Health Protection JSNA: Screening

Wirral Intelligence Service

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Background to JSNA – Joint Strategic Needs Assessment
What is a JSNA? A Joint Strategic Needs Assessment, better known as a JSNA, is intended to be a systematic review of the health and wellbeing needs of the local population, informing local priorities, policies and strategies that in turn informs local commissioning priorities that will improve health and wellbeing outcomes and reduce inequalities throughout the Borough. **Who is involved?** Information from Council, NHS and other partners is collected and collated to inform the JSNA and this reflects the important role that all organisations and sectors have (statutory, voluntary, community and faith) in improving the health and wellbeing of Wirral's residents. **About this document** This JSNA section looks to contain the most relevant information on the topic and provides an overview of those related key aspects **How can you help?** If you have ideas or any suggestions about these issues or topics then please email us at wirralintelligenceservice@wirral.gov.uk or go to https://www.wirralintelligenceservice.org/

Version Number	Date	Authors
3.0	June – 2018	Sophie Patterson, Hannah Cotgrave, John Highton, Sarah Kinsella, Matthew Saunders

Content overview

Abstract	Summary of screening uptake on the Wirral. Screening is a process of identifying apparently healthy people who are at increased risk of a disease or condition. They can then be offered information, further tests or treatment.
Intended or potential audience	• Wirral partners via Health Protection Forum • Public Health Departmental Management Team • Environmental Health Departmental Management Team
Links with other topic areas	• Cancer • Eye health • Hearing Impairment (children and young people) • Vaccines and Immunisations Supplement (in development)

Key findings

- Screening is a process of identifying apparently healthy people who are at increased risk of a disease or condition. They can then be offered information, further tests or treatment.
- Cancer screening uptake for Wirral in 2017 was 77.1% (breast), 72.8% (cervical) and 57.7% (bowel). Wirral performs better than the national average for breast and cervical screening, but performs slightly worse for bowel screening.
- Wirral meets the national acceptable target for coverage for breast (70%) and bowel cancer screening (52%), but not for cervical cancer screening (80%).
- For men aged 65 years old, the abdominal aortic aneurysm screening offer was above the acceptable target of 75% for 2016/17.
- Among people with diabetes, diabetic retinopathy screening uptake was 82.2% and exceeded both acceptable (70%) and achievable (80%) targets in 2016/17.
- For antenatal screening in 2016/17, Wirral performed at the higher achievable threshold for the HIV screening test coverage, timely specialist referral of mothers testing hepatitis B positive, and sickle cell and thalassemia coverage. Acceptable targets were achieved for completion of the family origin questionnaire and timeliness of sickle cell and thalassemia testing. An area for improvement was completion of foetal anomaly lab request forms, which was below the acceptable threshold.
- For newborn screening, blood spot screening coverage was above the acceptable target; however levels of avoidable repeat tests for this screen were outside the acceptable target. The newborn hearing screening met the acceptable target for completion with the 4 to 5 week timeframe but timely referral to assessment for newborn hearing was below the acceptable level. Newborn and infant physical examination coverage met the acceptable target for 2016/17.
- There are several factors which increase the likelihood of not attending for screening. These include greater deprivation, being from an ethnic minority group and having a learning disability. Barriers to screening include fear, embarrassment, and discomfort, lack of knowledge and difficulty attending the appointment.

Contents

What do we know?

Why is this important?

Screening is a process of identifying apparently healthy people who are at increased risk of a disease or condition. They can then be offered information, further tests and (if appropriate) treatment to reduce their risk and/or any complications arising from the disease or condition.
It is important to note that screening tests do not give a diagnosis. When tests are positive, the risk of a condition is higher and further follow-up is needed. There are risks as well as benefits to screening, for example false positive tests can result in some people having treatment which was not necessary. Screening programmes are implemented on the advice of the UK National Screening Committee (UK NSC) who judge screening programmes following strict guidelines and weighing up benefits and risks
.
In England we have a range of screening programmes including for breast, cervical and bowel cancer, abdominal aortic aneurysm (AAA), diabetic retinopathy, antenatal screening, and new-born screening.

In this section we consider:

- Cancer screening
  - breast, cervical and bowel
- Non cancer screening:
  - adult and young people screening
  - antenatal and newborn screening

Screening is important because it can lead to early identification of diseases, leading to prevention, early treatment, and improved health outcomes. This contributes to longer healthier lives, improved life expectancy, and reduced chronic disease burden.

Cancer Screening

There are currently three national cancer screening programmes: breast, cervical and bowel (colorectal). For details of local cancer rates please see Wirral JSNA: Cancer. National, regional and local cancer screening programme coverage is measured and shared as part of the Public Health Outcomes Framework sub indicators 2.20. Data is also available via the Open Exeter dataset which can be accessed by the Screening and Immunisation Team based in PHE. This data is not publically available.

Non-Cancer Screening

There are several non-cancer screening programmes for eligible groups. These include abdominal aortic aneurysm (AAA) screening for men aged 65, diabetic retinopathy screening for those aged over 12, antenatal screening for certain infectious diseases such as HIV, and screening for newborn babies, such as a hearing screening. National, regional and local non-cancer screening programme coverage is measured and shared as part of the Public Health Outcomes Framework sub indicator 2.21. Local data is available via the Open Exeter dataset which can be accessed by the Screening and Immunisation Team based in PHE. This data is not publically available. NICE Guidelines CG62 (2008) Antenatal Care provides advice and information to be given to women during pregnancy, including antenatal and newborn screening programmes.

What are we expecting to achieve? (Targets)

Public Health England sets out standards for all population screening programmes.
New specific national key performance indicators for antenatal, newborn, young person and adult screening for 2017/18 were published in May 2017, identifying lower 'acceptable' and a higher 'achievable' targets for most screening programmes.

All programmes should have development plans to attain and maintain the achievable level of performance. The acceptable threshold is the lowest level of performance which programmes are expected to attain. Where programmes are not meeting this level they should have recovery plans for rapid and sustained improvement.

Cancer screening standards are set out in the NHS Public Health Functions Agreement 2017/18 specifications. The breast cancer screening specification provides a performance indicator of acceptable screening coverage of 70% or greater and an achievable target of 80%. The cervical cancer screening specification sets a minimum target for uptake of 80% or greater to screen eligible women aged 25 to 49 every three years and women aged 50 to 64 every 5 years.

