

Immunisations JSNA

REFRESHED DECEMBER 2018

Public Health
LONDON BOROUGH OF LEWISHAM



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Introduction

Immunisation is a proven tool for controlling and eliminating life-threatening infectious diseases and is estimated to avert between 2 and 3 million deaths each year globally. Furthermore it is one of the most cost-effective health investments, with proven strategies that make it accessible to even the most hard-to-reach and vulnerable populations. The 2018 theme of World Immunisation Week was “Protected Together, #VaccinesWork”, and encouraged people at every level – from donors to the general public – to go further in their efforts to increase immunisation coverage.

Currently the European Region of the World Health Organisation (WHO) recommends that on a national basis at least 95% of children are immunised against diseases preventable by immunisation and targeted for elimination or control (specifically, diphtheria, tetanus, pertussis (whooping cough), polio, Haemophilus influenza b, measles, mumps and rubella). The routine childhood immunisation programme for the UK includes these vaccinations recommended by WHO as well as a number of others as defined by Public Health England (**Figure 1**).

Since 2013, NHS England have been responsible for commissioning immunisation programmes in Lewisham. The local public health team is however responsible to ensure that these programmes are delivered to a high standard and that coverage is adequate amongst their local population. Increasing the uptake of immunisation is one of the priorities of the Be Healthy element of the Children and Young People’s Plan and has been identified as a priority within the Health and Wellbeing Strategy.

This Joint Strategic Needs Assessment (JSNA) - refreshed in December 2018 - outlines the trends in vaccination coverage for routine childhood and adult immunisation, identifies the unmet needs and provides recommendations for future actions to enhance delivery and uptake of immunization.

Herd immunity

When a vaccination programme against a disease begins, the number of people catching the disease goes down. As the threat decreases, it's important to keep vaccinating, otherwise the disease can start to spread again. If enough people in a community are vaccinated, it's harder for a disease to pass between people who have not been vaccinated. This is called herd immunity. Herd immunity is particularly important for protecting people who can't get vaccinated because they're too ill or because they're having treatment that damages their immune system.

Public Health England (PHE) records the vaccinations that adults and children receive. PHE also records the number of cases of each disease each year. This way, PHE can work out the impact that each vaccination has on a particular disease. This data helps the Joint Committee on Vaccination and Immunisation (JCVI) consider whether the routine vaccination programme needs to be changed.

Current services

Since the Health and Social Care Act 2012, NHS England is responsible for the routine commissioning of national immunisation programmes under the terms of the Section 7a

agreement. In London, commissioning of immunisation programmes is done by the NHS England (London) immunisation commissioning team. This team comprises of Public Health England and NHS England staff who work together to improve the uptake and quality of commissioned vaccination services in London. These services are provided through general practice, school aged vaccination teams, pharmacies, and maternity services.

Lewisham public health team have a responsibility to provide information and advice to relevant bodies within its area to protect the population's health. Director of Public Health will provide independent scrutiny and challenge of the arrangements of NHS England, PHE and providers. This is done in Lewisham through Lewisham Partnership Immunisation Strategy Group chaired by Director of Public Health and ensure that these programmes are delivered to a high standard and that coverage is adequate amongst their local population. Increasing the uptake of immunisation is one of the priorities of the Be Healthy element of the Children and Young People's Plan and has been identified as one of its priorities by the Lewisham Health and Wellbeing Board. Lewisham CCG have a duty of quality improvement for services delivered by GP practices.

The routine childhood immunisation programmes are delivered by GPs. The school aged and adolescent immunisation services are provided by Lewisham and Greenwich trust through School Nursing Services, jointly commissioned by Lewisham Council. Both NHS England and PHE ensures that all providers have access to training that meets nationally agreed standards. Most routine queries from the public about immunisations are addressed by providers within the scope of *Immunisation against infectious diseases* ('the Green Book'). Providers are encouraged to answer queries from the public within this remit.

Childhood Immunisations

What do we know?

Routine childhood immunisation schedule

The full childhood immunisations schedule is appended as Appendix A.

It is important to note that the routine childhood immunisation schedule has been expanded since the previous JSNA – some of the updates of note are:

- Seasonal influenza vaccines are recommended for children aged 2-7 years (via a nasal vaccine, one dose each year).
- Addition of Human Papilloma Virus (HPV) vaccine – two doses 6-12 months apart for girls aged 12-14 years.

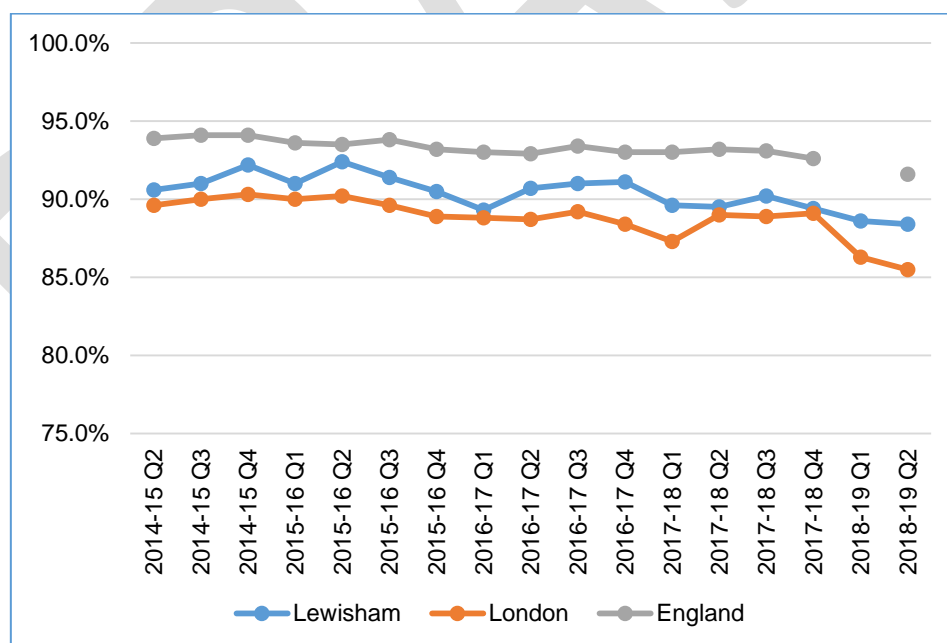
Facts, figures and trends

Figures 1-8 show the trends in uptake of key childhood vaccinations between 2014 and the first quarter of 2018.

D3 at 1 year

- Uptake of the third dose of Diphtheria vaccine (D3) is an indicator of completion of the primary course of immunisation of children under 12 months that aims to protect children against diphtheria, tetanus, whooping cough, polio, Haemophilus influenza b and Group C Meningococcus.

