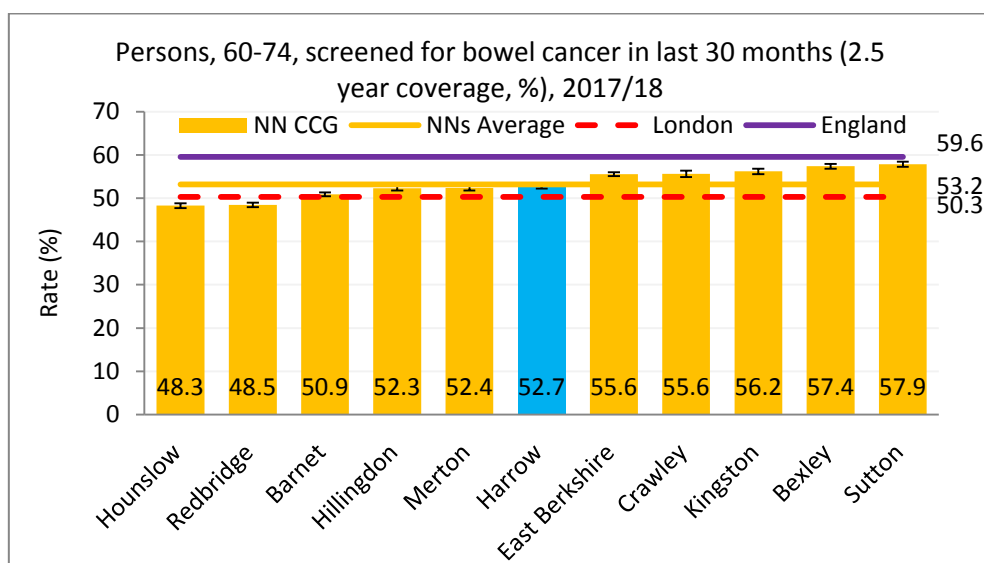


Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

Bowel Cancer screening for men and women aged 60-74 years

Bowel screening aims to prevent cancer developing by detecting and removing abnormal cells which have the potential to become cancerous over time. Screening is the best method to detect bowel cancer at an earlier stage. More than 9 out of 10 people with bowel cancer survive if it is diagnosed at an earlier stage. The national target of uptake of bowel screening is 60%¹⁰. The bowel screening coverage rate in NHS Harrow CCG in 2017/18 was 52.7%, higher than London average of 50.3% and lower than the England average of 59.6% (Fig 12).

Fig 12 Persons, 60-74, screened for bowel cancer in last 30 months (2.5 year coverage, %), Harrow & NNs, NN Average, London and England, 2017/18