The Bowel Cancer Screening Specification 2017 sets a minimum uptake target of 52% of people adequately screened out of those invited for bowel screening. In the 2017 specification, the achievable target for bowel screening is identified as 60% or over.

Facts, figures and trends (Wirral and beyond)

Cancer Screening

Breast Cancer Screening

Breast cancer screening is offered to women when they turn 50 years old, and then every three years thereafter until age 70. Women aged 71 years or older who self-refer will continue to be screened every three years. Women who are younger than the designated cut-off, but who are deemed high risk of developing breast cancer by specialist services, will also be included in the screening programme. In 2009, an age extension to the screening programme was rolled out, including women aged 47 years to 73 years old as part of a randomised controlled trial investigating the impact of expanding breast screening on mortality. The extension programme has been rolled out in Wirral, with GP surgeries currently extending screening for women from 47 years to 73 years. Results from the randomised controlled trial are expected in 2020.

The acceptable target coverage for breast screening is 70%, with an achievable target of 80%. The coverage of breast cancer screening for the last 7 years has exceeded the 70% acceptable target nationally, regionally and locally (**Table 1**). Uptake has shown some decline in the North West since 2012; however this trend was beginning to reverse in 2017. Wirral consistently has a higher coverage than the North West and England average. The screening programme is carried out every 3 years, so figures can be very variable depending on where the practice is in the screening round.

Table 1: Trend in percentage of eligible women who were adequately screened for breast cancer in the previous 36 months in Wirral, North West and England

	2011	2012	2013	2014	2015	2016	2017
Wirral	78.3	77.6	77.2	77.3	76.9	76.8	77.1
North West	74.9	74.9	74.5	73.4	72.6	72.2	73.2
England	77.1	76.9	76.3	75.9	75.4	75.5	75.4

Source: Public Health Outcomes Framework indicator 2.20i

Notes: *Data represents 36 month period up to March 31st each year*

For the 50 to 70 year old cohort there is a wide variation in breast cancer screening uptake at practice level, despite a high overall coverage, with 17 practices failing to meet the 70% acceptable uptake threshold (**Table 2**). In total, 8 practices achieved coverage equal to or greater than the 80% achievable target. Please note the data sets shown in **Tables 1** and **2** are different (age range and time period) and therefore numbers are not directly comparable.

Table 2: Wirral general practice data showing the percentage of eligible women who were screened for breast cancer in the previous 36 months.

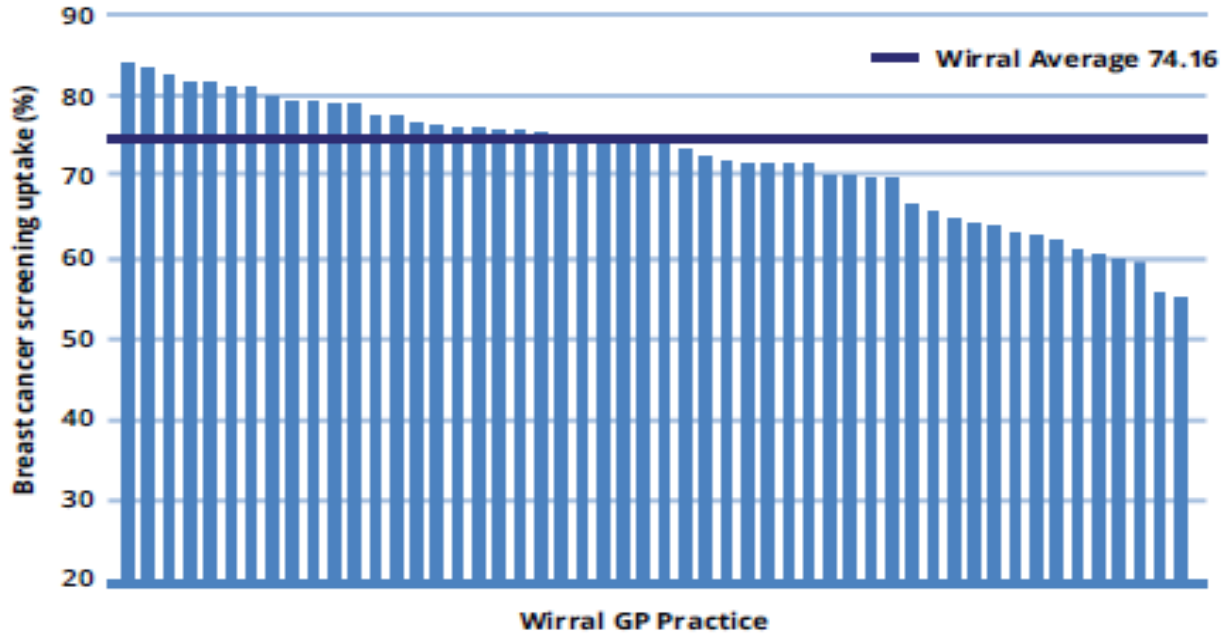
	Target	Average	Range	Lowest	Highest	Practices <70%	Practices ≥70%	Practices ≥80%
Coverage in 50 to 70 year olds	70%	72.5%	28.7%	55.7%	84.4%	17	35	8

Source: Public Health Outcomes Framework (Indicator 2.20iii)

Notes: *Data represents 36 month period up to March 31st each year*

There is a clear variation in uptake of breast cancer screening across GP practices in Wirral, ranging from less than 60% to more than 80% uptake among eligible women (**Figure 1**). Analyses conducted for the 2017 Wirral Director of Public Health Annual Report showed that if all GP practices in Wirral achieved the average level of uptake for the borough for breast cancer screening, then a further 1200 women would be screened and 7 breast cancer deaths could be prevented each year.

Figure 1: Females aged 50-70 screened for breast cancer in the last 36 months by practice.



Source: Wirral Director of Public Health Annual Report. Expect Better. 2017

Examining breast screening uptake by practice population deprivation rank shows uptake is lower in the most deprived areas of Wirral compared to all other areas (**Table 3**).