Figure 1: Percentage uptake of DTaP/IPV/HiB (D3) for Age 1 cohort



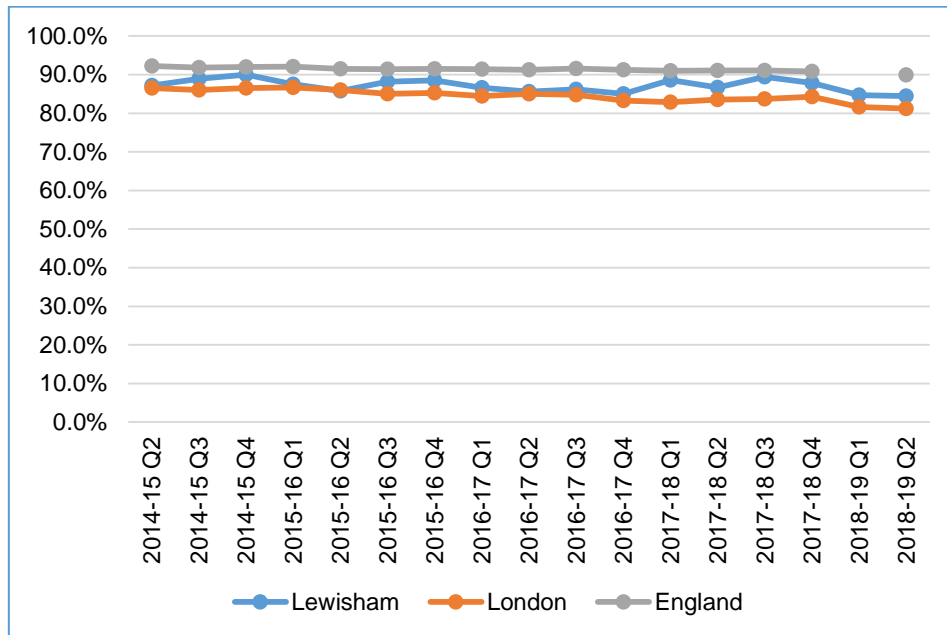
Source: Cover of vaccination evaluated rapidly (COVER) programme

- D3 Uptake has remained quite stable in the period 2014-18. Uptake in 2017-18 and 2018-19 (first two quarters) is above the London average but below the England average.

MMR

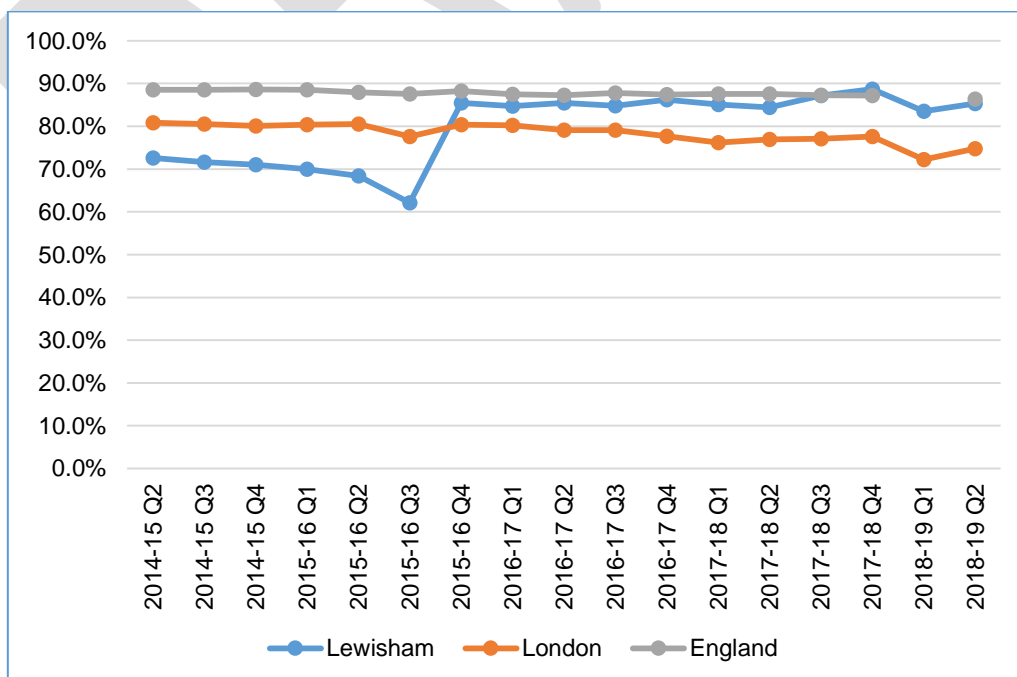
- MMR aims to protect children against measles, mumps and rubella. Two doses are required: MMR 1 at 12 months and MMR2 is given at 18 months in Lewisham like other South East London Boroughs (Southwark & Lambeth)
- Although a significant increase in uptake of MMR2 has been observed since 2015, uptake of both MMR1 and MMR2 are below the national average but has been above London average.

Figure 2: Percentage uptake of MMR1 for Age 2 cohort



Source: Cover of vaccination evaluated rapidly (COVER) programme

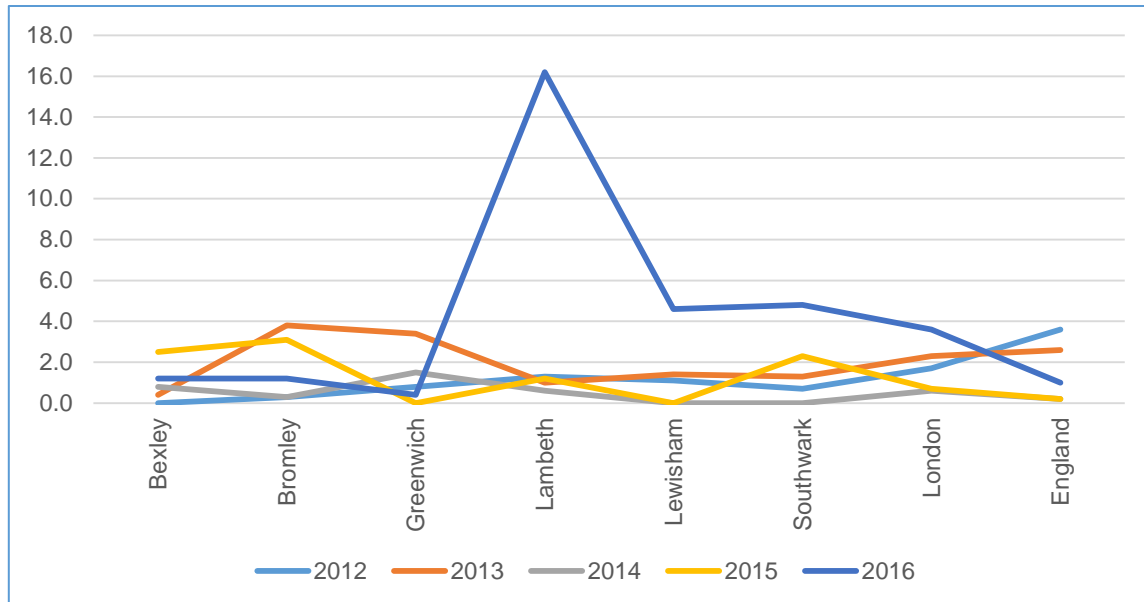
Figure 3: Percentage uptake of MMR2 for Age 5 cohort



Source: Cover of vaccination evaluated rapidly (COVER) programme

- MMR in context: Figure 4 illustrates the measles diagnosis rate per 100,000 from 2012 to 2016, even though South East London previously had large number of cases but with the higher vaccination rate with MMR, the numbers have fallen.

