Immunisation Update Seminar
July/August 2015

Public Health Protection Unit
NHSGGC
Seminar Programme

12.05pm  New meningococcal immunisation programmes
         - Men B
         - Men ACWY

12.50pm  Vaccine ordering and cold chain maintenance

1.00pm   Update on implementation of recently introduced
         immunisation programmes
         - Rotavirus
         - Pertussis
         - Zostavax
Seminar Programme

1.20pm Update on flu vaccination programme
   - Pre-school
   - Primary School
   - Over 65s / under 65s clinical at risk groups

1.40pm Questions and answers

2.00pm Close
Men B and Men ACWY vaccinations programme

- Describe epidemiology of meningococcal diseases in the UK and Scotland
- Describe the immunisation programme against meningococcal B disease and the use of the Bexsero vaccine for infants
- Describe the urgent vaccination programme against meningococcal W disease targeting 14 to 18 year olds by using MenACWY vaccines
- Useful resources
Dear Colleague

INTRODUCTION OF MENINGOCOCCAL GROUP B (MEN B) VACCINATION PROGRAMME IN 2015/16

1. We are writing to inform you that a meningococcal group B (Men B) vaccine will be added to the routine childhood vaccination programme from 1 September 2015.

2. From 1 September 2015, the Men B vaccine, Bexsero®, will be routinely offered to all babies born on or after 1 July 2015 along with the existing routine vaccinations when they attend for their childhood vaccination appointments at 2, 4 and 12-13 months.
Dear Colleague

Meningococcal ACWY (Men ACWY) vaccination programme: University freshers and adolescents aged 14-18.

1. We are writing to inform you of the introduction of a Men ACWY vaccine into the national vaccination programme this year from 1 August 2015. This programme is required to respond to a sudden, rapid and accelerating increase in cases of meningococcal group W (Men W) in the UK. The aim of the Men ACWY vaccination programme is to provide individual protection to those at higher risk of infection and to reduce carriage of the four strains of meningococcal bacteria to provide herd immunity to the wider population.
What is Meningococcal disease?

- Meningococcal disease occurs as a result of an invasive bacterial infection caused by Neisseria meningitidis.
- Transmission is by aerosol, droplets or direct contact and usually requires frequent or prolonged close contact, for example those living in the same household and/or intimate contacts.
- Incubation period 2 – 7 days.
- Meningococcal infection most commonly presents as either meningitis or septicaemia, or a combination of both.
- There are 12 serogroups of Neisseria meningitidis.
- In the UK serogroups B is currently the most common followed by W, less common include serogroups C and Y.
## Clinical presentation of Meningococcal infection

<table>
<thead>
<tr>
<th>Babies and toddlers</th>
<th>Children and young adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever with poor peripheral perfusion</td>
<td>Fever with poor peripheral perfusion</td>
</tr>
<tr>
<td>Poor feeding, refusing food or vomiting</td>
<td>Vomiting</td>
</tr>
<tr>
<td>Tense, bulging fontanelle and photophobia</td>
<td>Severe headache and photophobia</td>
</tr>
<tr>
<td>Fretful, unusual cry, moaning or rapid breathing</td>
<td>Confusion and irritability</td>
</tr>
<tr>
<td>Neck stiffness</td>
<td>Neck stiffness and muscle pain</td>
</tr>
<tr>
<td>Pale blotchy complexion and/or non blanching rash</td>
<td>Pale blotchy complexion and/or non blanching rash</td>
</tr>
<tr>
<td>Drowsy and loss of consciousness</td>
<td>Drowsy and loss of consciousness</td>
</tr>
</tbody>
</table>

**Symptoms can appear in any order, some may not appear at all**
The meningococcal rash

- The rash starts as a cluster of pinprick blood spots under the skin, spreading to form bruises. It can appear anywhere on the body.
- It can be distinguished from other rashes by the fact that it does not fade when pressed under the bottom of a glass (The Tumbler Test).
- A febrile illness and rash that does not fade under pressure is a sign of meningococcal septicaemia.

The Tumbler Test

Image source: Dr Petter Brandtzaeg, courtesy of Meningitis Trust
Meningococcal disease, potential complications

- In Scotland in 2011 the case fatality ratio was 5%
- Mortality higher in cases with septicaemia than those with meningitis alone
- Most common long term effects:
  - Skin scarring
  - Seizures
  - Limb amputation
  - Brain Damage
  - Hearing loss
Meningococcal disease: This four-month-old infant has gangrene of her hands and lower extremities as a result of meningocococcemia.
What is meningococcal disease?

- Meningococcal disease occurs as a result of an invasive bacterial infection caused by *Neisseria meningitidis*, which is commonly known as the meningococcus.

- Important clinical and public health problem:
  - rare but serious
  - disease onset is sudden and often dramatic

- The most common clinical presentations are meningitis and septicaemia: significant morbidity and mortality.

- Significant case fatality rate ~10% but varies with age, capsular group, and clinical presentation:
  - 1 in 8 survivors have long term complications
  - Brain damage, deafness, epilepsy, limb/digit loss, cognitive deficit
Carriage and Transmission

- Transmitted by person-to-person contact
- Pharyngeal acquisition sets the scene for invasive meningococcal disease
- *N meningitidis* is predominately carried by teenagers/young adults

Meningococcal carriage prevalence – peak among adolescents/young adults

- Infants: 4.5%
- 19 year olds: 23.7%
- 50 year olds: 7.8%

Impact of MenC vaccination programme

Meningococcal C cases in Scotland 1997-2012

- Introduction of Meningococcal C vaccine
- Under 20 years old
- 20 years and over

Source: HPS
Meningococcal disease cases reported to MIDAS by serogroup, 1999-2015* (first quarter)
Meningococcal B disease

- Most common serogroup causing disease in the UK
- Serogroup B accounted for 69% of all reported meningococcal cases in Scotland in 2014
- Most commonly affect children under 2 years, with a peak rate in infants aged 5 months and gradually declining and remain low until 12 years of age.
- Also a second but smaller peak for older adolescents at around age 18 years
Why routine immunisation of infants at 2 months of age?

- Meningococcal disease **can affect all age groups** but the rates of disease are highest in the first two years of life.
- Cases of invasive meningococcal group B disease increase from birth and peak to their highest levels around **5 months** of age before declining gradually over subsequent months.
- In considering the epidemiological and economic evidence as well as the vaccine safety and efficacy, the JCVI decided to prioritise young infants at 2 months of age with the aim of providing **optimal protection as early as possible** and before the peak increase in disease.
Meningococcal B immunisation Programme

- **Routine cohort:** from 1\(^{st}\) Sept 2015, all infants born on or after 1\(^{st}\) July 2015 will be offered Men B vaccine at 2, 4 and 12-13 months

- **Catch-up cohort (opportunistic and slightly altered schedule):** from 1\(^{st}\) Sept 2015, all infants born between 1\(^{st}\) May and 30\(^{th}\) June 2015 will be offered Men B vaccine opportunistically when they attend for their routine immunisation at 3 and 4 months followed by a booster at 12-13 months
Meningococcal B Programme: cont.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Dates of birth</th>
<th>Recommended immunisation schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine</td>
<td>Those born on or after 1 July 2015</td>
<td>2, 4 and 12-13 months (2+1) but see later</td>
</tr>
<tr>
<td>Opportunistic Catch-up Infants attending for 3 and 4 months routine immunisations</td>
<td>Those born on 1\textsuperscript{st} June 2015 to the 30\textsuperscript{th} June 2015</td>
<td>3, 4 and 12-13 months (2+1)</td>
</tr>
<tr>
<td></td>
<td>Those born 1\textsuperscript{st} May 2015 to the 31\textsuperscript{st} May 2015</td>
<td>4 and 12-13 months (1+1)</td>
</tr>
</tbody>
</table>
Meningococcal B immunisation Programme: cont.

- For catch up, give a dose of MenB vaccine to all babies presenting for their 2\textsuperscript{nd} and 3\textsuperscript{rd} routine primary vaccination dose from 1\textsuperscript{st} sept
- **No** 12-13 months booster dose given unless they already received at least one primary dose
- Infants born before 1\textsuperscript{st} May **not** included in the Men B vaccination programme
Meningococcal B immunisation programme: cont.

- **Routine cohort (born on and after 1\textsuperscript{st} July):** called by SIRS for 3 doses but in reality only called by SIRS those born on and after 8\textsuperscript{th} July

- **Opportunistic catch up:** given when infants present for 2\textsuperscript{nd} and 3\textsuperscript{rd} routine immunisation schedule at 3 and 4 months and booster dose at 12-13 months. No SIRS call recall but a list of eligible infants provided to clinic (boxi report for those born between 1\textsuperscript{st} May to 7\textsuperscript{th} July 2015)
The recommended vaccine: Bexsero®

- **Brand name**: Bexsero®
- **Generic Name**: *Neisseria meningitidis* group B NHBA fusion protein, *Neisseria meningitidis* group B NadA protein, *Neisseria meningitidis* group B fHbp fusion protein **and** a preparation of *Neisseria meningitidis* capsular group B outer membrane vesicle (OMV) *Neisseria meningitidis* group B strain NZ98/254
- Multi-component **inactivated vaccine** marketed by GlaxoSmithKline
- **Licensed** for use from 2 months of age
- Routinely **recommended** for infants at 2 months of age as part of the primary immunisation schedule at 2, 4 and 12 months (note: SPC schedule may differ)
The recommended vaccine: Bexsero® contd.

