

National Screening Programmes

Summary

- Screening identifies apparently healthy people who may be at increased risk of a disease or condition, so that they can be offered information, further tests and appropriate treatment to reduce their risk and/or any complications.
- There are 11 mandated National Screening Programmes in London, divided into Adult, Antenatal and Newborn, and Cancer Programmes, as well as one related programme covered by Sexual Health Services (Chlamydia Screening).
- The adult screening programmes are Abdominal Aortic Aneurysm (AAA), bowel, breast and cervical cancer screening, Chlamydia and diabetic retinal screening, made available as follows;
 - Abdominal Aortic Aneurysm (AAA) screening is offered to men over 65 years of age
 - Breast cancer screening is offered to women once every three years between the ages of 50-69, but this is being gradually extended to women aged 47-73.
 - Bowel cancer screening is offered every 2 years to men and women 60-69 years old, but this is in the process of being extended up to the age of 75.
 - Cervical cancer screening is offered to women 25-49 years old every 3 years, and every 5 years from 50-64 years of age.
 - Chlamydia screening is targeted at all sexually active males and females under 25.
 - Diabetic retinopathy is offered to people aged 12 and over with a diagnosis of diabetes, with checks carried out annually.
- Antenatal programmes include infectious diseases in pregnancy, sickle cell and thalassaemia, and foetal anomaly. Blood tests are taken to ensure that women with hepatitis B, HIV, syphilis and susceptibility to rubella infection are identified early in pregnancy. This allows prevention of mother to child transmission and identifies women for whom postnatal MMR vaccination could protect future pregnancies.
- There are three national newborn screening programmes; physical examination, hearing screening, and newborn bloodspot screening, delivered as follows;
 - A head to toe physical examination to check for problems or abnormalities, carried out within 72 hours of birth and then again at 6 to 8 weeks of age. This includes a general all over physical check, and specific examination of the baby's eyes, heart, hips and in boys, the testes.
 - Newborn hearing screening aims to identify all children born with moderate to profound permanent bilateral deafness within 4-5 weeks of birth. This involves a check of the baby's hearing using a special machine to carry out an Automated Otoacoustic Emission (AOAE) screening test.
 - Newborn Bloodspot screening via a heel prick test for Phenylketonuria (PKU), Congenital Hypothyroidism, Sickle Cell, Cystic Fibrosis and Medium-Chain

Acyl-CoA Dehydrogenase (MCADD) (a rare genetic condition where a person has problems breaking down fatty acids for energy)

- Screening programmes in Royal Greenwich generally perform below national targets and standards, although improvements have been made within a number of programmes. Performance against national standards has been significantly lower than England, but in relation to our IMD neighbours is slightly better. This may suggest that the performance in Greenwich is to do with population characteristics, rather than inadequate commissioning / management of programmes. Planned improvements include implementing evidence-based interventions to improve breast screening uptake, and extending the breast screening programme to women aged from 47 to 73 (currently screening is offered to women aged between 50 and 69 years of age).

National Screening Programmes

The UK National screening committee (UKNSC) describes screening as

“a process of identifying apparently healthy people who may be at increased risk of a disease or condition. They can then be offered information, further tests and appropriate treatment to reduce their risk and/or any complications arising from the disease or condition”.

Screening is an important public health function and is used for the primary and secondary prevention of ill health and disease.

UK National Screening Committee (UKNSC)

The UK NSC advises on all aspects of screening across all clinical areas including cancer and ensures that standards are met. It also informs, reviews, and maintains the policies on screening in the UK and the NHS in the four UK countries (see NHS Constitution).

What do we know about it?

There are 11 mandated National Screening Programmes in London, divided into Adult, Antenatal and Newborn, and Cancer Programmes, as well as one related programme covered by Sexual Health Services (Chlamydia Screening) - see table 1.

The Antenatal programmes includes infectious diseases in pregnancy, sickle cell and thalassaemia, and foetal anomaly, and there are three national newborn screening programmes (newborn and infant physical examination, newborn hearing screening, and newborn bloodspot screening). These programmes are offered to all women and their babies in Royal Greenwich. The adult screening programmes are Abdominal Aortic Aneurysm (AAA), bowel, breast, cervical, and diabetic retinal screening.

Who delivers it?

In England, although the local leadership for improving and protecting the public's health sits with local government, there are specific roles for the National Health Service England (NHS England) and Public Health England (PHE) for the commissioning and system leadership of the national screening and immunisation programmes.

Each of the partners (DH, NHS England, Local Government and PHE) has its own responsibilities for delivering screening. These are:

- DH is responsible for national strategic oversight, policy and finance for the national screening and immunisation programmes which includes overall system stewardship, based in part on information provided by PHE, and for holding NHS England and PHE to account.
- NHS England is responsible for routine commissioning of national screening and immunisation programmes, and the collection of information on disease and coverage.
- PHE will support the Directors of Public Health in local authorities in their role as leaders of health locally but PHE do not currently have a major role in screening except as relates to antenatal Hepatitis screening

- Local Government is the leader of the local public health system and is responsible for improving and protecting the health of local people and communities. It is responsible for providing assurance to the council's Health and Well-being board as well as reducing local variation across the borough.

