

Lancashire Screening and Immunisation Annual Report 2015/16



May 2017

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Executive Summary

This is the second annual report from the Public Health England Lancashire Screening and Immunisation Team (SIT); embedded within NHS England. The report provides a summary of all the available data and published key performance indicators for the national screening and immunisation programmes for NHS England North (Lancashire) for 2015/16. This includes published data by programmes, by Local Authority and CCG. Where trend data is available this has also been included.

The Lancashire SIT is employed by Public Health England (PHE) and is part of the North West PHE Centre. The SIT is embedded within the NHS England North (Lancashire) Public Health Commissioning Team who commission screening and immunisation programmes for a population of 1.4 million within:

Three upper tier Local Authority areas (LA):

- Blackburn with Darwen
- Blackpool
- Lancashire

Eight Clinical Commissioning Groups (CCG):-

- Blackburn with Darwen CCG
- Blackpool CCG
- Chorley & South Ribble CCG
- East Lancashire CCG
- Fylde & Wyre CCG
- Greater Preston CCG
- Lancashire North CCG
- West Lancashire CCG

6 NHS Trusts

- East Lancashire Hospital NHS Trust
- Blackpool Teaching Hospital NHS Foundation Trust
- University Hospital Morecambe Bay NHS Foundation Trust
- Lancashire Teaching Hospital NHS Foundation Trust
- Southport and Ormskirk NHS Trust
- Wrightington, Wigan and Leigh NHS Trust.

This report presents a summary of the national screening and immunisation programmes' uptake and coverage. There is variation in coverage and uptake across all section 7a screening and immunisation programmes across Lancashire whether at CCG, Local Authority or at the general practice level. A partnership approach to reducing health inequalities and improve coverage and uptake across all programmes is required.

Cancer Screening Programmes

Coverage in the cancer screening programmes across Lancashire is similar to that being observed across the country, with a reduction in breast and cervical screening but an improvement in bowel screening. In Lancashire, a reduction in coverage has been observed in 2 programmes:

- 0.3% in cervical screening coverage in 2015/2106 compared to 2014/2015
- 0.9% in breast screening coverage in 2015/2016 compared to 2014/2015.

In bowel screening, however there was an increase in coverage of 0.3% in 2015/2016 compared to 2014/2015, with a year on year increase in coverage since programme implementation. The challenge with all three programmes is the recording of uptake figures which is measured 6 months post invitation. All programmes experience lower uptake rates compared to the national target.

Antenatal, Newborn, Young Person's and Adult Screening Programmes.

The achievement of the Key Performance Indicators (KPIs) by Trusts varies however the majority of Trusts have improved performance across all KPIs throughout 2015-16 and most are reaching the minimum standards. Where standards are not met service improvement development plans are included within contracting processes.

In the AAA screening programme the coverage rate in Lancashire for 2015/16 was 81% and the programme consistently achieves above the acceptable target for coverage (75%). There is variation in coverage and uptake across CCGs and GP practices and this will be a significant focus of an approach to reduce health inequalities. Across Lancashire all 3 Diabetic Eye Screening Programmes (**DESPs**) that serve the Lancashire population achieved the acceptable standard of 80% uptake rate. In October 2016 the Central Lancashire and East Lancashire DESPs were re procured and are now delivered as one programme under a new provider. The Lancashire SIT will be working closely to monitor performance to ensure existing standards are maintained.

Immunisation Programmes

The immunisation uptake rates for children age 0-5 years have been declining since 2013. The decline is reflected across Lancashire in 2015/16 as uptake remains below the recommended 95% targets. For the immunisations measured at 12 months of age, uptake is below national level with no Local Authority areas achieving the target.

For immunisations measured at 24 months, measles, mumps and rubella (MMR) uptake remains a concern, as the rates remain below 95%. This highlights that there are children in this age group who are not protected from measles.

For immunisations measured at 5 years old across Lancashire, the uptake of preschool booster and 2nd MMR, remains low, at between 79%-85% and 83%-86% respectively. This highlights that there are around 15% of children in some areas who are starting school with incomplete immunisations.

During 2015/16 there were vaccine supply issues in the neonatal BCG programme which caused some disruption in service delivery, and led to a back log of 400 eligible babies who were unimmunised. A catch up programme was implemented; a new vaccine sourced; and all eligible babies offered the immunisation.

The neonatal Hepatitis B immunisation programme continues to be delivered using three different pathways. There is work taking place to standardise the pathway and delivery of the service across Lancashire.

The school age immunisation programmes continue to be delivered by Lancashire Care NHS Foundation Trust and Blackpool Teaching Hospitals NHS Foundation Trust. The Diphtheria, Tetanus and Polio (dTP) and Meningitis ACWY programmes are delivered in school Year 10. These two programmes are not nationally monitored and there is no nationally published uptake data available.

The Human Papilloma Virus (HPV) programme is delivered in Year 8 (Age 12-13 girls); none of the Local Authority areas achieved or exceeded the national target of 90% for all doses of the HPV vaccine. Two Local Authority areas exceed the England average uptake of 87.0%% in 2015-16 (Blackpool Council and Lancashire County Council).

The 2015/16 seasonal influenza programme was delivered from 1st September 2015 to 31st January 2016. Immunisation was administered in primary care, community pharmacies and maternity services. Uptake was above national level in the following cohorts:

- Those age 65 years and over,
- Those under 65 years old in clinical risk groups
- Pregnant women.

Lancashire achieved an increase in the number of vaccinations administered to eligible populations. However, vaccine uptake in children age 2, 3 and 4 years across Lancashire remained below national average.

Background

There are 11 national screening programmes and 16 Immunisation programmes that form part of the section 7a mandate commissioned through NHS England North (Lancashire).

Table 1: National Screening and Immunisation Programmes

Screening programmes:	Three cancer programmes: <ul style="list-style-type: none"> ➤ Breast ➤ Cervical ➤ Bowel 	Six ante natal and newborn: <ul style="list-style-type: none"> ➤ Infectious Disease ➤ Fetal Anomaly ➤ Sickle cell and thalassaemia ➤ Newborn physical exam ➤ Newborn hearing ➤ Newborn blood spot 	Two young person and adult: <ul style="list-style-type: none"> ➤ Diabetic eye screening (DES) ➤ Abdominal Aortic Aneurysm (AAA)
Immunisation programmes:	Childhood Universal: <ul style="list-style-type: none"> ➤ 0-5 years: DTaP/IPV/Hib Rotavirus, Men B, PCV, Hib/ Men C, ➤ School age: HPV, Men ACWY ➤ University entrants: Men ACWY ➤ Seasonal influenza 	Childhood risk based: <ul style="list-style-type: none"> ➤ Newborn BCG ➤ Newborn hepatitis B ➤ Influenza at risk groups 	Adult risk based <ul style="list-style-type: none"> ➤ Shingles ➤ Influenza ➤ Pneumococcal ➤ Prenatal Pertussis

Incidents and Significant Events

A total of 30 incidents were reported to the SIT during 2015/16. New national guidance on ***Managing Safety Incidents in NHS Screening Programmes*** was introduced in November 2015 to ensure that there is a consistent systematic approach to investigating screening incidents.

Below is a summary table of incidents reported during 2015/16:

Table 2: Summary of Reported Incidents 2015 / 16

Programme	Diabetic Eye Screening	Antenatal and Newborn	Bowel screening	Immunisations	Cervical screening programme	Breast screening
No of incidents	8	8	1	3	5	4

Provision of Expert Screening and Immunisation Advice to Healthcare Professionals

The Lancashire SIT continued to provide expert advice to healthcare professionals and providers through a designated enquiry line. The enquiry line transitioned over to an email only service in August 2015 in line with other services offered across the Northwest. A telephone facility is available for emergency situations however users are encouraged to email enquiries.

The enquiry line received approximately 40-70 enquiries per month with the majority received from practice nurses. An increased volume of calls is experienced when there are changes to the vaccination schedule or during flu season.

During 2015/16 the main topics of enquiries were:

- Scheduling
- Meningitis B vaccination
- Meningitis ACWY vaccination
- Seasonal influenza immunisation

Cancer Screening Programmes:

Bowel Cancer Screening Programme

The Bowel Cancer Screening Programme (BCSP) aims to reduce bowel cancer mortality by detecting and treating bowel cancer, or pre-cancerous growths (adenomas), at an early stage. The NHS BCSP offers screening by FOBt testing using a postal testing kit every two years for men and women aged 60-74 years.

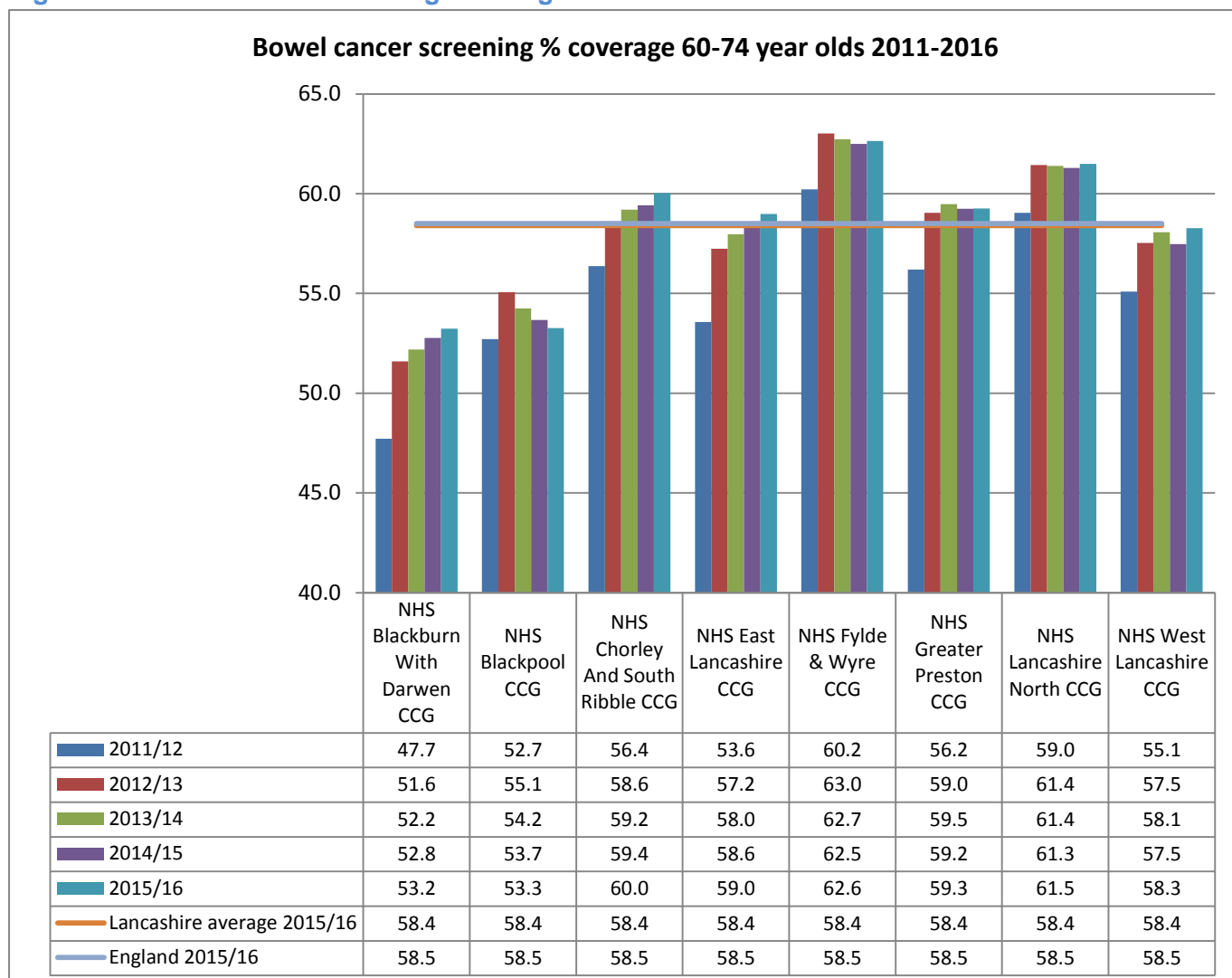
In Lancashire there are 2 programmes covering the 8 CCGs. North Lancashire CCG is served by the Cumbria programme and all other 7 CCGs are served by the Lancashire programme.