Table 3: The percentage of eligible women aged 50 to 70 years who were screened for breast cancer in the 36 month period up to June 2016, by practice deprivation rank.

Practice deprivation quintile	Average breast cancer screening uptake (2015/16)
1 (Most Deprived 20%)	65.2%
2	71.7%
3	74.3%
4	79.8%
5 (Least Deprived 20%)	80.8%

Source: National GP Profile, Public Health Outcomes Framework, IMD 2015 via Department for Communities and Local Government.
Notes: Practice deprivation quintiles were calculated using IMD 2015 scores for all England practices

Cervical Cancer Screening

Women aged 25 to 49 years are invited for a cervical smear every 3 years, with women aged 50 to 64 years invited every 5 years. Samples from the cervix are tested to detect abnormal cells at risk of becoming cancerous. In 2016, testing for human papilloma virus (HPV – responsible for causing a majority of cervical cancers) was incorporated into the cervical screening test to improve the accuracy of the screening programme.

The acceptable target coverage for cervical screening is 80%. Nationally, regionally and locally, cervical cancer screening coverage from 2011 to 2017 has remained below the acceptable 80% target (**Table 4a**).

Table 4a: Percentage of eligible women screened for cervical cancer adequately within the previous 3.5 or 5.5 years (according to age) by year and area.

Area / Year	2011	2012	2013	2014	2015	2016	2017
Wirral	74.6	74.6	72.6	72.9	73.5	73.1	72.8
North West	74.9	74.8	73.1	73.0	72.8	72.3	72.0
England	75.7	75.4	73.9	74.2	73.5	72.7	72.0

Source: Public Health Outcomes Framework (indicator 2.20ii)

National data from 2015 and 2016 shows uptake is lowest in the 25 to 29 age group. It steadily increases with age to a peak in the 50 to 54 age group and then declines again. Wirral data demonstrates lower uptake of screening among women aged <50 (**Table 4b**). This is in contrast to a cervical cancer health equity audit conducted in 2011, demonstrating poorer uptake of screening among women aged 50+.

Table 4b: Percentage of eligible women screened for cervical cancer by year and age

	Age 25-49	Age 50-64	All
2014/15	72.3%	75.7%	73.5%
2015/16	71.9%	75.1%	73.1%
2016/17	71.8%	74.4%	72.8%

Source: Local Service Data

It is important to acknowledge that the roll out of HPV vaccination may impact screening rates among younger women in Wirral moving forward. The HPV vaccine has been offered to all girls aged 12-18 in England since 2008. HPV vaccination coverage for Wirral can be found in the Vaccination and Immunisation supplement.

Analysis by Wirral's 56 GP practices shows that only three GP practices are achieving the national acceptable target of ≥80% across the eligible age cohort (**Table 5**).

Table 5: Percentage of eligible women who were screened for cervical cancer in the previous period

Age cohort screened	Target	Average	Range	Lowest	Highest	Practices <80%	Practices ≥80%
25 to 64 years (42 or 66 month period)	80%	73.2%	21.4%	60.5%	81.9%	49	3

Source: National GP Profile, Public Health Outcomes Framework, IMD 2015 via Department for Communities and Local Government.
Notes: Practice deprivation quintiles were calculated using IMD 2015 scores for all England practices

Examining cervical screening by GP practice deprivation rank, where 5 is the least deprived and 1 the most deprived, shows that practices in the most deprived two areas (ranks 1 and 2) have lower uptake of screening compared to practices in the three least deprived areas (**Table 6**).

Table 6: Average percentage uptake of cervical cancer screening by practice deprivation rank

Practice deprivation quintiles	Average cervical cancer screening uptake (2015/16)
1 (Most Deprived 20%)	68.4%
2	72.7%
3	75.4%
4	76.8%
5 (Least Deprived 20%)	77.1%

Source: National GP Profiles, Public Health Outcomes Framework, IMD 2015 via Department for Communities and Local Government.
Notes: Practice deprivation quintiles were calculated using IMD 2015 scores for all England practices.

Bowel Cancer Screening

The bowel cancer screening programme sends a bowel cancer testing kit (Faecal Occult Blood test, FOB) every 2 years to men and women aged between 60 and 74 years old registered with a GP. A new, easier form of this home testing method was introduced in 2016, the Faecal Immonochemical Test (FIT), which requires only one stool sample rather than two samples from three separate stools. As part of a national implementation programme, Wirral residents at the age of 55 years are now invited for a one-off bowel scope test to look inside the lower bowel and rectum. This is being delivered by Wirral University Teaching Hospital (WUTH).

The acceptable national target for uptake for bowel screening is now 52% with a national achievable target of 60%. Wirral uptake of the bowel screening test was slightly lower than the national average in 2017, but higher than the acceptable target of 52% (**Table 7**).

Table 7: The percentage of residents registered with a GP who were screened for bowel cancer adequately within the previous 2.5 years, by area.

Area / Year	2015	2016	2017
Wirral	56.2%	56.5%	57.7%
North West	55.9%	56.8%	58.0%
England	57.1%	57.9%	58.8%

