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# **Health Protection JSNA: Communicable Diseases**

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**Wirral Intelligence Service**

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**June 2018**

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## Health Protection JSNA: Communicable Diseases

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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](mailto: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

<b>Abstract</b>	In this section we consider recorded incidence of cases and outbreaks of communicable disease and briefly discuss immunisation of communicable diseases.
<b>Intended or potential audience</b>	<ul style="list-style-type: none"><li>• Wirral partners via Health Protection Forum</li><li>• Public Health Departmental Management Team</li><li>• Environmental Health Departmental Management Team</li></ul>
<b>Links with other topic areas</b>	<ul style="list-style-type: none"><li>• <a href="#">Food Safety</a></li><li>• <a href="#">Vaccines and Immunisations Supplement (in development)</a></li><li>• <a href="#">Screening</a></li><li>• <a href="#">Healthcare Associated Infections and Antimicrobial Stewardship</a></li><li>• <a href="#">Environmental Health</a></li></ul>

- In 2016 the five most reported notifiable diseases nationally were; scarlet fever, food poisoning, tuberculosis, mumps, and whooping cough.
- The top three notifiable diseases in Wirral in 2016 were scarlet fever, mumps and whooping cough. Scarlet fever was the most common.
- There were 50 reported outbreaks of communicable disease in Wirral care homes between April 2016 and March 2017.
- Groups at increased risk of acquiring a communicable disease include pregnant women, young children; people aged over 65 years, those with pre-existing medical conditions, homeless people, substance misusers, immigrants and black and minority ethnic groups.
- Immunisation is one of the most effective ways of reducing the incidence and burden of preventable infectious diseases.
- The following childhood vaccines did not meet 95% uptake in Wirral in 2016/17:
  - Diphtheria, tetanus, polio and pertussis (Dtap/IPV) booster by 5 years;
  - PCV vaccine dose by 2<sup>nd</sup> birthday;
  - Rotavirus vaccine;
  - Hib / Men C booster by 5<sup>th</sup> birthday, and
  - Two doses of Mumps Measles and Rubella (MMR) vaccine by 5<sup>th</sup> birthday.
- Compared to 2015/16 data, 2016/17 figures suggest a minor decline in uptake of the 5 in 1 vaccine by 1<sup>st</sup> birthday, and Hib / Men C booster by 5<sup>th</sup> birthday.
- All frontline healthcare workers should have the flu vaccine to protect themselves and patients, with a coverage target of 75%. Wirral University Teaching Hospital NHS Foundation Trust, the Clatterbridge Cancer Centre NHS Foundation Trust, and Cheshire, Warrington and Wirral Area Team Health Care Workers met these targets for 2017/18. Despite improvements over the past year, Wirral Community NHS Foundation Trust and Cheshire and Wirral Partnership NHS Foundation Trust did not meet these targets.
- The following groups face barriers to accessing vaccinations:
  - People living in areas of higher socio-economic deprivation,
  - Children in care,
  - Children who are hospitalised,
  - Children in larger families and minority ethnic groups.
- Currently, with the exception of flu data which is available by practice, vaccination data is only available for Wirral as a whole. This is a national issue and severely limits the ability to improve uptake of groups and or areas that experience low uptake.

## Contents

Key findings .....	3
<b>Contents.....</b>	<b>4</b>
<b>What do we know?.....</b>	<b>5</b>
Why is this important? .....	5
Facts, figures and trends (Wirral and beyond).....	5
Notification, investigation and control of infectious diseases.....	5
Outbreaks .....	8
Immunisation.....	9
Local, Community and Stakeholder views .....	10
Wirral Health Protection Group .....	10
What are we expecting to achieve? (Targets) .....	10
Immunisation Targets .....	10
What are we achieving? (Performance) .....	12
Overview of vaccination performance .....	12
Seasonal Flu Performance.....	13
Healthcare workers .....	13
<b>What is this telling us? .....</b>	<b>14</b>
Groups most at risk .....	14
Key issues and challenges .....	14
Key inequalities .....	14
<b>What are we doing and why? .....</b>	<b>15</b>
Current activity and services.....	15
Wirral Community Infection Prevention and Control Service.....	15
Wirral Immunisation Steering Group .....	15
Primary Care Training.....	15
Wirral Seasonal Flu Group.....	15
PHE Screening and Immunisation Quarterly Reports .....	16
Pertussis vaccination uptake in pregnancy .....	16
<b>What are the challenges? .....</b>	<b>16</b>
Key gaps in knowledge and services.....	16
What is coming on the horizon? .....	17
Strategy to vaccinate care home staff .....	17
Recommissioning of Wirral TB and Hepatitis C Service .....	17
What does the research suggest as further actions?.....	17

<b>Key content</b> .....	<b>18</b>
Links .....	18
Relevant and related National and local strategies.....	19
References .....	19
Contact details.....	20

## What do we know?

### Why is this important?

Communicable diseases are diseases that are transmitted between people or animals. They are often described as contagious or infectious diseases, and can be caused a variety of pathogens including viruses, bacteria, fungi and parasites. Transmission can occur via airborne droplets, direct physical contact, or via blood or other bodily fluids.

The surveillance of communicable disease includes the monitoring of disease incidence, immunisation uptake, and actions to prevent and reduce cases of communicable disease.

In this section we consider recorded incidence of cases and outbreaks of communicable disease and briefly discuss immunisation of communicable diseases.