Performance & Quality Assurance

Coverage is calculated as the percentage of people screened within 2.5 years. The coverage rate for 2015/16 increased for 6 out of 8 CCGs compared to 2014/15 however a decrease in coverage was seen in Blackburn with Darwen CCG and Blackpool CCG (see Figure 1).

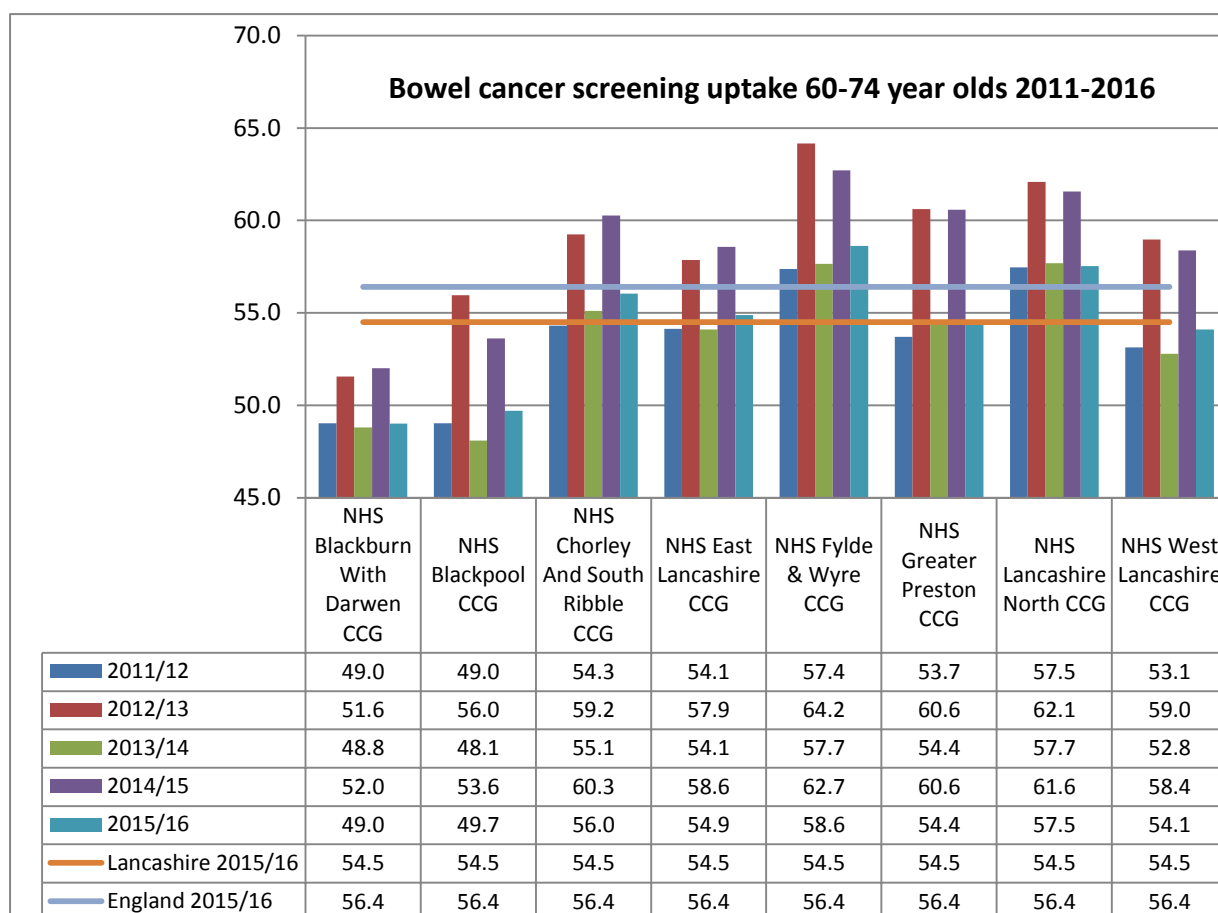
Uptake is calculated as the percentage of people who return their kits within 6 months of receiving their invitation. The national aspirational target is 60%. Uptake varied across Lancashire. In 2014 - 16 uptake increased to 56% compared to 55% for 2012 - 2014, with an additional 3500 people screened in 2014 - 16. There is a two year cyclic pattern in uptake experienced nationally which is due to the implementation and roll out of the programme, therefore it is more accurate to review uptake over 2 year periods (see Figure 2).

Figure 1: Bowel Cancer Screening Coverage



(Data source: Public Health England fingertips reports)

Figure 2: Bowel Cancer Screening uptake



(Data source: Public Health England fingertips reports)

Bowel Scope Screening

The Lancashire bowel scope screening programme is a new programme offering a flexible sigmoidoscopy examination of the lower bowel to men and women at 55 years of age. It is offered in addition to the existing bowel screening programme and has a similar aim to detect and treat polyps early before they can develop into cancer.

Bowel scope is currently offered as a single examination providing a level of reassurance for the next 5 years. All participants, when they reach the age of 60, are then automatically invited to participate in the regular bi-annual screening programme using the home testing kits.

The bowel scope programme is part of an incremental rolled out across England and commenced in Blackpool in December 2013. Initial uptake looks positive and a phased roll out across Lancashire is planned for completion by 2021.

Breast Cancer Screening Programme

The NHS breast screening programme aims to detect breast cancer at a very early stage. Women aged 50 – 70 are invited for screening every 3 years. In addition there is a national randomised controlled trial on extending the age range to include women aged 47 to 49 and 71 to 73. All programmes in Lancashire are taking part in the trial and practices are randomly located to either the younger or older age group. The results of the trial are expected in the 2020.

The following programmes undertake screening for the eight CCGs in Lancashire.

- South Lancashire Breast Screening Programme invites women from Chorley and South Ribble CCG, West Lancashire CCG and a small part of Greater Preston CCG.
- East Lancashire Breast Screening Programme invites women from East Lancashire CCG and Blackburn with Darwen CCG and a small part of Greater Preston CCG.
- North Lancashire and South Cumbria Breast Screening Programme invites women from Lancashire North CCG, Blackpool CCG and Fylde and Wyre CCG and the remainder of Greater Preston CCG.

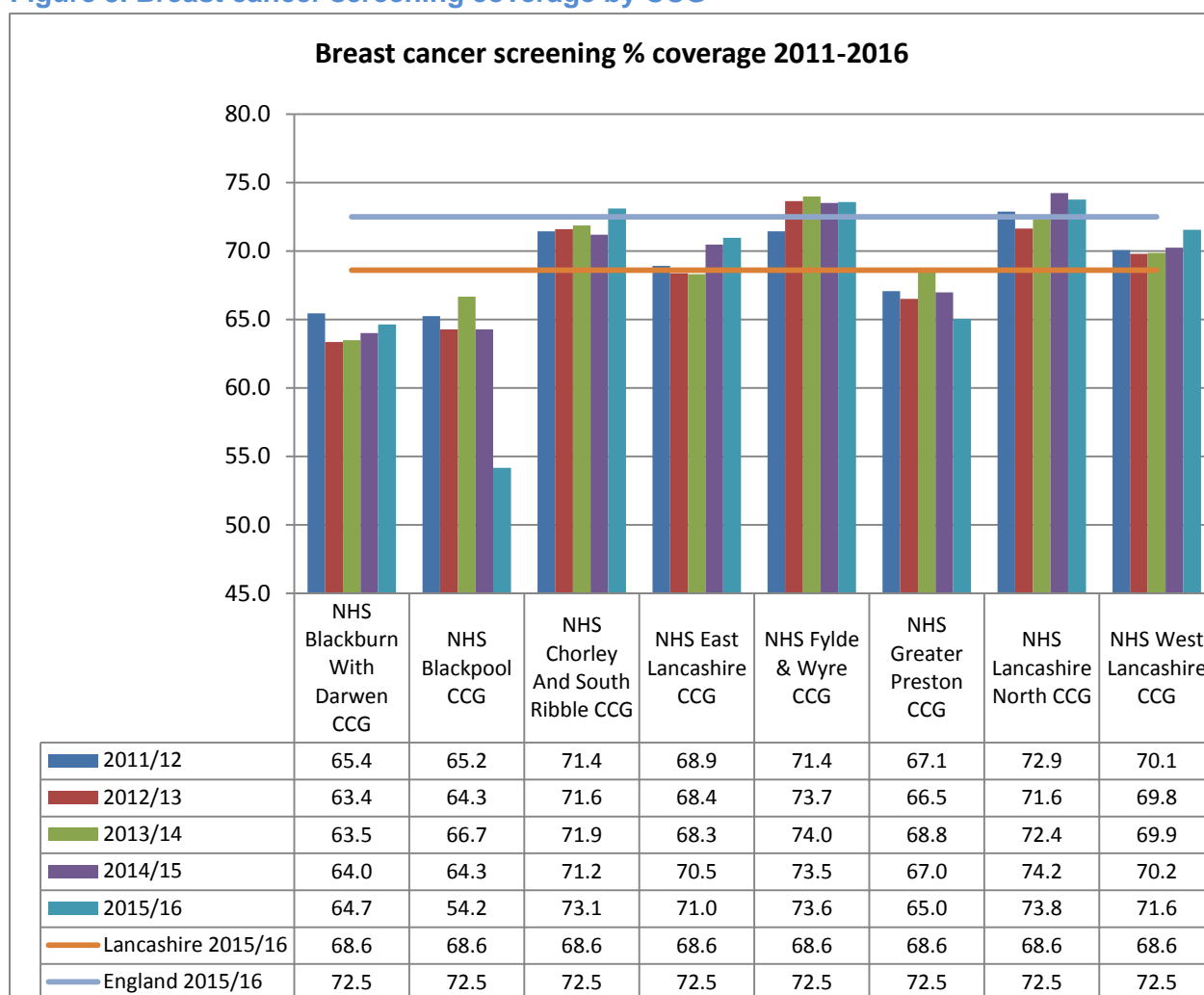
There have been significant challenges both nationally and locally in the breast screening services concerning capacity and workforce issues with recruitment to vacancies. This has impacted on some aspects of the programmes' performance. Recruitment issues have been experienced across the majority of programmes and this has been highlighted nationally.

Performance & Quality Assurance

The coverage of the screening programme is the proportion of resident eligible women who have had a mammogram with a recorded result at least once in the previous 3 years. The performance threshold (achievable) is 70% or over. Coverage in the 3 Lancashire programmes is between 67% and 69% of eligible women. Figure 3 illustrates coverage by CCG for 2011-2016. There has been an increase in coverage for 5 of the 8 CCGs, over the last 5 years, however Fylde and Wyre and Greater Preston areas have seen a small decline and Blackpool a significant decline in 2015/16.