Table 1 National Screening Programmes in London with national targets

Programme	Description	Who gets screened, National coverage target and what it covers	Q3 13/14
Cancer Screening	<p>Breast- Digital mammogram of the breast</p> <p>Bowel- faecal occult bowel test kit (FOBT)</p> <p>Cervical,- cervical smear and cytology</p> <p><i>Aim: to reduce mortality from cancer</i></p>	<ul style="list-style-type: none"> Breast: women aged 47-73 years – target 70% The programme is delivered by the Southeast London Breast screening programme – Kings Hospital Bowel: men and women aged 60-74 years- target 60% South East London bowel screening centre, Lewisham. Lewisham (South East London) will split into two centres in 2015/16 with Lewisham Greenwich Hospital Trust providing FOBT and bowel scope screening to Lewisham, Greenwich, Bexley and Bromley CCGs and Kings serving Lambeth and Southwark CCGs. A new programme Bowel scope screening will commence in Lewisham, Greenwich, Bexley and Bromley CCGs in 2014/15. It is flexible sigmoidoscopy for people aged 55 years Cervical: women aged 25-69 years- target 80%, Cervical cytology services are commissioned by CCGs screening takes place in the patient's GP practice and . 	
Adult and Young People Screening	<p>Diabetic Eye Screening Services</p> <p>Systematic screening involves digital photography of the retina followed by a two- or three- stage image grading process to identify the changes of sight-threatening diabetic retinopathy in the retina.</p>	<ul style="list-style-type: none"> The national minimum target for diabetic retinal screening uptake is 70% Screening is offered annually to people aged 12 or over with diabetes The Diabetic Eye Screening (DES) pathway was commissioned at PCT level and programmes have a number of commercial providers <p>As a result of a national review, a Common Pathway has been agreed by the UKNSC and the Programme is working towards implementation</p>	

Programme	Description	Who gets screened, National coverage target and what it covers	Q3 13/14
	<i>Aim: to reduce the risk of sight loss amongst people with diabetes.</i>		
	Abdominal Aortic Aneurysm, AAA- One off abdominal ultrasound scan <i>Aim: to reduce deaths from <u>AAA</u></i>	Men aged 65 years+. The national minimum target for AAA screening uptake is 70%. The target is currently 50% for Greenwich	
	Chlamydia <i>Aim: to identify and treat Chlamydia infection</i>	A 'related' programme, not a UK National Screening Committee approved systematic population screening programme. The target is all sexually active young people under 25.	
Antenatal Screening;	Foetal Anomaly Ultra sound scan	The national minimum target for screening uptake is 100% Pregnant women are offered an ultrasound scan between 18 – 20 weeks plus 6 days to check for physical abnormalities in their unborn baby http://fetalanomaly.screening.nhs.uk/annualreports	
	Down's screening	All pregnant women are offered screening for Down's syndrome with an early ultrasound scan to assess gestational age, nuchal translucency (NT) measurement and biochemistry testing between 10 and 14 weeks gestation.	
	Infectious Diseases in Pregnancy Screening (IDPS)	Target to achieve coverage of at least of 90%. Timely referral is based on Hepatitis B- national target of 70%. This Programme is responsible for ensuring that women with hepatitis B, HIV, syphilis and susceptibility to rubella infection are identified early in pregnancy. The Programme is an essential component of strategies to prevent mother to child transmission. The Programme also identifies women for whom postnatal MMR vaccination could protect future pregnancies.	97.6% Compliance
	Sickle Cell and Thalassaemia	The target is 99.9% as Greenwich is a high prevalence area http://sct.screening.nhs.uk/data-report	

Programme	Description	Who gets screened, National coverage target and what it covers	Q3 13/14
Newborn Screening;	Newborn Bloodspot (consisting of Phenylketonuria (PKU), Congenital Hypothyroidism (CH), Sickle Cell (SCD), Cystic Fibrosis (CF) and Medium-Chain Acyl-CoA Dehydrogenase (MCADD - a rare genetic condition where a person has problems breaking down fatty acids for energy)	<p>The UKNSC has set the avoidable repeat rate for NBS screening at $\leq 2.0\%$ as the 'acceptable' target and $\leq 0.5\%$ as the 'achievable' target.</p> <p>The Bloodspot programme spans different organisations and health professional boundaries</p> <p>http://newbornbloodspot.screening.nhs.uk/annualreports</p>	Timely referral 38.5%
	Newborn Hearing	<p>The national minimum target for screening coverage is 95%. Major aim is to identify all children born with moderate to profound permanent bilateral deafness within 4-5 weeks of birth</p> <p>Involves a check of the baby's hearing using the Automated Otoacoustic Emission (AOAE) screening test</p> <p>http://hearing.screening.nhs.uk/publications</p>	
	Newborn Infant Physical Examination (NIPE)	<p>The national target is set at 95% 'acceptable' and 99.5% 'achievable'</p> <p>. A head to toe physical examination to check for problems or abnormalities. The examination is carried out within 72 hours of birth and then again at 6 to 8 weeks of age. It includes:</p> <ul style="list-style-type: none"> • A general all over physical check, as well as specific examination of the baby's • Eyes • Heart • Hips • Testes, in boys 	

How it is delivered

The National Programmes are delivered in primary care and Acute Trust settings. From April 2013, responsibility for the Commissioning of Cancer and Non Cancer Screening Services passed to NHS England (NHSE). NHSE has put in place detailed service specifications for each of the programmes, and is accountable to DH for population coverage and tolerance limits.

