



Public Health
England

Protecting and improving the nation's health

The national flu immunisation programme 2019/20

**Barnsley Practice Nurse Forum
November 2019**

Key messages

- flu immunisation is one of the most effective interventions we can provide to reduce harm from flu and pressures on health and social care services during the winter
- it is important to increase flu vaccine uptake in clinical risk groups because of increased risk of death and serious illness if people in these groups catch flu
- for a number of years, only around half of patients aged six months to under 65 years in clinical risk groups have been vaccinated
- influenza during pregnancy may be associated with perinatal mortality, prematurity, smaller neonatal size, lower birth weight and increased risk of complications for mother
- vaccination of health and social care workers protects them and reduces risk of spreading flu to their patients, service users, colleagues and family members
- by preventing flu infection through vaccination, secondary bacterial infections such as pneumonia are prevented. This reduces the need for antibiotics and helps prevent antibiotic resistance

Flu overview

- flu is an acute viral infection of the respiratory tract (nose, mouth, throat, bronchial tubes and lungs)
- it is a highly infectious illness which spreads rapidly in closed communities
- even people with mild or no symptoms can infect others
- most cases in the UK occur during an 8 to 10 week period during the winter

Features of flu

- easily transmitted by droplets, small-particle aerosols and by hand to mouth/eye contamination from a contaminated surface or respiratory secretions of infected person
- people with mild or no symptoms can still infect others
- incubation period 1-5 days (average 2-3 days) though may be longer especially in people with immune deficiency

Common symptoms include:

- sudden onset of fever, chills, headache, muscle and joint pain and extreme fatigue
- dry cough, sore throat and stuffy nose
- in young children gastrointestinal symptoms such as vomiting and diarrhoea may be seen

Possible complications of flu

Common:

- bronchitis
- otitis media (children), sinusitis
- secondary bacterial pneumonia

Less common:

- meningitis, encephalitis, meningoencephalitis
- primary influenza pneumonia

Risk of most serious illness is higher in

- children under six months
- older people
- those with underlying health conditions such as respiratory disease, cardiac disease, long-term neurological conditions or immunosuppression
- pregnant women (flu during pregnancy may be associated with perinatal mortality, prematurity, smaller neonatal size and lower birth weight)

Influenza viruses

A viruses

- cause outbreaks most years and are the usual cause of epidemics and pandemics
- live and multiply in many different animals and may spread between them
- birds, particularly wildfowl, are the main animal reservoir