The reduction in coverage in Blackpool is being explored by the programme and the Lancashire SIT to provide assurance to the LA and CCG. During 2014 the North Lancashire and South Cumbria programme underwent an external review and one of the recommendations was to slow down screening to enable the programme to deal with some of the other higher priority recommendations. Therefore, this could account for some of the observed performance issues within that programme. An action plan will be developed to improve coverage in Blackpool.

Figure 3. Breast cancer screening coverage by CCG

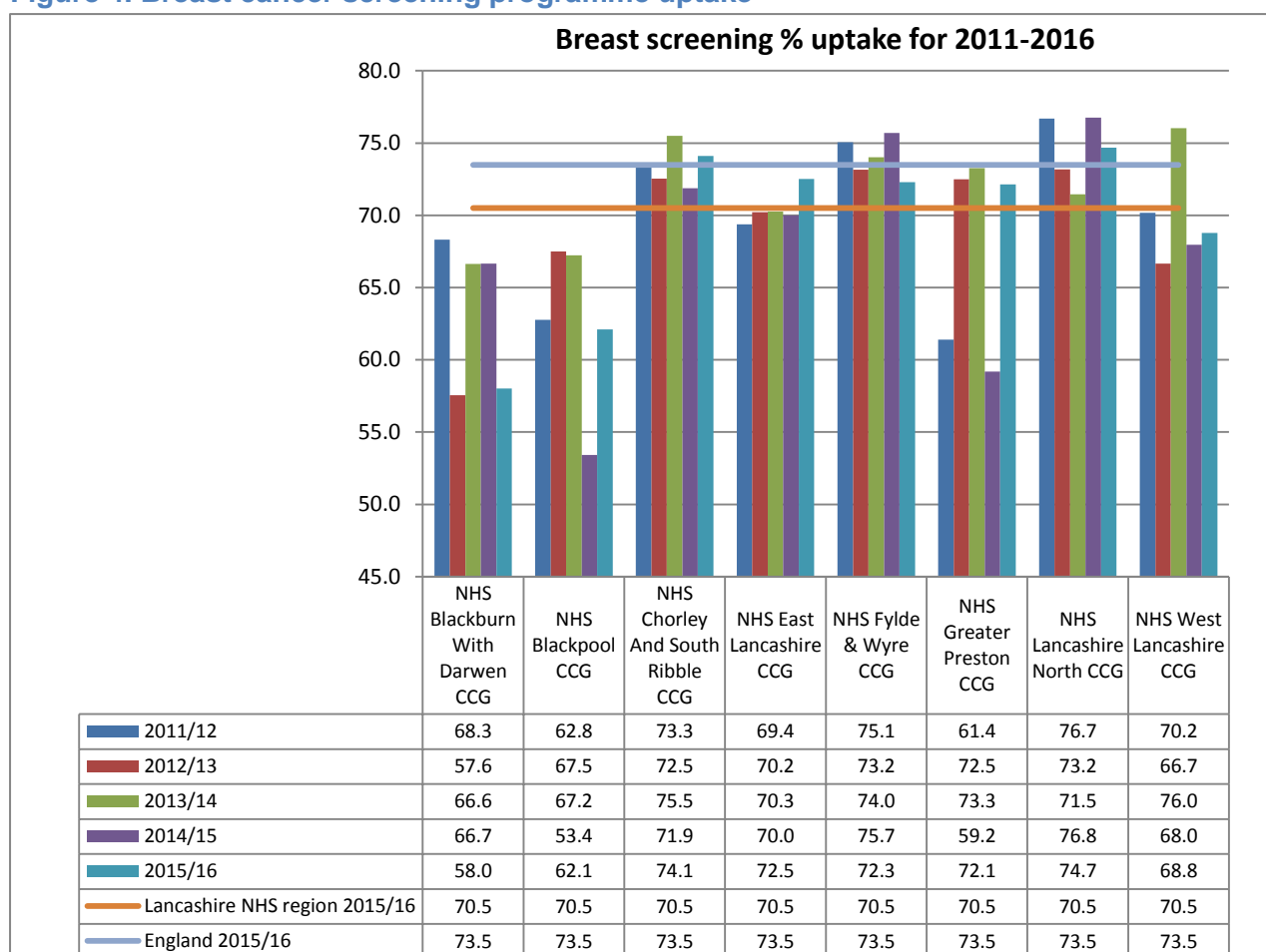


(Data Source: PHE Fingertips)

Uptake is defined as “the percentage of people who attend for screening within 6 months of being invited”. Average uptake across the Lancashire CCGs for 2015/16 was 70.5% compared to 73.5% for England. Generally uptake has been decreasing for all CCGs and as with bowel screening there has been a variation across CCGs. Uptake in women in the prevalent round (being invited for the first time) is worse than subsequent invitations (incident round) which is above 80% in all programmes serving the Lancashire population.

Across the northwest 1,844 cancers were diagnosed via screening in women aged 50-70, a cancer detection rate of 8.6% per 1000 women screened (Data source- breast screening annual report NHS Digital).

Figure 4. Breast cancer screening programme uptake



(Data Source: PHE Fingertips)

Cervical Screening Programme

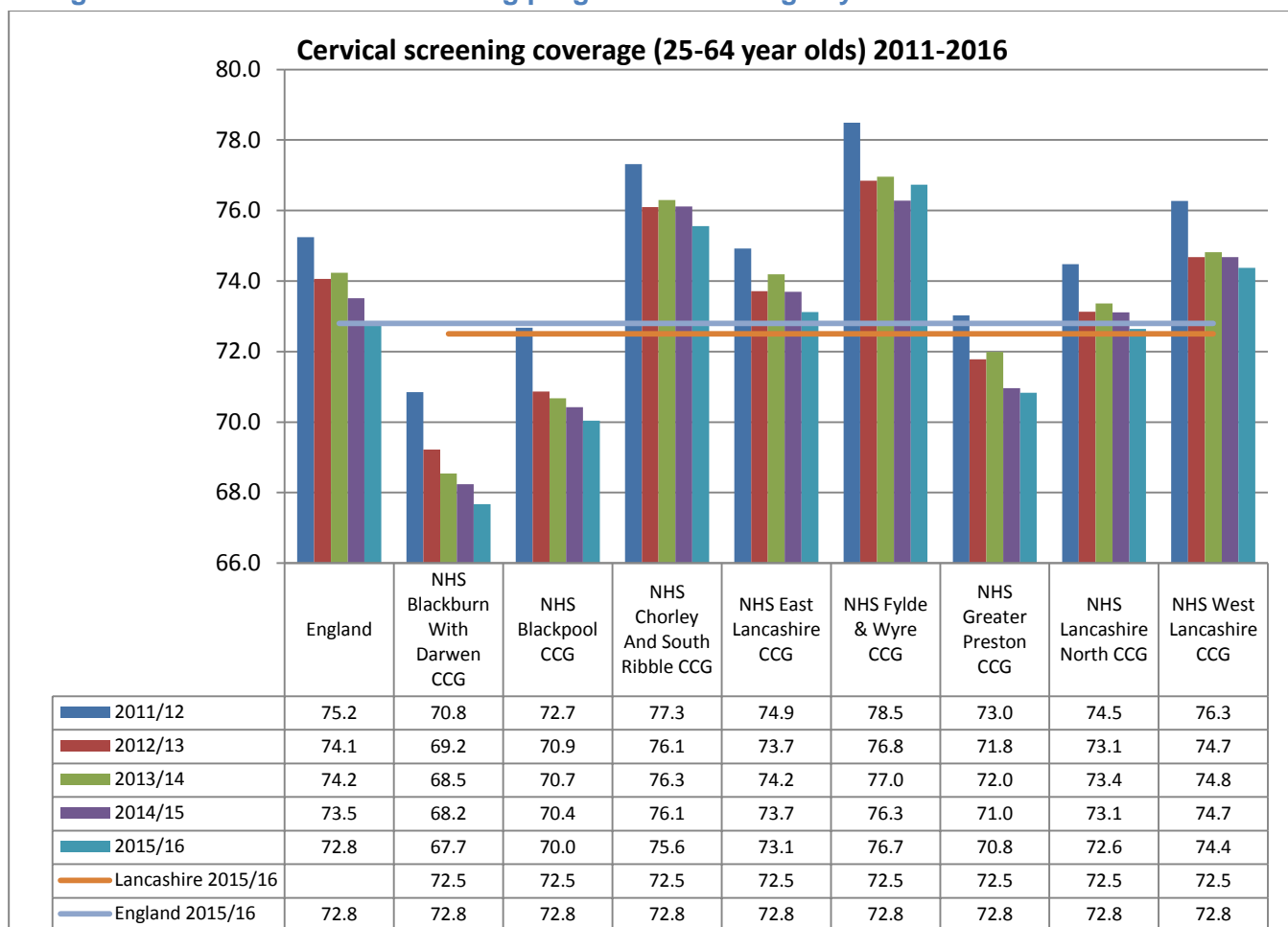
Cervical screening aims to detect and treat early abnormalities which, if left untreated, could lead to cancer in a woman's cervix. The NHS Cervical Screening Programme offers cervical cytology with HPV (Human Papilloma Virus) triage.

Performance and Quality Assurance

The programme is delivered predominantly in general practice. Coverage is the percentage of eligible women (25 – 64 years old) who have an adequate test result recorded within the last 5 years. The achievable performance threshold is 80% and over.

Coverage is declining year on year across Lancashire which is similar to the national trend. In 2015/16 coverage across Lancashire was 72.5% compared to 72.8% nationally. Coverage for 25-29 year olds is significantly lower than that for the over 30s. Coverage begins to decline over the age of 55 years.

Figure 5. Cervical cancer screening programme coverage by CCG



(Data Source: PHE Fingertips)

The Manchester Cytology laboratory handled 116,716 samples in 2015/16 from women across the Northwest aged 25-64. Of these, 75,841 samples were taken from the Lancashire population. 95.4% of samples tested were negative, 3.4% borderline or low grade and 1.1% were moderate/severe (high grade dyskaryosis or worse).

HPV primary testing continues to be delivered in Blackpool CCG, Lancashire North CCG and Fylde and Wyre CCG. There are plans to roll HPV primary testing out nationally however no date has been agreed.

Antenatal, Newborn, Young Person and Adult Screening

Performance reporting

Each antenatal, newborn, young person and adult screening programme has a set of nationally defined Key Performance Indicators (KPIs). The national screening programme directors have selected the performance measures to reflect areas where consistency and an understanding of regional and national variation are particularly important.

The KPIs do not provide a complete picture of performance but have provided a basic level of assurance. Due to the limited range they are not sufficient to quality assure or performance manage non cancer screening programmes.

Antenatal and Newborn Screening Programmes

There are six Antenatal and Newborn screening programmes; three Antenatal programmes and three programmes for newborn babies. The performance indicators by Trust are included in Table 3.

Antenatal programmes

1. Infectious diseases in pregnancy

NHS infectious diseases in pregnancy screening offers blood tests for Hepatitis B; HIV; Rubella & Syphilis in early pregnancy. The programme is designed to help protect the health of the pregnant woman and the baby, including (for some conditions) minimising the risk of transfer of the condition and to identify women for whom postnatal MMR vaccination could protect future pregnancies.

Generally all Trusts meet the performance indicators for this programme. Where Trusts do not meet ID2 it is due to patients not attending. In these circumstances, Trusts are required to exception report. As there are small numbers it significantly affects achievement of the performance target. In total 27 women were identified with a positive result for Hepatitis B in 2015/16 some of these women will have already been known to services, however there will be new diagnosis and it is important that these women received a referral into treatment.