What happens locally?

The three national **antenatal** screening programmes are offered to all pregnant women in Royal Greenwich. Midwives provide both written (*Screening tests for you and your baby*) and verbal information at the booking visit to all pregnant women to inform them about the opportunities to protect them and their future children, by screening. The programmes are:

- Infectious Diseases in Pregnancy Screening Programme (IDiPs) which offers pregnant women a blood test to identify infections which can then be treated to protect the health of the woman, her baby and sometimes her family. The blood is tested for Syphilis, Hepatitis B, HIV and Rubella.
- Sickle Cell and Thalassaemia Screening Programme (SCT) which offers screening for sickle cell disease during pregnancy for all pregnant women. The programme supports people to make informed choices during pregnancy; identifies babies with sickle cell disease promptly so they can get the care they need; provide high quality and accessible care throughout England and to promote understanding and awareness of Sickle Cell and Thalassaemia.
- Foetal Anomaly Screening Programme (FAS) which offers all women a blood test for Down's syndrome and an ultrasound scan between 18 – 20 weeks and 6 days to check for physical foetal abnormalities. This information is used to help the woman make decisions about her pregnancy and decide if she wants further diagnostic testing.

Newborn Screening

The national **newborn** screening programmes which are offered to all newborn babies in Royal Greenwich, supported by written and verbal information from the relevant healthcare professionals for the mothers and families.

- **Newborn and Infant Physical Examination (NIPE):** this consists of two examinations; one within 72hrs of birth and the other at 6-8 weeks of age. This screen offers parents the opportunity of a head to toe physical examination for their baby to check for problems or abnormalities. The examination within 72 hours of birth and then again at 6 to 8 weeks of age, as some conditions can develop or become apparent later.
- Each screen includes a general all over physical check, as well as specific examination of the baby's eyes. About two hundred children a year are born in the UK with opacity of the lens of one or both eyes - a cataract.
- Heart: Congenital heart anomalies affect about 5 in 1000 new born babies (0.5%).
- Hips: 1 to 2 in 1,000 babies born may have a hip that is dislocated at birth.
- Testes, in boys: around one in 20 male babies is born with an undescended testicle. This is more common in premature babies. The prevalence at the age of one year is around 1%.

Newborn Hearing Screening (NHSP): This screening programme aims to identify all children born with moderate to profound permanent bilateral deafness within 4-5 weeks of birth. This helps to ensure that safe high quality age-appropriate assessment and support for deaf children and their families is instigated as soon as possible. One to two babies in every 1,000 are born with a hearing loss in one or both ears and most of these babies are born into families with no history of hearing loss.

Newborn Bloodspot screening (NBS): This involves taking blood from the baby's heel and then testing it for the presence of Phenylketonuria (PKU); Congenital Hypothyroidism (CHT); Sickle Cell Disease (SCD); Cystic Fibrosis (CF); and Medium-chain acyl-CoA dehydrogenase deficiency (MCADD - a rare genetic condition where a person has problems breaking down fatty acids for energy).

- i. PKU is an autosomal recessive genetic condition that affects approximately 1 in 10,000 babies in the UK. If undetected it causes brain damage
- ii. CHT is an autosomal recessive genetic condition affects 1 in 4,000 babies in the UK., it is a common neonatal metabolic disorder and results in severe neurodevelopmental impairment and infertility if untreated
- iii. SCD is an autosomal recessive genetic condition which affects 1 in 2,000 babies in the UK. Sickle cell disease involves the red blood cells, or haemoglobin, and their ability to carry oxygen.
- iv. CF is an autosomal recessive genetic condition which affects 1 in 2,500 babies in the UK. People with CF secrete abnormal body fluids, including unusual sweat and a thick mucus which prevents the body from properly cleansing the lungs
- v. MCADD is an autosomal recessive genetic condition which affects around 1 in 10,000-20,000 babies in the UK. If undetected can cause serious illness and even death

Providers

The antenatal and newborn screening programmes are commissioned from a range of healthcare providers across South East London. These include the maternity units in acute hospitals, community healthcare providers, Public Health England accredited laboratories and regional specialist laboratories.

Performance

Each screening programme works to national quality standards. Data for these programmes come directly from the service providers. Screening programmes in Royal Greenwich generally perform lower than the level required, although improvements have been made within some programmes. Overall, the performance of Royal Greenwich's screening programmes against national standards for uptake and coverage has been significantly lower than the national target. The charts below suggest that Greenwich is worse than the national average but a bit better than its IMD neighbours. This might suggest that the performance in Greenwich is more to do with the population, rather than worse commissioning / management