- Bexsero® has been shown to be immunogenic in infants and toddlers
- Because the incidence of meningococcal disease is so low, there have been no clinical trials to demonstrate vaccine effectiveness against invasive disease
- In laboratory tests, antibodies induced by vaccination have been shown to kill at least 73-88% of MenB strains causing meningococcal disease in the UK
- The UK is the first country in the world to introduce Bexsero® into the national infant immunisation programme
- But the vaccine has been used successfully recently in the USA in controlling outbreaks at two Universities
The recommended vaccine: Bexsero®

- Bexsero® is the recommended vaccine for the routine infant immunisation programme and is the only market authorised meningococcal B vaccine in the UK
- Bexsero® should be ordered from the vaccine holding centres as for other childhood vaccines
- It is important to familiarise with the vaccine to avoid administration errors

Image courtesy of GlaxoSmithKline
Composition of Bexsero®

Composition
1. Recombinant Neisseria meningitidis group B NHBA fusion protein
2. Recombinant Neisseria meningitidis group B NadA protein
3. Recombinant Neisseria meningitidis group B fHbp fusion protein
4. Outer membrane vesicles (OMV) from Neisseria meningitidis group B strain NZ98/254 measured as amount of total protein containing the PorA

Excipients
Sodium chloride, Histidine
Sucrose, Water for injections

Image courtesy of GlaxoSmithKline
BEXSERO® consists of 4 antigenic components chosen to achieve broad protection

- **fHbp: factor H binding protein**
  - Binds factor H, which enables bacterial survival in the blood\(^1,2\)

- **NadA: neisserial adhesin A**
  - Promotes adherence to and invasion of human epithelial cells\(^3-5\)
  - May be important for colonisation\(^4\)

- **NHBA: neisseria heparin-binding antigen**
  - Binds heparin, which may promote bacterial survival in the blood\(^7\)
  - Present in virtually all strains\(^6,7\)

- **NZ PorA P1.4: porin A**
  - Major outer membrane vesicle protein—induces strain-specific bactericidal response\(^8\)

Combining antigens that target different steps of meningococcal pathogenesis is likely to help optimize MenB vaccine effectiveness

*From Neisseria meningitidis serogroup B strain NZ 98/254 measured as amount of total protein containing the PorA P1.4.*

Preparation of Bexsero®

- Bexsero® vaccine is supplied in packs containing 10 pre-filled syringes each with a volume of **0.5mls** of suspension per syringe.
- Needles for **intramuscular** administration of the vaccine need to be ordered by practices as per normal arrangements.
- During storage, the contents of the syringe may settle with off-white deposits being noticeable.
- Before use, the pre-filled syringe must be **shaken well** so that any observable deposits are thoroughly mixed into the liquid forming an homogenous suspension that should be administered **immediately**.
- The vaccine **should not** be administered where there are variations in physical appearance (i.e. **not an homogenous suspension**) or signs of foreign particulate are observed after shaking.
Administration of Bexsero®

- Bexsero® is a newly licensed vaccine that is subject to additional monitoring under the black triangle labelling scheme (MHRA)
- It is recommended that Bexsero® should be administered ideally on it’s own in the infants left thigh (anterolateral aspect) so that any local reactions can be accurately monitored
- Due to expected local reactivity of Bexsero® it is advised to administer it alone in a separate limb to any other vaccines. This also applies to the 12-13 month appointment
- The vaccine must not be injected intravenously, subcutaneously or intradermally and must not be mixed with other vaccines in the same syringe
Administration of Bexsero® cont.

- When more than one vaccine is administered at the same time, the vaccines should be given at a separate site, preferably in a different limb.
- If more than one vaccine is given in the same limb, they should be given at least 2.5cm apart. The sites at which each vaccine was given should be noted in the individual’s health records.
- For individuals with a bleeding disorder, the vaccine should be given by deep subcutaneous injection to reduce the risk of bleeding.
Administration of Bexsero® cont.

Bexsero® should only be administered:

- Against a prescription written manually or electronically by a registered medical practitioner or other authorised prescriber
- Against a Patient Specific Direction
- Against a Patient Group Direction
Contraindications

- Bexsero® should not be administered to those who have had:
  - A confirmed anaphylaxis to a previous dose of the vaccine OR
  - A confirmed anaphylaxis to any constituent or excipient of the vaccine

- There are very few infants who cannot receive meningococcal vaccines

- Where there is doubt, appropriate advice should be sought rather than withholding immunisation
Precautions

Minor illnesses without fever or systemic upset are not valid reasons to postpone immunisation

Premature infants:

- It is important that premature infants have their immunisations at the appropriate chronological age, according to the schedule

Immunosuppression and HIV infection:

- Individuals with immunosuppression and human immunodeficiency virus (HIV) infection (regardless of CD4 count) should be given meningococcal vaccines in accordance with the routine schedule
Bexsero Reactogenicity

- Multi-component vaccine with 4 different antigens
- Some antigens common to other meningococcal groups, so could potentially provide protection against other groups
- Vaccine more reactogenic than other childhood vaccines causing fever as a common side effect following vaccination
Possible adverse reactions (up to 10 years of age)

Most commonly reported:

- Fever (>38°C), tenderness at the injection site (including severe tenderness), rash, swelling or induration at the injection site, irritability, change in feeding/eating, sleepiness and unusual crying

Less commonly reported:

- Fever (>40°C), eczema, urticaria (hives; itching), Kawasaki syndrome, febrile seizures and pallor

However one large Bexsero trial with 1885 infants without paracetamol, one infant developed febrile seizure two days after vaccination and a subsequent trial of 364 infants receiving Bexsero with or without paracetamol, no case of febrile seizure
Adverse reactions to 4CMenB

Bexsero® is associated with higher rates of local and systemic reactions when given with other routine infant vaccinations

- similar to those seen with whole cell pertussis vaccines

Systemic effects tend to be additive when given with other vaccines

For example, any fever was seen following:

- 26-41% of Bexsero® doses when administered alone,
- 23-36% after routine vaccines given alone
- 51-61% after Bexsero® and routine vaccines administered together
The use of prophylactic Paracetamol suspension to prevent febrile Seizures

- The JCVI has recommended three doses of Paracetamol suspension to be given to infants each time they receive Bexsero® vaccine at age less than 12 months with their routine primary immunisations.
- Infants will receive the first dose (60 mg given as 2.5 ml of 120mg/5ml paracetamol suspension) at the same time as their vaccination.
- Parents should be advised how they can get paracetamol suspension so that a further two 60mg doses (2.5mls of 120mg/5ml suspension) can be administered at 4-6 hourly intervals.
## Men B overview

<table>
<thead>
<tr>
<th>Date of birth</th>
<th>Schedule of vaccination</th>
<th>Requirement for paracetamol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Babies born on or after 8th July 2015</td>
<td>2 months  &lt;br&gt; 4 months</td>
<td>1st dose given at vaccination appointment  &lt;br&gt; 2nd dose 4-6 hrs after 1st dose  &lt;br&gt; 3rd dose 4-6 hrs after 2nd dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 months booster</td>
</tr>
<tr>
<td><strong>Catch-up (opportunistic)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Babies born between 1st – 31st May 2015</td>
<td>4 months</td>
<td>1st dose given at vaccination appointment  &lt;br&gt; 2nd dose 4-6 hrs after 1st dose  &lt;br&gt; 3rd dose 4-6 hrs after 2nd dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 month booster (NB: only given to those who received priming dose at 4 months)</td>
</tr>
<tr>
<td>Babies born 1st June – 7th July 2015</td>
<td>3 months  &lt;br&gt; 4 months</td>
<td>1st dose given at vaccination appointment  &lt;br&gt; 2nd dose 4-6 hrs after 1st dose  &lt;br&gt; 3rd dose 4-6 hrs after 2nd dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 month booster (NB: given to those who got priming dose(s) at 3 and/or 4 months)</td>
</tr>
</tbody>
</table>
Obtaining paracetamol and syringes

- 1<sup>st</sup> Paracetamol dose given at the time of vaccination; by GP 10A stock order
- For subsequent doses, issue pre-printed prescription if parents don’t have any at home
- One year arrangement agreed with SGPC
- 100 mls bottle should cover up to 40 infants, so order only 100 or 200 mls bottles as required
- Order syringes for oral administration from usual sundries supplier
Should parents be worried about fever after vaccination?