2. Fetal Anomaly Screening

The Fetal anomaly screening programme offers antenatal screening tests to all pregnant women. There are two main components: screening tests for Down's syndrome and an ultrasound scan. These enable parents to make informed choices about their pregnancy outcome, offer further testing for their unborn baby, or get the right support after the birth. NHS Down's syndrome screening model of best practice is to offer first trimester screening between 11 weeks and 2 days gestation (11⁺²) to 14 weeks and 1 day gestation (14⁺¹) gestation). For those women who book later in the second trimester a QUAD test can be offered.

The performance indicator for this programme concentrates on completion of laboratory request forms to ensure that women are screened and receive their result within the relevant timeframe and are not required to return for a repeat screen. Trusts were required to work towards a service improvement development plan (SDIP) to improve Trust performance. Some Trusts implemented double checking of the forms which improved performance however this was not possible in some areas due to rurality of the services.

3. Sickle Cell and Thalassemia Screening

Antenatal Sickle Cell and Thalassemia Screening offers parents screening during pregnancy to find out if they are carriers of the disorders and ascertain if their baby is at risk of inheriting a disorder. This information supports parents to make informed choices about further testing for their unborn baby, or to get the right support after birth.

Most Trusts across Lancashire did not meet the achievable rate for performance for the ST2 performance indicator which measures the proportion of women receiving a conclusive result by 10 weeks into her pregnancy. The referral route into maternity services contributed to the achievement of this KPI. For those Trusts where women were able to self-refer performance was higher than those Trusts where women are required to be referred through their GP. The referral route is often the decision of the GP and not the maternity unit. Lancashire Teaching Hospitals NHS Foundation Trust maternity unit

undertook a review and have been working with the CCG to review the referral pathway into maternity services.

Newborn programmes

1. Newborn Bloodspot (NBS)

The newborn bloodspot screen is a blood sample taken from a heel prick for newborn babies. The programme currently screens for 9 conditions:

- **Congenital hypothyroidism (CHT)** which if untreated can result in serious, permanent, physical and mental disability. Screening enables early identification and treatment with oral medication to prevent serious disability.
- **Phenylketonuria (PKU)** which if untreated, can result in babies developing serious, irreversible, mental disability. Severe disability can be prevented through a special diet.
- **Cystic fibrosis (CF)** is an inherited condition that can affect the digestion and lungs. Screening means that babies can be treated early with diet, medicines and physiotherapy preventing early onset of complications and improving quality of life and outcomes.
- **Medium Chain Acyl-CoA Dehydrogenase Deficiency (MCADD)** can lead to serious illness, or even death. Special attention to diet can prevent serious illness.
- **Sickle cell disorders (SCD)** affect the red blood cells causing pain and damage to the baby including serious infection, or even death. Screening means that babies can receive early treatment to help prevent serious illness.
- **Maple Syrup urine disease (MSUD), Isovaleric academia (IVA), Glutaric aciduria type 1 (GA1) and Homocystinuria (HCU)** are conditions where body can't process certain amino acids causing a harmful build-up of substances in the blood and urine. Without treatment severe life-threatening symptoms can develop.

Avoidable Repeat Rate

All Trusts across Lancashire have struggled to meet this performance indicator. Trusts did see improvement throughout the year and service development improvement plans put in place using contracting processes. Trusts are also required to exception report explaining the reasons for the avoidable repeats. The Newborn bloodspot screening laboratory presents a quarterly report to the programme board.

2. Newborn Hearing Screening Programme (NHSP)

The newborn hearing screening programme aims to identify all children born with moderate to profound permanent bilateral deafness within 4-5 weeks of birth by Automated Otoacoustic Emission (AOAE) screening test. (A non-invasive small soft tipped earpiece placed in the baby's ear).

Trusts have experienced difficulties in meeting the "screen to assessment" performance indicator which is often due to DNAs and not audiology capacity. Trusts are all required to exception report any babies who do not attend audiology within 6 weeks of assessment.

A Newborn Hearing subgroup to the Antenatal and Newborn programme board has enabled Trusts to discuss issues and share good practice which has facilitated an improvement in practice.

3. Newborn Infant Physical Examination (NIPE)

The NHS Newborn and Infant Physical Examination Programme (NIPE) offer parents a physical examination for their baby 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.

The NIPE programme aims to:

- improve the detection and management of congenital heart disease
- reduce the need for surgical intervention for developmental dysplasia of the hip
- enable early treatment for congenital eye conditions
- ensure early detection and management of undescended testes (in boys)

Delays were experienced by Trusts in implementing the NIPE failsafe system therefore some Trusts were unable to report against the KPIs. All Trusts are now using NIPE Smart or similar system and are fully reporting.

The achievement of ANNB programme KPIs by Trusts varies however the majority of Trusts have improved performance across all KPIs throughout 2015/16 with the majority reaching the required standards (See Table 3). Where standards are not met, Service Development Improvement Plans are included within contracting processes.

Table 3: Antenatal and Newborn screening KPIs 2015/16

KPIs	ID1 (≥ 90%)	ID2 (below standard ≤ 70%, acceptable between 70-89.9%, achievable ≥ 90%)	FA1 (below standard less than 97%, acceptable between 97% and 99.9%. Achievable 100%)	ST1 (below standard less than 95%, acceptable 95% and 98.9%. Achievable 99% and over)	ST2 (below standard less than 50%, acceptable 50-74%, achievable over 74%)	ST3 (below standard less than 90%, acceptable 90-94.9%, achievable over 95)	NH1 (Standard Acceptable level: ≥ 95.0% Achievable level: ≥ 99.5%)	NH2 (Standard Acceptable level: ≥ 90.0% Achievable level: 100.0%)	NB2 (below standard more than 2.0, acceptable 2.0-0.5, achievable less than 0.5) - also reported in some areas by PCT	NP1 (Below standard <95%, acceptable 95-99%, achievable 100%)
Blackpool Teaching Hospitals NHS Foundation Trust	99.8	100	94	98.5	64.7	98.7	98.3	92.1	3.7	x
East Lancashire Hospital NHS Trust	97.2	100	94.6	97.6	58.5	100	97.2	89.4	2.3	96.8
Lancashire Teaching Hospital NHS Foundation Trust	99.6	66.7	98.8	99.5	45.7	97.7	99.2	93.5	4.3	95.3
Southport and Ormskirk Hospital NHS Trust	97.9	75	97.7	97.3	27.4	94.2	95.1	91.3	2.8	x

University Hospital of Morecambe Bay NHS Foundation Trust	x	16.7	93.3	x	69.4	99.4	99.6	79.2	3.4	x
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(Data source- PHE screening programme Annual KPI report)

(Definitions for all KPIs are in Appendix 1)

Diabetic Eye Screening

Diabetic retinopathy screening (DES) aims to reduce the risk of sight loss amongst people with diabetes by prompt identification and effective treatment. Screening is offered annually to people aged 12 or over with diabetes and involves digital photography of the retina.

The Diabetic Eye Screening Programme is now delivered by Emis Care following a procurement exercise in 2015/16. The service in East Lancashire and Central Lancashire commenced on 1st October and the North Lancashire, Blackpool Fylde and Wyre service will commence on 1st April 2017.

Performance & Quality Assurance

Coverage is the percentage of eligible patients offered diabetic retinopathy screening. All programmes aim to offer screening to 100% of eligible patients.

Table 4. Diabetic Eye Screening KPIs 2015/16

	DE1- Uptake of digital screening encounter Acceptable level: ≥ 70.0% Achievable level: ≥ 80.0%	DE2 Results issued within 3 weeks of screening Acceptable level: ≥ 70.0% Achievable level: ≥ 95.0%	DE3 Timely consultation for R3 screen positive Acceptable level: ≥ 80.0%
Central Lancashire programme	82.5	99.8	89.2
East Lancashire programme	83.3	99.8	88.9
Cumbria, North Lancs, Blackpool Fylde and Wyre	79.2	88.9	75
North Mersey	91.7	99.8	90

(Data source: Public Health England Screening)

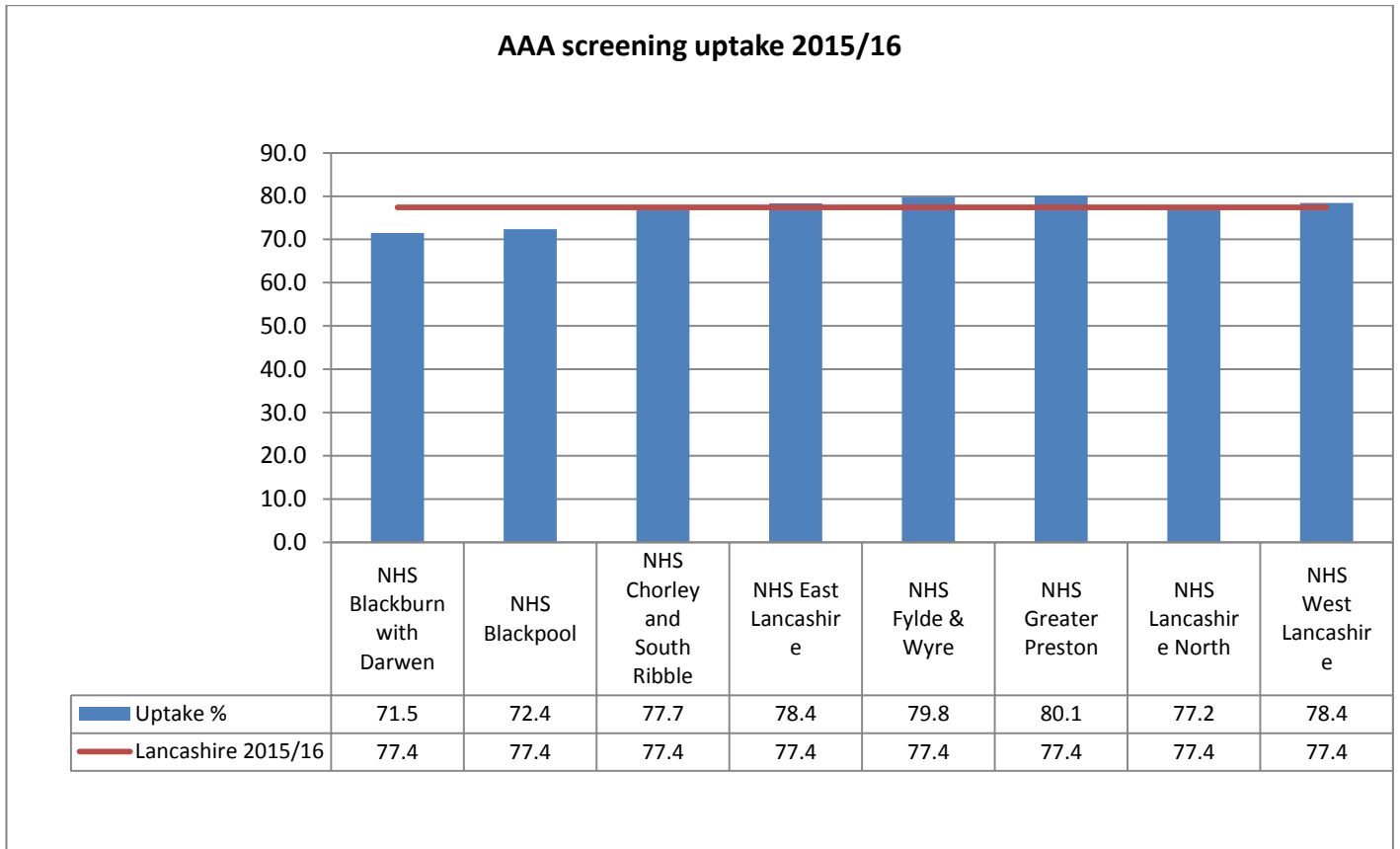
Abdominal Aortic Aneurysm (AAA) Screening

The NHS Abdominal Aortic Aneurysm screening programme aims to reduce deaths from abdominal aortic aneurysms through early detection. Men in the year of their 65th birthday are offered an ultrasound screen. AAA screening in Lancashire is part of the Lancashire and Cumbria AAA screening programme delivered by Gateshead Hospital NHS Foundation Trust.