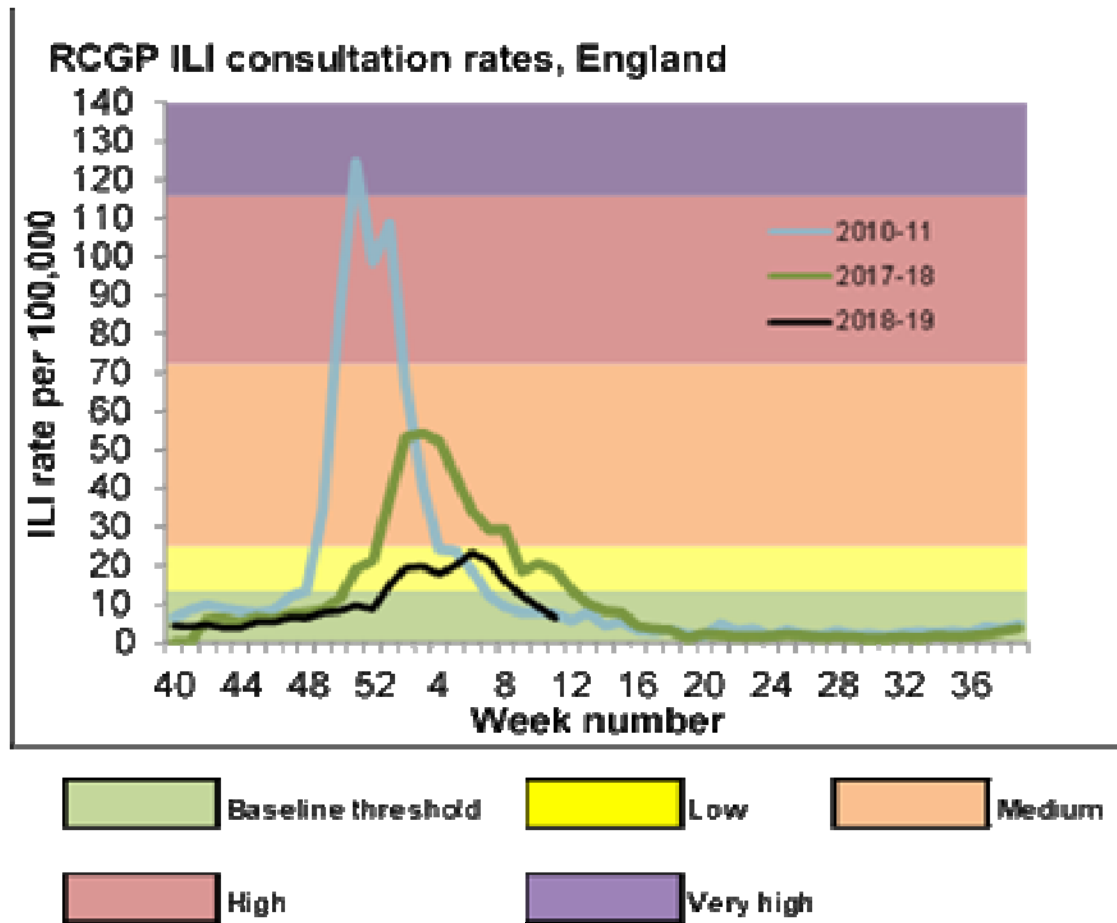
B viruses

- tend to cause less severe disease and smaller outbreaks
- predominantly found in humans
- burden of disease mostly in children

Flu vaccine effectiveness

- efficacy varies from one season to the next. Overall efficacy is calculated at between 50-60% for adults aged 18 to 65 years
- lower efficacy in elderly although immunisation shown to reduce incidence of severe disease including bronchopneumonia, hospital admissions and mortality
- provisional end-of-season adjusted vaccine effectiveness (VE) estimates for 2018/19 showed an overall VE of 44.3% against a laboratory confirmed infection resulting in a primary care consultation
- **VE was 49.9% in ≥ 65 year olds and 62.0% for those ≥ 65 year olds who received the adjuvanted vaccine (aTIV) so this vaccine provided significant protection**
- **VE was 48.6% for 2 to 17 year olds receiving quadrivalent live attenuated influenza vaccine (LAIV)**
- **it is hoped that the use of adjuvanted, cell-based, high dose and quadrivalent vaccines in the 2019/20 flu season will result in improved vaccine effectiveness against flu**

Flu epidemiology



- flu activity usually between September to March (weeks 37 and 15)
- impact of flu varies from year to year
- low to moderate levels of flu seen in the community in 2018/19 season
- A(H1N1)pdm09 dominant influenza A sub-type then A(H3N2) in 2018/19 season
- high number admissions to hospital and ICU/HDU (mainly young and middle-aged adults) – although slightly lower than seen in 2017/18 flu season, number was still higher than all other flu seasons since 2010/11

Weekly all age GP influenza-like illness rates for 2018/19 and past seasons, England (RCGP)

Flu eligibility/responsibility 19/20

Eligible Group	Responsibility of
2 & 3 yrs on 31 st August 2019, so will be turning 4 yrs during the season. DOB 1-9-15 to 31-8-17	GP Practice
School yrs R,1,2,3,4,5 & 6	School provider Intrahealth GP (to only at risk)
6 months to 18yrs in clinical risk groups	GP School provider (if eligible as above)
18yrs to under 65 yrs in clinical risk groups	GP Pharmacy
<u>Pregnant women</u> (include those who become pregnant during flu season & those who were pregnant in last season)	GP Pharmacy Maternity services
<u>Aged 65 years and over</u> (including those turning 65 during the flu season - prior to 31.3.20) DOB on or before 31.3.1955	GP Pharmacy
Those living in long-stay residential care homes or other long-stay care facilities	GP Pharmacy (if invited in by care home)
Frontline health and social care workers	GP - opportunistic Pharmacy Employer (Occupational health)

Barnsley uptake 18/19

Cohort	Total percentage uptake 17/18	Total percentage uptake 18/19	Number left to vaccinate to meet target 18/19	Aspirational target 19/20
Aged 65 years and over	72.6%	71.9%	1523	75%
6 months to 65 at risk	51.6%	50.7%	1419	55%
Pregnant women (Immform)	50.2%	47%	194	55%
Children aged 2 years	49.8%	43.5%	590	50%
Children aged 3 years	52.5%	51.7%	378	50%