- Fever after vaccination with or without Bexsero® is common and nearly always mild (<39°C)
- Fever is a normal and expected response of the immune system against the vaccine antigens
- Parents are often concerned about the risk of febrile convulsions or “fever fits”
- As stated, the risk of febrile seizures very low and Parents should be further reassured that febrile seizures often occur in infants from 6 months to 5 years of age and are rare in younger age groups
- However parents should be advised of the importance of administering paracetamol suspension around the time of immunisation and follow up doses to reduce post-immunisation fever
Paracetamol recommendation

- The Commission on Human Medicines (CHM) has been consulted regarding the licensing restriction on Pharmacy (P) and General Sales List (GSL) paracetamol products.
- The current licensure advises consulting a GP or pharmacist if more than 2 doses are required for a 2 month old infant post-immunisation. The reason for this is to ensure early diagnosis of systemic bacterial infection.
- The CHM supported PHE’s recommendations for 3 doses of paracetamol post-immunisation with MenB and supported use of paracetamol for up to 48 hours post immunisations if required.
Reporting suspected adverse reactions

- **Yellow card scheme**
- Bexsero® is a newly licensed vaccine and is subject to additional monitoring under the **black triangle** labelling scheme
- All suspected adverse reactions should be reported to the MHRA using the yellow card scheme
- Success depends on early, complete and accurate reporting
- Report even if uncertain about whether vaccine caused condition

[http://mhra.gov.uk/yellowcard](http://mhra.gov.uk/yellowcard)

See chapter 8 of Green Book for details
Resources

- NHS Inform
- NES educational resources for registered practitioners
- CMO Letter- awaiting
- Green Book
- Meningitis Research Foundation: www.meningitis.org
- Meningitis Now : www.meningitisnow.org
- Meningitis association Scotland: http://menscot.org/
Meningococcal disease cases reported to MIDAS by serogroup, 1999-2015* (first quarter)
Cumulative cases of laboratory-confirmed invasive meningococcal group W disease by epidemiological year in England, to end-January 2015
### Table 1. Invasive meningococcal disease in England by capsular group and laboratory testing method: January – March (Q1): 2015

<table>
<thead>
<tr>
<th>Capsular groups</th>
<th>Laboratory method</th>
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<td>Total</td>
<td>31</td>
<td>56</td>
<td>88</td>
<td>133</td>
<td>92</td>
<td>90</td>
<td>211</td>
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</table>
Laboratory confirmed cases of Meningococcal group W cases in Scotland, by year and quarter (data to 17 July 2015)
Age band of Meningococcal group W cases reported in Scotland 2014 and 2015 (data to 17 July 2015)
### Case fatality rate 2014 & 2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Serogroup</th>
<th>Cases</th>
<th>Deaths</th>
<th>CFR</th>
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<td>2015</td>
<td>B</td>
<td>19</td>
<td>1</td>
<td>5.3</td>
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<tr>
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<td>W</td>
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<tr>
<td>2015</td>
<td>Y</td>
<td>2</td>
<td>0</td>
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<tr>
<td>2015</td>
<td>Total</td>
<td>43</td>
<td>2</td>
<td>4.7</td>
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<table>
<thead>
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<th>Year</th>
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<tr>
<td>2014</td>
<td>Total</td>
<td>73</td>
<td>3</td>
<td>4.1</td>
</tr>
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</table>
Summary: Changes to Meningococcal epidemiology

- Although overall cases decline since 2000, cases of meningococcal W were first observed in previously healthy adults in 2009.
- In 2011, cases had extended across all age groups and across all regions in England, indicating the strain had become endemic.
- For the first time in a decade, meningococcal W related deaths have been observed in young infants, particularly those under 2 years of age.
- Additionally, an increase in MenW cases among university students across the country suggests that carriage and transmission of bacteria has become established.
Urgent JCVI recommendation

- Replace adolescent MenC booster dose given at school with MenACWY conjugate vaccine
- Urgent catch up programme for all 14 to 18 year olds
- Replace Men C freshers programme with MenACWY (First time university entrants in August/Sept 2015 up to age 25 years)
Meningococcal ACWY programme 2015-16

There will be two aspects to the programme: delivered through primary care

a) Fresher’s programme: same as last year

b) Catch up programme for 16-18 year olds:
   
   From 1st August 2015 to 31st March 2016 GP practices will be responsible for vaccinating the following cohorts:

   - 2014/15 S6’s and those already left school and still under 19 years of age
   - 2014/15 S4 and S5s school leavers only – S4’s and S5’s who leave school this summer and Christmas (2015) and do not stay at school after Christmas 2015
Meningococcal ACWY programme by primary care cont.

- Letters will be sent to all 2014/15 S6’s aged adolescents including those that left school in previous year (DOB: 01/03/97 to 28/02/98) and S5’s (DOB: 01/03/98 to 28/02/99) in August/Sept advising them to contact their GP practices to make appointment for the vaccine (S5s if leaving school this summer)

- Letters will be sent to those leaving school at 2015/16 Christmas (2014/15 S4’s) in early January advising them to contact their GP Practices to make arrangements for the vaccine

- Those born between 01/08/96 and 28/02/97: opportunistic catch up only but no letter
Meningococcal ACWY programme cont.

From **1 January to 31 March 2016**, NHS Boards (in schools) will be responsible for vaccinating the following cohorts:

All **S3, S4, S5 and S6** (2015/16 school year)
## Eligibility for MenACWY vaccine

<table>
<thead>
<tr>
<th>Cohorts</th>
<th>Academic Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routine</strong></td>
<td></td>
</tr>
<tr>
<td>(School based delivery model)</td>
<td>S 3</td>
</tr>
<tr>
<td></td>
<td>(2015/16 academic year)</td>
</tr>
<tr>
<td><strong>Catch-up</strong></td>
<td></td>
</tr>
<tr>
<td>(School based delivery model)</td>
<td>(2015/16 academic year) S4, S5 and S6</td>
</tr>
<tr>
<td><strong>Catch-up</strong></td>
<td></td>
</tr>
<tr>
<td>(Primary care delivery model)</td>
<td>All those aged under 19 year on 1\textsuperscript{st} August 2015 including all S6’s and those in S5 and S4 who have left school during 2015 summer holidays and would leave school at Christmas 2015/16</td>
</tr>
</tbody>
</table>

### Notes
- **Routine**: School based delivery model
- **Catch-up**: Primary care delivery model
- **Cohorts** (Commencing 1\textsuperscript{st} August 2015)
- **Catch-up** (School based delivery model) 2014/15 academic year
left school? aged 16–18?

contact your GP now to get the MenACWY vaccine

The MenACWY vaccine protects you against some of the main causes of meningitis and septicaemia, life-threatening illnesses. Get immunised today.

www.immunisationscotland.org.uk/menacwy

0800 22 44 88
The recommended vaccine(s)

- Two vaccines will be used in the catch-up programme
  - Nimenrix® (initial supply)
  - Menveo®
The recommended vaccine(s)

- **Brand name:** Nimenrix®
- **Generic Name:** Meningococcal group A, C, W135 and Y conjugate vaccine
- Marketed by GlaxoSmithKline
- **Licensed** for use in children from 12 months, adolescents and adults at risk of invasive disease from *Neisseria meningitidis* A, C, W and Y
- **Recommended** for adolescents as part of a routine and catch-up immunisation programme
The recommended vaccine(s)

- Nimenrix® is one of two vaccines recommended for the catch up MenACWY vaccination programme for adolescents.
- Nimenrix® will be centrally supplied through NHS Board vaccine holding centres.
- It is important immunisers familiarise themselves with the vaccine and its product information to avoid administration errors.

AWAITING APPROVAL and UPDATED IMAGE FROM GSK
The recommended vaccine (s)

Nimenrix®

- Active Ingredients
  - *Neisseria meningitidis* group A polysaccharide 5 micrograms
  - *Neisseria meningitidis* group C polysaccharide 5 micrograms
  - *Neisseria meningitidis* group W-135 polysaccharide 5 micrograms
  - *Neisseria meningitidis* group Y polysaccharide 5 micrograms
    - conjugated to tetanus toxoid carrier protein 44 micrograms

- Excipients
  - Sucrose, trometamol, sodium chloride, water for injections
Administration of Nimenrix®

- Nimenrix® should be administered via intramuscular injection (IM) into the arm (deltoid muscle)
- The vaccine is supplied containing one vial of powder and one pre-filled syringe
- The contents of the pre-filled syringe should be vigorously mixed with the contents of the vial prior to administration providing one dose- 0.5mls
- After reconstitution, the solution should be clear, colourless and free from visible foreign particles
The vaccine should not be administered where there are variations in physical appearance or signs of foreign particulate are observed after shaking.

Nimenrix® can be safely given with other routine adolescent vaccines.
The recommended vaccine(s)

- **Brand name**: Menveo®
- **Generic Name**: Meningococcal group A, C, W135 and Y conjugate vaccine
- Marketed by GlaxoSmithKline
- **Licensed** for use in children from 2 years, adolescents and adults at risk of invasive disease from *Neisseria meningitidis* A, C, W and Y
- **Recommended** for adolescents as part of a routine and catch-up immunisation programme
The recommended vaccine(s)

- Menveo® is one of two vaccines recommended for the catch up MenACWY vaccination programme for adolescents.
- Menveo® will be centrally supplied through NHS Board vaccine holding centres.
- It is important immunisers familiarise themselves with the vaccine and its product information to avoid administration errors.
The recommended vaccine(s)

Menveo®

- **Active Ingredients**
  - Meningococcal group A oligosaccharide 10 micrograms
    - Conjugated to *Corynebacterium diphtheriae* CRM$_{197}$ protein 16.7 to 33.3 micrograms
  - Meningococcal group C oligosaccharide 5 micrograms
    - Conjugated to *Corynebacterium diphtheriae* CRM$_{197}$ protein 7.1 to 12.5 micrograms
  - Meningococcal group W135 oligosaccharide 5 micrograms
    - Conjugated to *Corynebacterium diphtheriae* CRM$_{197}$ protein 3.3 to 8.3 micrograms
  - Meningococcal group Y oligosaccharide 5 micrograms
    - Conjugated to *Corynebacterium diphtheriae* CRM$_{197}$ protein 5.6 to 10.0 micrograms

- **Excipients**
  - Sucrose, potassium dihydrogen phosphate, Sodium dihydrogen phosphate monohydrate, Disodium phosphate dihydrate, sodium chloride, water for injections
Menveo® should be administered via intramuscular injection (IM) into the arm (deltoid muscle)

The vaccine is supplied containing two separate vials— one vial containing MenA (powder) and the second vial containing MenCWY (solution)

The contents of the two vials should be vigorously mixed together prior to administration providing one dose- 0.5mls

Using a syringe, withdraw the contents of the MenCWY solution and inject into the MenA powder

Invert and shake the vial vigorously and then withdraw 0.5 ml of reconstituted product. It is normal for a small amount of liquid to remain in the vial following withdrawal of the dose
Administration of Menveo cont.