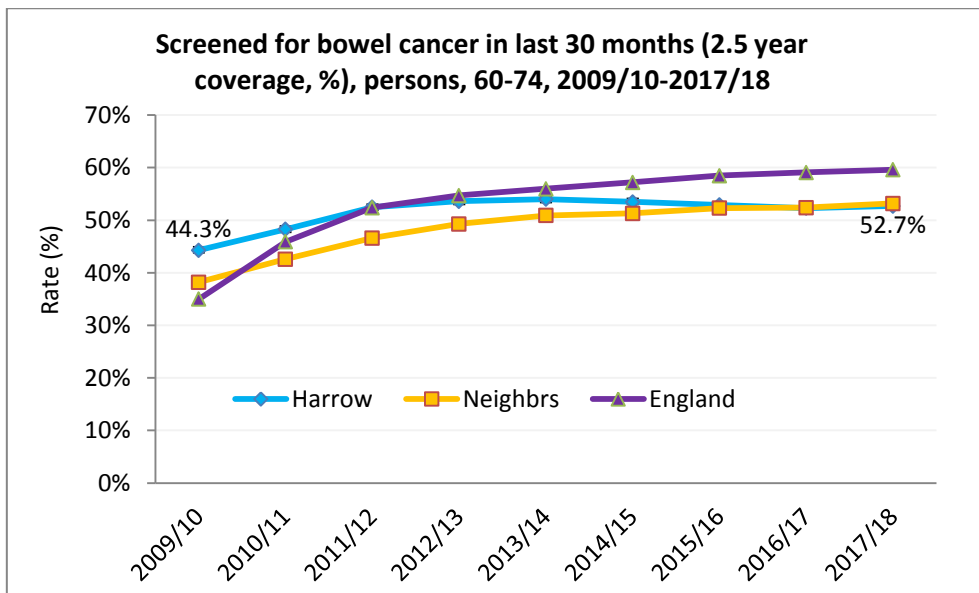


Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

Fig 13 illustrates the trend in 'Screened for bowel cancer in last 30 months (2.5 year coverage, %), persons, 60-74' in Harrow, NNs and England from 2009/10 to 2017/18. Graph below shows Harrow's bowel screening rate increased from 44.3% in 2009/10 to 54% in 2013/14 but it has declined to 52.7% in 2017/18.

Fig 13: Bowel screening coverage trend in NHS Harrow CCG; persons aged 60-74; Harrow, NN Average and England, 2009/10—2017/18

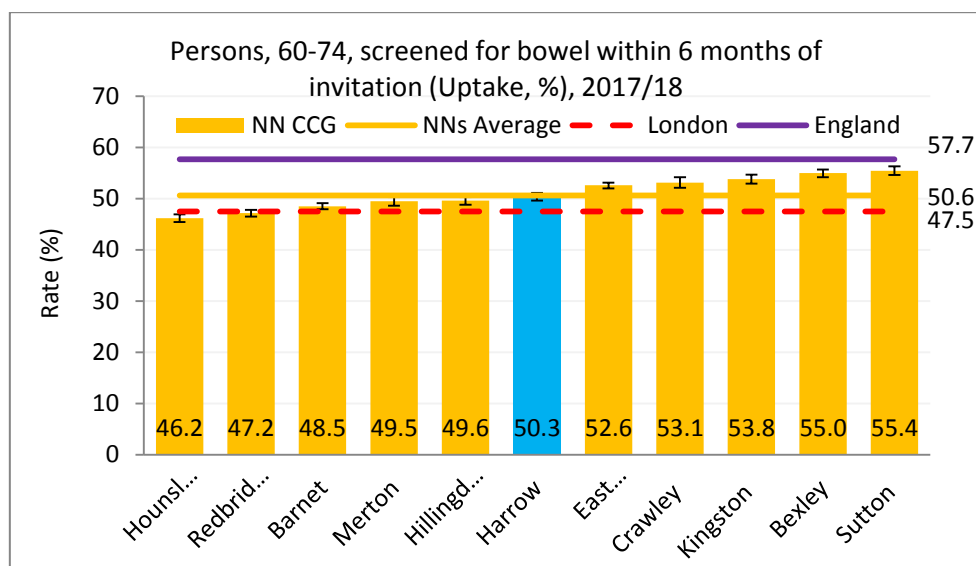
¹⁰ The Nuffield Trust. (2019). Cancer screening. Available at: <https://www.nuffieldtrust.org.uk/resource/breast-and-cervical-cancer-screening> [Last accessed 24 Oct. 2019].



Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

In 2017/18 50.3% of people aged 60-74 years old in Harrow were screened within 6 months of invitation, significantly higher than the London average of 47.5% but significantly lower than the England average of 57.7% (Fig 14).

Fig 14 Screening for bowel within 6 months of invitation, persons aged 60-74; Harrow & NNs, NN Average, London and England, 2009/10—2017/18