Figure 4: Measles New Diagnosis Rate per 100,000 in South East London

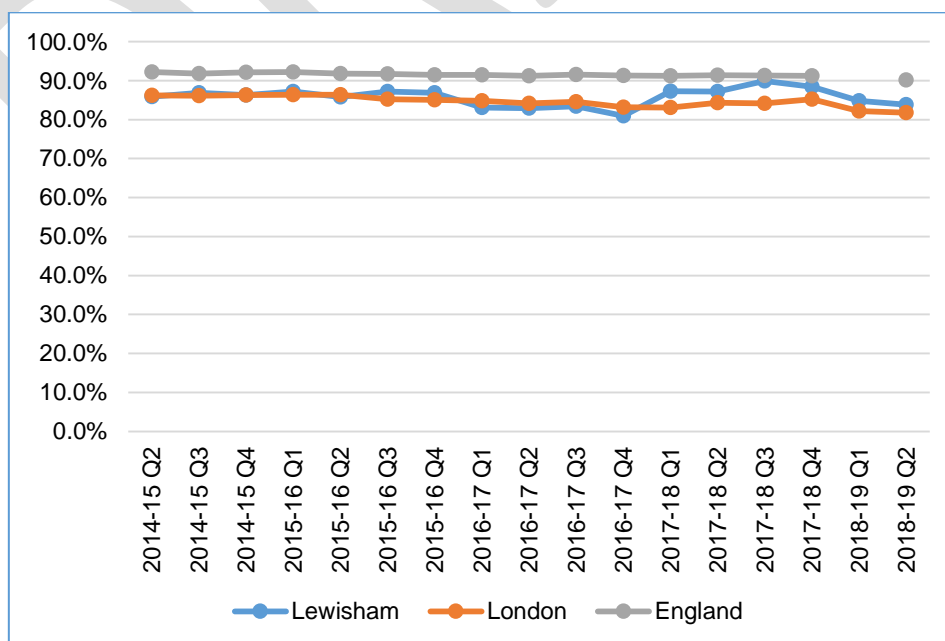


Source: <https://fingertips.phe.org.uk/profile/health-protection>

Hib/MenC and PCV boosters

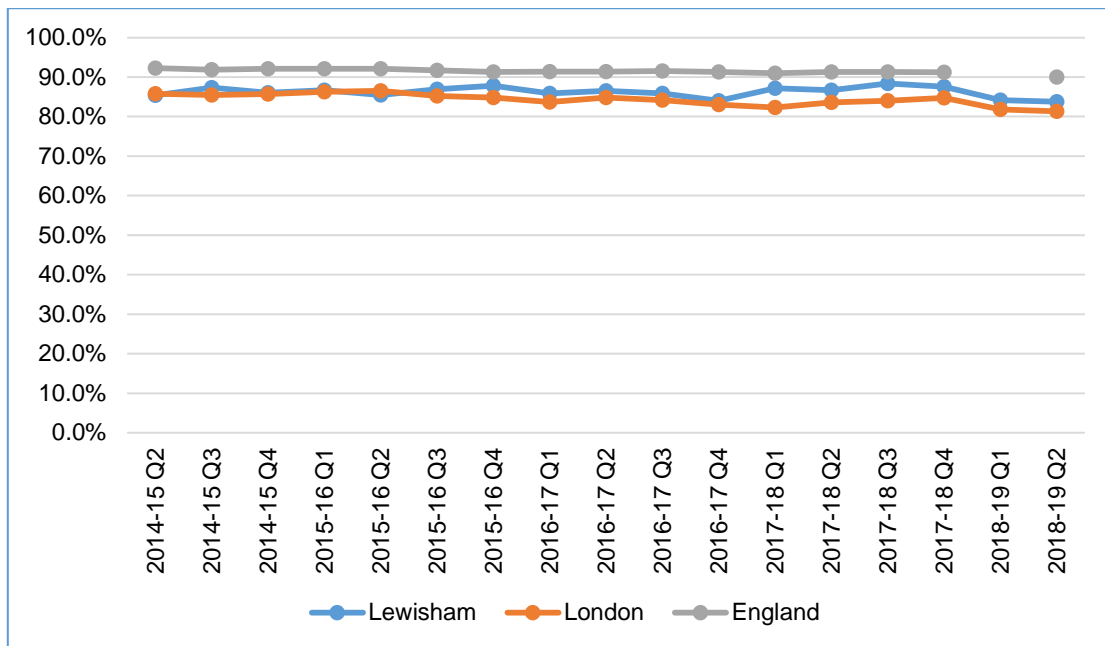
- Given at 12 months and aim to protect children against Haemophilus influenza B, Group C Meningococcus and pneumococcus.
- Uptake has remained relatively stable, similar to the London average but below the national average.