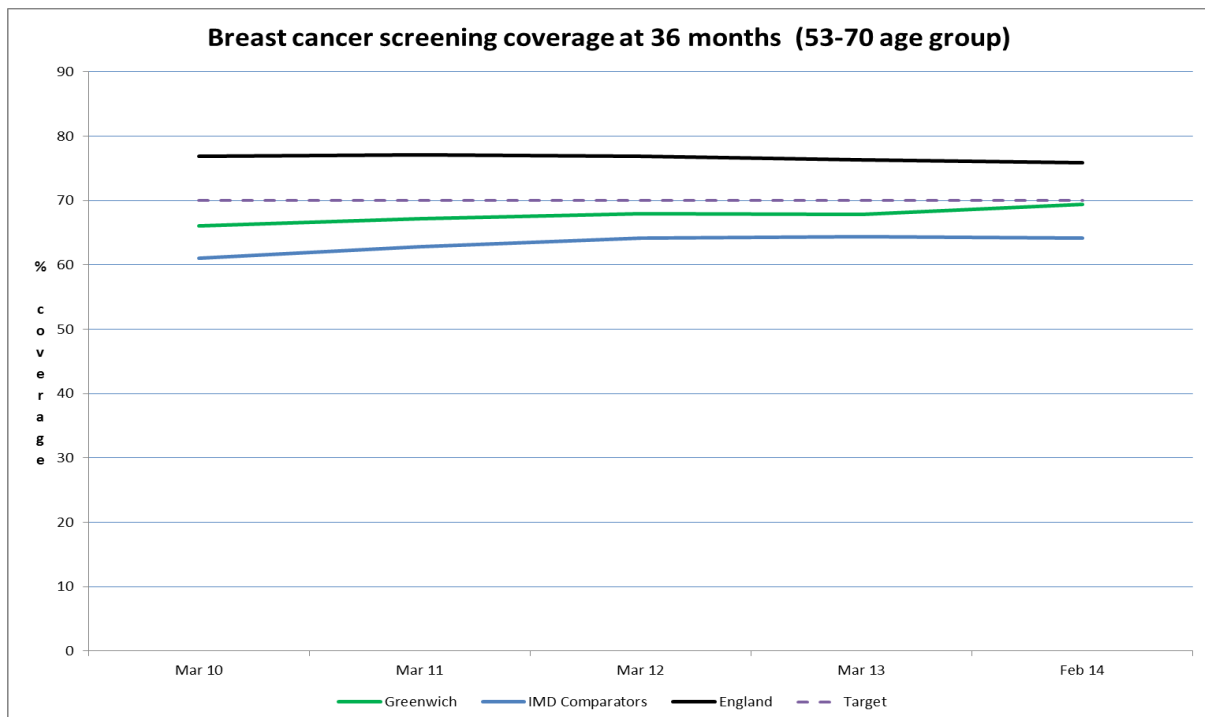
There are many factors that contribute to this performance, such as the high mobility of the population, presenting challenges in maintaining accurate lists and thus inviting the right people for screening at the right time; inadequacy of aspects of the commissioning and performance management services, with some services having poorly defined statements of purpose and contracts, and lack of generic and adequately resourced quality assurance processes (particularly for non-Cancer Screening).

Latest performance and trend data

Data for all the screening programmes is collected and published from a variety of sources; some of the data for the Cancer Screening Programmes is well validated and fairly easily accessible, however, data for non-Cancer Screening is less so.

Following the reorganisation and the transfer of the Public Health Functions the responsibility for commissioning the cancer screening programmes passed from the PCTs to NHS England. The data is now provided by Public Health England and the programme performance management is by NHS England.

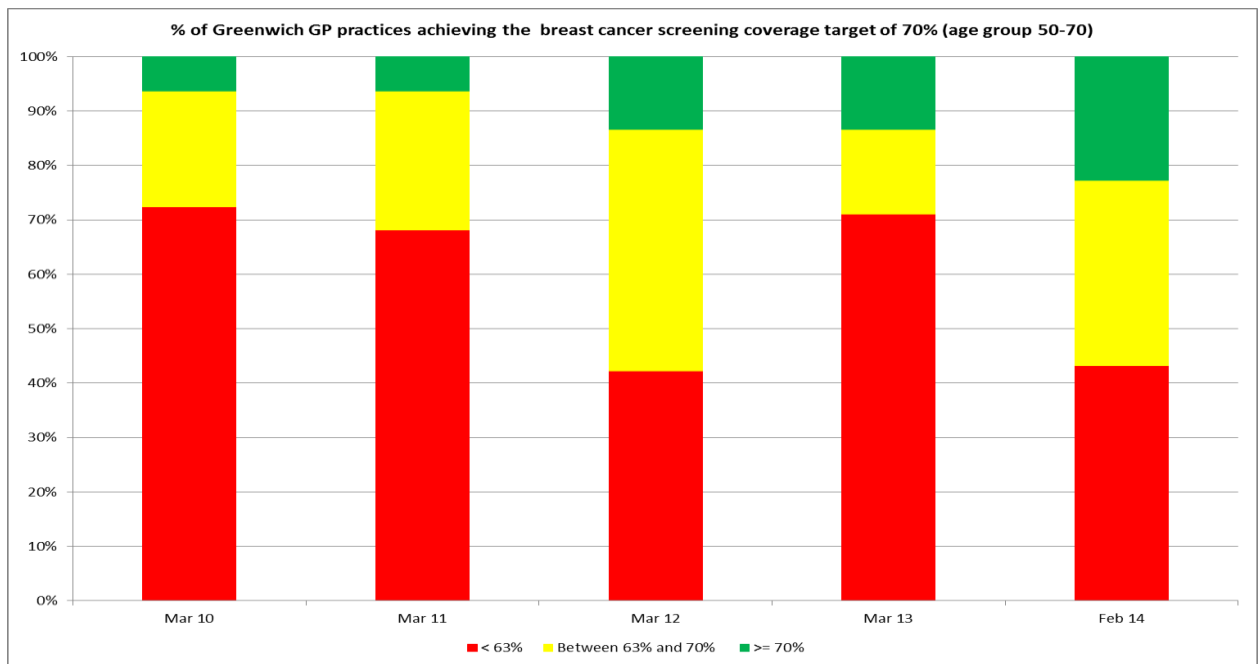
Chart 1: Breast cancer screening in Greenwich, IMD Comparators & England