Barnsley uptake 18/19

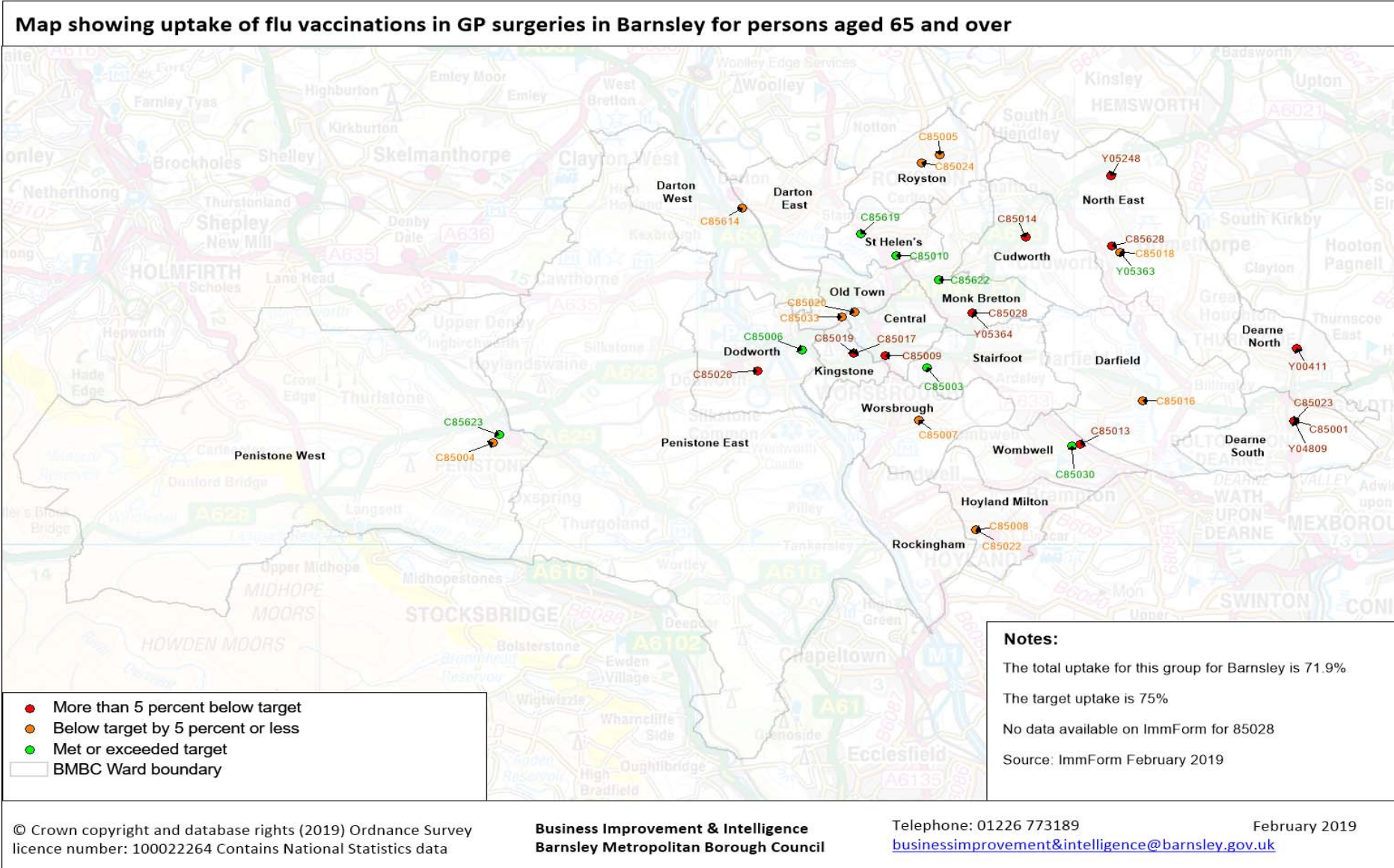
Condition	Total percentage uptake 17/18	Total percentage uptake 18/19	Number left to vaccinate to meet target 18/19	Aspirational target 19/20
Chronic Heart	55.6%	53.9%	65	55% or Higher
Chronic respiratory	54.9%	53.7%	193	
Chronic Kidney	56.1%	56.5%	Met target	
Chronic Liver	43.2%	42.1%	130	
Diabetes	65.3%	63.8%	Met target	
Immunosuppression	53.5%	55.3%	Met target	
Chronic Neurological	55.6%	54.6%	20	
Morbid obesity with clinical condition	59.7%	58.7%	Met target	
Morbid obesity with no clinical condition	32.1%	22.2%	1515	
Asplenia or dysfunctional of the spleen	48.1%	50.8	40	