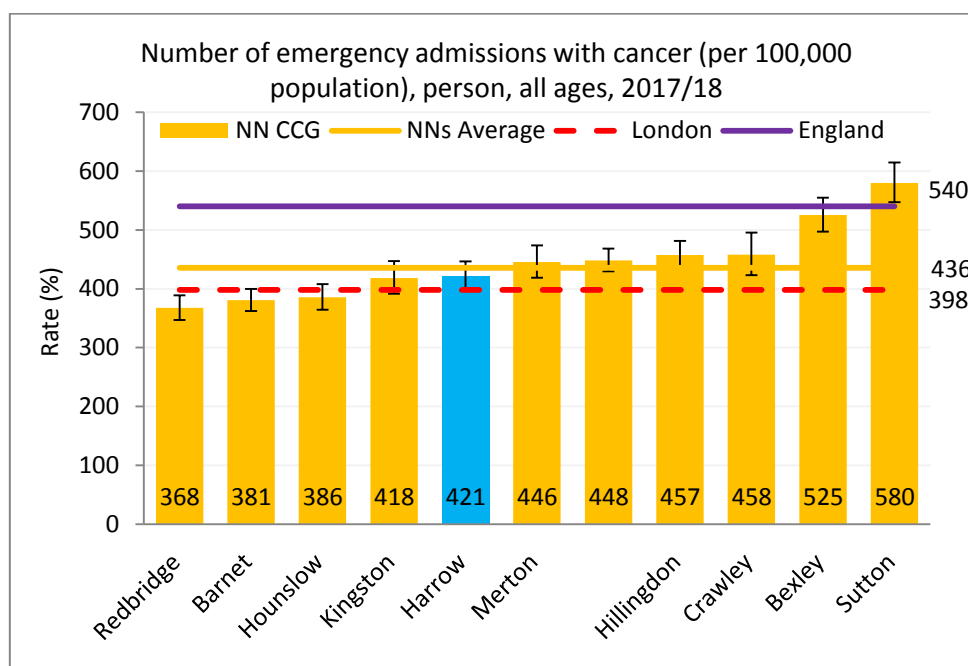
Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

Emergency Admissions

Patients who are diagnosed via emergency routes may display late diagnosis which may closely correlate with poor survival. Available data from 2009/10 to 2017/18 shows the number of emergency admissions with cancer (per 100,000) in Harrow has always been significantly lower than England. Emergency presentations have significantly reduced 1 year survival. Fig 14 shows Harrow's rate of emergency admissions with cancer for all age in 2017/18 (421 per 100,000

populations; N=1123 admissions), similar to NNs average and London but significantly lower than the National average rate of 540 per 100,000 populations.

Fig 14 Number of emergency admissions with cancer (per 100,000 population), person, all ages, Harrow & NNs, NN Average, London and England, 2017/18



Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

In 2017/18 rate of persons diagnosed with cancer via an emergency presentation (71 per 100,000; 95% CI, 61-82) and a non-emergency route (282 per 100,000; 95% CI 263-303) was also significantly lower than the England rate of 85 and 362 per 100,000 populations respectively.

Treatments

Treatment for cancer is most often comprised of a combination of chemotherapy, radiotherapy or surgery, or all three. In certain cases it can involve hormone treatment or biological therapies. It is estimates that 4 in 10 cancers are cured due to radiotherapy¹¹ and 5 in 10 due to surgery¹².

Treatments are provided alongside social and psychological support as well as rehabilitation during and following treatment. The Cancer strategy for England 2015-20 states that “patients should have access to the best evidence-based treatments which will mean reducing variation across the country, upgrading radiotherapy technology and using medicines in more stratified ways¹³.

¹¹ Department of Health, Radiotherapy Services in England 2012.

<https://www.gov.uk/government/publications/radiotherapy-services-in-england-2012> [Last accessed 24 Oct. 2019].