Source: Open Exeter Cancer Screening Statistics: PHOF Indicators (Breast Cancer Screening)

Chart 1 shows that there has been a small but steady rise in breast cancer screening coverage in Royal Greenwich

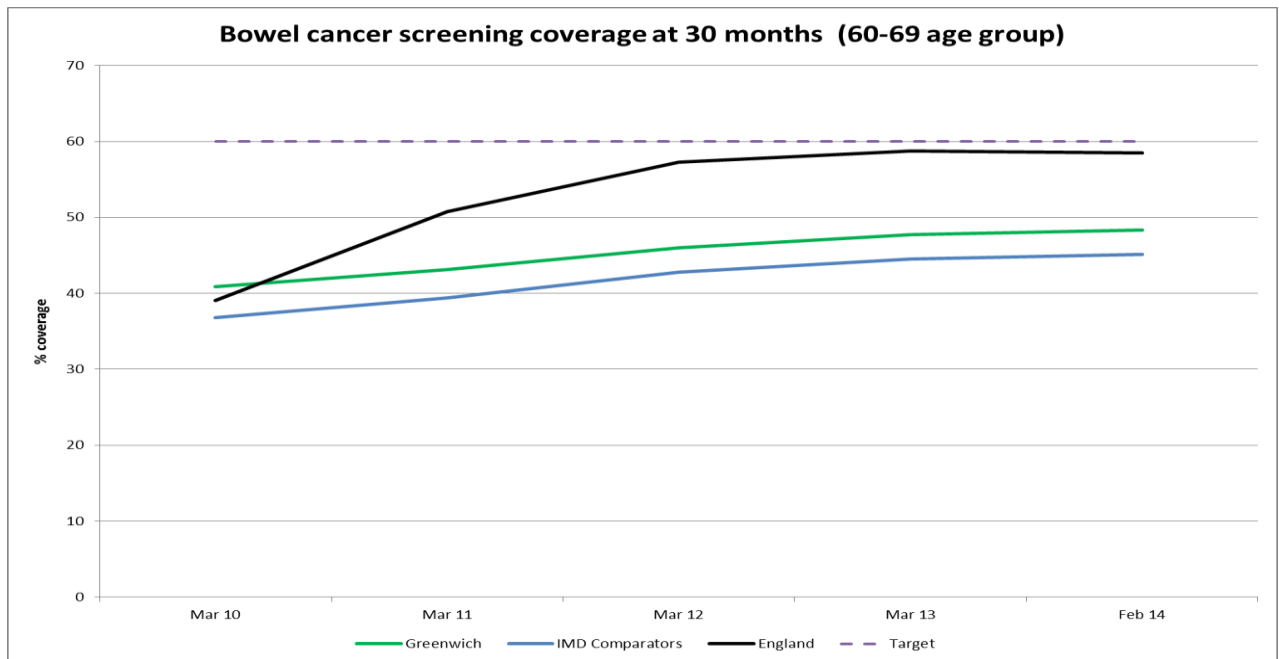
Chart 2: Breast screening coverage performance, Royal Greenwich, practice level, 2010- Feb 2014



Source: Open Exeter Cancer Screening Statistics, Practice Profile (Bowel Cancer Screening)

Chart 2 shows that since 2010 the proportion of Greenwich practices that achieve the national target coverage of 70% and above has risen steadily.