School Vaccination programme

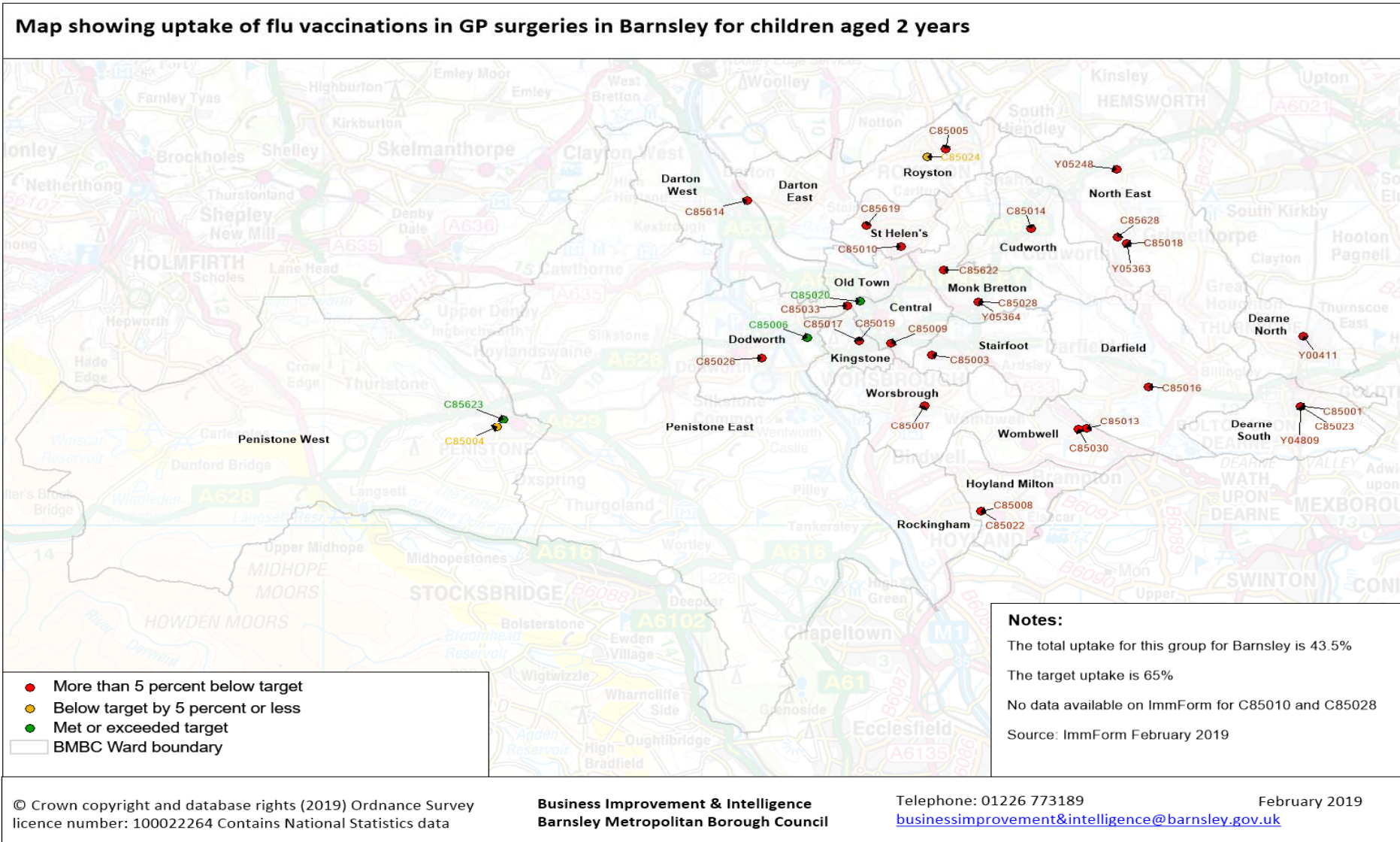
	Reception	Y1	Y2	Y3	Y4	Y5
Barnsley	78.5%	80.5%	77.3%	76.8%	76.1%	75.5%
Bassetlaw	71.2%	70.4%	70.0%	69.6%	66.6%	65.4%
Doncaster	70.7%	69.4%	68.2%	66.3%	65.5%	63.8%
Rotherham	64.9%	67.4%	66.9%	64.9%	62.4%	60.6%
Sheffield	60.2%	60.9%	60.9%	59%	57.4%	55%