- After reconstitution, the solution should be clear, **colourless to light yellow** and free from visible foreign particles.
- Prior to administration, healthcare practitioners should change the needle for a suitable needle for IM administration into the deltoid muscle.
- The vaccine should not be administered where there are variations in physical appearance or **signs of foreign particulate** are observed after shaking.
- Menveo® can be safely given with other routine adolescent vaccines.
Menveo® or Nimenrix® should only be administered:

- Against a prescription written manually or electronically by a registered medical practitioner or other authorised prescriber
- Against a Patient Specific Direction
- Against a Patient Group Direction
Contraindications

- Menveo® OR Nimenrix® **should not** be administered to those who have had:
  1. A confirmed anaphylaxis to a previous dose of the vaccine **OR**
  2. A confirmed anaphylaxis to any constituent or excipient of the vaccine
- There are very few individuals who cannot receive meningococcal vaccines
- Where there is doubt, appropriate **advice** should be sought rather than withholding immunisation
Precautions

- **Minor illnesses without fever or systemic** upset are not valid reasons to postpone immunisation

- **Pregnancy and breast-feeding**
  Meningococcal vaccines may be given to pregnant women when clinically indicated. There is no evidence of risk from vaccinating pregnant women or those who are breast-feeding with inactivated virus or bacterial vaccines or toxoids

- **Immunosuppression and HIV infection**
  Individuals with immunosuppression and human immunodeficiency virus (HIV) infection (regardless of CD4 count) should be given meningococcal vaccines in accordance with the routine schedule
Possible adverse reactions (adolescents)

- Pain, tenderness, swelling or redness at the injection site and mild fever
- Older children and adults: headaches, nausea, rash and malaise
- Neurological reactions such as dizziness, febrile/afebrile seizures, faints, numbness and hypotonia are very rare
Reporting suspected adverse reactions

- **Yellow card scheme**
  - All suspected adverse reactions should be reported to the MHRA using the yellow card scheme
  - Success depends on early, complete and accurate reporting
  - Report even if uncertain about whether vaccine caused condition
  - [http://mhra.gov.uk/yellowcard](http://mhra.gov.uk/yellowcard)
  - See chapter 8 of Green Book for details
Key Messages

- Meningococcal disease is caused by a bacterium *Neisseria meningitidis* also known as meningococcus
- There are **12 serogroups** of meningococcus of which group **B, C, W and Y** were historically more common in the UK
- Invasive meningococcal disease presents as meningitis or septicaemia and can affect all age groups, particularly children under 2 years
- The meningococcal bacteria colonises the nasopharynx of humans. Between 5-11% of adults and up to 25% of adolescents carry the bacteria without any signs or symptoms
- Introduction of the MenB vaccine and replacing the MenC vaccine in adolescents with MenACWY should offers much wider protection against meningococcal diseases in this country
Resources

- NHS Inform
- CMO Letter
- Meningitis Now [www.meningitisnow.org](http://www.meningitisnow.org)
Acknowledgements

- Scottish Immunisation programme members
- Colleagues at NES/HPS
- Some slides modified from PHE
- All staffs involved in the vaccination programmes in Scotland
Any Questions on MenB and MenACWY vaccination programmes??
Vaccine ordering and cold chain maintenance

- Ordering
- Cold chain incidents
- Encouraging seasonal flu uptake

“She was on vacation for three weeks, but burned up on re-entry.”
Ordering

- **Routine**
  - By SIRS allocation (PDC)
- **Ring fenced stock**
  - Individualized order form
  - Short expiry
  - Fridge space
  - Consider last year uptake (PDC)
- **Fluenz**
  - on request up to 50% cohort
- **Mass clinics**
  - discuss with PDC
- **Men ACWY**
  - Once appointments booked

---

**GENERAL PRACTITIONER VACCINE REQUISITION FORM**

**ASCRIBE NO:** «Ascribe_Code»  
**SIRS NO:** «Sirs_Code»  
**DELIVERY DAY:** «Comments»

**PRACTICE NO:** «GP_Code»
- «GP_Name»
- «GP_Address»
- «Telephone_Number»

**CLINIC DATE:**

COMPLETE & FAX TO PDC. RETAIN A COPY FOR YOUR RECORDS.

DO NOT POST CONFIRMATION COPY AFTER FAXING.

<table>
<thead>
<tr>
<th>CODE</th>
<th>VACCINE</th>
<th>ISSUE UNIT</th>
<th>EXISTING STOCK IN PRACTICE (GP use only)</th>
<th>QUANTITY REQ'D (GP use only)</th>
<th>CALL NO'S (PDC use only)</th>
<th>QUANTITY SENT (PDC use only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GGS456A</td>
<td>Hepatitis B 10mcg/0.5ml Vaccine</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GGS754A</td>
<td>Infanrix IPV AND TS (PRIMARY VACCINE)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GGT375E</td>
<td>DTaP + IPV (Pedialtx) (PRIMARY VACCINE)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GGT311C</td>
<td>Menigococcal C Vaccine (Menjugatekit)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GGA781A</td>
<td>Meningococcal C Vaccine (Menitec)</td>
<td>1x10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GGA276C</td>
<td>Measles Mumps Rubella (Pentrix)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GGA279C</td>
<td>Meningococcal C Vaccine (Menitec)</td>
<td>Single</td>
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<td></td>
</tr>
<tr>
<td>GGA666A</td>
<td>STaF + IPV (Infanrix) (P) (FRE SCHOOL)</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>GGT511B</td>
<td>Haemophilus B/MenC (Menitorix)</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDG340C</td>
<td>Pneumococcal Vaccine (Prevenar 13)</td>
<td>1x10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DVO387A</td>
<td>Rotavirus (Rotarix)</td>
<td>Single</td>
<td></td>
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<tr>
<td>PDG187B</td>
<td>Zostavax (Varicella-Zoster)</td>
<td>Single</td>
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<tr>
<td>PDG428U</td>
<td>Boostrix IPV (pregnant ladies)</td>
<td>Single</td>
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<tr>
<td>PDG440G</td>
<td>Bexarox Men B</td>
<td>1x10</td>
<td></td>
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<tr>
<td>PDG346D</td>
<td>Fluence Tatra (nasal vaccine)</td>
<td>1x10</td>
<td></td>
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<tr>
<td>PDG350Z</td>
<td>Fluence Tatra (quadrivalent &gt;3years-18 years)</td>
<td>1x10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDG337X</td>
<td>Trivalent Flu &lt;3 years</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ALL VACCINES MUST BE REFRIGERATED IMMEDIATELY WHEN RECEIVED**

Check above details are correct and contact Public Health on 0141 201 4464 to amend if not Enter date of clinic

Complete column 1 and 2 only
PDC will issue vaccine according to SIRS list
Clearly mark on order if vaccines are required outwith SIRS list
Sign order and fax to PDC
New Immunisation Programmes- Ordering Information for GP practices

All orders should be placed using your *individualized* ordering form (see example overleaf). If you need a copy please phone the PDC to request 0141 347 8981.

**Flu**

Fluenz should be ordered from PDC (not community pharmacy).

Order for all children 2-5 years, any primary school children who missed vaccine at school visit and children 12-18 years in clinical at risk category. If an injectable vaccine is required for children order from the PDC. Fluarix Tetra is indicated for children over 3 years while children 6 months to 3 years require a trivalent flu vaccine Zanofi Split Viron.

1. Vaccine can be delivered weekly so do not over order.
2. Fluenz Tetra has **very** short expiry so only order sufficient for immediate needs.
3. Consider fridge space when placing order.
4. Consider last year’s up-take when placing orders.
5. At start of campaign each practice will be supplied on request with up to 50% of their 2-5 years cohort in first drop (assuming stock available from supplier).
6. If your practice plans large weekend sessions please discuss order with PDC to review previous year’s demand and arrange delivery prior to clinic. This minimises risk in practice.
7. Do not arrange a clinic until vaccine has arrived at practice or a delivery date is agreed with PDC.

**Shingles**

Zostavax should be ordered from PDC for patients aged 70 years and 78 years.