Performance & Quality Assurance

Uptake is defined as the percentage of men who have attended for their appointment within their screening year. In 2015/16, 106 men were identified with an aorta of greater than 3.0cm (1.6% of those screened) within the Lancashire and Cumbria AAA screening programme.

Figure 6: AAA screening uptake by CCG



(Data source PHE Annual data tables)

Immunisation

The National Immunisation Programmes in England continue to be an effective public health intervention in reducing vaccine preventable diseases. The NHS Constitution states that it is the right of individuals to receive the vaccinations recommended by the Joint Committee on Vaccination and Immunisations (JCVI). All vaccinations included within the programmes are based on clinical evidence together with cost effectiveness.

Table 5: National Immunisation Schedules 0-16 years

Routine childhood immunisation 0-16 years in 2015/2016	
Disease Protection	Age of Immunisation
Diphtheria, Tetanus, Pertussis, Polio, Haemophilus influenzae type B (Hib) (DTaP-IPV/Hib), Rotavirus, Pneumococcal (PCV)	Two months
Diphtheria, Tetanus, Pertussis, Polio, Hib Meningococcal group C disease (Men C), Rotavirus	Three months
Diphtheria, Tetanus, Pertussis, Polio, Hib Pneumococcal	Four months
Hib Meningitis C (Hib/Men C), Measles, Mumps, Rubella (MMR), Pneumococcal (PCV)	12-13 months
Diphtheria, Tetanus, Pertussis, Polio (dTaP/IPV or DTaP/IPV), Measles, Mumps, Rubella	Three years and four months
Human Papilloma Virus (HPV)	12-13 year girls
Tetanus, Diphtheria, Polio (Td/IPV), Meningococcal group A,C,W and Y disease (Men ACWY)	13-14 years
Seasonal Influenza	2, 3 and 4 year olds School Years 1 and 2
Selective Immunisation 0-5 years	
Disease protection	Age of Immunisation
Neonatal Hepatitis B	At birth, 2 further doses one month apart, a dose at 12mths plus a booster dose at three years and four months (with Pre-School Booster)
Neonatal BCG	At Birth or as soon as possible after birth: North West standard within 14 days
Respiratory Syncytial Virus (RSV)	Under 2 years

Table 6: National Immunisation Schedules: Adult Immunisation Programmes

Adult Immunisation Programmes	
Disease protection	Cohort to be immunised
Seasonal Influenza	65 years & over Under 65 years in clinical at risk groups Pregnant women Carers
Pneumococcal	Over 65 years & under 65 years in clinical at risk groups (as per Green Book)
Shingles	70 years of age (current catch up programme in place)
Prenatal Pertussis	Pregnant women with gestation at 28 to 38 weeks
Meningitis ACWY	Adults – Fresher’s starting university

Coverage and performance

Universal 0-5 Years

The World Health Organisation (WHO) recommends that at least 95% of children receive (and 100% are offered) three primary doses of diphtheria, tetanus, polio and pertussis in the first year of life and at least 95% receive one dose of measles, mumps and rubella vaccine by two years of age.

Immunisation uptake is monitored and reported through Public Health England (PHE) Cover of Vaccination Evaluated Rapidly (COVER) data collection. The national target is 95% for all vaccinations with the exception of the preschool booster and MMR 2 (second dose) which is 90%.

Figure 7: Uptake of 3 doses of DTP/IPV/Hib vaccine at age 12 months by Local Authority

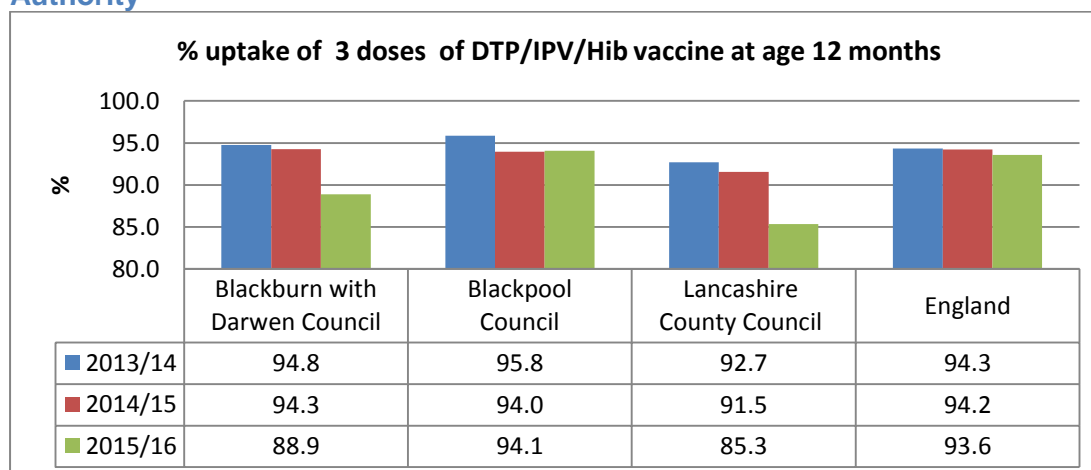
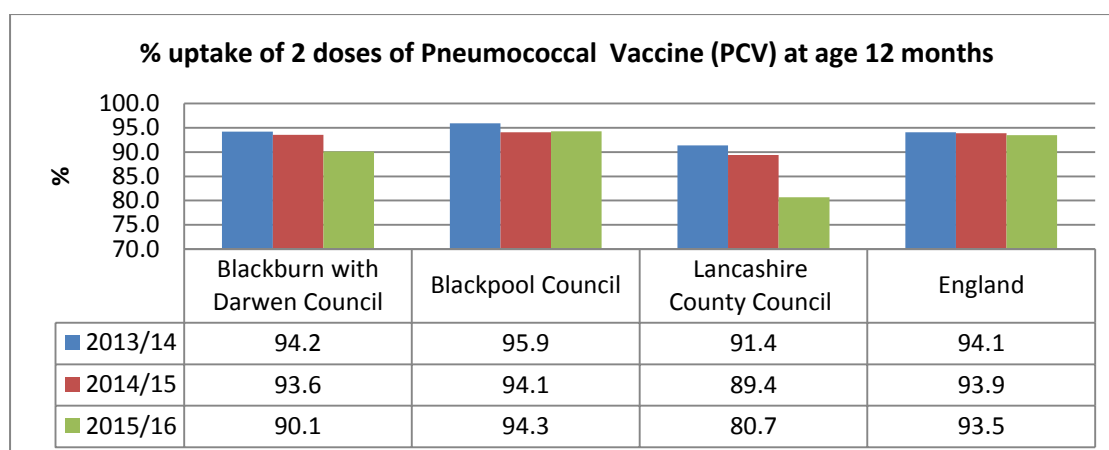


Figure 8: Uptake of 2 doses of Pneumococcal Vaccine (PCV) at age 12 months by Local Authority



As shown in Figure 7 and Figure 8, the immunisation uptake figures in 2015/16 across Lancashire for children Age 12 months have failed to meet the 95% recommended target. There have been concerns with data quality especially in Lancashire Country Council locality which adversely affected the figures. Work to address the issues is ongoing with the Child Health Immunisation System (CHIS) provider and other stakeholders.

Figure 9: Uptake of 3 doses of DTP/IPV/Hib vaccine at age 24 months by Local Authority

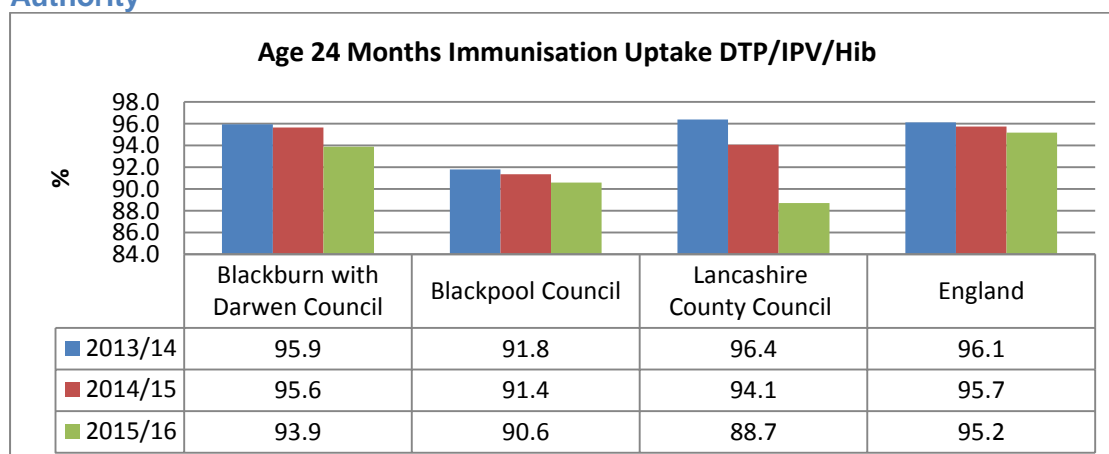
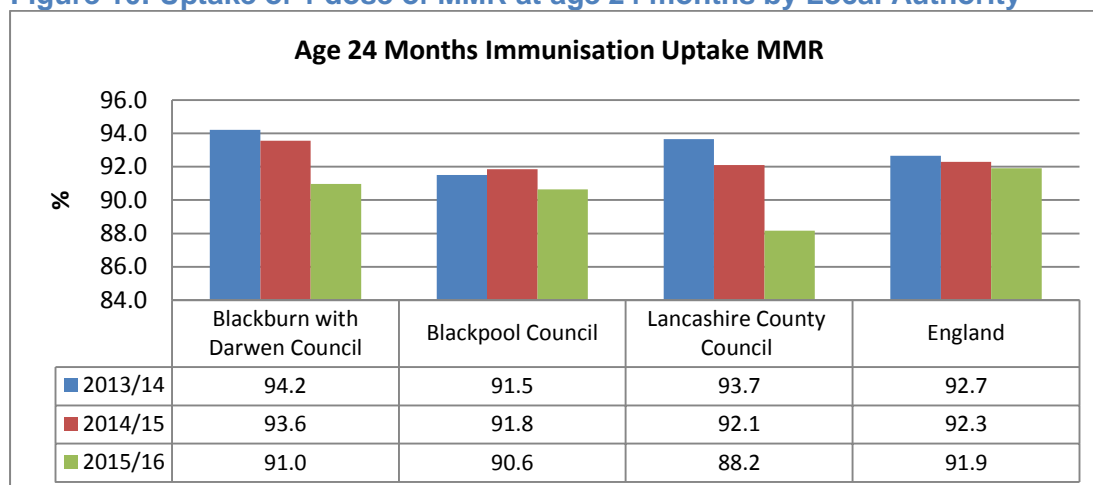