Aspirational target is 65% 19/20

GP practice uptake map - 65 years

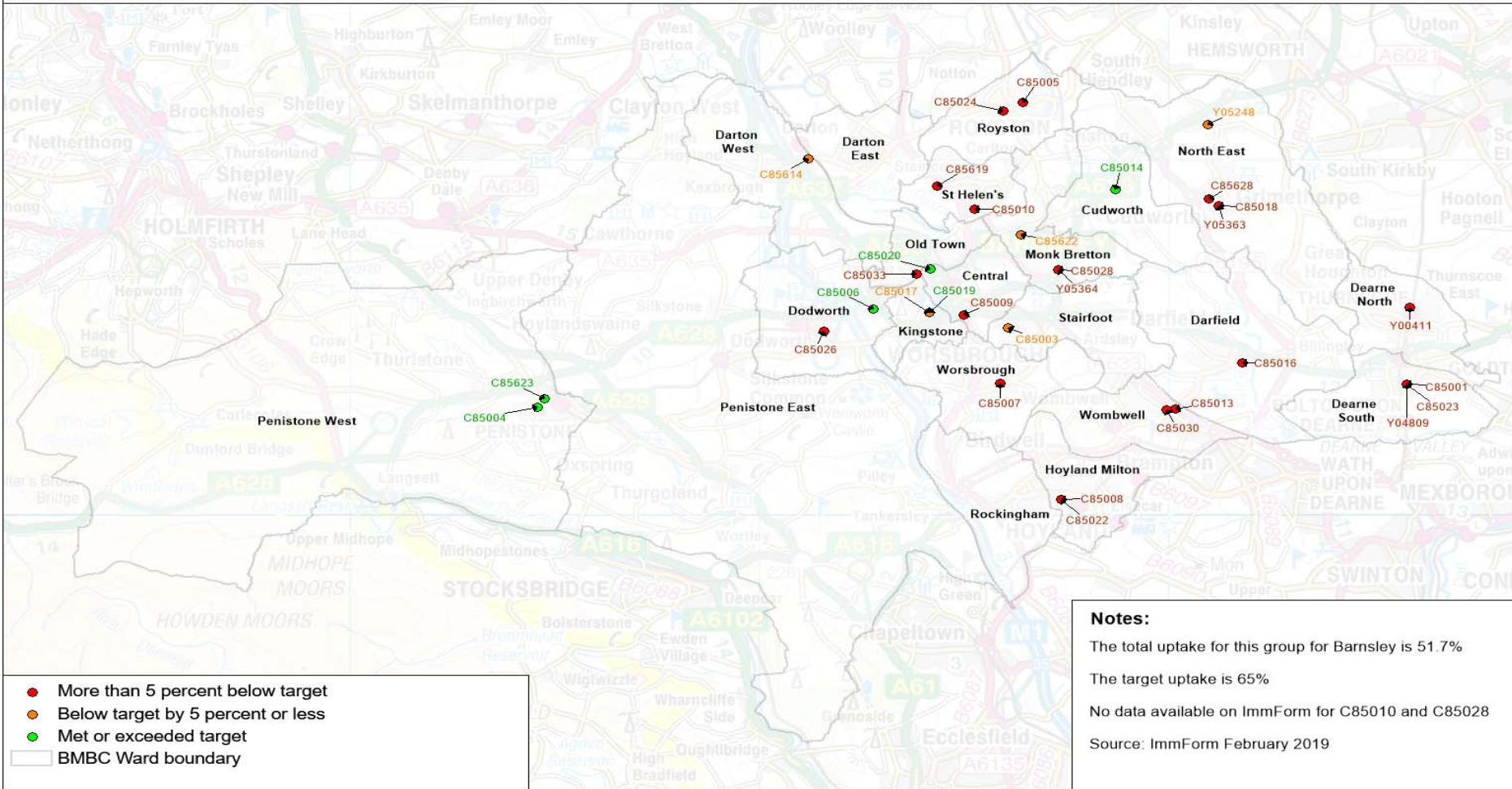


GP practice uptake map – 2 year



GP practice uptake map – 3 year

Map showing uptake of flu vaccinations in GP surgeries in Barnsley for children aged 3 years



Rationale for vaccinating children against flu

Extension of the seasonal flu vaccination programme to children aims to appreciably lower the public health impact of flu by:

- **providing direct protection** thus preventing a large number of cases of flu infection in children
- **providing indirect protection** by lowering flu transmission from children:
 - to other children
 - to adults
 - to those in the clinical risk groups of any age