1. Do not order vaccine for 15/16 campaign until existing stock exhausted.
2. Vaccine can be delivered weekly so do not over order.
3. PDC will allocate vaccine according to cohort. This stock is ring fenced for your practice so no need to over order.
4. Ensure you have sufficient fridge space to accommodate order.
5. Consider last year’s up-take when placing orders.
6. Only arrange a clinic when you have stock in practice.
7. Practices are discouraged from administering Zostavax during large flu sessions. However, if this is planned please discuss with PDC who will arrange vaccine delivery on nearest delivery day to clinic to minimise risk at surgery.

**Please ensure usual twice daily monitoring is in place.**

Our records demonstrate that fridge incidents occur during busy periods due to frequent fridge opening and unfamiliar staff using fridge. These vaccines are very expensive and even the loss of 10 Zostavax and 10 Fluenz Tetra amounts to over £1,000.

July 2015
Incidents

- 69 incidents in 24/15
  - 25% preventable
  - 70% Fluenz/Zostavax

- Fewer than last year but... £153k

- Prevention
  - E learning
  - Replace old fridge
Epidemiology of Rotavirus in Scotland before introduction of the vaccine

Why vaccinate against rotavirus?

Epidemiology of rotavirus in Scotland

Laboratory confirmed cases of rotavirus reported in Scotland 2002 to 2012

- Only a very small proportion of cases are confirmed by laboratory testing
- These cases are just the tip of the iceberg
What has been the impact of the programme

Weekly laboratory reports of rotavirus to HPS for infants age<1 year in 2014 and first 15 weeks of 2015 compared to an average of 2009-13
GP consultation rate per 100,000 for infants age 1 year for all GIs in 2014 and 2015 compared to an average of 2011-13.
Number of admissions of infants age <1 year for diagnoses codes for rotavirus and viral enteritis by month in 2014 and 2015 compared to an average of 2010-13.
Pertussis: Key message

- The incidence of pertussis increased dramatically as part of a national outbreak in 2012 and 2013.
- There are still a lot of pertussis around at the moment and babies who are too young to start their vaccinations are at greatest risk of complications and deaths.
- During 2014 there were 504 laboratory confirmed cases of pertussis, which remains well above the historic levels.
- In 2011 and 2010 there had been 119 and 82 confirmed cases respectively.
Rationale for pertussis vaccination programme in pregnant women

- Helps protect the baby – Babies born to mothers vaccinated should have higher levels of antibodies, which help protect the infant until they start receiving their own immunisations.
- Helps protect the mother – Reduces the risk of the mother catching pertussis and passing it on to the young infant.
- Programme to date has been shown to be very effective since Oct 2012 at reducing the number of cases in infants, although levels in older children and adults remain high.
- In England 11 babies died from pertussis since programme started in Oct 2012, 10 of them babies born to unvaccinated women.
Pertussis uptake among pregnant women, by Board

- Board uptake
- All Scotland uptake
Why vaccinate pregnant women against pertussis

Laboratory confirmed cases of whooping cough 2000 to 2014

Number of cases

Year

0 500 1000 1500 2000 2500

Laboratory confirmed cases of pertussis in infants under three months of age in England and Wales

Peak levels of disease before 2012

Pregnancy programme introduced from 1 October 2012
Impact of the vaccination programme

Laboratory reports of *Bordetella pertussis* in children under one year of age, 2012 - week 12 of 2015, by 4-week period

Year and 4-week period
Pertussis; Key message

- 2 studies done in the UK showed the programme to be very effective and no concerns of safety for pregnant women
- Vaccinating women during pregnancy reduces the risk of pertussis to infants by **90% if the vaccine is given at least 7 days** before delivery
Vaccination against pertussis update - the use of Boostrix®-IPV

- Women should be vaccinated in each pregnancy to maximise transplacental transfer of antibody.
- One dose of Boostrix®-IPV is recommended for women expecting twins and higher multiple pregnancies.
- Women with multiple pregnancy consider giving the vaccine earlier than 28 weeks.
- For women who have not received the vaccine in pregnancy, pertussis-containing vaccine should be offered in the two months following birth i.e. up until their child receives their first dose of vaccine.
Dear Colleague

DETAILS OF THE 2015-16 SHINGLES (HERPES ZOSTER) VACCINATION PROGRAMME

Introduction

1. This year’s shingles programme will run from 1 September 2015* until 31 August 2016. The programme is aimed at:

   - People aged 70 years (routine)
   - People aged 78 years (catch-up).

From the Chief Medical Officer
Chief Nursing Officer
Chief Pharmaceutical Officer
Dr Catherine Calderwood
Professor Fiona McQueen
Dr Rose Marie Parr

10 July 2015

SGHD/CMO(2015)14

Addressees
For action
NHS Board Chief Executives
NHS Board Immunisation Coordinators
NHS Board Medical Directors
Nurse Directors, NHS Boards
# Shingles Vaccine uptake by age cohort and by NHS board by June 2015

<table>
<thead>
<tr>
<th>NHS Board</th>
<th>Age 70</th>
<th></th>
<th>Age 78</th>
<th></th>
<th>Age 79</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cohort</td>
<td>Dose1</td>
<td>%</td>
<td>Cohort</td>
<td>Dose1</td>
<td>%</td>
</tr>
<tr>
<td>Ayrshire &amp; Arran</td>
<td>4267</td>
<td>2170</td>
<td>50.86</td>
<td>2698</td>
<td>1326</td>
<td>49.15</td>
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<tr>
<td>Borders</td>
<td>1387</td>
<td>849</td>
<td>61.21</td>
<td>935</td>
<td>523</td>
<td>55.94</td>
</tr>
<tr>
<td>Dumfries &amp; Galloway</td>
<td>1948</td>
<td>1133</td>
<td>58.16</td>
<td>1275</td>
<td>731</td>
<td>57.33</td>
</tr>
<tr>
<td>Fife</td>
<td>3901</td>
<td>2207</td>
<td>56.58</td>
<td>2447</td>
<td>1386</td>
<td>56.64</td>
</tr>
<tr>
<td>Forth Valley</td>
<td>3005</td>
<td>1920</td>
<td>63.89</td>
<td>1958</td>
<td>975</td>
<td>49.80</td>
</tr>
<tr>
<td>Grampian</td>
<td>4942</td>
<td>2832</td>
<td>57.30</td>
<td>3336</td>
<td>1895</td>
<td>56.80</td>
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<tr>
<td>GGC</td>
<td>9457</td>
<td>5536</td>
<td>58.54</td>
<td>6769</td>
<td>3367</td>
<td>49.74</td>
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<tr>
<td>Highland</td>
<td>3642</td>
<td>2033</td>
<td>55.82</td>
<td>2231</td>
<td>1303</td>
<td>58.40</td>
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<tr>
<td>Lanarkshire</td>
<td>5991</td>
<td>3591</td>
<td>59.94</td>
<td>3988</td>
<td>2139</td>
<td>53.64</td>
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<tr>
<td>Lothian</td>
<td>7095</td>
<td>3820</td>
<td>53.84</td>
<td>4877</td>
<td>2376</td>
<td>48.72</td>
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<tr>
<td>Orkney</td>
<td>248</td>
<td>152</td>
<td>61.29</td>
<td>144</td>
<td>111</td>
<td>77.08</td>
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<tr>
<td>Shetland</td>
<td>218</td>
<td>112</td>
<td>51.38</td>
<td>139</td>
<td>42</td>
<td>30.22</td>
</tr>
<tr>
<td>Tayside</td>
<td>4144</td>
<td>2411</td>
<td>58.18</td>
<td>2846</td>
<td>1675</td>
<td>58.85</td>
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<tr>
<td>Western Isles</td>
<td>305</td>
<td>137</td>
<td>44.92</td>
<td>192</td>
<td>86</td>
<td>44.79</td>
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<tr>
<td><strong>Scotland</strong></td>
<td><strong>50550</strong></td>
<td><strong>28903</strong></td>
<td><strong>57.2</strong></td>
<td><strong>33835</strong></td>
<td><strong>17935</strong></td>
<td><strong>53.0</strong></td>
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</table>
## Shingles vaccination uptake

As at End June 2015

<table>
<thead>
<tr>
<th></th>
<th>70 years</th>
<th>78 years</th>
<th>79 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Dun</td>
<td>66.2%</td>
<td>61.4%</td>
<td>58.6%</td>
<td>62.6%</td>
</tr>
<tr>
<td>East Ren</td>
<td>55.1%</td>
<td>44.9%</td>
<td>41.4%</td>
<td>48.5%</td>
</tr>
<tr>
<td>Inverclyde</td>
<td>63.3%</td>
<td>51.7%</td>
<td>51.4%</td>
<td>56.9%</td>
</tr>
<tr>
<td>NE Glas</td>
<td>52.4%</td>
<td>42.5%</td>
<td>43.7%</td>
<td>46.7%</td>
</tr>
<tr>
<td>NW Glas</td>
<td>54.3%</td>
<td>46.0%</td>
<td>44.6%</td>
<td>49.0%</td>
</tr>
<tr>
<td>Renfrew</td>
<td>58.2%</td>
<td>51.7%</td>
<td>51.7%</td>
<td>54.5%</td>
</tr>
<tr>
<td>S Glas</td>
<td>56.4%</td>
<td>45.8%</td>
<td>47.4%</td>
<td>50.7%</td>
</tr>
<tr>
<td>West Dun</td>
<td>67.8%</td>
<td>61.3%</td>
<td>54.7%</td>
<td>62.4%</td>
</tr>
<tr>
<td>GGC</td>
<td>58.6%</td>
<td>49.8%</td>
<td>48.8%</td>
<td>53.2%</td>
</tr>
<tr>
<td>Scotland</td>
<td>57.2%</td>
<td>53.0%</td>
<td>53.4%</td>
<td>54.9%</td>
</tr>
</tbody>
</table>
In the third year of the programme (from 1st September 2015) the programme will include those:-

- aged **70 years on 1st September 2015** (those born between 02/09/1944 and 01/09/1945)

  and

- aged **78 years on 1st September 2015** (those born between 02/09/1936 and 01/09/1937)
Who is eligible in year three, 2015/16 (from September 2015) - (contd)

All those who were eligible in years one and two of the programme and are still aged less than 80 years at time of the vaccination currently remain eligible if not vaccinated

- These individuals will, on 1st September 2015 be aged:
  - 71 (born between 02/09/1943 and 01/09/1944)
  - 72 (born between 02/09/1942 and 01/09/1943)
  - 79 (born between 02/09/1935 and 01/09/1936)
Shingles vaccine is a live attenuated vaccine and is therefore contraindicated for some patients groups.