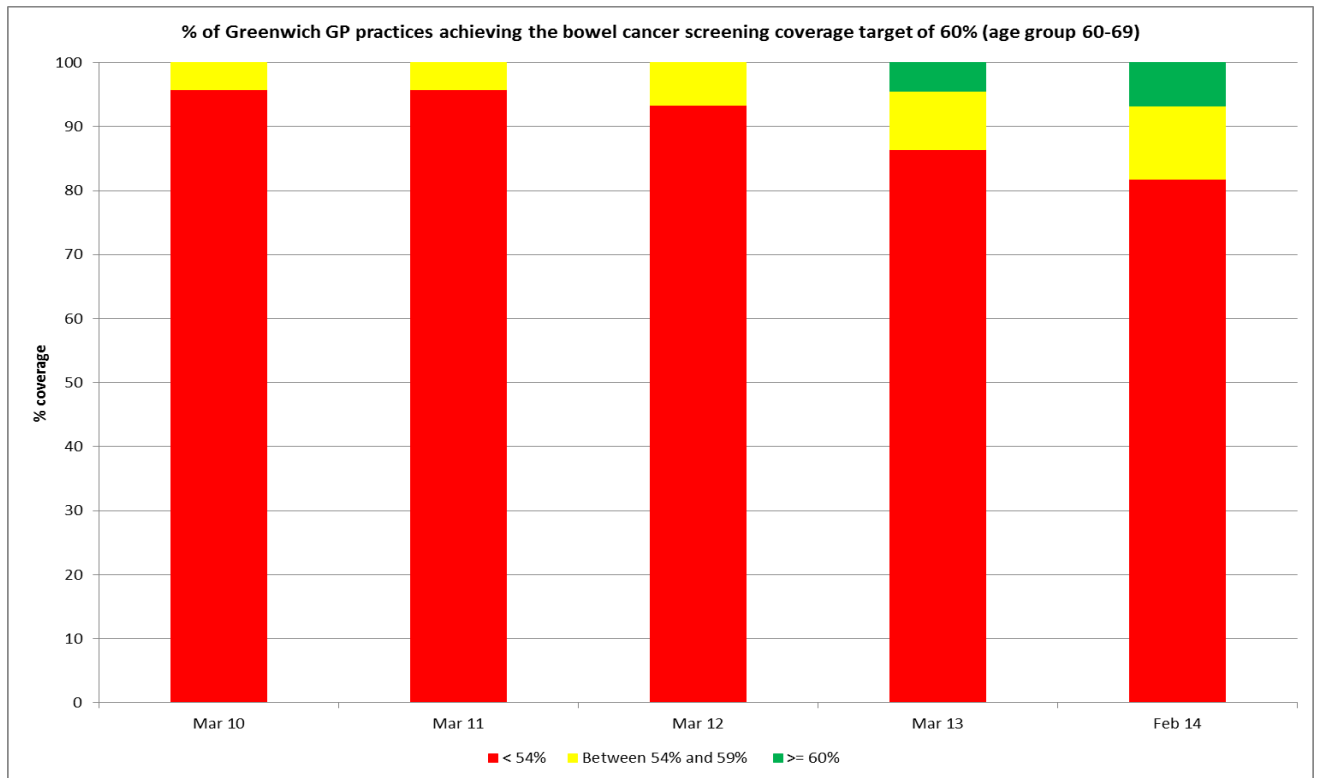
Chart 3: Bowel Cancer Screening in Greenwich, IMD Comparators & England



Source: Open Exeter Cancer Screening Statistics, Practice Profile (Bowel Cancer Screening)

Chart 3 shows that although Royal Greenwich does not achieve the national target it has shown a slight but steadily increasing trend and has a higher coverage rate than its comparator boroughs.

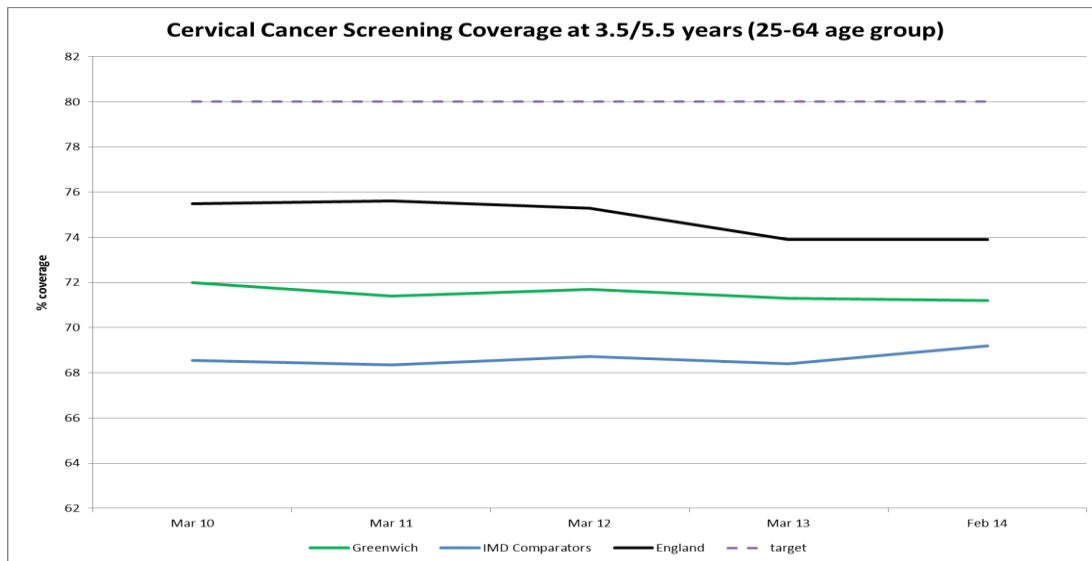
Chart 4: Bowel screening coverage performance, Royal Greenwich, practice level, 2010- Feb 2014



Source: Open Exeter Cancer Screening Statistics, Practice Profile (Bowel Cancer Screening)

Chart 4 shows that there is also an increasing trend in the proportion of Greenwich practices that are achieving the national coverage target