Figure 5: Percentage uptake of Hib/MenC Bstr for Age 2 cohort



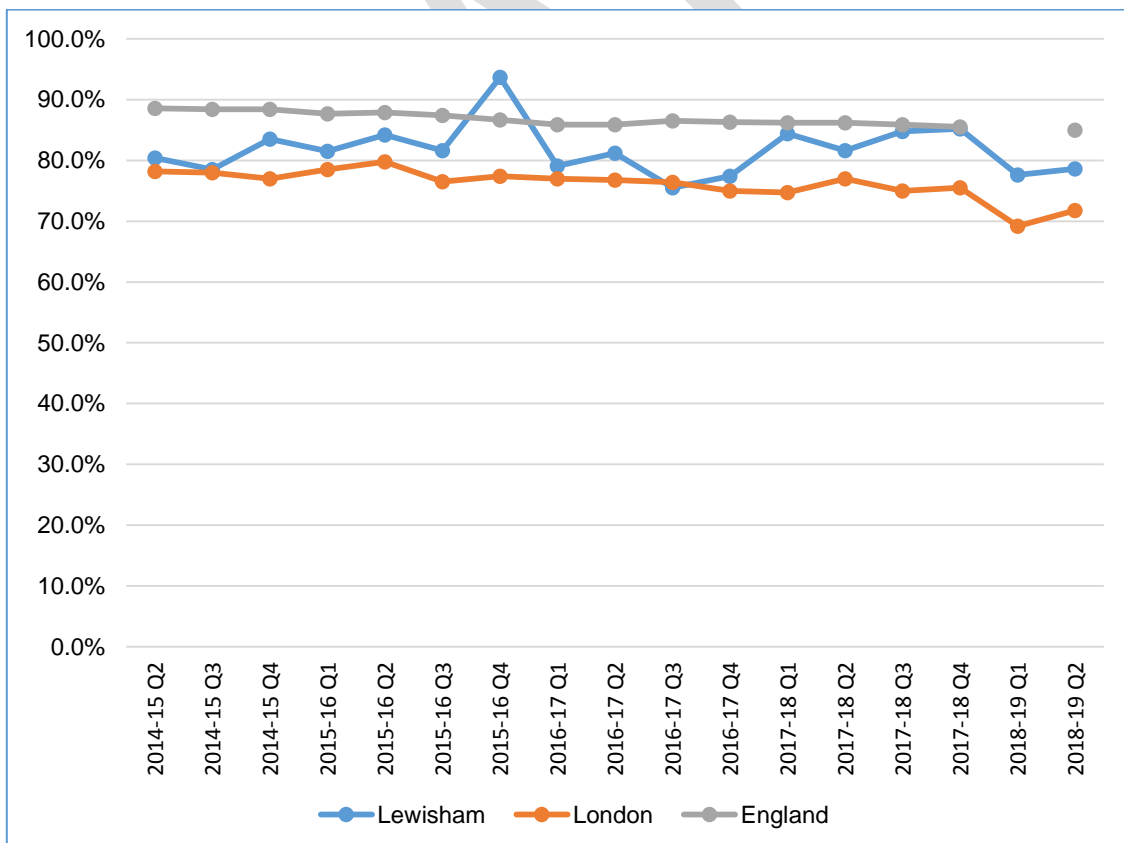
Source: Cover of vaccination evaluated rapidly (COVER) programme

Figure 6: Percentage uptake of PCV Bstr for Age 2 cohort



Source: Cover of vaccination evaluated rapidly (COVER) programme

Figure 7: Percentage uptake of DTaP/IPV Bstr for Age 5 cohort (D4)



Source: Cover of vaccination evaluated rapidly (COVER) programme

- D4 is the fourth dose of diphtheria vaccine. It is a key component of the preschool booster, which should be given at any time from the age of 3 years and 4 months but before the child starts school.

- The preschool booster completes the protection of children against diphtheria, tetanus, whooping cough and polio.

Neonatal BCG

- The Maternity Service is responsible for delivering neonatal BCG vaccinations. This includes a universal offer for all babies to the age of 28 days, and a targeted offer for babies up to 12 months who are at risk of TB due to one or more parent or grandparent being born in a country where the annual incidence of TB is 40/100,000 or greater.

Influenza (Children)

Children from the age of two upwards are now offered the flu vaccine in the form of a nasal spray to help protect them from catching and spreading flu. The vaccine is offered in schools to children in reception and in years 1, 2, 3, 4 and 5 and to two and three year olds through general practice. The programme will eventually roll out to all primary school children. Due to having typically poorer hand and respiratory hygiene than adults, children tend to spread flu more easily, so protecting them is also important for protecting the rest of the population.

Table 1: Flu Monthly Child (Primary School Age Delivery) 2017-18

Reception	4-5 Year Olds Birth Cohort: 1 September 2012 - 31 August 2013	Total no. of eligible children in Lewisham	3,805
		Total no. of children vaccinated	1,995
		% Uptake	52.4
Year 1	5 -6 Year Olds Birth Cohort: 1 September 2011 - 31 August 2012	Total no. of eligible children in Lewisham	3,763
		Total no. of children vaccinated	1,908
		% Uptake	50.7
Year 2	6 -7 Year Olds Birth Cohort: 1 September 2010 - 31 August 2011	Total no. of eligible children in Lewisham	3,891
		Total no. of children vaccinated	1,947
		% Uptake	50.0
Year 3	7-8 Year Olds Birth Cohort: 1 September 2009 - 31 August 2010	Total no. of eligible children in Lewisham	3,774
		Total no. of children vaccinated	1,844
		% Uptake	48.9
Year 4	8-9 Year Olds Birth Cohort: 1 September 2008 - 31 August 2009	Total no. of eligible children in Lewisham	3,643
		Total no. of children vaccinated	1,574
		% Uptake	43.2

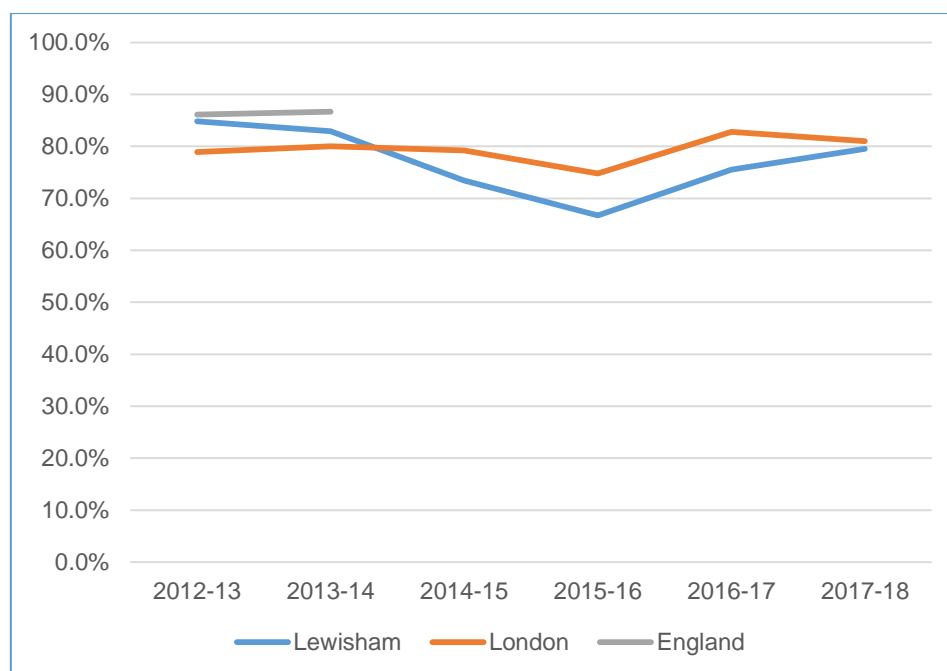
Source: Immform, January 2018

These figures are improvements on previous years.

HPV

The latest available data for HPV vaccine uptake shows a marked improvement from the previous reporting period. Public Health and school nursing are working closely with the joint commissioning team and NHS England to address the fall in HPV vaccine coverage in the previous reporting periods which was related to increasing numbers of parents withholding consent for their daughters to be vaccinated, as well as changes to the dosage schedule and delivery in schools.