Control of infectious diseases is important as they can affect large numbers of people and have the potential to cause illness and death, particularly among children, older people and people with chronic illnesses or conditions. In England, infectious diseases account for £1.00 of every £10.00 spent on the NHS and are a major cause of lost workforce productivity.

### Facts, figures and trends (Wirral and beyond)

Registered medical practitioners in England and Wales have a statutory duty to notify their local Public Health England Health Protection Team of suspected cases of certain infectious diseases classed as [notifiable diseases](#). All laboratories in England performing a primary diagnostic role must notify Public Health England (PHE) when they confirm a notifiable disease.

These notifications are collected, analysed and published in weekly [reports](#) produced by Public Health England (PHE).

The notification, investigation and control of infectious diseases are necessary to identify potential sources and vehicles of transmission, thereby preventing spread. Notifications are also used to monitor the development of outbreaks and the success of immunisation programmes.

#### [Notification, investigation and control of infectious diseases](#)

Nationally in 2016, the five most common reported [notifiable diseases](#) were scarlet fever, food poisoning, tuberculosis, mumps and whooping cough. In Wirral the most common notified diseases in 2016 were scarlet fever, whooping cough and mumps (**Table 1**). This reflects the national increased incidence of these diseases in 2016.

**Table 1:** Notifiable disease suspected and confirmed incidence in Wirral from 2011 to 2016.

Disease Name / Year	Acute encephalitis	Acute infectious hepatitis	Acute Meningitis	Brucellosis	Cholera	Food poisoning	Infectious bloody diarrhoea	Invasive group A streptococcal disease	Legionnaire's Disease	Malaria	Measles	Meningococcal septicaemia	Mumps	Other	Rubella	Scarlet fever	Tuberculosis	Whooping cough	Total
2011	0	0	3	0	0	35	0	0	0	0	16	1	21	0	3	18	16	3	116
2012	0	0	2	0	1	12	0	1	0	0	81	1	41	0	4	20	16	20	199
2013	0	3	4	0	0	15	2	3	0	0	18	1	54	1	0	10	11	26	148
2014	1	0	7	0	0	6	3	6	0	1	8	3	43	1	2	74	9	16	180
2015	0	3	12	1	0	8	0	3	1	0	9	1	32	2	3	65	13	28	181
2016	0	0	2	0	0	8	1	2	0	0	10	3	32	0	3	164	15	62	302

Source: [gov.uk](http://gov.uk)

### Scarlet Fever

In 2016, scarlet fever was the most commonly reported [notifiable disease](#) both nationally and in Wirral. National monitoring of [Scarlet fever](#) showed an increase in the number of cases in 2014, which remained elevated in 2015 and 2016. Wirral data showed a statistically significant increase in the rate of scarlet fever cases reported in 2016 (51.1 per 100,000 people) as compared to 2015 (20.3 per 100,000 people). This may reflect heightened awareness and improved diagnosis and/or notification practices. [In the 2015/2016 monitoring report from Public Health England](#), Cheshire and Merseyside were among the four areas with the highest notification rate of scarlet fever cases (32.5 per 100,000 people).

A recent publication in The Lancet reviews the public health impact of the increase in scarlet fever notifications over the past few years in the UK, in terms of increased hospitalisations and outbreaks in schools and nurseries ([Lamagni et al, 2017](#)).

There is no vaccine for scarlet fever, which is caused by infection with *Streptococcus pyogenes* (group A Streptococcus). The illness mainly affects children aged 2 to 8 years attending nurseries and schools. New guidelines on the [public health management of scarlet fever outbreaks in schools, nurseries and other childcare settings](#) were released in October 2017. National guidance recommends that GPs, schools and nurseries are made aware of the current high levels of scarlet fever and inform local Public Health England health protection teams if they become aware of cases, particularly if more than one child is affected. Early recognition and antibiotic treatment of scarlet fever improves symptoms and prevent onward transmission.