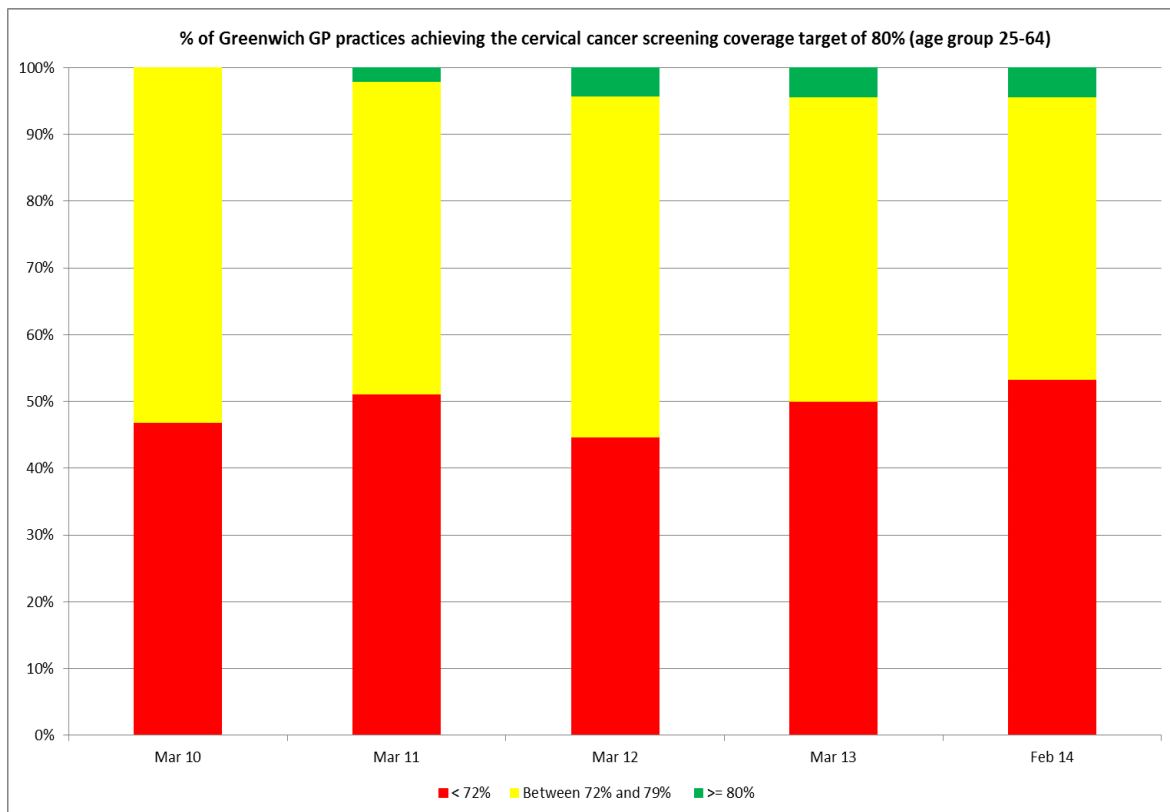
Chart 5: Cervical cancer screening in Greenwich, IMD Comparators & England



Source: Open Exeter Cancer Screening Statistics: PHOF Indicators (Cervical Screening)

Chart 5 shows that cervical screening coverage has decreased slightly in Greenwich compared to both England and comparator boroughs.

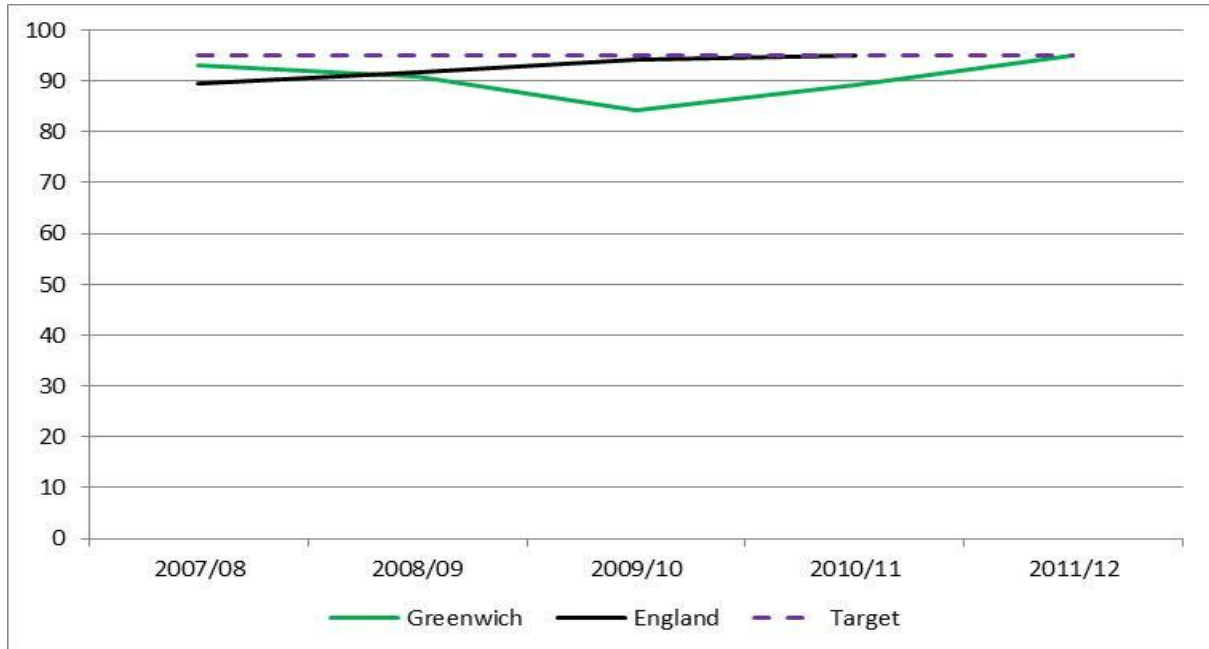
Chart 6: Cervical screening coverage performance, Royal Greenwich, practice level, 2010- Feb 2014



Source: Open Exeter Cancer Screening Statistics, Practice Profile (Cervical Cancer Screening)

Chart 6 shows the variation by practice in cervical screening coverage performance in Greenwich.