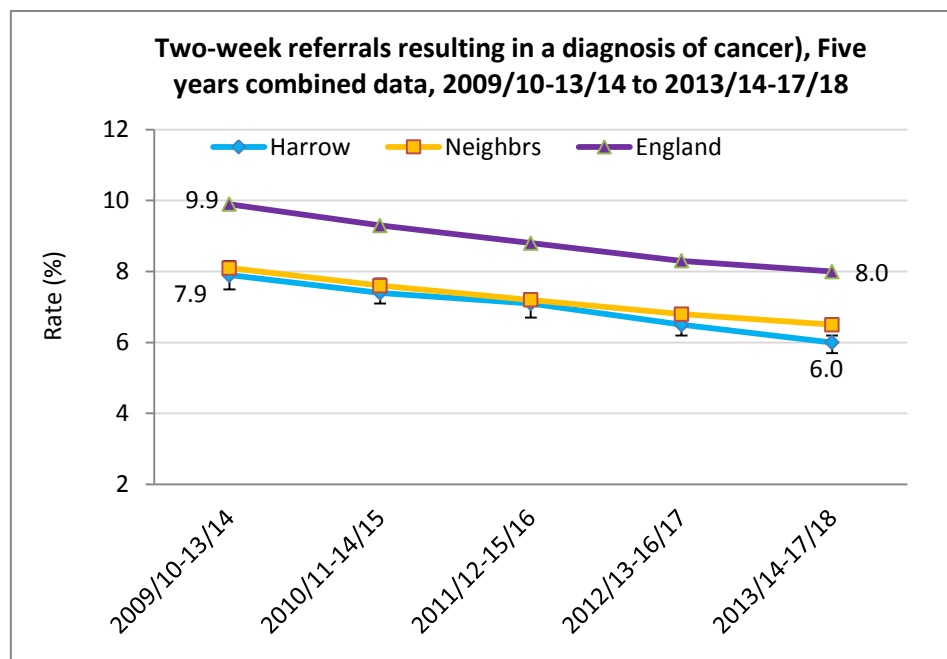
¹² Price, P., Sikora, K. and Illidge, T. (eds.) (2008) Treatment of Cancer. London: Edward Arnold Ltd

¹³ Achieving world-class cancer outcomes: a strategy for England 2015-2020 p23 Independent Cancer Taskforce
http://www.cancerresearchuk.org/sites/default/files/achieving_world-class_cancer_outcomes_-_a_strategy_for_england_2015-2020.pdf [Last accessed 24 Oct. 2019].

The case for change in London noted that variation in practice across the city is leading to variation in the quality of services offered to patients, and ultimately to care outcomes¹⁴. Cancer alliances aim to address variation by better coordination of resources and services.

Fig 15 shows the Two-Week Waiting (TWW) referrals rate resulting in a diagnosis of cancer for Harrow, NNs and England from 2009/10 to 2017/18 (5 years combined data). The graph below shows in this period of time there has been around 2% decline for comparing areas, with Harrow holding the lowest rate, significantly lower than NNs average and England.

Fig 15 Two-week referrals resulting in a diagnosis of cancer (Conversion rate: as % of all TWW referrals), Five years combined data, Harrow, NNs average and England 2009/10-13/14 to 2013/14-17/18

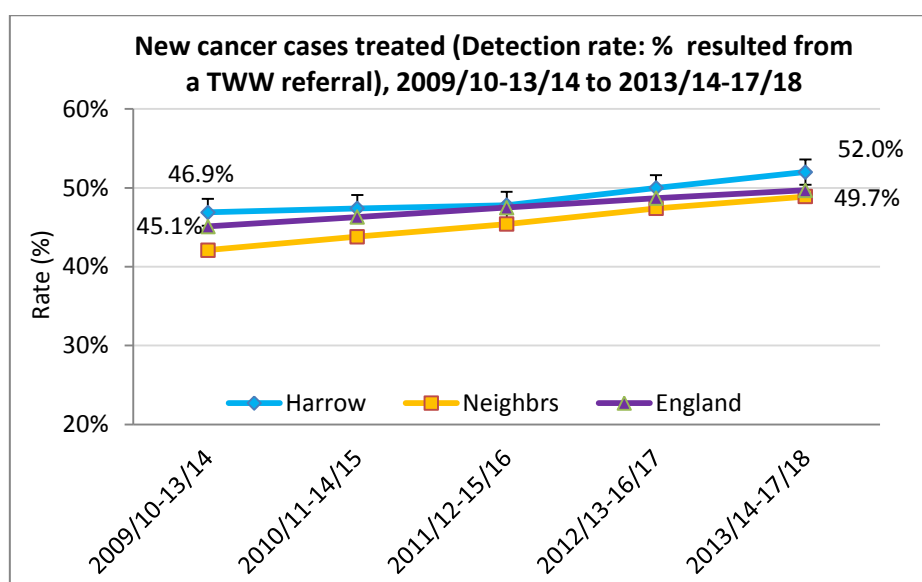


Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

The proportion of new cancer cases treated who were referred through the Two Week Waiting referral route in Harrow, NNs and England is presented in Fig 16. The five years aggregated data shows a 5.1% increase for Harrow, 6.8% for NNs and 4.6% for England. The aggregated data for 2013/14-17/18 also shows Harrow's detection rate was significantly higher than both NNs average and England.