A screening tool for contraindications for shingles vaccine has been produced by Health Protection Scotland and is available at [http://www.hps.scot.nhs.uk/immvax/shinglesvaccine.aspx](http://www.hps.scot.nhs.uk/immvax/shinglesvaccine.aspx)

This tool may be used to aid identification of patients who are contraindicated for this vaccine and includes explanatory notes for healthcare practitioners.

The questions in the screening tool are designed for completion either by the patient or by the healthcare practitioner in a structured interview with the patient.
Guidance from Specialist Teams on Shingles vaccine

- Patients with Lympho-proliferative disorders such as Leukaemia's contraindicated
- Patients with chemotherapy and radiotherapy: wait for 6 months and seek advice before giving vaccine
- Other immunosuppression: seek advice
- Rheumatology patients with DMARD, biologics and low dose steroids: see guidance from the NHSGGC Rheumatology MCN
July 2015

Dear Colleagues

ZOSTAVAX VACCINE SUPPLY – EXPIRY DATES
OPPORTUNITY FOR EARLY IMMUNISATION - SHINGLES (HERPES ZOSTER)
PROGRAMME – 2015-16

Expiry of Stock

1. Now that the shingles programme has been running since September 2013 we are beginning to see some of the unused vaccine stock reaching its expiry date. As you may be aware this expensive vaccine has a shelf life of around 18 months.

Early Immunisation

2. To help minimise wastage of the current supply we have securec agreement to offer early immunisation to help use these doses up rather than see it destroyed. This means we can offer 'early immunisation' to those who will be eligible in 2015-16 where possible.

Action

3. This letter therefore asks you to check your fridges for expiry dates and identify any vaccine that is due to expire before the end of August/beginning of September and if you do have some of this we would encourage you to start calling up new patients a little earlier ie from 1 August 2015 if possible (ie ahead of the official start date of 1 September). We would appreciate your assistance with this request.
Dear Colleague

SCOTTISH CHILDHOOD FLU VACCINATION PROGRAMME
2015-16

1. This year’s childhood flu vaccination programme will offer vaccination to the same groups as last year. Specifically:

   - All children aged 2-5* (not yet at school) through GP practices (*children must be aged 2 or above on 1 September 2015); and
Extension of the seasonal flu vaccination programme to children

Extension to flu vaccination programme in Scotland

- In 2015/16, 2-5 year olds not yet in school through primary care
- All primary school aged children including those with at risk medical conditions by school health
- Mop up of school aged children not done at school by primary care (through DES) but primary care not to target them proactively
- In NHSGGC, only Fluenz will be offered at schools
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayrshire &amp; Arran</td>
<td>55</td>
<td>55</td>
<td>100.0%</td>
<td>9,971</td>
<td>6,283</td>
<td>63.0%</td>
<td>27,317</td>
<td>21,154</td>
<td>77.4%</td>
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<td></td>
</tr>
<tr>
<td>Borders</td>
<td>23</td>
<td>23</td>
<td>100.0%</td>
<td>2,808</td>
<td>2043.5</td>
<td>72.8%</td>
<td>8,300</td>
<td>6,901</td>
<td>83.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dumfries &amp; Galloway</td>
<td>34</td>
<td>34</td>
<td>100.0%</td>
<td>3,684</td>
<td>2691.5</td>
<td>73.1%</td>
<td>10,752</td>
<td>8,447</td>
<td>78.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fife</td>
<td>58</td>
<td>58</td>
<td>100.0%</td>
<td>10,476</td>
<td>5,265</td>
<td>50.3%</td>
<td>28,523</td>
<td>20,225</td>
<td>70.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forth Valley</td>
<td>56</td>
<td>56</td>
<td>100.0%</td>
<td>8,508</td>
<td>5,520</td>
<td>64.9%</td>
<td>23,656</td>
<td>14,802</td>
<td>62.6%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Lanarkshire</td>
<td>112</td>
<td>112</td>
<td>100.0%</td>
<td>18,838</td>
<td>9,483</td>
<td>50.3%</td>
<td>51,667</td>
<td>38,573</td>
<td>74.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lothian</td>
<td>125</td>
<td>125</td>
<td>100.0%</td>
<td>24,917</td>
<td>14,095</td>
<td>56.6%</td>
<td>62,923</td>
<td>41,951</td>
<td>66.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orkney</td>
<td>10</td>
<td>10</td>
<td>100.0%</td>
<td>531</td>
<td>369.5</td>
<td>69.6%</td>
<td>1,522</td>
<td>826</td>
<td>54.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shetland</td>
<td>10</td>
<td>10</td>
<td>100.0%</td>
<td>676</td>
<td>495.5</td>
<td>73.3%</td>
<td>1,828</td>
<td>1,360</td>
<td>74.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tayside</td>
<td>66</td>
<td>65</td>
<td>98.5%</td>
<td>11,049</td>
<td>5561.5</td>
<td>50.3%</td>
<td>29,349</td>
<td>20,887</td>
<td>71.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western Isles</td>
<td>10</td>
<td>10</td>
<td>100.0%</td>
<td>640.5</td>
<td>368</td>
<td>57.5%</td>
<td>1,888</td>
<td>1,297</td>
<td>68.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td>982</td>
<td>980</td>
<td>99.8%</td>
<td>149,821</td>
<td>84,484</td>
<td>56.4%</td>
<td>396,118</td>
<td>284,255</td>
<td>71.8%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*2 to under 5 year olds not yet in school*

**Primary school programme**
2.1 School vaccine uptake by NHS board

![Bar chart showing vaccine uptake by NHS board]

- **2013/14 end of season**
- **2014/15 to week 10**
- **Target Uptake**

Vaccine uptake percentages for different NHS boards are presented. The chart compares the uptake between the end of the 2013/14 season and the early weeks of 2014/15.
Vaccine uptake for at risk children

<table>
<thead>
<tr>
<th>Risk group:</th>
<th>Six months to under two years</th>
<th>Two years to under five years</th>
<th>Five years to under 16 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with chronic heart disease</td>
<td>21.4</td>
<td>47.5</td>
<td>31.6</td>
</tr>
<tr>
<td>Patients with chronic respiratory disease</td>
<td>24.4</td>
<td>56.7</td>
<td>44.6</td>
</tr>
<tr>
<td>Patients with chronic kidney disease</td>
<td>34.9</td>
<td>46.9</td>
<td>36.3</td>
</tr>
<tr>
<td>Patients with chronic liver disease</td>
<td>24.5</td>
<td>45.4</td>
<td>40.5</td>
</tr>
<tr>
<td>Patients with diabetes</td>
<td>24.7</td>
<td>63.5</td>
<td>60.5</td>
</tr>
<tr>
<td>Patients with immunosuppression</td>
<td>29.6</td>
<td>55.4</td>
<td>47.6</td>
</tr>
<tr>
<td>Patients with chronic neurological disease (including stroke/ TIA, cerebral palsy or MS)</td>
<td>17.9</td>
<td>47.3</td>
<td>33.1</td>
</tr>
<tr>
<td>Patients with asplenia or dysfunction of the spleen.</td>
<td>32.8</td>
<td>47.2</td>
<td>31.3</td>
</tr>
</tbody>
</table>
Extension of the seasonal flu vaccination programme to children

Use of Fluenz™ Tetra (cont.)

Fluenz™ Tetra composition

<table>
<thead>
<tr>
<th>Active ingredient</th>
<th>Excipients</th>
<th>Residues</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/California/7/2009 (H1N1)pdm09-like virus;</td>
<td>Sucrose</td>
<td>Egg protein (e.g. ovalbumin)</td>
</tr>
<tr>
<td></td>
<td>Dibasic potassium phosphate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monobasic potassium phosphate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gelatine (porcine type A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arginine hydrochloride</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monosodium glutamate monohydrate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water for injection</td>
<td></td>
</tr>
<tr>
<td>A/Switzerland/9715293/2013 (H3N2)-like virus;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gentamicin</td>
<td></td>
</tr>
<tr>
<td>B/Phuket/3073/2013-like virus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B/Brisbane/60/2008-like virus</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Extension of the seasonal flu vaccination programme to children-
Severe Asthma and active wheezing

In cases of severe asthma or active wheezing:

- **Fluenz™ Tetra is not recommended:**
  - for children currently taking oral steroids
  - prescribed oral steroid in the last 14 days

- **Fluenz™ Tetra should only be given on the advice of a specialist**
  for children currently taking high dose of an inhaled steroid such
  as Budesonide greater than 800 mcg/day or equivalent
Extension of the seasonal flu vaccination programme to children-
Severe Asthma and active wheezing (Contd.)