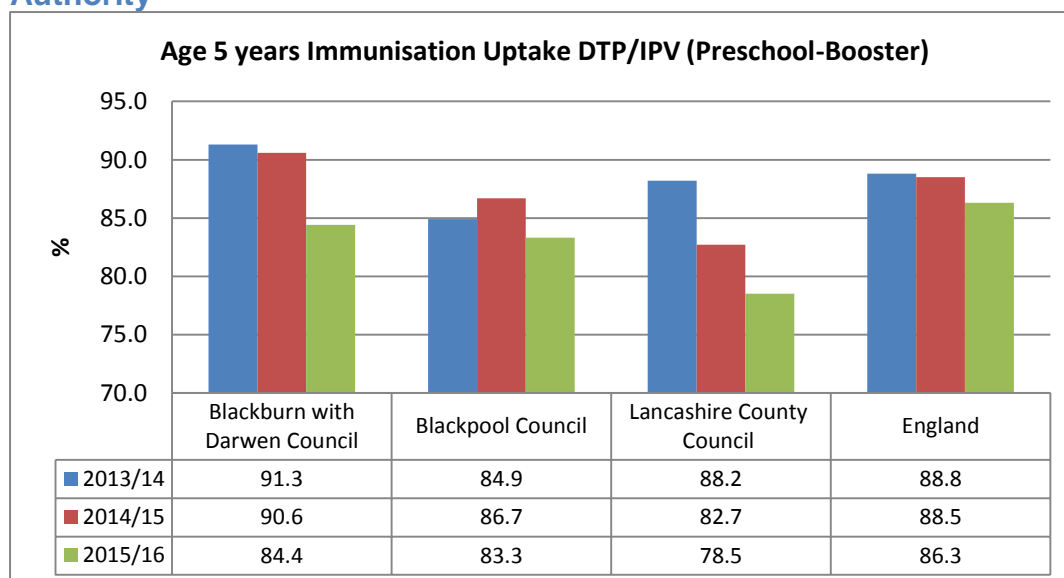
Figure 10: Uptake of 1 dose of MMR at age 24 months by Local Authority



The uptake figures of vaccines given at 24 months in Figure 9, highlights that uptake of the DTP/IPV/Hib, remains below national average and also declined compared to the 2014/15 figure.

In Figure 10, the MMR uptake figures across Lancashire did not meet the 95% target. In two Local Authority areas, Blackburn with Darwen and Blackpool, uptake figures for this vaccine are above 90% with uptake in Lancashire County Council just below at 88.2%.

Figure 11: Uptake of DTP/IPV (Preschool-Booster) at age 5 years by Local Authority



The uptake figures for the pre-school booster vaccine have been low nationally with uptake below 90%. Across Lancashire uptake remains below national level and highlights that over 15% of children in in the area are starting school with incomplete immunisations.

Figure 12: Uptake of 1 dose of MMR at age 5 years by Local Authority

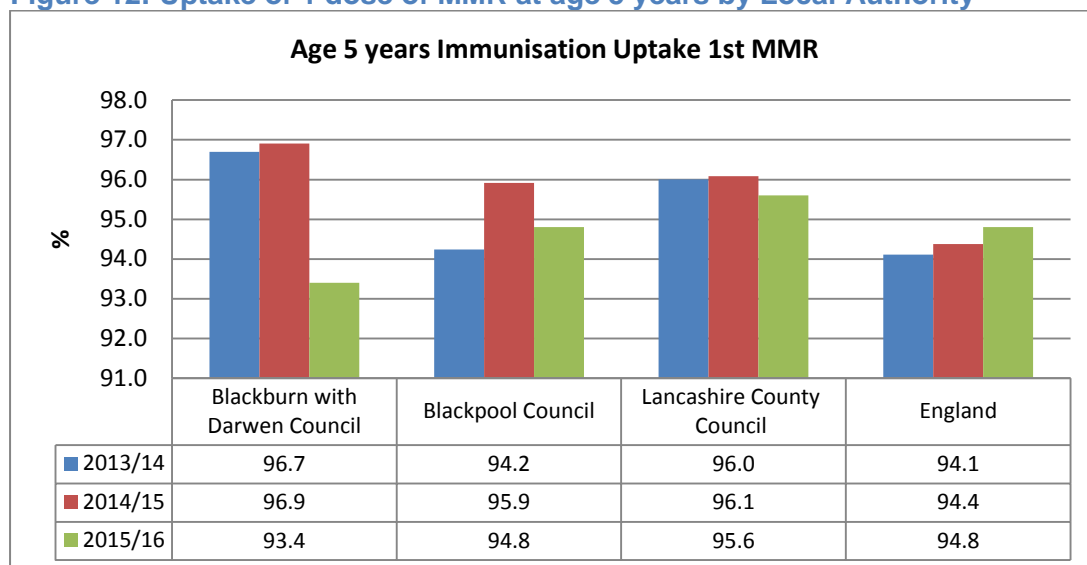
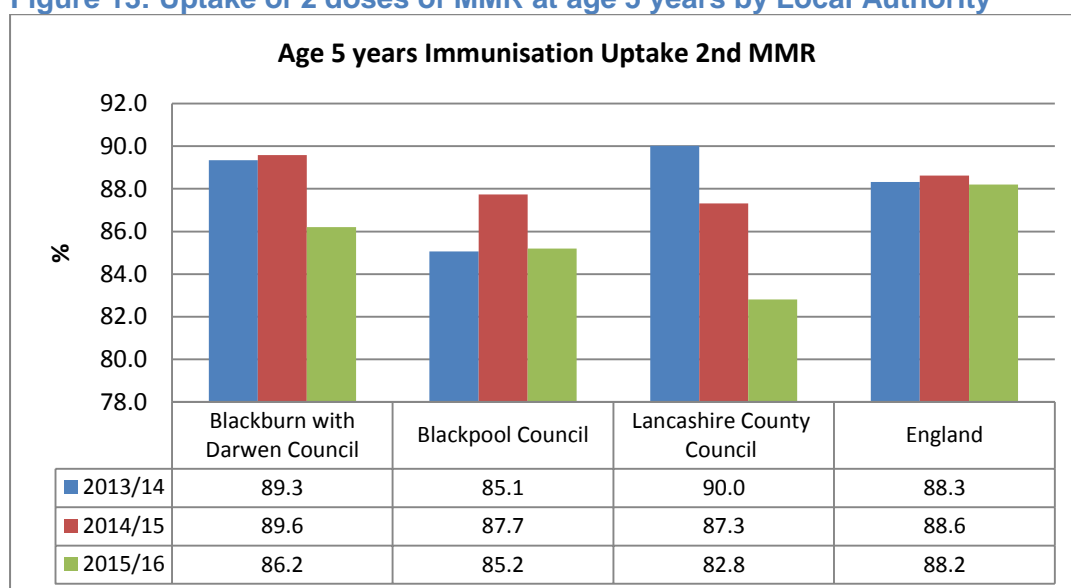


Figure 12 highlights that the percentage of children in this cohort who received their 1st MMR by age 5 is higher than at age 2 years old. In two Local Authority areas uptake was similar or above national average. Compared to 2014/15, there is a decline in uptake of across Lancashire of between 0.5% and 3.5%

Figure 13: Uptake of 2 doses of MMR at age 5 years by Local Authority



Uptake figures for the 2nd MMR at age 5 years remain low, not meeting the 95% recommended target and below national average. The low figures in this cohort highlights that there is a significant proportion of children, between 13.8% to 17.2%, potentially susceptible to measles, mumps and rubella infections as they have not completed 2 doses of MMR vaccine.

Child Health Information System (CHIS)

Blackpool Teaching Hospitals NHS Foundation Trust is the new provider of this service. The CHIS is currently not able to schedule the following immunisations: Rotavirus, Meningitis B, BCG and Hepatitis B. The vaccinations given can be recorded on the children's records as free text however extraction for COVER reporting is not robust. It is

anticipated that this issue will be resolved in the future once their clinical system is updated and fully operational.

Neonatal BCG and Hepatitis B Immunisation

The neonatal BCG and Hepatitis B immunisation programmes are risk-based. The neonatal programme is targeted at protecting those children most at risk of exposure to the disease.

Neonatal BCG:

Neonatal BCG is offered to all infants (0–12 months) living in areas of the UK where annual incidence of TB is 40/100,000 or greater and to all infants (0–12 months) where a parent or grandparent was born in a country where the annual incidence of TB is 40/100,000 or greater.

In 2015/16 there were national supply issues with BCG vaccine which led to back logs of at risk children being unimmunised. In total approximately 400 eligible unimmunised infants were identified across Lancashire. Two providers were commissioned to deliver the BCG catch up programme between January and March 2016 to. All eligible infants have now been offered immunisation and the catch up programme is complete.

It is not possible to measure uptake across Lancashire due to the lack of a denominator as this is a targeted immunisation programme for at risk babies. The providers who deliver the programme report on the number of babies vaccinated in their maternity services.

Neonatal Hepatitis B

Neonatal Hepatitis B vaccine is offered to babies born to hepatitis B positive mothers. It is given as post exposure prophylaxis to prevent vertical transmission from mother to baby.

Similar to BCG, It is not possible to measure uptake across Lancashire due to the lack of a denominator as this is a targeted immunisation programme for risk babies. The providers who deliver the programme report on the number of babies vaccinated in their services.

The neonatal Hepatitis B immunisation programme continues to be delivered using three different pathways across Lancashire. There is an ongoing work programme to standardise and improve the primary care delivery element of this programme.

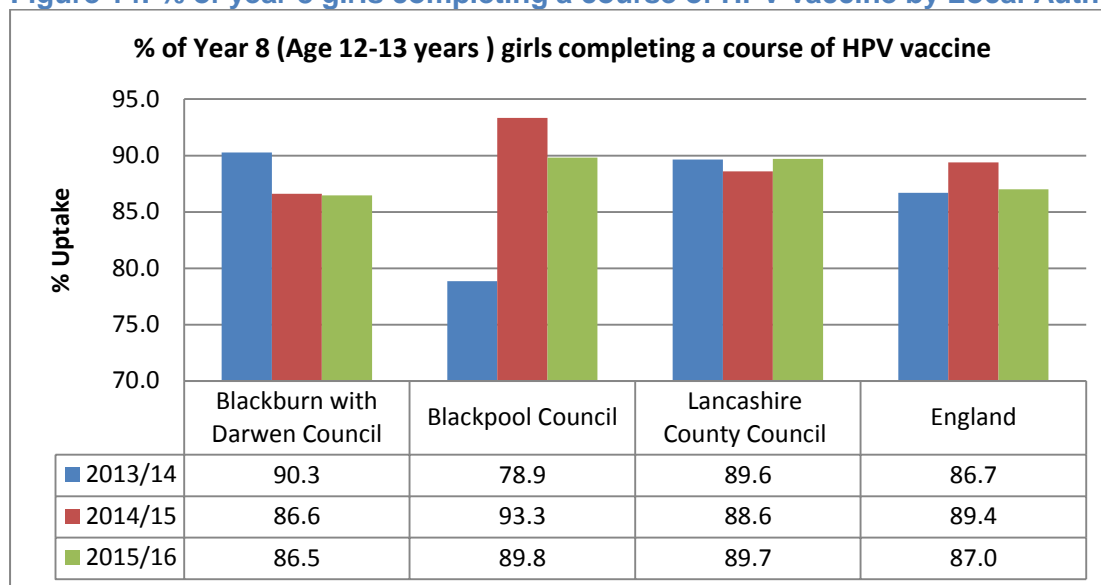
The CHIS is moving towards reporting on the targeted immunisation programmes in the future once their clinical system is updated and fully operational.