Figure 8: Percentage of females aged 12-13 who have received all* doses of the HPV vaccine, 2012-18



Source: Immform, January 2018

* In 2014, the HPV vaccine changed from 3 doses to 2 doses. England-level data not available for 2014-16 onwards.

The MenACWY and Td/IPV

The MenACWY vaccine was introduced in 2015 to respond to a rapid and accelerating increase in cases of invasive meningococcal group W (MenW) disease. MenACWY was added to the routine adolescent schools programme (school year 9 and 10) from Autumn 2015. The 2015/16 survey collected coverage data for both the catch-up campaign, school year 11 (Cohort 1), and the first year of MenACWY inclusion in the routine adolescent schools programme, school year 10 (Cohort 2) or school year 9 (Cohort 3) depending on local arrangements.

Td/IPV vaccine has been included in the adolescent schedule for many years but delivery has varied locally; school based, GP and combined programmes have all been adopted and coverage data collection has been challenging. Data can be provided for year 9 and/or 10 depending on local arrangements.

Table 2 :MenACWY and Td/IPV Booster Uptake 2017-18 (01/09/2017 - 31/08/2018)

Cohort 5 - 13-14 Year Olds (Year 9) born between 1 September 2003 - 31 August 2004	Number of students	2,493
	No. vaccinated with MenACWY by 31/08/2018	2,201
	% Uptake	88
	No. vaccinated with Td/IPV booster by 31/08/2018	2,143
	% Uptake	86
Cohort 4 - 14-15 Year Olds (Year 10) born between 1 September 2002 - 31 August 2003	Number of students	2,390
	No. vaccinated with MenACWY by 31/08/2018	1,819
	% Uptake	76.1
	No. vaccinated with Td/IPV booster by 31/08/2018	1,749
	% Uptake	73.2

Source: ImmForm

What are the key inequalities?

There is evidence to suggest that the following groups of children and young people are at risk of not being fully immunised:

- children and young people who have missed previous vaccinations;
- looked after children;
- children with physical or learning difficulties;
- children of teenage or lone parents;
- children not registered with a general practitioner;
- younger children from large families;
- children who are hospitalised;
- minority ethnic groups;
- vulnerable children, such as those whose families are travellers, asylum seekers or homeless.

There are evidences that there are differences in MMR uptake between GP Practices. Data indicates that in 2016-17 there were significant differences in MMR uptake between GP practices, however Public Health are awaiting approval to access more recent data.

Adult immunisations

Routine adult immunisation schedule

The routine immunisation schedule for adults comprises three vaccinations:

- Pneumococcal - offered at 65 years old
- Influenza - offered to those aged 65 and over and other at risk groups (annually from September)
- Shingles - offered at 70 years old

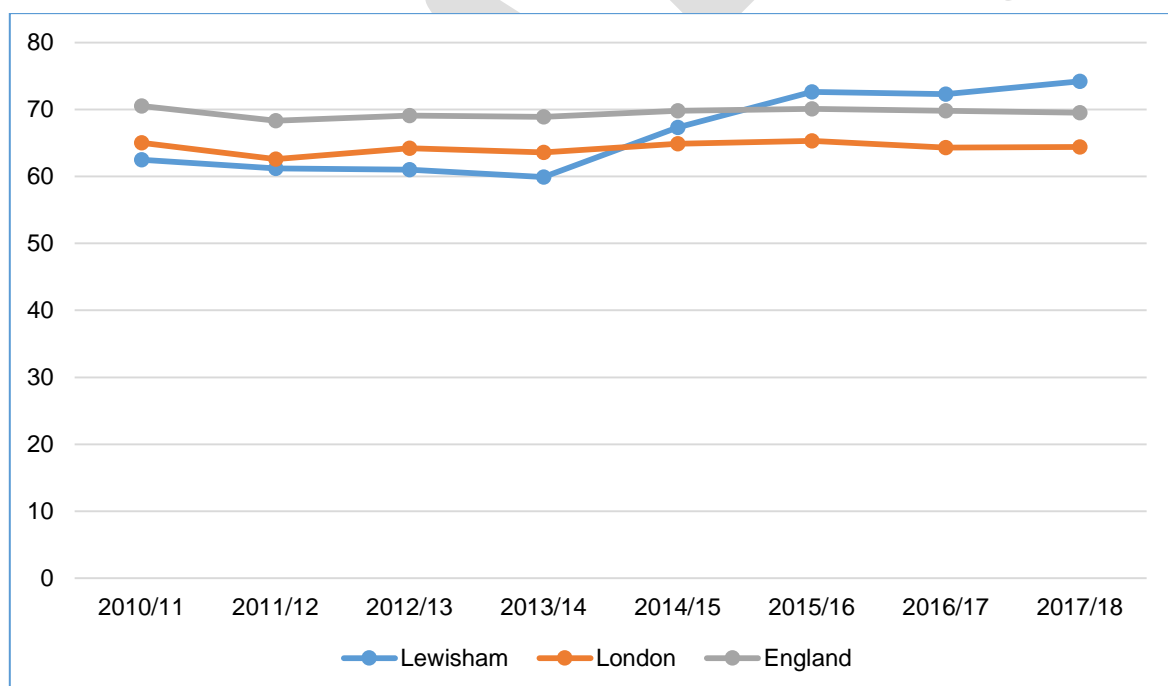
Facts, figures and trends

During the seasonal flu vaccination period (1st Oct - 31st Jan each year) data is collected on a monthly basis from GPs at a national level to monitor the uptake of this vaccination campaign. The GPs also provide other adult vaccination including pneumococcal, shingles alongside seasonal flu vaccination as well pre-natal pertussis and neonatal BCG.

Pneumococcal

Public Health England reported a 74.2% population coverage of the PPV vaccine for Lewisham adults aged 65 years and over in 2017/18.