- Fluenz™ Tetra should be deferred in:
  - children with a history of active wheezing in the past 72hrs
  - children who have increased their use of bronchodilators in previous 72hrs
Extension of the seasonal flu vaccination programme to children

Egg Allergy

- Except for those with severe anaphylaxis to egg which has previously required intensive care, children with an egg allergy can be safely vaccinated with Fluenz™ Tetra in any setting (including primary care and schools)*

- Those with clinical contraindication to Fluenz™ Tetra due to egg allergy should be offered an inactivated influenza vaccine with a very low ovalbumin content (less than 0.12ug/ml)
Theoretical potential for transmission of live attenuated virus to immunocompromised contacts for one to two weeks following vaccination

Extensive use of the live attenuated flu vaccine in United States - no reported transmission of the vaccine virus among immunocompromised patients inadvertently exposed to vaccinated children

However, if close contact with very severely immunocompromised patients (e.g. bone marrow transplant patients requiring isolation) is likely consider an inactivated flu vaccine instead
Exposure of healthcare professionals to live attenuated influenza vaccine viruses

- In the US, where there has been extensive use of LAIV, no reported instances of transmission from a vaccinee to HCP
- The vaccine viruses are cold-adapted and attenuated and therefore unlikely to cause symptomatic flu
- As a precaution, very severely immunosuppressed individuals should not administer LAIV; (unlikely to be at work)
- Other HCPs who have less severe immunosuppression or are pregnant, should follow normal clinical practice and ensure that they themselves are appropriately vaccinated
Extension of the seasonal flu vaccination programme to children

Administration of Fluenz™ Tetra and pork gelatin

- Fluenz™ Tetra contains pork (porcine) gelatin, an essential ingredient in many medicines, including some vaccines
- Many faith groups have approved the use of gelatin-containing vaccines
- It is, however, an individual choice whether or not to receive this vaccine and it is recognised that there will be different opinions within different communities
- Offer Fluarix Tetra (injectable) vaccine if any concerns about pork gelatine
Vaccine for 2014/15 Flu Season

- Fluenz Tetra: Intra nasal live vaccine contains 2 Flu A and 2 Flu B strains
- Fluarix Tetra: Inactivated vaccine contain 2 Flu A and 2 Flu B strains given by i.m injection
- Trivalent vaccine: Inactivated vaccine contain 2 Flu A and 1 Flu B strains given by i.m injection
Beware of product confusion!

- Fluarix™ Tetra is an inactivated vaccine supplied for children aged three and over who cannot receive the live Fluenz Tetra® vaccine.

Care must be taken not to confuse the two ‘Tetra’ brands

- One way of remembering which vaccine is which is:
  - Fluenz is the nasal flu vaccine
  - Fluarix is the arm injected vaccine
Administration of Childhood Flu Immunisation (birth to pre-school age groups)

Birth to under six months:
- Vaccination not required

Six months to under two years:
- In Clinical Risk Group? (See table 19.5 Green Book flu chapter for further details)
  - YES: Suitable for Fluenz™ Tetra?
    - YES: One dose of trivalent inactivated vaccine
    - NO: One dose of Fluenz™ Tetra
  - NO: If never had flu vaccine before give a second dose at least four weeks later

Pre-school aged two - five years:
- In Clinical Risk Group? (See table 19.5 Green Book flu chapter for further details)
  - YES: Suitable for Fluenz™ Tetra?
    - YES: One dose of Fluenz™ Tetra
    - NO: One dose of quadrivalent inactivated vaccine (Fluarix™ Tetra)
  - NO: Aged three years or above?
    - YES: One dose of trivalent inactivated vaccine
    - NO: If never had flu vaccine before give a second dose at least four weeks later

Be careful with Tetras
- Fluenz™ Tetra (Live vaccine given by nasal administration)
- Fluarix™ Tetra (Inactivated vaccine given by intramuscular injection)

Extension of the seasonal flu vaccination programme to children:
Phase 2 - 2014/15
An update for registered healthcare practitioners
© Health Protection Scotland/NHS Education Scotland
August 2014
Dear Colleague

SEASONAL INFLUENZA VACCINATION PROGRAMME
2015-16

1. This letter provide details about the arrangements for the 2015-16 seasonal influenza vaccination programme in adults aged 65 years and over and adults aged 18 years and over with “at-risk” health conditions. A separate letter (SGHD/CMO(2015)13) covers the childhood programme.

2. The key points of note for the seasonal flu programme are as follows:
Why vaccinate these risk groups?

Influenza-related population mortality rates and relative risk of death among those aged six months to under 65 years by clinical risk group in England, September 2010 – May 2011

<table>
<thead>
<tr>
<th></th>
<th>Number of fatal flu cases (%)</th>
<th>Mortality rate per 100,000 population</th>
<th>Age-adjusted relative risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In a risk group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In a risk group</td>
<td>213 (59.8)</td>
<td>4.0</td>
<td>11.3 (9.1-14.0)</td>
</tr>
<tr>
<td><strong>Not in any risk group</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not in any risk group</td>
<td>143 (40.2)</td>
<td>0.4</td>
<td>Baseline</td>
</tr>
<tr>
<td><strong>Chronic renal disease</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic renal disease</td>
<td>19 (5.3)</td>
<td>4.8</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>Chronic heart disease</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic heart disease</td>
<td>32 (9.0)</td>
<td>3.7</td>
<td>10.7 (7.3-15.7)</td>
</tr>
<tr>
<td><strong>Chronic respiratory disease</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic respiratory disease</td>
<td>59 (16.6)</td>
<td>2.4</td>
<td>7.4 (5.5-10.0)</td>
</tr>
<tr>
<td><strong>Chronic liver disease</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic liver disease</td>
<td>32 (9.0)</td>
<td>15.8</td>
<td>48.2 (32.8-70.6)</td>
</tr>
<tr>
<td><strong>Diabetes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>26 (7.3)</td>
<td>2.2</td>
<td>5.8 (3.8-8.9)</td>
</tr>
<tr>
<td><strong>Immunosuppression</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunosuppression</td>
<td>71 (19.9)</td>
<td>20.0</td>
<td>47.3 (35.5-63.1)</td>
</tr>
<tr>
<td><strong>Chronic neurological disease (excluding stroke/transient ischaemic attack)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic neurological disease</td>
<td>42 (11.8)</td>
<td>14.7</td>
<td>40.4 (28.7-56.8)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>378</td>
<td>0.8</td>
<td></td>
</tr>
</tbody>
</table>
### Why preventing flu is important?

Numbers, rates and relative risks with 95% lower and upper confidence intervals for seasonal influenza clinical risk factors amongst confirmed influenza related fatalities aged 6 months to 64 years, Scotland, 2010/2011. Provisional and preliminary data from HPS up to 23rd June 2011.

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Number of fatal cases</th>
<th>Mortality rate per 100,000 population</th>
<th>Age Adjusted Relative Risk (RR)*</th>
<th>Lower 95% Confidence Interval</th>
<th>Upper 95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any risk factor (6m-64y)</td>
<td>31</td>
<td>4.7</td>
<td>17.8</td>
<td>8.5</td>
<td>37.4</td>
</tr>
<tr>
<td>No risk factor (6m-64y)</td>
<td>9</td>
<td>0.3</td>
<td>Baseline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic renal disease</td>
<td>2</td>
<td>6.3</td>
<td>23.9</td>
<td>5.2</td>
<td>110.8</td>
</tr>
<tr>
<td>Chronic heart disease</td>
<td>9</td>
<td>7.2</td>
<td>27.3</td>
<td>10.8</td>
<td>68.7</td>
</tr>
<tr>
<td>Chronic respiratory disease</td>
<td>14</td>
<td>4.6</td>
<td>17.5</td>
<td>7.6</td>
<td>40.5</td>
</tr>
<tr>
<td><strong>Chronic liver disease</strong></td>
<td>7</td>
<td>21.9</td>
<td>83.5</td>
<td>31.1</td>
<td>224.1</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1</td>
<td>0.7</td>
<td>2.8</td>
<td>0.4</td>
<td>21.8</td>
</tr>
<tr>
<td><strong>Immunosuppression</strong></td>
<td>7</td>
<td>14.1</td>
<td>53.6</td>
<td>20</td>
<td>143.9</td>
</tr>
<tr>
<td><strong>Chronic neurological disease incl stroke</strong></td>
<td>6</td>
<td>7.7</td>
<td>29.4</td>
<td>10.5</td>
<td>82.5</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Morbidly obese patients