Source: Public Health Outcomes Framework indicator 2.20iii

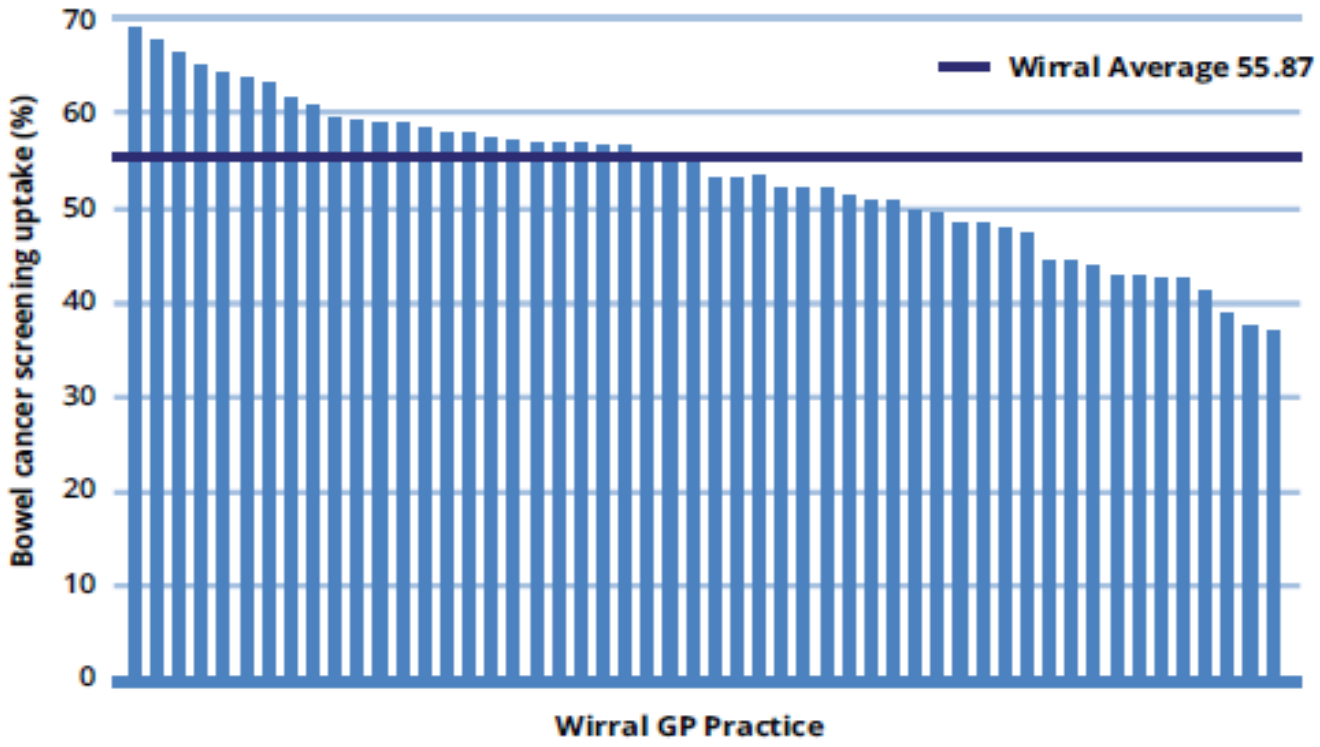
Bowel screening uptake varies across Wirral GP practices, ranging from below 40% to above 60% among eligible people (**Table 8, Figure 2**). Notably, there are 20 practices that have an average uptake below the 52% acceptable target (**Table 8**).

Table 8: The percentage of people registered with a Wirral GP eligible for bowel screening who were screened adequately within the previous 2.5 years (30 months) by 31st March 2017

Age Cohort	Target	Average	Range	Lowest	Highest	Practices < 52%	Practices ≥52%	Practices ≥60%
All 60 to 74	60%	55.9%	31.2%	37.9%	69.1%	20	32	12

Source: National GP Profiles, Public Health Outcome Framework.
Notes: Open Exeter data is not available for public access.

Figure 2: Persons aged 60-69 screened for bowel cancer in last 30 months (2.5 year coverage, %) by Wirral GP practice



Source: Wirral Director of Public Health Annual Report. Expect Better. 2017

Examining uptake by deprivation quintile shows lower uptake in the most deprived areas compared to the least deprived areas, with uptake steadily increasing as deprivation declines (**Table 9**).

Table 9: Average percentage of Wirral practice population screened for bowel cancer in the past 30 months in the eligible cohort (aged 60 to 74 years) by deprivation quintile

Practice deprivation quintiles	Average bowel cancer screening uptake (2015/16)
1 (Most Deprived)	44.8%
2	53.9%
3	58.1%
4	61.4%
5 (Least Deprived)	63.5%

Source: National GP Profile, Public Health Outcomes Framework, IMD 2015 via Department for Communities and Local Government.
Notes: Practice deprivation quintiles were calculated using IMD 2015 scores for all England practices

Non-Cancer Screening

Adult and Young People Screening

For men aged 65 years and over there is an abdominal aortic aneurysm screening programme. A diabetic retinopathy screening programme is available for eligible people aged 12 years and over.

Abdominal aortic aneurysm (AAA) screening

The abdominal aortic aneurysm (AAA) screening programme is run by PHE. It is offered to men in the year they turn 65 years old to detect a dangerous swelling (aneurysm) in the aorta. The aorta is the main blood vessel that runs from the heart down through the abdomen to the rest of the body.

Men are 6 times more likely to develop a swelling than women. Risk also increases with age, being a smoker, high blood pressure and having an immediate relative with an AAA. An AAA usually causes no symptoms, but if it bursts, it is extremely dangerous and usually fatal. Around 8 out of 10 people with a ruptured AAA either die before they reach hospital or do not survive surgery.

Screening involves an ultrasound scan of the stomach (abdomen), which takes about 10-15 minutes. If the abdominal aorta is not enlarged, no further testing is required. If there is a small to medium aneurysm, regular monitoring is put in place to check it does not increase in size. Anyone found to have a large aneurysm is referred to a vascular surgeon (a specialist in blood vessels) within two weeks to advise on possible treatment to reduce the risk of rupture.

The acceptable coverage target for AAA screening is 75% of the eligible cohort, with an achievable target of 85% or greater. The proportion of men eligible for screening who are tested has increased in Wirral between 2013/14 and 2016/17 (**Table 10**). The latest figure meets the acceptable target and exceeds the regional average. Further improvement is needed to meet the national average and the achievable target of 85% or more of all eligible men receiving AAA screening.

Table 10: Percentage of men aged 65 years and over who receive Abdominal Aortic Aneurysm (AAA) screening by year and area

Area / Year	2013/14	2014/15	2015/16	2016/17
Wirral	66.1%	77.0%	77.3%	78.5%
North West	68.6%	74.6%	76.6%	77.8%
England	77.4%	79.4%	79.9%	80.9%

Source: Public Health Outcome Framework indicator 2.21viii

Diabetic retinopathy screening

Diabetic retinopathy is a complication of diabetes, caused by high blood sugar levels damaging the small blood vessels in the back of the eye (retina). It may not cause symptoms until it is quite advanced. It can cause blindness if left undiagnosed and untreated. All people with diabetes (type 1 and 2) aged 12 or over are eligible for annual screening to detect retinopathy in its early stages of development.