Figure 9: Pneumococcal Polysaccharide Vaccine (PPV) Uptake



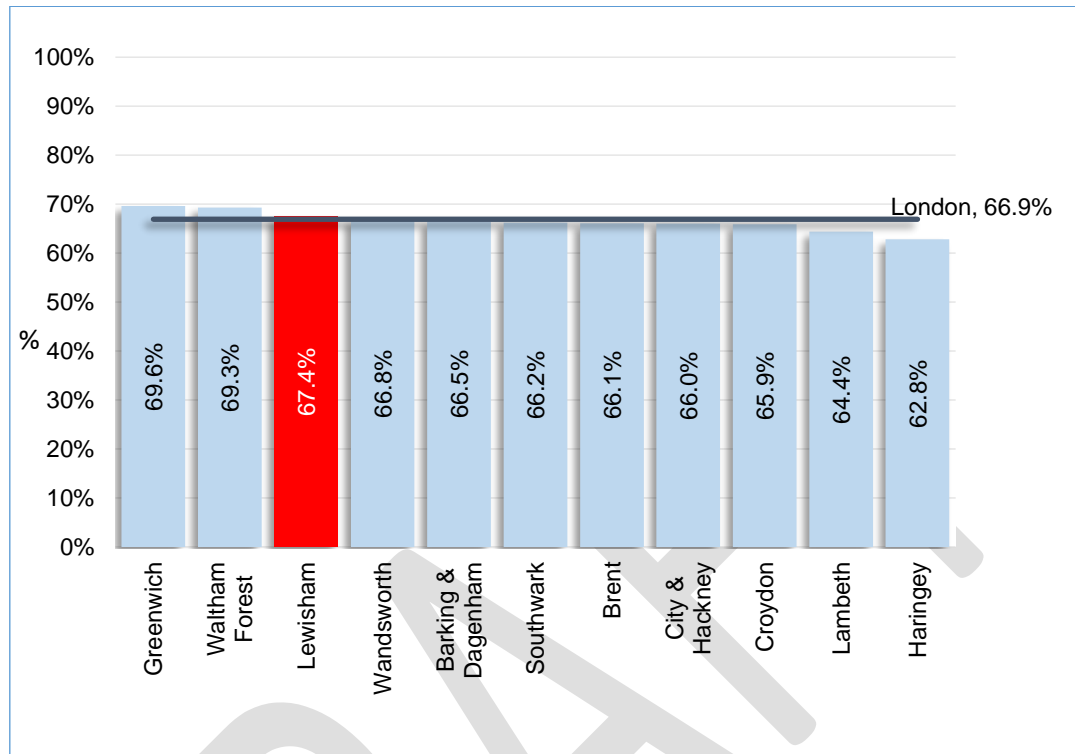
Source: <https://fingertips.phe.org.uk/profile/health-protection>

Influenza

There are certain groups who are at higher risk from flu; these include pregnant women, those over the age of 65, healthcare workers and those with serious health conditions. Seasonal flu vaccine is offered to people in all of these groups, to help protect them from catching and spreading flu. Eligible people can have their flu vaccine at their GP surgery or a local pharmacy offering the service. Some midwifery services can offer the vaccine to pregnant women each winter.

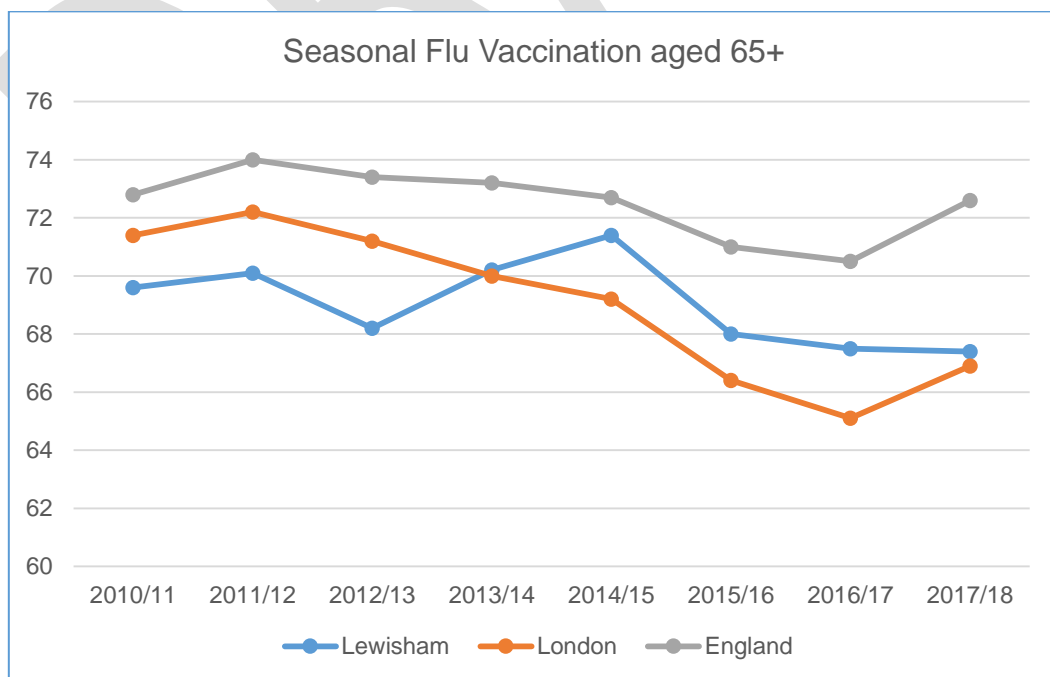
Lewisham uptake in patients 65 years and over was 67.4% in 2017-18 (and 67.5% in 2016-17).

Figure 10: Flu vaccine monthly uptake in patients 65 and over. Lewisham compared to its similar CCGs, 2017-18



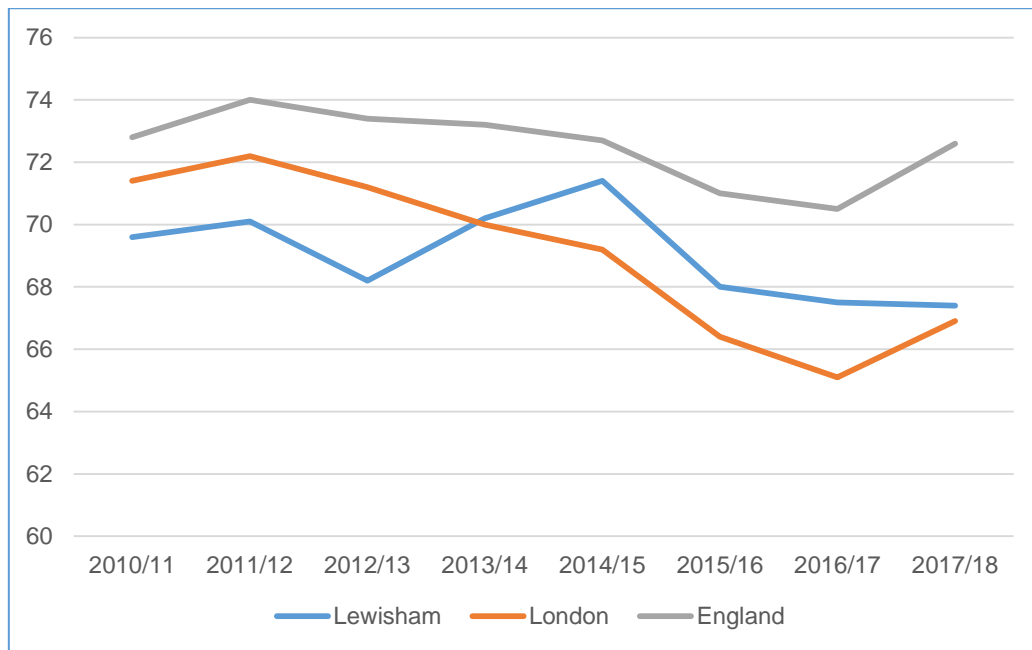
Source: ImmForm (<https://www.gov.uk>)