### Whooping cough (pertussis)

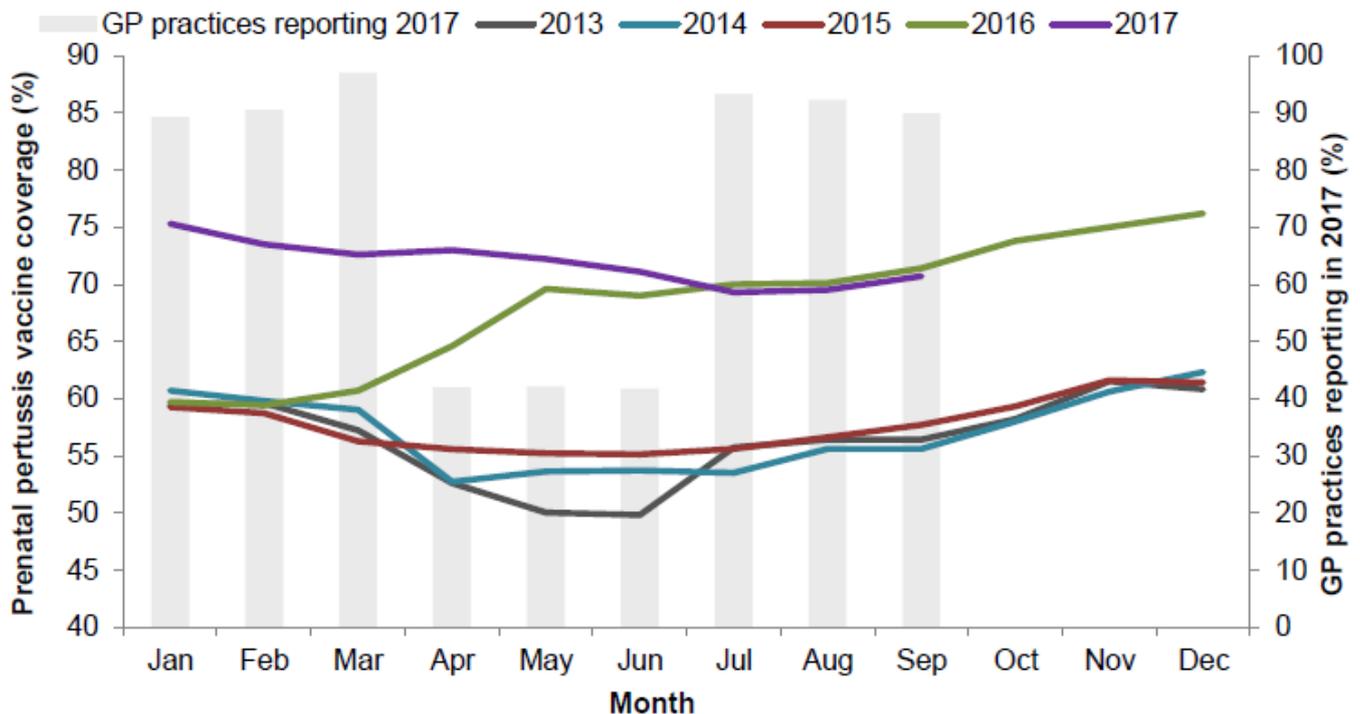
Whooping cough was the second most commonly reported [notifiable disease](#) in Wirral in 2016, and the fifth most commonly reported nationally. There was a national outbreak of reported [whooping cough](#) in 2012. National [Surveillance](#) demonstrated a 42% year-on-year increase in cases between 2015 and 2016 (though total cases are below the 2012 peak). [In the first 8 months of 2017](#), the total number of cases was 23% lower than for the same period in 2016, but remained above levels seen pre- 2012.

In Wirral, whooping cough cases increased from 28 to 62 cases between 2015 and 2016 (**Table 1**). Whooping cough cases follow a seasonal patterns with incidence tending to peak in autumn. Very young children have the greatest health risk of serious complications from whooping cough.

In response to the 2012 pertussis outbreak, a pertussis immunisation programme was introduced to protect newborn infants.

This programme provides pertussis vaccination to pregnant women, with antibodies passed via the placenta to protect new-borns until their first vaccination at 8 weeks old. In 2014 the programme was extended at the advice of the [Joint Committee on Vaccination and Immunisation](#) until 2019. From April 2016, pregnant women were recommended to receive pertussis vaccination between 16-32 weeks, with preferred timing beyond 20 weeks. [Monitoring](#) of the programme shows national uptake was at an all-time high in December 2016, with 76.2% of pregnant women receiving the vaccination (**Figure 1**).

**Figure 1:** Monthly pertussis vaccination coverage in pregnant women: England 2013-2017.



**Source:** Pertussis vaccination programme for pregnant women update: vaccine coverage in England, July to September 2017. Health Protection Report Volume 12 Number 1

### Mumps

Mumps was the third most commonly reported [notifiable disease](#) in Wirral in 2016, and the fourth most commonly reported nationally. [National](#) monitoring of [mumps](#) indicated a decline in the number of cases from 571 infections in 2016 to 798 in 2015. Most cases were in young adults between 15 and 35 years of age. [In 2016](#), the North West had 58 infections reported, lower than the 84 reported the previous year. Wirral has demonstrated an annual decrease in the number of mumps cases since 2013, with the total cases reported in 2015 and 2016 remaining constant at 32 cases in each year (**Table 1**).

### Tuberculosis (TB)

[Tuberculosis](#) (TB) was the fourth most common [notifiable disease](#) in Wirral in 2016, and the third most commonly reported nationally. There has been a decline in the number of TB cases [nationally](#) since 2011. This decline slowed between 2015 and 2016, with cases reducing from 5,726 to 5,664. In 2016, the incidence rate of new TB infections in Wirral was 8.3 per 100,000 population, lower than the national average of 10.2 per 100,000. Notified TB cases in Wirral have increased annually since 2014: 9 cases were reported in 2014, 13 in 2014 and 15 cases were reported in 2016 (**Table 1**).

## Food Poisoning

[Food poisoning](#) was the fifth most commonly notified disease in Wirral in 2016, and the second most commonly reported nationally. The number of cases of food poisoning in Wirral has significantly reduced since 2012 (**Table 1**). This reduction is mainly due to [campylobacter](#) no longer being entered on the local data system since 2013. [Nationally](#), the number of campylobacter cases reported has also remained relatively consistent since 2013. 2017 data from [Public Health England](#) reports the campylobacter incidence rate as 37.4 per 100,000 population (95% confidence interval 31.0, 44.7), which is significantly lower than the rate in 2016 (79.4, 95% confidence interval 69.9, 89.7), and lower than the national rate. Illness due to food poisoning is now considered in the JSNA on [Food Safety](#).

## Outbreaks

The World Health Organization defines a disease outbreak as the occurrence of cases of disease in excess of what would normally be expected in a defined community, geographical area or season. An outbreak may occur in a restricted geographical area, or may extend over several countries. It may last for a few days or weeks, or for several years. The emergence of a previously unknown disease may also constitute an outbreak and should be reported and investigated. Early detection and reporting of outbreaks is crucial to minimising their disruptive health, social and economic impacts.