Fig 16 Number of new cancer cases treated (Detection rate: % of which resulted from a TWW referral), Five years combined data, Harrow, NNs average and England 2009/10-13/14 to 2013/14-17/18

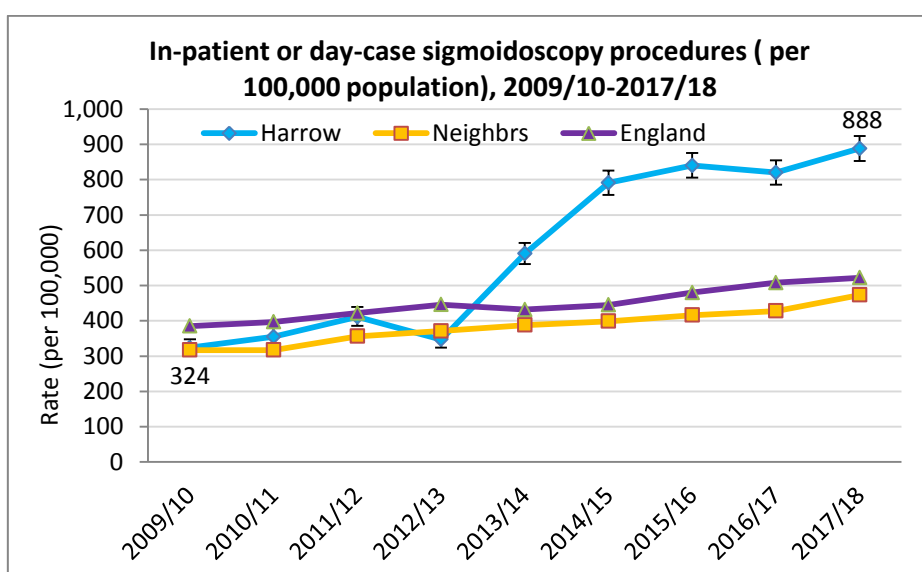
¹⁴ A Model of Care for Cancer Services p51 <http://www.londonhp.nhs.uk/wp-content/uploads/2011/03/Cancer-model-of-care.pdf> [Last accessed 24 Oct. 2019].



Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

Sigmoidoscopy: Examination of the lower colon using a sigmoidoscope, inserted into the rectum. A sigmoidoscope is a thin, tube-like instrument with a light and a lens for viewing. It may also have a tool to remove tissue to be checked under a microscope for signs of disease, it is also called proctosigmoidoscopy. Fig 17 illustrates the In-patient or day-case sigmoidoscopy procedures (Number per 100,000 populations) performed on persons registered at the practices for Harrow, NNs average and England from 2009/10 to 2017/18. Graph below shows a sharp increase in sigmoidoscopy rate in Harrow from 2012/13.

Fig 17 In-patient or day-case sigmoidoscopy procedures (per 100,000 population), Harrow, NNs Average and England, 2009/10-2017/18