Wirral consistently exceeds the 70% acceptable and 80% achievable level of uptake of those offered screening (**Table 11**). However, our screening coverage has shown a slight decline over the past 2 years. The key performance indicators for diabetic retinopathy screening have been revised; from April 2017 the acceptable and achievable levels will change to 75% and 85%, respectively.

Table 11: Percentage of eligible Wirral residents offered diabetic eye screening who attended.

Area/ Year	2014/15	2015/16	2016/17
Wirral	84.4%	83.9%	82.2%
North West	81.1%	81.1%	80.2%
England	83.4%	83.0%	82.9%

Source: NHS screening programmes: KPI reports and briefings 2016 to 2017

The performance of diabetic eye screening is also benchmarked against an acceptable target of 70% or more and an achievable target of 95% or more results being issued within 3 weeks of screening date. Both the acceptable and achievable targets were met by Wirral in 2016/17 (**Table 19**). Additionally, there is an acceptable target of 80% or more of patients attending consultation within 4 weeks of a positive screen, which was met by Wirral in 2016/17. This final key performance indicator will change to an acceptable target of 80% or more of patients attending consultation within 6 weeks of a positive screen as of April 2017.

Local rates of sight loss due to diabetic eye disease from 2010/11 to 2012/13 were similar to the national and regional average. However, in 2013/14 there was a more than two-fold increase for Wirral compared to the previous year (**Table 12**). The 2014/15 rate and 2015/16 rates have returned to levels seen in 2012/13, and remain constant.

Table 12: Trend in rate of sight loss due to diabetic eye disease aged ≥12 yrs. per 100,000 population

Area/ Year	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Wirral	3.6	3.3	2.5	6.2	2.5	2.5
North West	3.5	3.9	3.4	3.4	2.7	2.3
England	3.6	3.9	3.5	3.4	3.2	2.9

Source: Public Health Outcomes Framework indicator 4.12iii

Data for 2016/17 were not available at the time of this report. It should also be noted that these are crude rates (i.e. not adjusted for age) and numbers are relatively small, therefore subject to fluctuations. For further information please see Wirral JSNA: eye health.

Antenatal and Newborn Screening

Screening tests are offered to pregnant women and their newborn. The tests aim to identify problems at an early stage which could affect the health of the mother or baby. This will enable early action and support for families to help them make decisions about the pregnancy and care of their child.

Infectious diseases in pregnancy

NHS infectious diseases in pregnancy screening offers blood tests for hepatitis B, HIV and syphilis. This is designed to help protect the health of the pregnant woman and the baby, including minimising the risk of the transfer of the condition. The two key performance indicators which measure the screening for infectious diseases in pregnancy are HIV coverage and timely referral of hepatitis B positive women for specialist assessment.

HIV Screening

The national acceptable target is to achieve 95% uptake of antenatal screening for HIV, with an achievable target of 99% or more.

This new guidance stated in the 2016/17 key performance indicators replaced previous targets of 90% acceptable and 95% achievable. In 2016/17, nearly all pregnant women in Wirral were screened for HIV, meeting both acceptable and achievable screening targets (**Table 13**). The borough had a slightly higher uptake than the regional average.

Table 13: HIV screening for pregnant women by area and year

Area / Year	2013/14	2014/15	2015/16	2016/17
Wirral University Teaching Hospital	99.9%	99.6%	N/R	99.1%
North West	98.1%	98.0%	98.5%	98.8%
England	98.9%	98.9%	99.1%	99.4%

Source: NHS screening programmes: KPI reports and briefings 2016 to 2017

Hepatitis B Screening

Once identified, the referral of mothers who are hepatitis B positive to specialist services is performance measured as an important part of the maternal pathway. It is where screening and clinical services meet and responsibility of care becomes multidisciplinary. The target timeframe is 6 weeks from the screen positive result being reported to maternity services, to attendance at specialist assessment. The acceptable target is 70% or more with an achievable target of 90% or greater. Data from 2016/17 shows Wirral achieved a 100% record for this indicator (**Table 19**). As of April 2017, a new key performance indicator has been incorporated into the screening guidance, stating that ≥ 95% eligible pregnant women booked for antenatal care should be screened for hepatitis B during pregnancy, with an achievable target of ≥ 99%.

Syphilis Screening

The 2017/18 key performance indicators in screening guidance states that ≥ 95% eligible pregnant women booked for antenatal care should be screened for syphilis during pregnancy, with an achievable target of ≥ 99%. Syphilis coverage is a new addition to the key performance indicators for 2017/18, so access to local syphilis screening data is not yet available. Data is available regionally through Public Health Outcomes Framework. In 2015, the North West region had syphilis screening coverage above the acceptable target, but was below the national average and was the second lowest region in England (**Figure 3**).

Figure 3: Antenatal syphilis screening coverage by region, 2015

2.20viii - Infectious Diseases in Pregnancy Screening - Syphilis Coverage 2015 Proportion - %

Area	Count	Value	95% Lower CI	95% Upper CI
England	702,520	98.2	98.2	98.3
London region	151,813	99.1	99.0	99.1
South East region	106,764	99.0	99.0	99.1
South West region	63,569	99.0	98.9	99.1
Yorkshire and the Humber...	69,097	98.7	98.6	98.8
East of England region	87,301	98.4	98.3	98.5
West Midlands region	55,933	97.7	97.6	97.8
East Midlands region	48,265	97.3	97.2	97.5
North West region	94,078	96.4	96.3	96.5
North East region	25,700	96.3	96.1	96.5

Source: National Antenatal Infection Screening Monitoring (NAISM) Programme www.gov.uk/government/publications/national-antenatal-infections-screening-monitoring-annual-data-tables

Source: Public Health Outcomes Framework indicator 2.20viii

Foetal Anomaly Screening

The foetal anomaly screening programme offers tests to all pregnant women. There are two main test components; screening tests for Down's syndrome and an ultrasound scan. A number of essential data fields must be completed on the request form to prevent delays and ensure an accurate test for Down's syndrome. The acceptable standard for the accurate and full completion of request forms is 97% or greater, with 100% set as the achievable standard. Wirral performance was below the acceptable threshold in 2016/17, with 95.7% of submitted forms demonstrating completed data (**Table 19**).