## Outbreak Management

There is a need to provide assurance that arrangements for the command, control and co-ordination for outbreaks are fit for purpose, rehearsed and understood by all partners.

The [Public Health England Outbreak Control Plan](#) published in 2014 describes the overall approach and responsibilities of different parties in responding to infectious disease outbreaks. This includes standards for investigating and managing outbreaks through an Outbreak Control Team (OCT). Members of an OCT will vary depending on the nature of the outbreak, but would usually include members of PHE health protection teams, Microbiology, Local Authority Public Health, Environmental Health and Community or hospital Infection Prevention and Control teams.

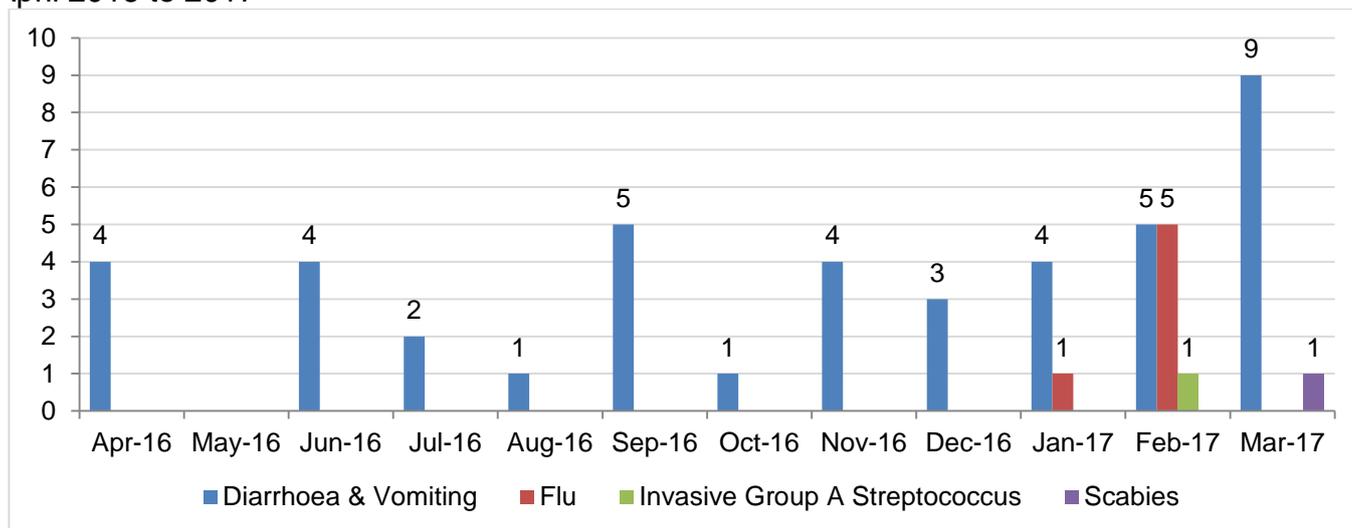
On a local scale, the [Wirral Community Infection Prevention and Control Team](#) provides infection prevention and control advice and support in the community, including schools, nurseries and primary and social care settings, such as GPs, dental practices and nursing homes. The service works across the health and social care system to respond to cases, clusters and outbreaks of communicable disease in the community to manage, control and reduce the risk of infection. The work of this team includes conducting audits of practice and service improvement plans, as well as offering education and training.

## Care Homes

Care homes residents can be vulnerable to infectious diseases due to older age and/or the presence of health conditions, both of which increase susceptibility to infections. Data from the Wirral Community Infection Prevention and Control Team data show that there were 50 outbreaks in Wirral Care Homes from April 2016 to March 2017. This includes outbreaks of a range of types, for example Invasive Group A Streptococcus (IGAS), flu, and gastrointestinal infection. Of note, there was an unusual outbreak of Norwegian scabies, a highly contagious infection caused by the *Sarcoptes scabiae* mite, in one care home during the 4th quarter of 2016/2017. This outbreak required intensive management, including the treatment and prophylactic treatment of 167 staff and patients.

The peak months for outbreaks in Wirral Care Homes from April 2016 to March 2017 were February and March (**Figure 2**). Of the 76 care homes in Wirral, 33 had at least one outbreak (1 home had 5 outbreaks, 3 homes had 3 outbreaks and 8 homes had 2 outbreaks).

**Figure 2:** Communicable disease outbreaks in care homes and number of people affected from April 2016 to 2017



Source: Wirral CCG/ Wirral Public Health

### Other settings (e.g., nurseries, schools)

From April 2016 to March 2017 Wirral Infection Prevention and Control Team helped to manage one outbreak of diarrhoea and vomiting, of hand foot and mouth at a private day nursery, and an outbreak of 5 cases of *Pseudomonas aeruginosa* at one Wirral tattoo parlour.

In 2017, there was an outbreak of acute hepatitis A in a sauna and private members club on the Wirral. This was related to an international [hepatitis A outbreak](#) among men who have sex with men in 2016/17. The Wirral Community NHS Foundation Trust conducted site visits and offered advice and support around infection and control practices.