Human Papilloma Virus (HPV) Programme

This school based vaccine is offered to all girls aged 12 to 13 (School Year 8) as part of the NHS childhood vaccination programme. Research has indicated that the HPV vaccine protects against cervical cancer for at least twenty years. The uptake figures in 2013/14 are based on the completion of 3 doses of vaccine however in September 2014 the HPV schedule changed to 2 doses of vaccine.

The national uptake target for this programme remains at 90% for the recommended number of doses. In 2015/16, the % uptake of a completed course of HPV vaccine across all Local Authorities in Lancashire was slightly below the national target but was comparable to or higher than the national average.

Figure 14: % of year 8 girls completing a course of HPV vaccine by Local Authority



Men ACWY

In summer 2015 a Men ACWY catch up vaccination programme was launched for University Fresher's and in September 2015 the Men B vaccination was introduced.

Prenatal Pertussis

The pertussis vaccination programme was introduced in October 2012 following recommendations from the JCVI. Vaccination of pregnant women in the third trimester offers protection to new-borns during the early weeks after birth when the risk of complications is highest and the infant is too young to receive vaccination themselves.

The collation of prenatal pertussis vaccination uptake data continues to be automatically uploaded from the GP clinical systems onto the ImmForm site. The data collected relates to the number of pregnant women who received or declined a dose of a pertussis-containing vaccine from week 20 weeks of their pregnancy who have given birth (excluding miscarriages and stillbirths) in the relevant month in the annual collection regardless of gestational age of birth.

Table 7: Pertussis Uptake Figures 1st April 2015 to 31st March 2016

CCG Name	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16
Blackburn with Darwen	58.0	62.3	64.4	59.5	60.0	67.9	64.7	75.4	69.0	64.2	56.1	59.7
Blackpool	47.5	50.9	52.7	46.5	62.3	53.8	54.4	51.3	64.1	53.6	60.5	59.6
Chorley & South Ribble	57.8	62.5	66.9	62.3	63.1	62.2	61.6	70.1	68.9	70.9	75.6	72.1
East Lancashire	57.1	59.9	58.5	62.1	64.7	59.8	61.7	59.4	64.1	61.7	64.2	69.1
Greater Preston	49.1	55.0	53.8	63.2	56.2	62.0	64.7	66.4	69.4	61.7	63.4	61.2
Lancashire North	43.7	49.2	41.0	44.4	34.5	51.0	54.9	58.3	64.3	57.9	44.0	43.3
West Lancashire	61.7	67.2	54.0	50.0	64.3	69.4	52.5	80.0	66.7	61.4	76.5	60.0

Fylde & Wyre	64.4	52.4	53.8	51.9	60.4	65.1	66.3	62.7	67.6	66.7	63.0	60.2
ENGLAND	55.6	55.2	55.1	55.6	56.6	57.7	59.3	61.6	61.4	59.7	59.4	60.7

Adult pneumococcal

The pneumococcal vaccine protects against serious and potentially fatal pneumococcal infections. Pneumococcal infection can affect anyone; however, some people are at higher risk of serious illness.

The collection of uptake data regarding pneumococcal vaccination for individuals aged 65 and over is extracted via GP clinical systems on to the ImmForm website. There is no target for this programme and the data is difficult to present. However, this is available on request.

Shingles vaccination

The shingles vaccination programme started in September 2013. Shingles is an infection of a nerve and the area of skin around it. It is caused by the herpes varicella-zoster virus, which also causes chickenpox. Following chickenpox infection, the virus can lie dormant in the nervous tissue but may reactivate and present as shingles. It is possible to have shingles more than once. The vaccine can reduce the chance of developing the condition or reducing the severity. It can also reduce the chance of developing a complication of shingles, post herpetic neuralgia, which can be extremely debilitating. One dose of vaccine is offered in GP practice to people who are 70 years of age. There is also a catch up campaign for those who are 78 years of age.

Uptake of shingles vaccination on the whole across Lancashire is comparable with or higher than the national average with areas of poorer uptake in Fylde and Wyre CCG, and Greater Preston CCG

Figure 15: Uptake of 1 dose of Shingles vaccine at age 70 years by CCG

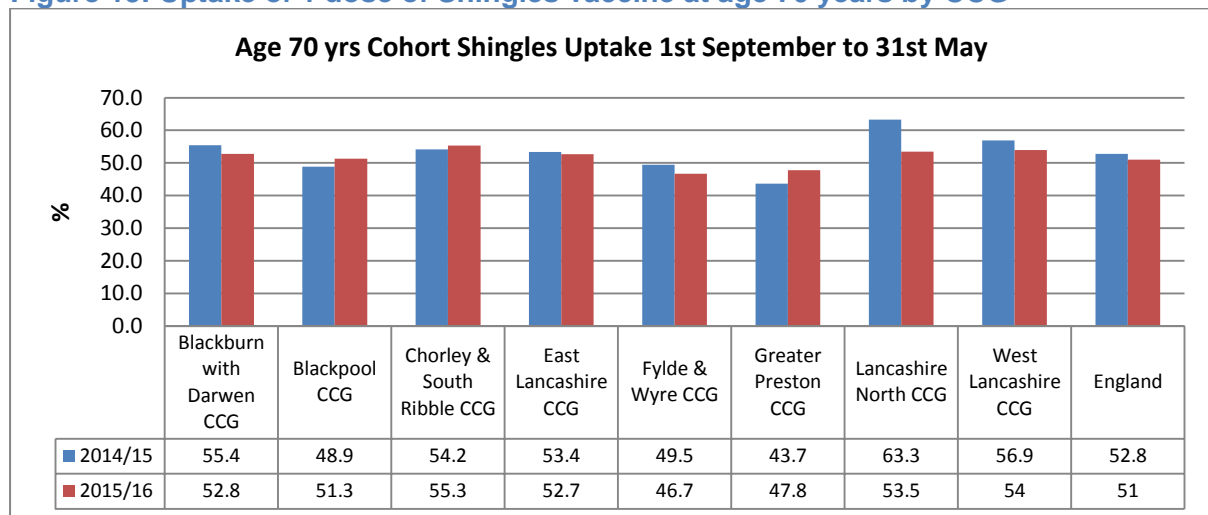
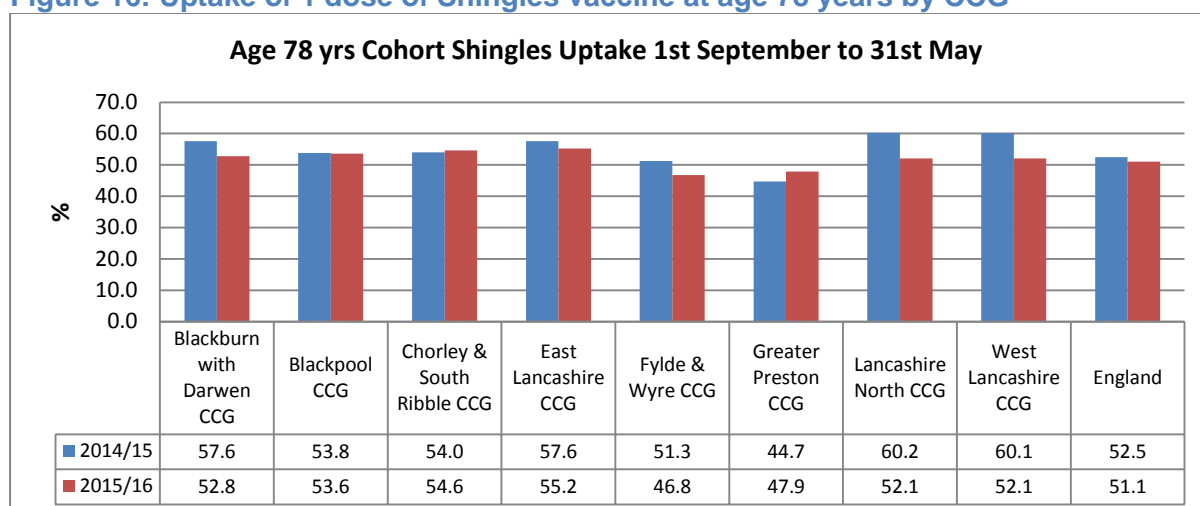


Figure 16: Uptake of 1 dose of Shingles vaccine at age 78 years by CCG



Seasonal Influenza Vaccination

The seasonal influenza immunisation programme commenced on 1st September 2015 to 31st January 2016. The aim of the seasonal influenza vaccination programme is to reduce morbidity and mortality caused by influenza. Lancashire has over 502,000 infants, children, young people and adults eligible for the vaccine. Between 1st September 2015 and 31st January 2016, 313,587 seasonal influenza vaccines were recorded as administered to Lancashire registered patients (this does not include the healthy children in the schools programme). The 2015/16 seasonal influenza vaccine was a good match to the dominant seasonal influenza subtype.

The aim of the 2015/16 influenza programme was to actively offer the flu vaccine to 100% of all eligible individuals. The eligible cohorts included the following groups:

- Those age 65 years and over 65 years
- Those under 65 years in a clinical risk groups.
- Pregnant women
- All children aged 2, 3 and 4 years
- Healthcare workers
- Carers

Primary Care delivered the majority of seasonal influenza vaccinations. However, this year for the first time:

- There was a national pharmacy programme. 246 community pharmacies across Lancashire signed up to the national specification to deliver the programme; an increase of 149 pharmacies when compared to 2014/15. 14,164 patients were vaccinated through the pharmacy. This contributed to 4.5% of the population vaccinated and was an increase of 3,066 compared to 2014/15.
- Two maternity services in Lancashire were commissioned to deliver the seasonal influenza vaccine to pregnant women on their premises. A total of 747 vaccinations were administered to pregnant women through these services in 2015/16

Table 7 below illustrates uptake in the eligible populations for the Lancashire. Lancashire achieved above the national average in 3 target groups and ranked in the top 10 achieving local teams.

Table 8: Influenza Vaccination Uptake for Lancashire

Eligible population	National Target	National Average %	Lancashire Uptake %
Those aged 65 years or older	75%	71	73.1
At risk groups under 65yrs	Improve uptake	45.1	48.4
Pregnant women	Improve uptake	42.3	43.2
All those 2 years of age	Aspirational 40-60%	35.4	31.1
All those 3 years of age	Aspirational 40-60%	37.7	36
All those 4 years of age	Aspirational 40-60%	30.1	27.8
School year 1	Aspirational 40-60%	54.4	53.5
School year 2	Aspirational 40-60%	52.9	51.8

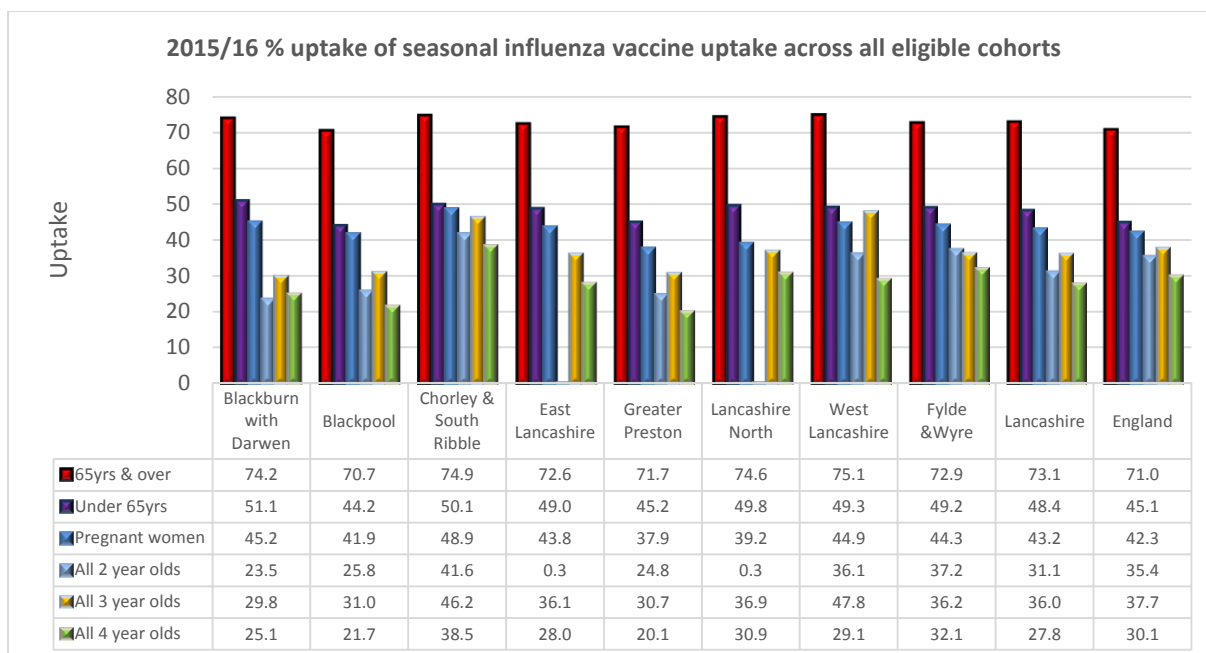
(Source: Immform)

There was variation in uptake across CCGs and within CCGs at practice level for all eligible groups. The uptake figures in the 65 years and over, under 65 years in clinical risk groups and pregnant women cohorts was above national average. However the uptake in those aged 2, 3 and 4 years of age across Lancashire was below the national average.