For pregnant women eligible for an antenatal ultrasound between 18 to 23 weeks, the acceptable target for a completed scan is ≥ 90%, with an achievable target of ≥ 95%. This key performance indicator was introduced in 2016/17. Data has not yet been collected and presented, but should be available for publication by the end of 2018.

Sickle Cell Disease and Thalassaemia Screening

Sickle cell disease (SCD) and thalassemia are inherited blood disorders which can be passed onto a baby. All pregnant women in England are offered a blood test to find out if they carry a gene for thalassemia, and those at high risk of being a sickle cell carrier are offered a test for sickle cell disease.

From 2013/14 to 2016/17, Wirral screened almost 100% of eligible women, meeting the achievable target of 99% or more screened (**Table 14**).

Table 14: Antenatal sickle cell and thalassemia screening by area and year

Area/ Year	2013/14	2014/15	2015/16	2016/17
Wirral University Teaching hospital	99.9%	99.8%	N/R	99.8%
North West	98.3%	98.1%	98.3%	98.6%
England	98.9%	98.9%	99.1%	99.3%

Source: NHS screening programmes: KPI reports and briefings 2016 to 2017

The performance of this screening is also monitored against the timeliness of the test (a conclusive screening result should be available by 10 weeks' gestation), and the proportion of samples submitted to the laboratory with a completed family origin questionnaire (FOQ). During 2016/17 Wirral met both the 50% acceptable target for timeliness of the test, and the 90% acceptable target of submitted samples with a completed FOQ, a notable improvement from previous years (**Table 19**).

Newborn Screening

Newborn babies are clinically examined for abnormalities of the heart, eyes, hips and testes. They also receive a hearing screening test (for deafness and hearing impairment) and the new-born blood spot test (for metabolic conditions).

Newborn Bloodspot Screening

The newborn bloodspot screen is a blood sample taken from a heel prick of new-born babies. The programme currently screens for nine conditions; Sickle Cell Disease (SCD); Cystic Fibrosis (CF); Congenital Hypothyroidism (CHT) and six Inherited Metabolic Diseases (IMDs). Wirral achieved the acceptable target of 95% or more coverage with 99.6% coverage in 2016/17. This was higher than the regional and national average (**Table 15**). The achievable target is set at 99.9%. According to the updated key performance indicator specification for screening, as of April 2017, the achievable target will be revised to 99%.

Table 15: Newborn bloodspot screening coverage by 17 days of age by area and year

Area/ Year	2013/14	2014/15	2015/16	2016/17
Wirral CCG	N/R	99.6%	99.1%	99.6%
North West	93.2%	96.9%	93.7%	96.6%
England	93.5%	95.8%	95.6%	96.5%

Source: NHS screening programmes: KPI reports and briefings 2016 to 2017

The newborn bloodspot performance is monitored against avoidance of repeat tests. In 2016/17, 3% of babies in Wirral had to have a repeat bloodspot test due to an avoidable failure in the sampling process. This was higher than the acceptable level of 2% or less. According to the updated key performance indicator specification for screening, as of April 2017, the achievable target will be less than 1%. Avoidable repeat tests cause delays in identification and treatment of screen-positive babies, anxiety to parents, and distress to babies and waste of healthcare resources.

Newborn Hearing Screening

The newborn hearing screening programme aims to identify all children born with a moderate to profound permanent bilateral deafness within 4 (hospital programmes) or 5 (community programmes) weeks of birth. The acceptable target is for 97% or more children to be tested within the time frame, with a 99.5% achievable target. Wirral performance has been consistently above the acceptable target, with a marginally better performance than the national and regional average (**Table 16**).

Table 16: Newborn hearing screening coverage within 4 weeks (hospital) 5 weeks (community) by area and year

Area / Year	2013/14	2014/15	2015/16	2016/17
Wirral	99.0%	97.4%	98.6%	98.9%
North West	97.6%	97.6%	97.8%	98.3%
England	97.8%	97.9%	98.2%	98.7%

Source: NHS screening programmes: KPI reports and briefings 2016 to 2017

Where screening indicates that a referral to a specialist audiology service is required, babies should enter into the assessment process within four weeks of screening or before 44 weeks of age. This ensures the benefits of newborn hearing screening can be maximised and reduces anxiety for parents. The acceptable target for timely referral is greater than 90% and the achievable target is 95%. Wirral has not met the acceptable target for the past four years, and the proportion of newborns receiving timely referral to assessment notably decreased between 2015/16 and 2016/17 (**Table 17**). Please also see Wirral JSNA Hearing Impairment (Children and Young People).

Table 17: Newborn hearing screening referral to assessment within 4 weeks by area and year

Area / Year	2013/14	2014/15	2015/16	2016/17
Wirral	78.6%	87.2%	87.2%	76.9%
North West	83.6%	86.5%	90.0%	87.3%
England	85.9%	86.4%	87.1%	89.2%

Source: NHS screening programmes: KPI reports and briefings 2016 to 2017

Newborn and Infant Physical Examination (NIPE)

This programme is a physical examination of the baby to check for problems or abnormalities. It is carried out within 72 hours of birth and then again at 6 to 8 weeks of age.
The available data for examination within 72 hours shows that Wirral met the ≥95% acceptable target in 2016/17 with 95.7%, but did not meet the achievable target of ≥99.5%.

For babies who are identified to have an abnormality of the hips, receipt of a specialist hip ultrasound scan should occur within 2 weeks. Wirral data for timely assessment of dysplasia of the hip is only available in quarter 1 2014/15, with an assessment prevalence of 85.7%, short of the acceptable ≥95% target. (Data source: PHE Health Protection Report February 2016). As fewer than five babies had hip abnormalities in Wirral, further data is suppressed for confidentiality reasons. The NIPE is not a mandatory reporting requirement. There is limited data while this indicator is under development which means performance cannot be accurately assessed.