### Immunisation

Immunisation is one of the most successful and cost effective health protection interventions. Immunised individuals have greater protection against serious infection than those unimmunised. They are also less likely to carry or transmit infections, reducing the spread of infectious disease and the risk to unimmunised individuals. Where uptake of a vaccination is sufficiently high, communicable diseases are unable to spread and the risk to unimmunised individuals is also reduced. This is known as providing 'herd immunity'. According to the World Health Organisation, a 95% vaccine uptake is the benchmark to achieve herd immunity.

England and Wales have a [vaccination schedule](#) for children, adults and at risk groups. National, regional and local vaccination uptake figures are measured as part of the [Public Health Outcomes Framework](#) sub indicators 3.3 *population vaccination coverage*. Data is also available via the [Cover of Vaccinations Evaluated Rapidly](#) (COVER) and Immform.

Detailed information about vaccination coverage in Wirral can be found in the **Vaccination and Immunisations Supplement** which will be found on [Health Protection webpage](#)

### Wirral Health Protection Group

Wirral's 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. 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. The forum is in the process of identifying priorities for 2018, which this JSNA chapter will inform.

## What are we expecting to achieve? (Targets)

### Immunisation Targets

The World Health Organisation (WHO) European Vaccine Action Plan makes some recommendations on the national coverage of DTP-containing vaccines in European Member States.

### *Immunisation best practice guidance*

The National Institute for Health and Clinical Excellence (NICE) has provided guidance on [Reducing differences in the uptake of immunisations among children and young people aged under 19 years](#). This provides a number of recommendations to improve immunisation uptake in communities where uptake is low. This includes actions to:

- Improve access to immunisation services by extending clinic times and making clinics child friendly
- Ensure providers take a comprehensive approach to vaccination coverage, including nominated leads and the use of recall and reminders. Robust IT systems should be used, which include timely recording of status on patient records.
- Provide tailored information and support to parents and young people and include opportunities to explore and discuss concerns.
- Check children and young people's immunisation status during school entrance assessments and when they join nurseries, schools and further education colleges and sign-post them to appropriate services to offer vaccinations.
- Provide access to the ['Green book'](#) for all staff involved in immunisation services, and ensure that updates to the childhood immunisation programme are recognised early and services adapted appropriately.

### *Seasonal Flu*

Influenza '[flu](#)' is a viral infection which most commonly occurs in winter peaking between December and March. It is not a notifiable disease. Flu is usually a mild, self-limiting illness, but it can be detrimental to some vulnerable groups and contribute to premature mortality.

## *National Winter Flu Plan 2017/18*

To protect vulnerable populations from seasonal flu, there is a [national annual flu vaccination programme](#) for the following groups:

- those aged 65 years and over;
- those aged six months to <65 years with a serious medical condition;
- pregnant women;
- all two and three year olds;
- all children in reception class and years one, two, three and four at school;
- children in primary school at one of the previous primary school pilot areas;
- those in long-stay residential care homes;
- informal carers;
- front line health and social care staff
- There is also consideration for the vaccination of household contacts of immunocompromised individuals

The annually-updated National Winter Flu Plan sets out objectives to minimise the health impact of seasonal flu through effective monitoring, prevention and treatment. The plan has a number of objectives including:

- Actively offering flu vaccination to 100% of all those in eligible groups
- Vaccination of at least 75% of those aged 65 years and over, in line with the World Health Organization (WHO) target.
- Vaccination of at least 75% of healthcare workers with direct patient contact.
- Improving uptake for those in clinical risk groups, particularly for those who are at the highest risk of mortality from flu but have the lowest rates of vaccine uptake. The ambition for 2017/18 is to achieve vaccine uptake of at least 55% in all of the clinical risk groups, and maintain higher rates where those have already been achieved
- For children, a minimum uptake of 40% has been shown to be achievable in both primary care and school based programmes and some have achieved much higher rates. As a minimum uptake levels between 40-65% should be attained by every provider. Uptake levels should be consistent across all localities and sectors of the population

The Cheshire and Merseyside Public Health England team have set a local target to increase flu vaccine uptake by 10% from the previous year for clinical risk-groups and pregnant women. The local implementation of the flu plan requires partnership work across primary care, health and social care community services, Hospital Trusts, Public Health, the voluntary sector and NHS commissioners. Gaining the trust of the public is essential in encouraging flu vaccination uptake and a comprehensive communications plan accompanies local implementation of the vaccination programme.

## What are we achieving? (Performance)

### Overview of vaccination performance

In 2016/17, Wirral failed to meet the desired 95% uptake target for:

- Booster vaccine protects against diphtheria, tetanus, polio and pertussis (Dtap/IPV) by 5 yrs.
- PCV vaccine dose by the 2<sup>nd</sup> birthday;
- Rotavirus vaccine;
- Hib / Men C booster by 5<sup>th</sup> birthday;
- Two doses of Mumps Measles and Rubella (MMR) vaccine by 5<sup>th</sup> birthday (**Table 2**).

Compared to the 2015/16 data, 2016/17 figures suggest a minor decline in uptake of:

- 5 in 1 by 1<sup>st</sup> birthday;
- Hib / Men C booster by 5<sup>th</sup> birthday.

There was an increase in pertussis vaccination coverage among pregnant women in Wirral in 2016/17 compared to 2015/16. [Data](#) from PHE show that Cheshire/Merseyside demonstrated higher vaccine coverage than the national average for July, August and September 2017.

