The new routine UK infant immunisation schedule

The changes

Important changes are being made to the routine infant immunisation programme from the 4th September 2006. Information about the specific changes and practical arrangements are available in the Scottish Executive Health Department letter, SEHD/CMO(2006)9, issued on 12th July 2006. The background to the changes was originally explained in detail in the CMO letter SEHD/CMO (2006)3 on 8th February 2006.

The following changes will be introduced:

- A pneumococcal conjugate vaccine (PCV) will be introduced to the routine childhood programme for the first time
- The schedule for MenC and Hib vaccines will be modified
- An additional immunisation visit will be required at 12 months (Hib-MenC)
- A pneumococcal immunisation catch-up programme will be carried out for children aged under 2 years

The new schedule will mean that infants will be offered different combinations of vaccines at the 2, 3 and 4 month visits with a total of 3 injections being offered to infants at 4 months of age. The table below summarises the new schedule.

There is no catch-up campaign for Hib-MenC for children older than 12 months at the start of the new programme.

<table>
<thead>
<tr>
<th>Clinic visit</th>
<th>Age (months)</th>
<th>Vaccine</th>
<th>Total no. of injections given at visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>DTaP/IPV/Hib + PCV</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>DTaP/IPV/Hib + MenC</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>DTaP/IPV/Hib + PCV + MenC</td>
<td>3*</td>
</tr>
<tr>
<td>4</td>
<td>12**</td>
<td>Hib/MenC</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>MMR + PCV</td>
<td>2</td>
</tr>
</tbody>
</table>

* Please note that there are no additional adverse effects from having three injections at the same time.

**Additional clinic attendance

Administration of vaccine

Vaccines should be drawn up just prior to administration and injected into the anterolateral aspect of both thighs. The suggested vaccination sites are the left thigh for the Pediacel® and MenC and the right thigh for the PCV. There should be 2.5cm between the two injection sites in the one thigh. A record of the vaccinations should be made in accordance with the recording procedure outlined in the PGD.

Needles

Needles for PCV (Prevenar®) need to be ordered separately as the pre-filled syringe preparation comes without needles. The product FTR163 blue needle 23g x 25mm is recommended.

PGDs

These will be forwarded by senior nurses (children’s services) to all staff involved in delivering the new childhood immunisation programme and must be signed by staff prior to commencement of the programme.

Information for parents/consent

There is no legal requirement for consent in writing. From 4th September, health visitors will be expected to give an information booklet to parents at the first visit. This booklet will be available to staff from the 28th August and on-line at www.healthscotland.com/immunisation. Staff will be able to order further copies from Public Education Resource Library (PERL) on 0141 201 4915 or at PERL@qcc.scot.nhs.uk. Please note that a leaflet regarding the pneumococcal catch-up programme will be sent centrally to all parents of ‘catch-up’ children around the same time as the appointment letter.
Children aged over 2 months of age at the start of the programme

This small number of children who will be part-way through their primary immunisations should continue to receive 3 doses of Pediacel®. They should have at least 2 doses of MenC, with one dose given at 4 months (e.g. a child presenting at 4 months having had 2 doses of MenC at 2 and 3 months should still receive MenC at 4 months). If the child is part-way through the primary immunisation schedule, they should also receive at least 2 doses of pneumococcal conjugate vaccine (PCV) but these children will be called automatically by SIRS (see catch-up table below).

Pneumococcal vaccination catch-up programme

The table below summarises the PCV requirement for all children over 2 months and under 2 years of age at the time of introduction of the new schedule. Children over 2 years of age will not be part of the catch-up programme.

<table>
<thead>
<tr>
<th>Cohort Group</th>
<th>Date of birth</th>
<th>PCV</th>
<th>Booster PCV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 (13 months - 2yrs)</td>
<td>05/09/2004 - 03/08/2005</td>
<td>1 dose</td>
<td>-</td>
</tr>
<tr>
<td>Group 2 (8-13 months)</td>
<td>04/08/2005 - 03/02/2006</td>
<td>1 dose (at routine 13months visit)</td>
<td>-</td>
</tr>
<tr>
<td>Group 3 (2-8 months)</td>
<td>04/02/2006 - 03/07/2006</td>
<td>2 doses (2 months apart)</td>
<td>1 dose at 13 months</td>
</tr>
</tbody>
</table>

Children aged between 2 months and 2 years at the start of this new schedule will be called automatically by the SIRS system. If a child fails to attend an appointment, the system will re-appoint with the required schedule determined by the child’s age at the time of re-appointing (e.g., a child in Group 3 who fails to attend for the first of the two pneumococcal vaccines recommended may be treated as a Group 2 child depending on the age at time of re-appointing). Parents of children in the catch-up programme will receive a leaflet, sent centrally, around the same time as the appointment explaining the change to the programme and the reason for the vaccination.