As a result of the 2015/16 seasonal influenza vaccination programme, Lancashire immunised 73.1% of the over 65s eligible population (above the national average of 71%). 48.4% of the under age 65 population in a clinical risk group were immunised across Lancashire, above the national average of 45.1%, and Lancashire ranked second highest in England out of 25 Direct Commissioning Offices.

The figure below gives a summary of the uptake figures across all the eligible cohorts by each CCG

Figure 17: 2015/16 seasonal influenza vaccine % uptake across CCGs



(source: Immform)

Frontline Healthcare Workers

CCG GP practice staff

It is not possible to appraise and report accurately on the uptake of frontline health care workers employed by Lancashire practices due to the poor reporting rate. Reporting of vaccination uptake within this population is mandatory for each Area Team. However, it is not mandatory for GP practices to provide the information. 148 (66%) practices provided the information when requested by the Lancashire Screening and Immunisation Team. This accounts for an uptake of 59.5%.

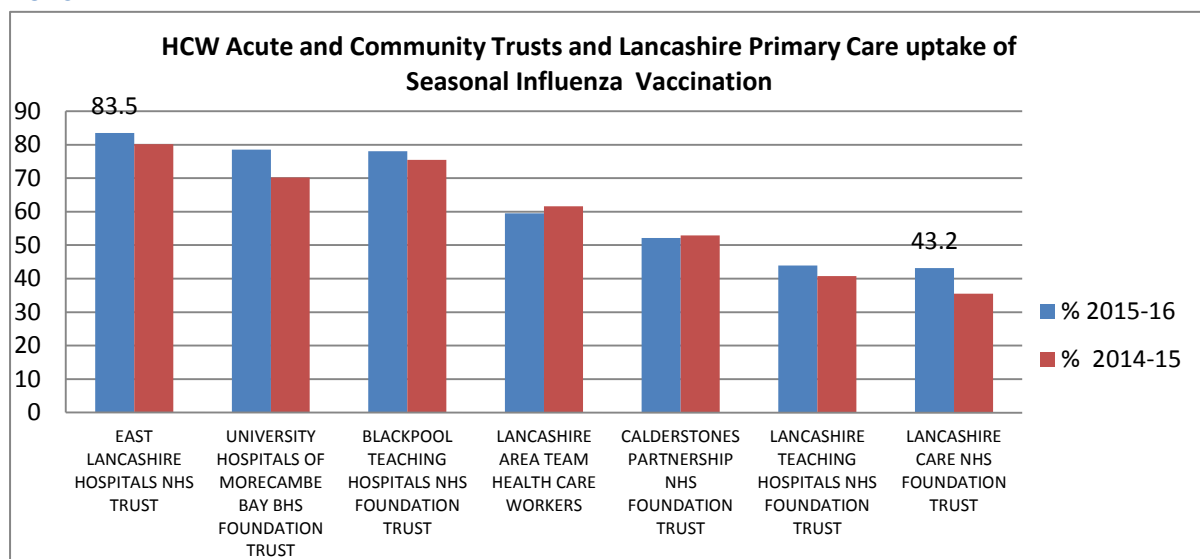
Acute and Community Trusts

The uptake figures across all of the Lancashire Acute and Community Trusts varied from 43.2% to 83.5%.

- 3 Trusts achieved or exceeded 75% uptake
- 5 Trusts improved their uptake in this cohort
- 2 Trusts showed a decrease in uptake in this cohort in comparison to 2014/15.

This is illustrated in Figure 18 below.

Figure 18: Healthcare Workers Uptake Figures 1st September 2015 to 31st January 2016



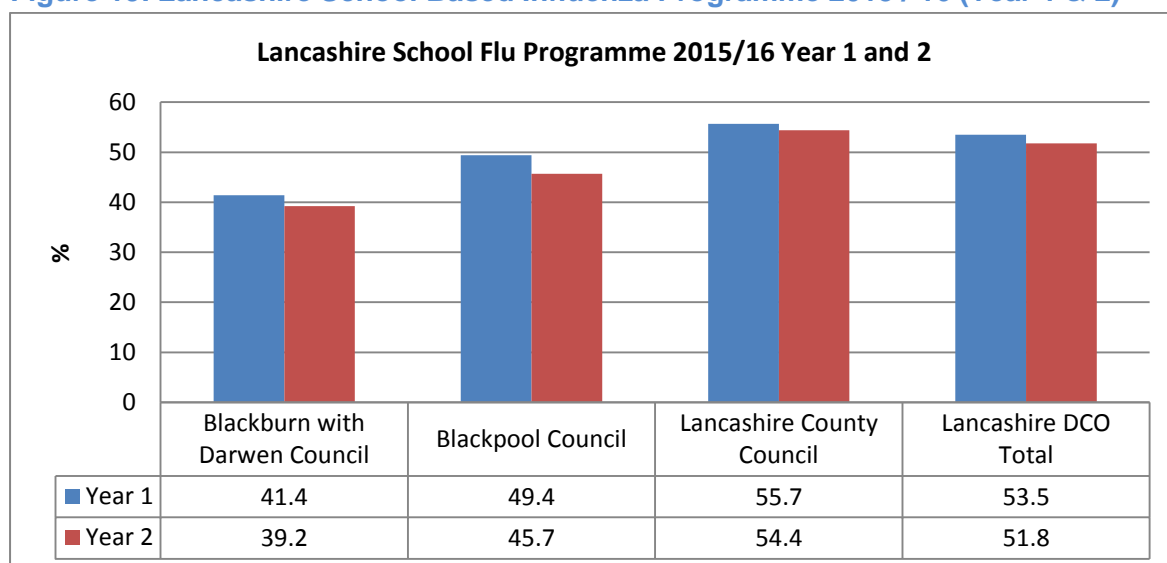
(Source: Immform)

School Based Influenza Immunisation Programme

This was the first year the seasonal influenza immunisation programme had been offered to all children educated in Year 1 and 2. The national aspirational target was 40%-60%. The figure below illustrates the uptake for the Lancashire schools programme in 2015/16 across the Local Authorities:

- 35,174 children were eligible for vaccination in Lancashire in both Year 1 and 2
- 18,797 seasonal influenza vaccines were administered across the two educational year cohorts
- Variation in uptake of the vaccine was seen at area and school level
- Combined uptake for the school years was 52.6%

Figure 19: Lancashire School Based Influenza Programme 2015 / 16 (Year 1 & 2)



Recommendation:

It is clear that evidence based population screening and immunization programmes save lives and protect from illness. Much success has been observed across Lancashire to increase coverage and uptake but there is still work to do to increase the level of protection and the detection rate amongst these diseases. No one organisation can do this alone but a partnership is required to achieve the best outcomes for the eligible population across Lancashire.

Appendix 1 Antenatal and Newborn Screening KPI definitions

KPI ID1 Antenatal infectious disease screening – HIV coverage

Description: The proportion of pregnant women eligible for infectious disease screening who are tested for HIV, leading to a conclusive result.

Numerator: tested women

Denominator: eligible women

KPI ID2 Antenatal infectious disease screening – timely referral of hepatitis B positive women for specialist assessment

Description: The proportion of pregnant women who are hepatitis B positive who are referred and seen by an appropriate specialist within an effective timeframe (6 weeks from identification).

Numerator: women referred for hepatitis B

Denominator: pregnant women with hepatitis B

KPI FA1 Down's syndrome screening – completion of laboratory request forms

Description: The proportion of laboratory request forms including complete data prior to screening analysis, submitted to the laboratory within the recommended timeframe of 10+0 to 20+0 weeks' gestation.

Numerator: completed laboratory request forms

Denominator: submitted laboratory request forms

KPI ST1 Antenatal sickle cell and thalassaemia screening – coverage

Description: The proportion of pregnant women eligible for antenatal sickle cell and thalassaemia screening for whom a conclusive screening result is available at the day of report.

Numerator: tested women

Denominator: eligible women

KPI ST2 Antenatal sickle cell and thalassaemia screening – timeliness of test

Description: The proportion of women having antenatal sickle cell and thalassaemia screening for whom a conclusive screening result is available by 10 weeks' gestation.

Numerator: women tested by 10 weeks gestation

Denominator: women for whom sample received at laboratory

KPI ST3 Antenatal sickle cell and thalassaemia screening – completion of FOQ

Description: The proportion of antenatal sickle cell and thalassaemia samples submitted to the laboratory which is supported by a completed Family Origin Questionnaire (FOQ).

Numerator: laboratory requests with completed FOQ

Denominator: laboratory requests

KPI NB1 Newborn blood spot screening – coverage (PCT responsibility at birth)

Description: The proportion of babies registered within the PCT both at birth and at the time of report who are eligible for newborn blood spot screening and have a conclusive result recorded on the Child Health Information System within an effective timeframe. For this KPI, PKU is used as a proxy for all tests and the test must be completed by 17 days of age.

Numerator: tested babies

Denominator: eligible babies

KPI NB2 Newborn blood spot screening – avoidable repeat tests

Description: The percentage of babies from whom it is necessary to take a repeat blood sample due to an avoidable failure in the sampling process.

Numerator: avoidable repeats

Denominator: initial blood samples

KPI NH1 Newborn Hearing Screening – coverage

Description: The proportion of babies eligible for newborn hearing screening for whom the screening process is complete by 4 weeks corrected age (hospital programmes-well babies, NICU babies) or by 5 weeks corrected age (community programmes-well babies).

Numerator: complete screens

Denominator: eligible babies

KPI NH2 Newborn Hearing Screening – timely assessment for screen referrals

Description: The percentage of referred babies receiving audiological assessment within 4 weeks of the decision that referral for assessment is required or by 44 weeks gestational age.

Numerator: timely assessments

Denominator: assessment referrals indicated

KPI NP1 Newborn and Infant Physical Examination – coverage (newborn)

Description: The proportion of babies eligible for the newborn physical examination who were tested within 72 hours of birth.

Numerator: tested babies

Denominator: eligible babies