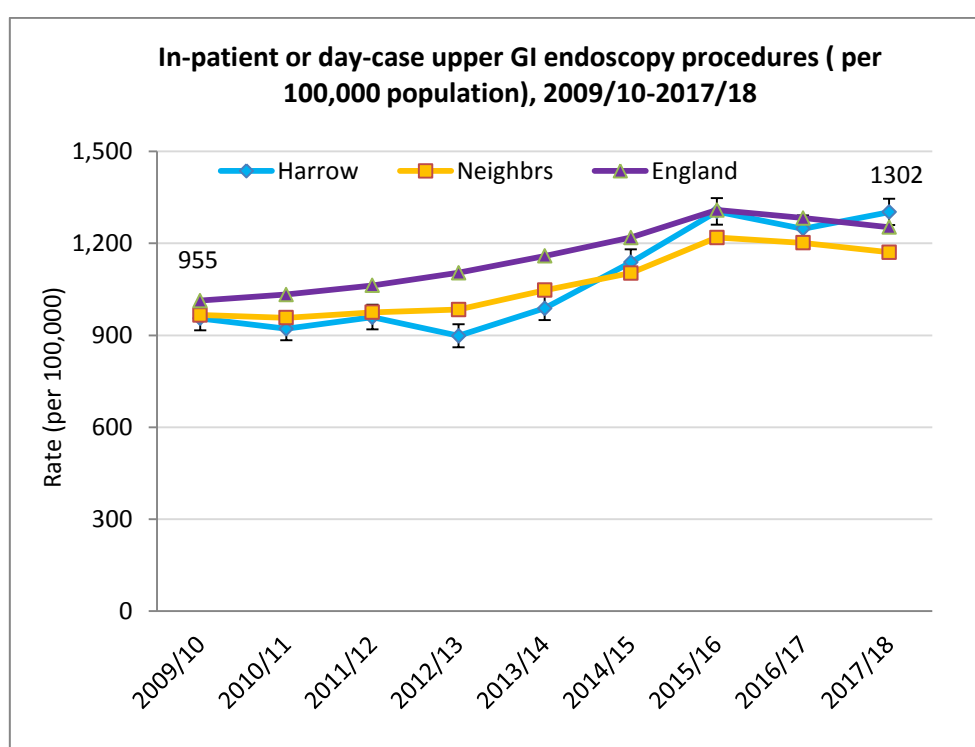


Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

Upper GI Endoscopy: An endoscope is a long, thin, flexible tube that has a light source and camera at one end. Images of the inside of the patients' body are relayed to a television screen. An endoscopy can be used to investigate unusual symptoms also to help perform certain types of surgery.

The crude rate per 100,000 persons of endoscopies of the upper gastrointestinal tract performed on persons registered at the practice from 2009/10 to 2017/18 in Harrow, NNs and England is presented in Fig 18. Graph below shows for Harrow between 2009/10 to 2017/18 there has been 37% increase in endoscopy rate (from 955 to 1302 per 100,000 of populations). Harrow's rate is significantly higher than NNs and England average.

Fig 18 In-patient or day-case upper GI endoscopy procedures (per 100,000 population), Harrow, NNs Average and England, 2009/10-2017/18



Source: PHOF - <https://fingertips.phe.org.uk/profile/cancerservices/>

Recommendations

1. Prevention

Prevention is a crucial component of the Harrow Cancer Strategy. People should be supported to stop smoking, maintain a healthy body weight, eat a healthy diet and engage in physical activity. Focusing on these prevention strategies not only helps with cancer prevention, but numerous other medical conditions, such as hypertension and diabetes.

2. Public awareness

The national 'Be clear on cancer' campaign has helped support increased awareness of cancer. The national cervical screening campaign, Cervical screening saves lives was launched earlier this year. Public Health England is currently evaluating the campaign. These national campaigns should be supported with local, tailored campaigns.

3. Screening programmes

Harrow has introduced the primary Human Papilloma virus testing, which has higher sensitivity for detecting changes in the cervical cells compared with primary cytology (previous screening method). The new test will identify more women at risk of developing cervical cancer.

The NHS Bowel Cancer screening programme reduces the risk of dying from bowel cancer by detecting disease before symptoms develop. The introduction of the new home test kit will make the test simpler to complete and more accurate.

These programmes should be supported and published locally to encourage participation.

4. Commissioning more effective Cancer Pathways

Commissioning a pathway that allows straight to test for people referred with suspected gastrointestinal cancer avoids delays due to multiple appointments. Stratified follow-up for patients with prostate cancer.

5. Living with and Beyond Cancer

Implementing the Recovery Package consisting of Holistic Needs Assessment, Treatment summary, Cancer care reviews, patient education and support. This package ensures that people are supported after their and beyond their cancer diagnosis.