Reducing flu transmission in the community averts many cases of severe flu and flu-related deaths in older adults and people with clinical risk factors

Annual administration of flu vaccine to children is expected to substantially reduce flu-related illness, GP consultations, hospital admissions and deaths

Key messages to health and social care workers

- getting vaccinated against flu can help protect you, your patients and family
- everyone is susceptible to flu, even if you are in good health and eat well
- you can be infected with the virus and have no symptoms but can still pass flu virus to others including patients or residents
- duty of care as professionals to patients or residents to do everything in your power to protect them against infection, including being immunised against flu
- good infection control measures reduce spread of flu and other acute respiratory infections in healthcare settings but are not sufficient alone to prevent them
- impact of flu on frail and vulnerable patients can be fatal and outbreaks can cause severe disruption in communities, care homes and hospitals
- flu vaccine has a good safety record and will help protect you. It cannot give you flu. Having the vaccination can encourage your colleagues to do likewise
- throughout the last ten years there has generally been a good to moderate match between the strains of flu virus in the vaccine and those that subsequently circulated
- staff act as positive role models for patients aged 65 and over, those with long-term health conditions and pregnant women to take up the offer too

Types of flu vaccines

Two main types of vaccine available:

- inactivated – given by injection
- live attenuated – given by nasal application

None of the flu vaccines can cause clinical influenza in those that can be vaccinated

- **Trivalent:** flu vaccines contain two subtypes of Influenza A and one type B virus
- **Quadrivalent** vaccines contain two subtypes of Influenza A and both B virus types

As quadrivalent vaccines contain both lineages of B viruses and therefore may provide better protection against the circulating B strain(s) than trivalent flu vaccines, **the live intranasal vaccine offered to children aged 2 years and over is a quadrivalent vaccine**

Quadrivalent vaccines are now recommended for pregnant women and individuals in risk groups aged 6 months to under 65 years

In 2019/20 flu season, a cell based quadrivalent vaccine will be available for both 65y and over and under 65 years at risk groups

Flu vaccine composition 2019/20

Quadrivalent vaccines will contain the following four viruses:

- an A/Brisbane/02/2018 (H1N1)pdm09-like virus
- an A/Kansas/14/2017 (H3N2)-like virus
- a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage)
- a B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage)

Trivalent vaccines will not contain:

- B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage).

More detailed information on the characteristics of the available vaccines, including age indications can be found in the Influenza chapter of the Green Book (Immunisation against infectious disease) and the individual product SPCs

Live attenuated influenza vaccine

(LAIV)

- a live attenuated intranasal spray is the recommended vaccine for the childhood flu programme
- the live attenuated influenza vaccine (LAIV) has been shown to be more effective in children compared with inactivated influenza vaccines
- it may offer some protection against strains not contained in the vaccine as well as to those that are and has the potential to offer better protection against virus strains that have undergone antigenic drift
- since this vaccine is comprised of weakened whole live virus, it replicates natural infection which induces better immune memory (thereby offering better long-term protection to children than from the inactivated vaccines)
- in addition to being attenuated (weakened), the live viruses in LAIV have been adapted to cold so that they cannot replicate efficiently at body temperature
- LAIV has a good safety profile in children aged two years and older

Summary table of which flu vaccines to offer children and adults

Eligible group	Type of flu vaccine
At risk children aged from 6 months to less than 2 years	Offer standard egg-grown quadrivalent influenza vaccine (QIVe)* QIVe is offered to these children as the live attenuated influenza vaccine (LAIV) is not licenced for children under 2 years of age.
At risk children aged 2 to under 18 years	Offer live attenuated influenza vaccine (LAIV) If child is contraindicated to LAIV (or it is otherwise unsuitable) offer standard egg-grown quadrivalent vaccine (QIVe)*
Universal children's programme: Those aged 2 and 3 years on 31 August 2019 All primary school aged children (aged 4 to 10 on 31 August 2019)	Offer live attenuated influenza vaccine (LAIV) If child is in at risk group and is contraindicated to LAIV (or it is otherwise unsuitable) offer standard egg-grown quadrivalent vaccine (QIVe)*
At risk adults (aged 18 to 64), including pregnant women	Offer EITHER standard egg-grown quadrivalent influenza vaccine (QIVe) OR cell-grown quadrivalent influenza vaccine (QIVc) These two vaccines are considered equally suitable for use in adults under 65 years of age.
Those aged 65 years and over**	Offer EITHER adjuvanted trivalent influenza vaccine (aTIV)*** OR cell-grown quadrivalent influenza vaccine (QIVc) These vaccines are considered equally suitable for use in adults aged 65 and over.