- JCVI has advised morbidly obese patients (BMI 40+) could benefit from flu vaccination
- Those with morbid obesity (BMI>40) found to be at higher risk of hospitalisation and death during 2009 pandemic
- Many in this group already eligible due to complications of obesity that place them in another risk category
- Coding for morbid obesity is available but it is unlikely many of them have been coded, so may not be able to extract from the system
- Practices should identify them opportunistically and offer the vaccine; included in the DES
<table>
<thead>
<tr>
<th>HealthBoard</th>
<th>Number of GP Practices</th>
<th>No of Practices submitting data Over65</th>
<th>% Practices Submitting Data</th>
<th>Population Over65</th>
<th>Cumulative Total Vaccinations</th>
<th>Cumulative % Uptake</th>
<th>Population AllRisk</th>
<th>Cumulative Total Vaccinations</th>
<th>Cumulative % Uptake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayrshire &amp; Arran</td>
<td>55</td>
<td>55</td>
<td>100.0%</td>
<td>78,853</td>
<td>60,092</td>
<td>76.2%</td>
<td>46,850</td>
<td>25,672</td>
<td>54.8%</td>
</tr>
<tr>
<td>Borders</td>
<td>23</td>
<td>23</td>
<td>100.0%</td>
<td>26,650</td>
<td>20,665</td>
<td>77.5%</td>
<td>13,187</td>
<td>7,759</td>
<td>58.8%</td>
</tr>
<tr>
<td>Dumfries &amp; Galloway</td>
<td>34</td>
<td>34</td>
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<td>36,341</td>
<td>28,410</td>
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<td>18,167</td>
<td>10,517</td>
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</tr>
<tr>
<td>Fife</td>
<td>58</td>
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<td>71,332</td>
<td>54,517</td>
<td>76.4%</td>
<td>44,386</td>
<td>22,160</td>
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</tr>
<tr>
<td>Forth Valley</td>
<td>56</td>
<td>56</td>
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<td>56,022</td>
<td>44,347</td>
<td>79.2%</td>
<td>35,608</td>
<td>20,117</td>
<td>56.5%</td>
</tr>
<tr>
<td>Grampian</td>
<td>79</td>
<td>78</td>
<td>98.7%</td>
<td>99,952</td>
<td>75,690</td>
<td>75.7%</td>
<td>62,905</td>
<td>33,366</td>
<td>53.0%</td>
</tr>
<tr>
<td>Greater Glasgow &amp; Clyde</td>
<td>244</td>
<td>244</td>
<td>100.0%</td>
<td>189,930</td>
<td>144,021</td>
<td>75.8%</td>
<td>148,351</td>
<td>80,564</td>
<td>54.3%</td>
</tr>
<tr>
<td>Highland</td>
<td>100</td>
<td>100</td>
<td>100.0%</td>
<td>68,814</td>
<td>51,055</td>
<td>74.2%</td>
<td>36,941</td>
<td>20,603</td>
<td>55.8%</td>
</tr>
<tr>
<td>Lanarkshire</td>
<td>112</td>
<td>112</td>
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<td>112,709</td>
<td>84,489</td>
<td>75.0%</td>
<td>82,416</td>
<td>44,082</td>
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<tr>
<td>Lothian</td>
<td>125</td>
<td>125</td>
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<td>138,344</td>
<td>107,450</td>
<td>77.7%</td>
<td>96,742</td>
<td>51,855</td>
<td>53.6%</td>
</tr>
<tr>
<td>Orkney</td>
<td>10</td>
<td>10</td>
<td>100.0%</td>
<td>4,599</td>
<td>3,498</td>
<td>76.1%</td>
<td>2,245</td>
<td>1,234</td>
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</tr>
<tr>
<td>Shetland</td>
<td>10</td>
<td>10</td>
<td>100.0%</td>
<td>4,315</td>
<td>3,219</td>
<td>74.6%</td>
<td>2,912</td>
<td>1,613</td>
<td>55.4%</td>
</tr>
<tr>
<td>Tayside</td>
<td>66</td>
<td>65</td>
<td>98.5%</td>
<td>84,026</td>
<td>64,580</td>
<td>76.9%</td>
<td>47,215</td>
<td>24,989</td>
<td>52.9%</td>
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<tr>
<td>Western Isles</td>
<td>10</td>
<td>10</td>
<td>100.0%</td>
<td>6,356</td>
<td>4,324</td>
<td>68.0%</td>
<td>3,182</td>
<td>1,770</td>
<td>55.6%</td>
</tr>
<tr>
<td>Scotland</td>
<td>982</td>
<td>980</td>
<td>99.8%</td>
<td>978,243</td>
<td>746,357</td>
<td>76.3%</td>
<td>641,107</td>
<td>346,301</td>
<td>54.0%</td>
</tr>
</tbody>
</table>
# Seasonal Flu vaccination uptake 2014/15

<table>
<thead>
<tr>
<th></th>
<th>Over 65s</th>
<th>&lt;65 clinical risk group</th>
<th>Pregnant (not in a clinical risk group)</th>
<th>Pregnant (and in a clinical risk group)</th>
<th>2-5 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Dun</td>
<td>78.0%</td>
<td>55.0%</td>
<td>58.5%</td>
<td>63.5%</td>
<td>64.2%</td>
</tr>
<tr>
<td>East Ren</td>
<td>77.0%</td>
<td>53.5%</td>
<td>61.1%</td>
<td>81.7%</td>
<td>63.7%</td>
</tr>
<tr>
<td>Inverclyde</td>
<td>76.3%</td>
<td>55.6%</td>
<td>51.7%</td>
<td>69.7%</td>
<td>61.5%</td>
</tr>
<tr>
<td>NE Glas</td>
<td>73.3%</td>
<td>53.4%</td>
<td>51.8%</td>
<td>73.0%</td>
<td>54.2%</td>
</tr>
<tr>
<td>NW Glas</td>
<td>73.3%</td>
<td>53.5%</td>
<td>54.8%</td>
<td>70.6%</td>
<td>56.1%</td>
</tr>
<tr>
<td>Renfrew</td>
<td>77.0%</td>
<td>54.5%</td>
<td>59.0%</td>
<td>66.1%</td>
<td>55.2%</td>
</tr>
<tr>
<td>South Glas</td>
<td>75.6%</td>
<td>53.6%</td>
<td>54.7%</td>
<td>64.9%</td>
<td>46.1%</td>
</tr>
<tr>
<td>West Dun</td>
<td>78.9%</td>
<td>58.4%</td>
<td>51.5%</td>
<td>70.1%</td>
<td>60.2%</td>
</tr>
<tr>
<td>GGC</td>
<td>75.9%</td>
<td>54.3%</td>
<td>55.1%</td>
<td>69.2%</td>
<td>55.4%</td>
</tr>
<tr>
<td>Scotland</td>
<td>76.3%</td>
<td>54.0%</td>
<td>49.5%</td>
<td>65.0%</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*As at Week 13 2015*
Achieving high uptake: Recommended Checklist

The checklist is based upon the findings from a study examining the factors associated with higher vaccine uptake in general practice. 

*Dexter LJ et al. BMJ Open 2012*

- Practices should have a named individual who is responsible for the flu vaccination programme
- Have a register that can identify all pregnant women, patients in the under 65 years at risk groups, those aged 65 years and over and those aged 2 to 5 years
- Update patient registers throughout the flu season with inclusion of women who become pregnant during the flu season
Achieving high uptake: Checklist cont’d

- Submit accurate data on the number of patients eligible and number vaccinated by data recording accurately
- Order sufficient amounts of vaccine based on previous use and projected need
- Patients should be directly contacted to make an appointment (letter, email, text, phone etc)
- Follow-up patients who do not respond
Achieving high uptake: Checklist cont’d

- Flu vaccination should start as soon as practicable after receipt of the vaccine to ensure early protection.
- The practice should collaborate with midwives to identify and offer vaccine to all pregnant women throughout the flu season.
- The practice should offer flu vaccination in clinics and opportunistically.
- The practice should work with other health and social care staffs to identify and offer vaccine to residents in care homes, nursing homes and house-bound patients.


bmjopen.bmj.com/content/2/3/e000851.full
The best defence against flu is this year’s vaccine.

Flu is coming and it can hit you hard. So don’t risk it. Even if you are normally fit and healthy, if you’ve got a health condition like diabetes, asthma or heart disease, get the free vaccine by making an appointment at your GP practice today.

immunisationsscotland.org.uk/flu
NHS inform 0800 22 44 88

NHS SCOTLAND
healthier scotland SCOTTISH GOVERNMENT
The best defence against flu is this year's vaccine.
Flu is coming and it can hit you and your unborn baby hard. So don't risk it.
The flu vaccine helps protect you and your child for up to three months after birth.
To get the free vaccine make an appointment with your GP practice today.

immunisationscotland.org.uk/flupregnancy
NHS inform 0800 22 44 88
NHS Scotland
Healthier Scotland
Scottish Government
FLU

Flu. I’m Ready For You.

Healthcare workers

The best defence against flu is this year’s vaccine.

Flu is coming and it can hit your patients hard. So don’t risk it. Help protect them and yourself. To get the free vaccine speak to your line manager or occupational health department today.
Acknowledgements

- Scottish Immunisation programme members
- Colleagues at NES/HPS
- Some slides modified from PHE
- All staffs involved in the vaccination programmes in Scotland