What are we achieving? (Performance)

Summary outcomes for cancer screening

Table 18 shows Wirral's performance against cancer screening acceptable and achievable coverage targets. In 2016/17, Wirral met the minimum standard for breast screening coverage but was below the achievable 80% target. Cervical cancer screening coverage was below the acceptable target. Bowel cancer screening was above the 52% acceptable target, but below the 60% achievable target. Performance has been rated. Where performance meets the achievable target these have been rated green, as this is the level areas should be aspiring to. Performance which meets the acceptable threshold but not the achievable target is rated amber. The acceptable target is the minimum threshold areas should be working to and where performance is below this it is rated red.

Table 18: Wirral cancer screening coverage performance rated against national targets by year

Screening / Target & Performance	Acceptable Target	Achievable Target	2014/15	2015/16	2016/17	Practice Range 2016/17	Practices meeting achievable target
Breast	≥70%	≥80%	73.0%	74.2%	74.5%	56.3% - 85.2%	35
Cervical	≥80%	-	73.6%	73.2%	72.8%	57.8% - 82.7%	2
Bowel	≥52%	≥60%	55.7%	55.9%	56.7%	37.9% - 71.4%	16

Rating Key	
Red	Acceptable target not met
Amber	Acceptable target met but not achievable target
Green	Achievable target met

Summary Outcomes for Non-Cancer Screening

Table 19: Wirral's screening performance against national key performance indicators

Screening / Target & Performance	Target		Year		
	Acceptable	Achievable	2014/15	2015/16	2016/17
Adult and young person screening					
Abdominal Aortic Aneurysm (AAA) offer	≥75%	≥85%	66.1%	77.0%	77.3%
Diabetic eye screening uptake	≥70%	≥80%	84.4%	83.9%	82.2%
Diabetic eye screening– results issued within 3 weeks of routine digital screening	≥70%	≥95%	99.4%	99.6%	99.7%
Diabetic eye screening – timely assessment for R3A screen positive	≥80.0%	N/A	91.4%	92.3%	87.5%
Ante-natal screening					
HIV Test Coverage	≥95%	≥99%	99.6%	N/R	99.1%
Hepatitis B timely assessment	≥70%	≥90%	100.0%	100.0%	100.0%
Syphilis test coverage	≥95%	≥99%	N/R	N/R	N/R
Sickle Cell and Thalassemia Coverage	≥95%	≥99%	99.8%	N/R	99.8%
Antenatal sickle cell and thalassaemia screening – timeliness of test	≥50.0%	≥75.0%	8.0%	11.1%	62.9%
Sickle cell and thalassaemia screening – completion of FOQ	≥90%	≥95%	98.7%	98.7%	97.0%
Foetal Anomaly Screening	≥97.0%	100%	94.6%	97.2%	95.7%
Newborn Screening					
Newborn blood spot coverage	≥95%	≥99.9%	99.7%	99.1%	99.6%
Newborn blood spot screening – avoidable repeat tests	≤2.0%	≤0.5%	2.5%	3.5%	3.0%
Newborn and infant physical examination coverage	≥95%	≥99.5%	N/R	N/R	95.7%
Newborn Hearing Screening complete by 4 Wks. (Hospital) / 5 Wks. (Community) after birth	≥97%	≥99.5%	97.4%	98.6%	98.9%
Newborn Hearing Screening - Assessment referral within 4 Weeks	≥90%	≥95%	87.2%	87.2%	76.9%

Rating Key	
Red	Acceptable target not met
Amber	Acceptable target met but not achievable target
Green	Achievable target met

Local, Community and Stakeholder views

Wirral Health Protection Group

The Wirral Health Protection Group meets every two months and has a strategic focus on system leadership, assurance and risk management for health protection across Wirral. Members include representatives from the Wirral Public Health team, NHS England, PHE and Wirral CCG. The forum is in the process of identifying priorities for 2018, which this JSNA chapter will inform. Wirral Health Protection Group produces an annual report, which identifies areas of achievement and priorities in the field of health protection moving forward. Priorities for 2016/17 include:

1. Reducing food borne illness
2. Integrating seasonal and pandemic influenza plans
3. Tackling the growth in Antimicrobial Resistance
4. Reducing incidence of Clostridium difficile
5. Protecting the health of care home residents
6. **Reducing variation in cancer and diabetic retinopathy screening**
7. Reducing variation in vaccine uptake at 5 years and prenatal pertussis vaccine
8. Integrating and effective emergency resilience

Priorities directly relevant to this JSNA are highlighted in bold.

What is this telling us?

Groups most at risk

A Cancer Research UK report found younger age to be associated with lower screening uptake, specifically with breast screening. The other factors identified in the report which influenced lower screening uptake were being from a black or minority ethnic group, having low literacy, belonging to a lower socioeconomic group, or having a mental health issue. Research drawing on data collected for the Office for National Statistics 'Opinions' survey, conducted from December 2008 to January 2009, captured barriers to attending cervical screening, including embarrassment, uncertainty about the process of testing, and fear of the results.

National research suggests that ethnicity is one of the most important predictors of participation in cervical screening. Offering and delivering cervical screening in a culturally-appropriate manner is, therefore, an especially important consideration. Identifying as a lesbian or a woman who has sex with women has also been identified as a barrier to uptake of cervical cancer screening (Cancer Research UK). For bowel cancer screening, men are less likely to accept an invitation to participate than women, even though men are at comparatively higher risk. There is also some evidence to suggest that people from some minority ethnic groups and smokers are less likely to participate in the bowel cancer screening programme.

Research summarised by NHS England has found that people who currently have other health problems are less likely to participate in cancer screening. In particular, there is concern that people with learning disabilities are not accessing screening. This applies to all three cancer screening programmes. Differences in screening rates between those with and without learning disabilities were less pronounced in more socially deprived areas where general participation rates are low.

Key issues and challenges

The inferences that can be drawn from local and national data are limited by the completeness, accuracy, timeliness and level of the information.

It is important to note that for all the screening programmes, uptake likely varies widely by GP practice. Unfortunately we do not have access to all data at GP level from PHE, which limits our ability to conduct current practice level analyses.

Cancer screening data is based on uptake within the time frame of repeat screening frequency. For example, eligible women are offered screening every 3 years for breast cancer. Screening coverage may, therefore, be affected by issues with maintenance of screening frequency rather than low uptake.

Gaps in the data for screening programmes compromise ability to assess performance trends and to identify areas for improvement. However, data identified and presented here demonstrate several areas where screening can be improved to further improve the health of Wirral residents.