**Table 2:** Immunisation coverage achieved against targets for 2015/16 and 2016/17

Immunisation Vaccine for:	2015/16	2016/17
<b>Children</b>		
5 in 1 by 1 <sup>st</sup> birthday	96.5	96.3
5 in 1 by 2 <sup>nd</sup> birthday	97.5	97.6
DtaP/ IPV booster by 5 <sup>th</sup> birthday	93.7	94.4
PCV by 1 <sup>st</sup> birthday	96.2	96.2
PCV by 2 <sup>nd</sup> birthday	94.6	95.0
Rotavirus	92.7	93.6
Men B (first dose) by 1st birthday	-	TBA
Men B (second dose) by 1st birthday	-	TBA
Hib / Men C booster by 2nd birthday	94.9	95.1
Hib / Men C booster by 5 <sup>th</sup> birthday	94.1	93.8
MMR 1 dose by 12mths	95.1	95.2
MMR 1 dose by 5 <sup>th</sup> birthday	97.4	97.5
MMR 2 doses by 5 <sup>th</sup> birthday	93.1	93.9
<b>Pre-leavers</b>		
HPV 2 <sup>nd</sup> dose (13-14 years)	91.7	86.0
HPV 2nd dose (14-15 years)	-	91.7
MenACWY (Year 9)	84.6	88.8
MenACWY (Year 10)	-	84.6
MenACWY (Year 11)	84.1	86.7
MenACWY (Year 12)	-	84.1
Td/IPV Booster	83.6	-
<b>Adults</b>		
PPV	72.2	71.9
Shingles 70 year olds	59.2	46.6
Shingles 79 year olds	56.1	48.3
<b>Pregnancy</b>		
Pertussis	72.4	80.5

Source: Wirral Intelligence Team

Detailed information about vaccination coverage in Wirral can be found in the **Vaccination and Immunisations Supplement** which will be found on [Health Protection webpage](#)

## Seasonal Flu Performance

The latest flu vaccine data indicate that Wirral is above the 75% target for vaccination of adults 65 years and over. Flu vaccine uptake among pregnant women has only increased by 10% on the previous year's performance and is still below target (**Table 3**). Uptake for children was greatest in the older age groups (years 1 and 2 / ages 5 and 6) where the vaccine is administered in school.

**Table 3:** Wirral flu Immunisation uptake against national targets and local targets, 2015/16 and 2017/18

Flu Vaccine	Target	2015/16	2016/17	2017/18
65+ years	75%	73.6%	73.6%	76.0%
At Risk (6m-65y)	55%	49.6%	52.3%	51.4%
Pregnant women	55%	44.6%	46.0%	48.7%
Children (2 to < 5)	Min 40%	-	35.7%	35.8%

Source: Immform

## Healthcare workers

Frontline healthcare workers (HCWs) involved in direct patient care are encouraged to receive seasonal influenza vaccination annually from their employers to protect themselves and their patients from influenza. The national coverage target is 75%. [Nationally](#) in 2016/17, 63.2% of eligible healthcare workers received the influenza vaccination, up from 50.6% in 2015/16. In the North West, vaccine uptake among healthcare workers was 72.1% in 2016/17.

In 2017/18, Wirral University Teaching Hospital (WUTH) attained an excellent 81.3% uptake, exceeding the national 75% uptake target for the percentage of seasonal flu dosage given for the past 2 years (**Table 4**). Cheshire, Warrington and Wirral Area Team Health Care Workers and Clatterbridge Cancer Centre NHS Foundation Trust also met or exceeded the uptake targets. However, Wirral Community NHS Foundation Trust and Cheshire and Wirral Partnership NHS Foundation Trust did not meet these targets, despite demonstrating a notable improvement in vaccination uptake since the previous year.

**Table 4:** Flu vaccine uptake by frontline workers, 2016/17 and 2017/18

Organisation Name	Year	Summary of Flu Vaccine Uptake		
		No. of HCWs with Direct Patient Care	No. of seasonal flu doses given since 1st September	% of seasonal flu doses given since 1st September
Cheshire, Warrington and Wirral Area Team Health Care Workers	2016/17	26,426	19,079	72.2%
	2017/18	27,847	21,183	76.1%
Wirral University Teaching Hospital NHS Foundation Trust	2016/17	4,750	3,754	79.0%
	2017/18	4,728	3,844	81.3%
The Clatterbridge Cancer Centre NHS Foundation Trust	2016/17	784	603	76.9%
	2017/18	929	697	75.0%
Cheshire & Wirral Partnership NHS Foundation Trust	2016/17	3,037	1,754	57.8%
	2017/18	2,528	1,782	70.5%
Wirral Community NHS Foundation Trust	2016/17	1,153	677	58.7%
	2017/18	1,162	827	71.2%

Source: [Public Health England, 2018](#)

Note: Figures have been collated between October 2017 and February 2018

## What is this telling us?

### Groups most at risk

Groups at high risk of infection include pregnant women, young children, and people over the age of 65 years, those with pre-existing medical conditions, homeless individuals, substance misusers, immigrants and black and minority ethnic groups. Children in nurseries and people living in residential and nursing homes are also at increased risk.

The factors which place certain groups at greater risk include:

- Being less able to avoid infections due to environmental / living conditions (e.g. homeless, people living in crowded accommodation and or accommodation which has poor provision of safe water, sanitation and drainage).
- Being more susceptible to infection through lower immunity (e.g. infants, older people and those who are immune-compromised)
- Being less able to cope with the illness, due to being less likely or able to seek help with the illness and or adhere to treatment (e.g. homeless, substance misusers).

### Key issues and challenges

Data is not currently available at a level of detail necessary to understand differences in uptake of vaccines between population groups and geographical areas. This may reveal hidden variation and help to prioritise action needed to improve the situation for those most in need of immunisation.