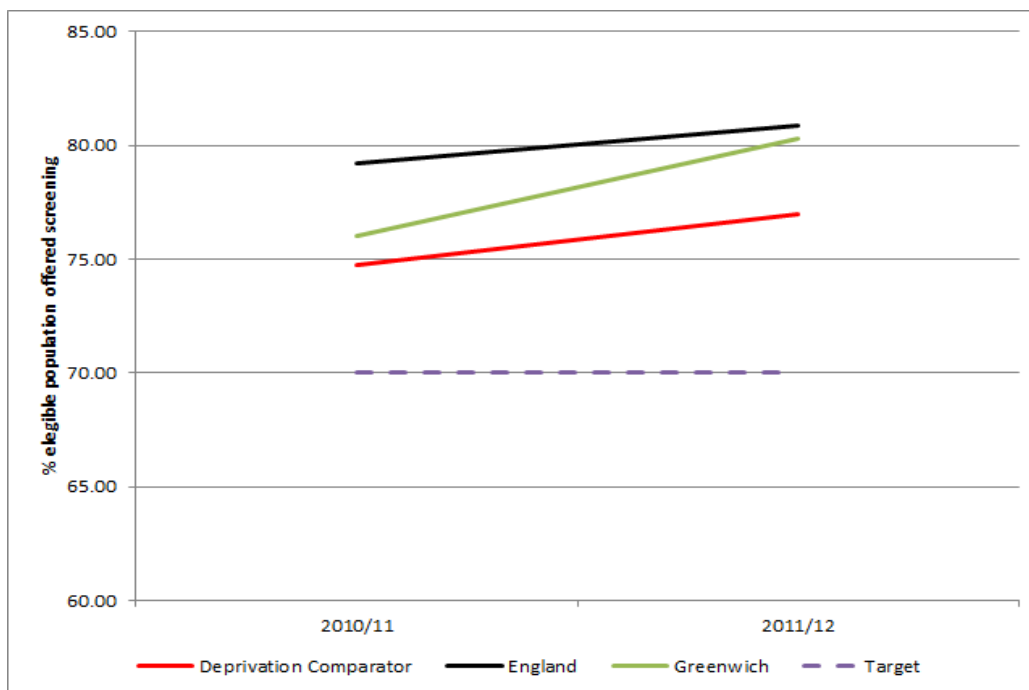
Chart 7: NHSP: Greenwich children screened by 5 weeks



NHSP Trends at 30/08/2012 and NHS Newborn Hearing Screening Programme 2010-11 Annual Report and 2009-10 Data Report

Chart 7 illustrates the improved performance in relation to Newborn Hearing Screening

Chart 8: Diabetic retinopathy in Greenwich, IMD Comparators & England



Source: Department of Health: Unify2 data collection - VSMR (NB now Integrated Performance Measures Return - IPMR)

Chart 8 shows improving performance in relation to diabetic retinopathy screening in Greenwich.

Evidence of what works

There is good evidence that the following are important to successful screening programmes:

- Training for all personnel involved in any screening programme at any stage is vital. Seamless pathways which merge the roles of a variety of providers to ensure gaps in care are negated.
- Professional Networks provide opportunities to share problems and solutions; ideas and work enabling adaptation not reinvention.
- Evidence based improvements outlined in the section below.

Planned improvements

- NHS England has incentivised all breast screening providers to implement the following evidence-based interventions to improve uptake:
 -
 - Pre-appointment text reminders- estimated 6% improvement in uptake
 - Offering a second appointment to non-attenders at a specific time - estimated 3% improvement in uptake
 - Pre-invitation letters - estimated 3-4% improvement in uptake
- There is a national randomised controlled trial underway with a view to extending the breast screening programme to women aged from 47 to 73 (currently screening is offered to women aged between 50 and 70 years of age).
- The bowel cancer screening programme has extended the age of eligibility from 60 to 69 to 60 to 73 years. London Bowel Screening Centres have been rolling out age extension since 2008. The last two centres (South East and North East) completed roll in Q4 2013/14 and age extension is now fully implemented across London.
- NHS England is to develop a single Pan London cervical screening sample takers database in 2014/15. This will standardise the collection of cervical cytology sample takers' data, allocation of unique sample taker code and improve sample taker performance monitoring. The database will be a key tool in quality improvement and incident and risk management for the cervical screening programme in London.
- A SEL Group of commissioners and providers has been formed to develop a model of co-commissioning for cervical screening that supports performance and quality improvement across the entire pathway and will in future facilitate implementation of service developments.

References

Immunisation & Screening National Delivery Framework & Local Operating Model
<http://www.england.nhs.uk/wp-content/uploads/2013/05/del-frame-local-op-model-130524.pdf>

Source: KC63, Health and Social Care Information Centre NHS England, London Cancer Screening & Coverage Report