Key inequalities

For all three cancer screening programmes, local data show wide variation in uptake between Wirral GP practices, with lowest uptake seen in most deprived wards. Cancer screening uptake steadily increases as deprivation decreases. These observations are consistent with the findings of a health equity audit into bowel screening in Wirral published in 2012.

A negative relationship between greater deprivation and screening uptake has been found in several studies examined by Cancer Research UK, including data from the ONS Omnibus Survey, and was identified in the 2014 NHS England cancer screening fact sheet. Research has found women are more likely to attend for breast screening if they have access to a car, which suggests delivering breast screening locally is important in addressing poor uptake in less affluent areas.

A systematic review of published UK studies by Rowe et al, (2004) found some evidence to suggest there may be inequalities in access to antenatal testing. Some studies suggested that women of South Asian origin might be up to 70% less likely to receive antenatal testing for haemoglobin disorders and Down's syndrome than White women. A small number of studies suggested that South Asian women might be less likely to be offered testing.

Understanding the barriers different groups face in accessing screening can help inform strategies to encourage uptake. Barriers include fear, embarrassment, and discomfort, lack of knowledge, inconvenience and difficulty attending the appointment. Wallace (2013) identified the specific barriers faced by groups protected under the Equality Act . These may be useful in informing action to better meet unmet needs in Wirral.

What are we doing and why?

Current activity and services

Bowel cancer non-responder project

This project involves focussing on non-responders to bowel cancer screening requests. GP practices are being asked to identify 100 of the last non-responders for recall. The project falls under the umbrella of the Strategic Cancer Networks, which also launched a Be Clear On Cancer campaign in 2017 across the North West to increase uptake of bowel cancer screening regionally.

Cancer screening service Commissioning for Quality and Innovation (CQUIN) 2014/15

The CQUIN payment framework enables commissioners to reward excellence by linking a proportion of the providers' income to the achievement of local quality improvement goals. A health inequalities CQUIN was in all Wirral providers screening and immunisation contracts for 2014/15.

This involved, for example, the breast screening service identifying hard-to-reach patients such as transsexuals, people with learning difficulties or those with a physical impairment. Programmes of work were implemented by services (with support from Screening and Immunisation Coordinators) to improve uptake among identified groups.

GPs were encouraged to identify patients with learning difficulties to allow for more appropriate screening times to be offered. Bowel cancer screening was also included in the CQUIN and targets were set and achieved for the service.

Screening Programme Boards

There are local (Cheshire and Merseyside) programme boards for all national screening programmes. These boards are currently being reviewed worked towards standardising the approach of each boards and agreeing a shared model of good practice.

Antenatal and newborn screening quality group

PHE Cheshire and Merseyside Screening and Immunisation Team have set up a quality group for all providers of antenatal and newborn screening programmes to meet on a quarterly basis. The group aims to address issues, review standards against key performance indicators and ensure work going forward provides a consistent high quality of care for women and their babies.

What are the challenges?

Key gaps in knowledge and services

Due to challenges with data sharing, data is not currently available at a level of detail to enable an understand differences in uptake between population groups or geographical areas. This may hinder identification of hidden variation and prevent prioritisation of action to target groups or areas with low screening uptake.

At their 2016 national Inequalities in Screening workshop, PHE identified that the lack of national and local information on screening uptake by different groups as a key issue. The web-based report for this workshop highlighted that although data exist; users are unaware of it or cannot access it. A series of actions are planned to improve the quality, availability, and use of data held by PHE.

Local Public Health teams within local authorities no longer have access to NHS data systems such as Open Exeter. Public health teams are now reliant on PHE for access to timely and accurate data.

What is coming on the horizon?

Local Screening and Immunisation Board Wirral

Efforts are currently underway to establish a local screening and immunisation board. This board will provide local leadership in the fields of screening and immunisations, and bring together representatives from Public Health, NHS England, CCG, primary care and PHE.

What does the research suggest as further actions?

1. The uptake of cervical cancer screening in Wirral needs to improve, particularly among younger women. However, with the increasing uptake of the HPV vaccination among school-age girls, promotion of cervical screening among younger women will feature less prominently in future long-term planning, as cervical cancers are prevented.

2. Screening uptake needs to be boosted among practices struggling to meet 'acceptable' targets through partnership working with practices and local populations. This is especially important in areas with more deprived populations, where uptake is generally lower. Improving public education around screening programmes may help to increase acceptability and uptake.

3. There is still notable variation and inequality in cancer screening coverage and uptake across Wirral and more work is needed to address this local health protection priority. **The Wirral Health Protection Group should update their priorities to reflect the findings of this JSNA.**

Key content

Links

- **Health and Social Care Information Centre**. Available at: http://www.hscic.gov.uk/ [cited 20/03/18]
- **NHS choices for information on diseases**. Available at: http://www.nhs.uk/Conditions/Pages/hub.aspx [cited 20/03/18]
- **Public Health Outcomes Framework**. Available at: http://www.phoutcomes.info/ [cited 20/03/18]
- **Population screening programmes**. Available at: https://www.gov.uk/topic/population-screening-programmes [cited 20/03/18]
- **UK National Screening Committee**. Available at: https://www.gov.uk/government/groups/uk-national-screening-committee-uk-nsc [cited 20/03/18]
- **Wirral Director of Public Health Annual Report**. Expect Better. 2017. Available at: https://www.wirral.gov.uk/sites/default/files/all/Health%20and%20social%20care/Health%20in%20Wirral/Public%20Health%20Annual%20Report%20Wirral%202017.pdf [cited 20/03/18]

Relevant and related National and local strategies

- **Department of Health (2016).** New Bowel Cancer Screening Test. Available at: https://www.gov.uk/government/news/new-bowel-cancer-screening-test [cited 20/03/18]

- **NHS England (2017).** NHS public health functions agreement 2017-18 Service specification no.24 Breast Screening Programme. Leeds: NHS England.

- **NHS England (2017).** Service specification No. 25 Cervical Screening Leeds: NHS England.

- **NHS England (2017).** Service specification No. 26 bowel cancer screening programme Leeds: NHS England.

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