It is important to be able to access uptake of vaccines by GP practice and by demographic factors to be able to identify which groups and areas are most at risk of low uptake. Local Public Health teams in the local authorities no longer have access to NHS data systems such as [Cover of Vaccinations Evaluated Rapidly](#) (COVER). This places a reliance on Public Health England for access to timely and accurate data at GP level.

### Key inequalities

High coverage (95%) of vaccination is a fundamental necessity to protecting people from vaccine preventable diseases. The Department of Health published '[Vaccination services - reducing inequality in uptake](#)' in March 2005. This identified that there are groups who face barriers to access and are subsequently at risk of low vaccination uptake. Groups include:

- Children in care;
- Young people who missed previous immunisations;
- Children with physical or learning difficulties;
- Children of lone parents;
- Children not registered with a general practitioner;
- Children in larger families;
- Children who are hospitalised;
- Minority ethnic groups;
- Vulnerable adults, such as asylum seekers and the homeless.

The review also found association between lower vaccination uptake and residence in areas of greater deprivation. Similarly, a [study](#) in the North East found that the incidence of infectious disease increased with increasing deprivation.

An analysis of pertussis vaccination uptake in pregnancy at the [national](#) level found that coverage varied considerably by ethnic group, with a difference of 25% between the ethnic groups with the highest (White British) and the lowest (Black 'other' and Black Caribbean) uptake.

Vaccine hesitancy has been defined as a behaviour, influenced by a number of factors, including issues of confidence (level of trust in vaccine or provider); complacency (do not perceive a need for a vaccine, do not value the vaccine), and convenience (access). Vaccine-hesitant individuals are a heterogeneous group that are indecisive to varying degrees about specific vaccines or about vaccination in general. Some vaccine-hesitant individuals may accept all vaccines but harbour concerns, some may refuse or delay some vaccines but accept others, and others may refuse all vaccines.

A review of vaccine hesitancy was published by the [European Centre for Disease Prevention and Control](#) (ECDC) in 2015. The research identified groups of individuals from across societies who are hesitant to accept vaccines. Factors influencing vaccination uptake were clustered under three key themes: contextual influences, individual and group influences, and vaccine-specific issues. Contextual influences included conspiracy theories, religious beliefs and vaccine-negative media influences. Individual and group influences included personal perceptions or beliefs about vaccines and influences from the social environment. The most common reason for refusing vaccination was the belief that vaccines are unsafe and specifically that vaccines can cause severe harm. Vaccine hesitancy is an important emerging area of work for improving informed choices among members of the public, and strengthening vaccination uptake.

## What are we doing and why?

### Current activity and services

#### [Wirral Community Infection Prevention and Control Service](#)

A quality improvement program is currently in operation, whereby the Wirral Infection Prevention and Control Team target support towards care homes and practices failing to meet current infection control targets. A range of support is provided such as additional training and development of improvements plans. The work of this service complements the Wirral health protection priority to protect the health of residents in care homes.

#### [Wirral Immunisation Steering Group](#)

The uptake of immunisations in Wirral is monitored by Public Health England (PHE) Cheshire and Merseyside Screening and Immunisation Coordinator. On quarterly basis stakeholders from across the delivery systems for immunisation meet to identify and address emerging issues. Group members include PHE, Public Health, 0 to 19 service, child health, TB service, neonatal service, and Wirral Community Infection Prevention and Control Service. The work of this group supports the Wirral health protection priority to reduce variation in vaccine uptake at 5 years and prenatal pertussis vaccine.

#### [Primary Care Training](#)

Immunisation training is provided to primary care staff annually as part of their Continuing Professional Development. This is coordinated and led by NHS England / Public Health England Cheshire and Merseyside Screening and Immunisation Coordinator. This work supports the Wirral health protection priority to reduce variation in vaccine uptake at 5 years and prenatal pertussis vaccine.

#### [Wirral Seasonal Flu Group](#)

This group was established in 2016, representing a key part of the Wirral Health Protection Priority to integrate seasonal and pandemic flu plans.

This group meets during the flu season to develop and drive an operational seasonal flu plan to reduce the risk and consequences of flu. This includes encouraging uptake of the flu vaccine and ensuring measures are in place to control and manage outbreaks.

Members include representatives from Wirral Council Public Health team, Public Health England, Wirral Clinical Commissioning Group and healthcare providers. This group also supports the Wirral health protection priority to integrate seasonal and pandemic influenza plans.

### **PHE Screening and Immunisation Quarterly Reports**

PHE produce a Screening & Immunisation report for Cheshire. This is updated quarterly and shared at the Wirral Health Protection Forum following NHS England Governance sign off. This provides data by CCG/ Local Authority and by Provider, including trend data by GP practice population. For each section, there is an explanatory narrative. This process makes the data generally up to six months behind actual activity. Behind the report there is detailed practice specific performance data that can be shared with Local Authority or Clinical Commissioning Group analyst colleagues on request.

### **Pertussis vaccination uptake in pregnancy**

There is a national working group to increase uptake of pertussis vaccination during pregnancy. Locally this is being addressed as part of the Wirral Immunisation Steering Group and is also part of the Antenatal Programme Board to ensure both the influenza and pertussis vaccines are offered to all pregnant women at the appropriate time. This work supports the Wirral health protection priority to reduce variation in vaccine uptake at 5 years and prenatal pertussis vaccine.