Figure 11: Seasonal Flu Vaccination aged 65+



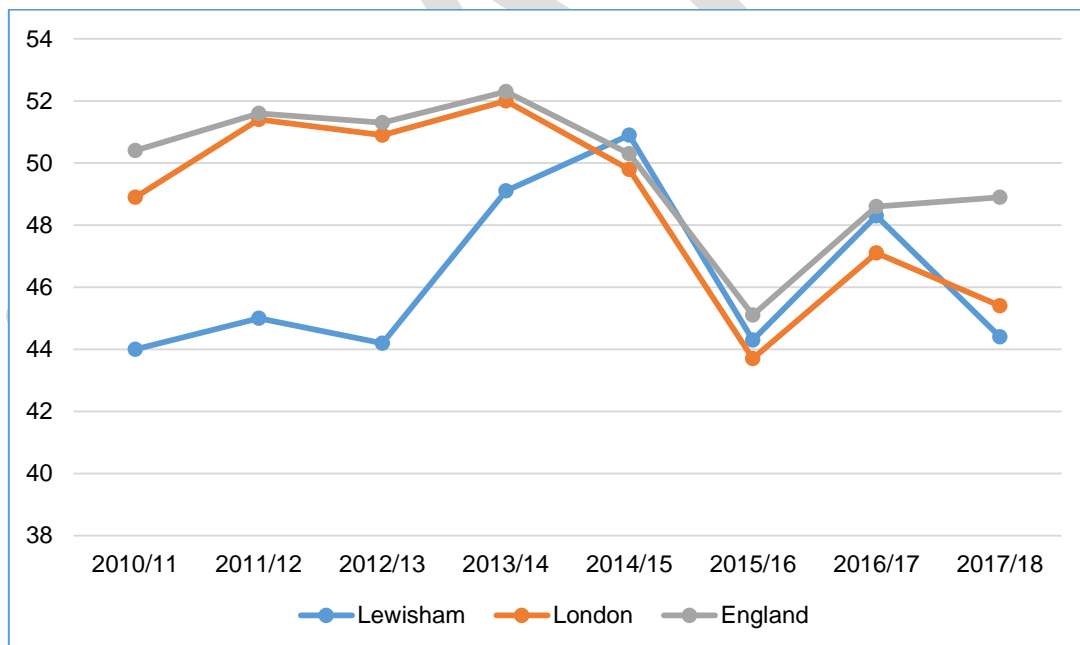
Source: <https://fingertips.phe.org.uk/profile/health-protection>

Figure 12: Population Vaccination Coverage - Flu, aged 65+ (%)



Source: <https://www.gov.uk/government/collections/vaccine-uptake#seasonal-flu-vaccine-uptake:-figures>

Figure 13: Population vaccination coverage - Flu, at risk individuals (%)

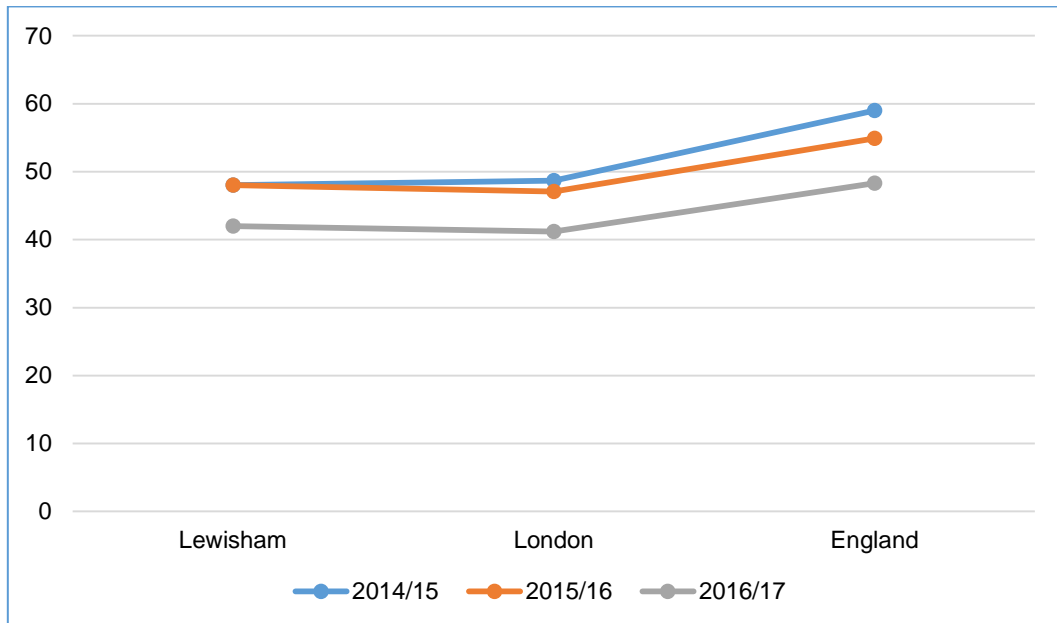


Source: <https://www.gov.uk/government/collections/vaccine-uptake#seasonal-flu-vaccine-uptake:-figures>

Shingles

Public Health England report a 42% population coverage of the shingles vaccination for adults at 70 years old in Lewisham. (2016-17 figure)

Figure 14: Shingles Vaccination Coverage (70 years old)



Source: <https://fingertips.phe.org.uk/profile/health-protection>

Pre-natal pertussis

Pertussis immunisation would be offered to pregnant women from 1 October 2012 to protect infants from birth. This programme aims to passively protect infants from birth, through intrauterine transfer of maternal antibodies, until they can be actively protected by the routine infant programme with the first dose of pertussis vaccine scheduled at eight weeks of age.

During 2017-18 (01/04/2017 to 31/03/2018), 35 out of 40 GPs reported about the uptake of pre-natal pertussis vaccination. Of the 2,902 women who delivered in the survey month (regardless of gestational age at birth), 1,857 women received pertussis vaccination between week 16 of pregnancy and delivery, which makes the uptake of 64.0%, and this needs to improve. 20 women declined taking pertussis vaccination in the 26 weeks prior to delivery who have not been vaccinated.

National and local strategies

Nationally

Since the changes to the NHS in April 2013, nationally NHS England is the organisation responsible for the commissioning of the immunisation programme across the country and for providing assurance to the Director of Public Health in Lewisham that the standards for this programme are being met. The immunisation programmes delivered to the Lewisham residents are recommended by the Joint Committee on Vaccination and Immunisation (JCVI) - the national body for scheduling the national vaccinations programmes and introducing new vaccines into the schedules as and when required.