* For 2019/20 PHE has purchased QIVe for children. (However, please note that QIVc is licenced for children aged 9 years and over).

** JCVI recommended that TIV-HD is equally suitable for use in those aged 65 and over. However, it is not eligible for reimbursement in the 2019/20 season.

***Although aTIV is not licensed for those less than 65 years of age, it is recommended that those who become 65 before 31 March 2020 can be offered the vaccine 'off label'. The PHE Patient Group Direction (PGD) for inactivated influenza vaccine for 2019/20 will incorporate this off label indication.

Inactivated flu vaccines

- a number of different manufacturers produce flu vaccines. Those available for 2019/20 season are listed in 'The national flu immunisation programme 2019/20' letter available on PHE website
- inactivated influenza vaccines are administered by intramuscular injection
- most currently available flu vaccines are prepared from viruses grown in embryonated hens' eggs and details of the ovalbumin content of each vaccine is made available on the PHE flu webpage
- some flu vaccines are restricted for use in particular age groups
- **the SPC for individual products should always be referred to when ordering vaccines for particular patients**

Supplier	Name of product	Vaccine type	Age indications	Ovalbumin content micrograms/dose	Contact details
AstraZeneca UK Ltd	Fluenz Tetra	Quadrivalent LAIV (live attenuated influenza vaccine) supplied as nasal spray suspension	From 24 months to less than 18 years of age	Less than 0.024 micrograms per 0.2 ml dose	0845 139 0000
GSK	Fluarix™ Tetra ▼	QIVe (standard egg-grown quadrivalent influenza vaccine), split virion, inactivated	From 6 months	Equal to or less than 0.05 micrograms per 0.5 ml dose	0800 221 441
MASTA	Quadrivalent influenza vaccine ▼	QIVe (standard egg-grown quadrivalent influenza vaccine), split virion, inactivated	From 6 months	Equal to or less than 0.05 micrograms per 0.5 ml dose	0113 238 7552
Mylan	Quadrivalent influenza vaccine Tetra MYL ▼	QIVe (standard egg-grown quadrivalent influenza vaccine), supplied as surface antigen, inactivated	From 3 years	Equal to or less than 0.1 micrograms per 0.5 ml dose	0800 358 7468
	Quadrivalent Influx sub-unit Tetra ▼	QIVe (standard egg-grown quadrivalent influenza vaccine), supplied as surface antigen, inactivated	From 3 years	Equal to or less than 0.1 micrograms per 0.5 ml dose	
Sanofi Pasteur Vaccines	Quadrivalent influenza vaccine ▼	QIVe (standard egg-grown quadrivalent influenza vaccine), split virion, inactivated	From 6 months	Equal to or less than 0.05 micrograms per 0.5 ml dose	0800 854 430
	Trivalent Influenza Vaccine, High-Dose ▼	TIV-HD (standard egg-grown trivalent influenza vaccine), split virion, inactivated	65 years of age and over	Equal to or less than 1.0 micrograms per 0.5 ml dose	
Seqirus UK Ltd	Flucelva® Tetra ▼	QIVc (cell-grown quadrivalent influenza vaccine) supplied as surface antigen, inactivated, prepared in cell cultures	From 9 years	n/a (egg-free)	08457 451 500
	Flud®	aTIV (adjuvanted trivalent influenza vaccine) supplied as surface antigen, inactivated, adjuvanted with MF59C.1	65 years of age and over	Equal to or less than 0.2 micrograms per 0.5 ml dose	

Recording flu vaccine given

As a wide variety of influenza vaccines are on the UK market each year, it is especially important that the following information be recorded:

- vaccine name, product name, batch number and expiry date
- dose administered
- date immunisation given
- route/site used
- name and signature of vaccinator

This information should be recorded in:

- patient's GP record (or other patient record, depending on location)
- personal Child Health Record (the 'Red Book') if a child
- practice computer system
- Child Health Information System if a child

Information on flu vaccines administered outside general practice (e.g. maternity providers, pharmacies) must be passed back to the patient's GP practice in a timely manner (within 48 hours) so patient records can be updated

Achieving high uptake (GP Practice checklist)

In order to obtain high vaccine uptake, it is recommended that GP practices:

1. Identify a named lead individual within the practice who is responsible for the flu vaccination programme and liaises regularly with all staff involved in the programme
2. Hold a register that can identify all pregnant women and patients in the under 65 years at risk groups, those aged 65 years and over, and those aged two to three years
3. Update the patient register throughout the flu season, paying particular attention to the inclusion of women who become pregnant and patients who enter at-risk groups during the flu season
4. Submit accurate data on the number of patients eligible to receive flu vaccine and the flu vaccinations given to its patients on ImmForm (www.immform.dh.gov.uk), ideally using the automated function. Submit data on uptake among healthcare workers in primary care using the ImmForm data collection tool

Achieving high uptake (GP Practice checklist cont'd)

5. Order sufficient flu vaccine taking into account past and planned improved performance, expected demographic increase, and ensure that everyone eligible is offered the most effective flu vaccine for their age group consistent with national guidance. For children follow the guidance on ordering the vaccine from PHE central supplies through the ImmForm website
6. Invite patients recommended to receive the flu vaccine to a flu vaccination clinic or to make an appointment (eg by letter, email, phone call, text). This is a requirement of the enhanced service specification
7. Follow-up patients, especially those in at risk groups, who do not respond or fail to attend scheduled clinics or appointments and have not been offered the vaccine elsewhere
8. Start flu vaccination as soon as practicable after receipt of the vaccine. Aim to complete immunisation of all eligible patients before flu starts to circulate and ideally by end of November
9. Collaborate with maternity services to offer and provide flu vaccination to pregnant women and to identify, offer and provide to newly pregnant women as the flu season progresses

Achieving high uptake (GP Practice checklist

11. Offer flu vaccination in bespoke clinics and opportunistically during routine primary care encounters
12. Where the patient has indicated they wish to receive the vaccination but is physically unable to attend the practice (for example is housebound) the practice must make all reasonable effort to ensure the patient is vaccinated. The GP practice and/or CCG will collaborate with other providers such as community pharmacies and community or health and social care trusts to identify and offer flu vaccination to residents in care homes, nursing homes and house-bound patients, and to ensure that mechanisms are in place to update the patient record when flu vaccinations are given by other providers

The GP practice checklist highlights good practice

- it is based upon the findings from a study examining the factors associated with higher vaccine uptake in general practice

Dexter L et al. (2012) Strategies to increase influenza vaccination rates: outcomes of a nationwide cross-sectional survey of UK general practice. BMJ Open 2012;2

- GP practices are encouraged to review their systems in the light of the checklist

Most recommendations will apply to other settings where flu vaccine is given

For guidance on improving uptake among children in general practice see 'Increasing influenza immunisation uptake among children':

www.gov.uk/government/collections/annual-flu-programme

Key messages

- flu immunisation is one of the most effective interventions we can provide to reduce harm from flu and pressures on health and social care services during the winter
- it is important to increase flu vaccine uptake in clinical risk groups because of increased risk of death and serious illness if people in these groups catch flu
- for a number of years, only around half of patients aged six months to under 65 years in clinical risk groups have been vaccinated
- influenza during pregnancy may be associated with perinatal mortality, prematurity, smaller neonatal size, lower birth weight and increased risk of complications for mother
- vaccination of health and social care workers protects them and reduces risk of spreading flu to their patients, service users, colleagues and family members
- by preventing flu infection through vaccination, secondary bacterial infections such as pneumonia are prevented. This reduces the need for antibiotics and helps prevent antibiotic resistance

Resources

- **Letter detailing 2019/20 flu programme**
Available at: www.gov.uk/government/publications/national-flu-immunisation-programme-plan
- **Green Book Influenza chapter** Available at: www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book
- **Leaflets, posters, information materials and other resources to support the annual flu programme** Available at: www.gov.uk/government/collections/annual-flu-programme
- **PGD templates for flu vaccines** www.gov.uk/government/collections/immunisation-patient-group-direction-pgd
- **A video for health professionals on how to administer the LAIV vaccine** produced by NHS Education for Scotland is available at www.nes.scot.nhs.uk/education-and-training/by-theme-initiative/public-health/health-protection/seasonal-flu/childhood-seasonal-flu-vaccination-programme-resources-for-registered-practitioners.aspx
- **Summary of Product Characteristics (SPC) for flu vaccines** are available at www.medicines.org.uk/emc/
- **Leaflets and posters** prepared specifically for the flu programme. Available at: www.gov.uk/government/organisations/public-health-england/series/annual-flu-programme
- **Healthcare Workers Flu Immunisation resources** (leaflets, posters, guides and resource packs) available at <https://campaignresources.phe.gov.uk/resources/campaigns/92-healthcare-workers-flu-immunisation-/resources>