## **What are the challenges?**

### **Key gaps in knowledge and services**

The inferences that can be drawn from local and national data are limited by the nature, completeness, accuracy, timeliness and level of availability of those data. The notified records and reports of disease include cases that are confirmed and not confirmed and are, therefore, subject to inaccuracies. These records also do not include the many cases do not present to health care services, and are not, therefore, reported to PHE.

The completeness of data for child and adult vaccination coverage is dependent on timely GP practice returns. The completeness of the data for pertussis (whooping cough) vaccination in pregnancy is reliant on the recording of delivery dates in mothers' medical records. Women not registered with a GP (and therefore less likely to be having regular contact with the health service prior to delivery) will not be captured by this reporting system. The accuracy of the vaccination data from GP systems is reliant on correct and complete clinical records that are correctly coded.

Currently, with the exception of flu data which is available by practice, vaccination data is only available for Wirral as a whole. This limits targeted action to increase uptake and reduce inequalities in uptake. Efforts should be made to improve data capture and appropriate information sharing through GP practices.

## What is coming on the horizon?

### Strategy to vaccinate care home staff

In October 2017, [NHS England](#) revealed a strategy to administer the influenza vaccination to care home staff nationally to boost vaccination uptake. Wirral had already implemented a similar strategy, which is currently underway. The success of this scheme will be evaluated in 2018.

### Recommissioning of Wirral TB and Hepatitis C Service

The Tuberculosis (TB) and Hepatitis C services in Wirral are currently being reviewed ahead of a re-commissioning of these services. Consultation is underway with specialists, community services and service users to ensure that both services reflect the current need in Wirral. These services play an important role in raising the awareness and understanding of TB and Hepatitis C locally. They provide rapid assessment for people at risk, access to specialist services and support for people undergoing treatment for TB and Hepatitis C.

## What does the research suggest as further actions?

Wirral Health Protection priorities should be reviewed and revised by the Wirral Health Protection Group based on the findings of this JSNA.

In light of the notable increase in scarlet fever cases reported in Wirral in 2016, monitoring and surveillance should be focussed on improving current understanding of local outbreak pathways and preparing to respond to any further increase in cases.

Efforts to monitor and audit infectious disease outbreaks in community settings should be continued to inform best practice in infection control moving forward, particularly in care home settings with vulnerable residents.

Further actions should focus on increasing the seasonal influenza vaccine uptake to reach national targets. This will be mobilised by work of the Wirral Seasonal Flu Group. Efforts should also be targeted towards improving uptake of the influenza vaccine among healthcare workers in Cheshire & Wirral Partnership NHS Foundation Trust and Wirral Community NHS Foundation Trust.

More work is needed to ensure all childhood vaccinations meet current target coverage to strengthen herd immunity within the local community.

## Key content

## Links

**Joint Committee on vaccination and Immunisation.** Available at:

<https://www.gov.uk/government/groups/joint-committee-on-vaccination-and-immunisation> [cited 20/03/18]

**NHS Choices.** NHS choices for information on infectious diseases. Available at:

<http://www.nhs.uk/Conditions/Pages/hub.aspx> [cited 20/03/18]

**Public Health England.** Public Health Outcomes Framework. Available at:

<http://www.phoutcomes.info/> [cited 20/03/18]

**Public Health England.** Public Health England list of notifiable diseases. Available at:

<https://www.gov.uk/guidance/notifiable-diseases-and-causative-organisms-how-to-report#list-of-notifiable-diseases> [cited 20/03/18]

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[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/521550/hpr1616\\_SF-GAS2.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/521550/hpr1616_SF-GAS2.pdf) [cited 20/03/18]

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[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/656687/Guidelines\\_for\\_the\\_public\\_health\\_management\\_of\\_scarlet\\_fever\\_outbreaks\\_.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/656687/Guidelines_for_the_public_health_management_of_scarlet_fever_outbreaks_.pdf) [cited 20/03/18]

**Public Health England (2018).** Pertussis vaccination programme for pregnant women update: vaccine coverage in England, July to September 2017. Health Protection Report; 12: 1. Available at:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/672129/hpr0118\\_p\\_rntl-prtsss.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/672129/hpr0118_p_rntl-prtsss.pdf) [cited 20/03/18]

**The Green Book: Immunisation against infectious disease<sup>7</sup>.** Available at:

<https://www.gov.uk/government/publications/immunisation-against-infectious-disease-the-green-book-front-cover-and-contents-page> [cited 20/03/18]

## Relevant and related National and local strategies

**NHS vaccination schedule.** Available at:

<http://www.nhs.uk/conditions/vaccinations/pages/vaccination-schedule-age-checklist.aspx> [cited 20/03/18]

**Public Health England - PHE (2014)** Communicable Disease Outbreak Management: Operational guidance. London: crown copyright.

**Public Health England - PHE (2016)** Flu Plan Winter 2017/18. London: Crown Copyright.

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[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/600532/annual\\_flu\\_plan\\_2017to2018.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/600532/annual_flu_plan_2017to2018.pdf) [cited 20/03/18]

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**Public Health England – PHE (2017)** Seasonal influenza vaccine uptake in healthcare workers (HCWs) in England: Winter season 2016 to 2017. London: Crown Copyright

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**Wirral Health Protection Group.** Annual Report, 2015/16. Available at:

<https://www.wirralintelligenceservice.org/media/2065/hp-final-annual-partnership-report-2015--2016.pdf> [cited 20/03/18]

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