GPs deliver both the childhood vaccination schedules to the local GP registered population. The cover of vaccination evaluated rapidly programme (COVER) evaluates childhood immunisation in England, collating data for children aged 1, 2 and 5. COVER collects the quarterly coverage figures for all the childhood vaccinations given across Lewisham similar to other parts of England and Wales. This provides comparative data for this vaccination schedule at a London and national level. The data tables are provisional and give an indication of current coverage. Data is collected by financial year.

During the seasonal flu vaccination period (1st Oct - 31st Jan each year) data is collected on a monthly basis from GPs at a national level to monitor the uptake of this vaccination campaign.

School nursing services provide vaccinations to school aged children. The school aged vaccination team provides HPV, MenACWY, and school leaver booster (Td/IPV) to adolescents (between the ages 12 to 18 years). The school team also provide seasonal flu vaccination to year 1, 2, 3, 4, and 5 through nasal spray.

The NHS Long-term Plan was published in January 2019. The document states improving childhood immunisations is a priority. The programme will also work closely with other areas of government and key programmes such as the Healthy Child Programme. The expectation is that CCGs should ensure that all screening and vaccination programmes are designed to support a narrowing of health inequalities. The plan also states:

- In 2019, a fundamental review of GP vaccinations and immunisation standards, funding, and procurement will be undertaken to support the goal of improving immunisation coverage, using local coordinators to target variation and improve groups and areas with low vaccines uptake.
- From September 2019, all boys aged 12 and 13 will be offered vaccination against HPV-related diseases, such as oral, throat and anal cancer.
- A digital version of the 'red book' will help parents record and use information about their child, including immunisation records and growth.

Locally

Lewisham Immunisation Partnership Strategy Group comprising of the various stakeholders including the providers, NHS England, Public Health England, and Lewisham CCG provides strategic directions locally. This group is chaired by Director of Public Health. A Lewisham Immunisation Partnership Action Group is also in existence for the providers only and is led by the Public Health Immunisation lead. Both groups work closely to ensure immunisation

uptakes are improving to achieve herd immunity. An action plan provides direction in the effort to improve the uptake of the childhood, adolescent and adult immunisation.

In addition to elements on training and communication with the public, key elements of the action plan include:

- An Information Action Plan –improving information systems is where much of the efforts have been, and improvements are being made. The challenge is that these improvements have to be maintained, in addition with new changes made by NHS England to collect and analyse COVER data has proven to be challenging as well. Further improvement is necessary to influence uptake to have a positive influence on the behaviour of GPs locally.
- Working closely with various providers and stakeholders to improve uptake of various immunisation is another important component of action plan.

Support for GPs in aiming for best practice and to ensure good flow of data, including feedback of information to practices.

What is this telling us?

What are the key gaps in knowledge and/or services

- Lewisham is not achieving the majority of immunisation targets, particularly MMR vaccinations.
- There is a continued need to enhance information systems to allow live feedback.
- With the new ways of collecting childhood immunisation data from GP Practices, it has become challenging to look at practice specific data to identify variation in childhood immunisations uptake by GP practice. Work is in progress to access these from new Child Health Information Service (CHIS) providers, however current difficulty accessing this level of data hinders understanding and reactivity.

What is coming on the horizon?











- Expansion of routine HPV vaccination coverage to boys from September 2019, however, there is currently no guidance or direction from either a national or London level.

What should we do next?

- Working with relevant stakeholders to ensure implementation of appropriate immunisation pathway following national guidance and Green Book.
- Engaging with primary and secondary school vaccination providers to improve uptake of the school immunisations.
- Continue work on MMR pathway, improved information systems and with GPs. To improve uptake of MMR vaccination amongst residents by highlighting this situation with NHSE to find ways of promoting the MMR vaccination to all Lewisham residents.
- To continue to distribute targeted resources to key stakeholders to GPs/practice nurses/health visitors and children's centres to promote this issue.

- Opportunistic immunisation of children whenever they present within the health service. To improve coverage of childhood vaccination programme by encouraging GP practices to make necessary improvements to their programmes.
- To improve uptake of season flu vaccination in all eligible groups by learning from other GPs with higher levels of vaccination uptake amongst these groups.
- To continue to support improvement of uptake of Whooping Cough (Pertussis) vaccination in pregnant women by improving the access to through the new maternity service and to gather information on reasons why local women will not have this vaccination.
- To improve vaccination uptakes of vulnerable children and adults to ensure these groups are not being disadvantaged and are receiving all the vaccinations as required on the immunisation schedule.

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Age for Immunisation	Protects against...	Which Vaccines to be Given	Number of Injections
Birth to 28 days	Tuberculosis	BCG	One injection
Two months 	Diphtheria, tetanus, whooping cough, polio, <i>haemophilus influenzae b</i> , hepatitis B and pneumococcal infection, rotavirus and meningitis B	DTaP/IPV/Hib/HepB PCV (Prevenar13) Rotavirus (Rotarix) MenB (Bexsero)	Three injections + Oral
Three months 	Diphtheria, tetanus, whooping cough, polio, <i>haemophilus influenzae b</i> , hepatitis B and rotavirus	DTaP/IPV/Hib/HepB + Rotavirus (Rotarix)	One injection + Oral
Four months 	Diphtheria, tetanus, whooping cough, polio, <i>haemophilus influenzae b</i> , hepatitis B and pneumococcal infection and meningitis B	DTaP/IPV/Hib/HepB + PCV (Prevenar13) + MenB (Bexsero)	Three injections
12 months 	Measles, mumps, rubella, Hib, meningitis C, pneumococcal infection and meningitis B 	MMR (MMRvaxPro, Priorix) Hib/MenC (Menitorix) PCV (Prevenar13) MenB Bexsero	Four injections
15 Months (or 3 months after MMR1)	Measles, mumps, rubella There needs to be a three month gap between the two doses of MMR for children in this age group.	MMR (MMRvaxPro, Priorix) 	One injection
2,3,4,5,6,7 year olds	Seasonal flu	Fluenz - nasal vaccine	One dose Each year
Three years and 4 months and over 	Diphtheria, tetanus, whooping cough and polio	dTaP/IPV (Infanrix/IPV) (NB Boostrix - DTaP/IPV for pregnant women 20-32 weeks. Can be given later if missed.)	One injection
Girls aged 12 to 14 years 	Cervical cancer and genital warts Girls in school year 8 and above are immunised against Human Papilloma Virus by school nurses.	 HPV (Gardasil) TWO doses 6-12 months apart 	Two injections

13 to 18 years 	Diphtheria, tetanus, polio and meningitis types ACW and Y 	Td/IPV (Revaxis) + MenACWY	Two injections
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It's NEVER too late to catch up on vaccinations!!

If you have a question or concern, speak to your practice nurse, GP, health visitor or school nurse. You can also go to NHS Choices at www.nhs.uk/vaccinations
MC public/prof Lewisham and Greenwich NHS Trust 20170626

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