At-risk children in the catch-up cohort

Please note that immunisation staff are advised to phone the PHPU on 0141 201 4917 for advice on the PCV dose-regimes required for those ‘catch-up’ children who are also at risk. The risk status of these children is not recorded on the SIRS system and additional doses of PCV may be required.

Hib/MenC at 12 months

No automatic re-appointment

Immunisation staff should note that children will be called by SIRS only once for the Hib-MenC vaccination. This is the only vaccine for which children will not be re-appointed by SIRS. In the event of a non-attendance, SIRS will contact the practice by letter advising immunisation staff to re-appointment at the earliest opportunity. In the case of a re-appointment, practice staff should complete an ‘Unscheduled Immunisation’ form and return it to the Child Heath Department.

Hib/MenC and MMR, PCV precaution and defaulters

It is recommended that there should be a gap of 4 weeks between the Hib/MenC vaccine and the MMR, PCV vaccines. This is a precautionary measure until more data accumulates as to whether these vaccines can be given without any interference between them. However, if a child fails to attend for Hib/MenC at 12 months but presents at 13 months for the MMR and PCV, re-appointment for Hib/MenC can be made anytime after the MMR, PCV without an interval. Furthermore, if, in the opinion of the practitioner, the child is unlikely to return for further Hib/MenC appointments, all 3 vaccines (Hib/MenC, MMR, PCV) should be given at the same time in different sites. Please note that this should only be done in exceptional cases where non-attendance is a real possibility.

Footnote: ‘Head Lice’ seminar – guest speaker Dr Ian Burgess (Entomologist, Cambridge University)

Date:       Wednesday, 27th September 2006
Venue:      Hampden Park
Time:        2.30 – 4.30pm
Contents:  Lifecycle of louse, treatment, bug-busting, contact tracing, service overview in Glasgow, PGDs, new protocols
Booking arrangements: Invitations with booking details have been sent to senior personnel for distribution to all relevant staff (school nurses, HVs, practice nurses, GPs). For further information call Karen Carberry on 0141 201 4824 or e-mail at
karen.carberry@ggc.scot.nhs.uk
**QUESTIONS & ANSWERS**

**General**

Q. What is the start date for the new programme?
   A. 4th September 2006

Q. When will the pneumococcal conjugate vaccine catch-up programme end?
   A. Feb 2007

Q. Why are changes to the immunisation programme being made now?
   A. These changes are being made now to ensure that young children in this country are offered protection against serious vaccine-preventable diseases. New vaccines are developed and licensed, for example pneumococcal conjugate vaccine (PCV). Research has shown that longer-term protection against Hib and meningococcal C disease is achieved by modifying the existing programme.

Q. What if a child has already started their vaccination course, how do they complete their immunisations?
   A. Children should complete their vaccination course according to the new vaccination schedule

Q. Can 3 injections be given at one visit - is it safe?
   A. Yes. Three injections can be given at the same time with no additional adverse effects from such a procedure. If the child is upset or cries a little, a cuddle often helps. In the US, babies are sometimes given four injections at one visit.

Q. Where will the third injection be given?
   A. It is recommended that children aged four months receive two jabs in one thigh, and one jab in the other.

Q. Does it matter which of the 3 vaccines are given in the same leg?
   A. The Department of Health suggests that at 4 months of age, PCV vaccination should be given into one thigh, with DTaP/IPV/Hib and MenC into the other thigh. PCV is a new vaccine and this procedure would allow any localised reaction to be easily linked to the particular vaccine.

Q. Can the third injection be given in the arm? If not, why?
   A. It is not recommended that immunisations be given in the arm of infants under one year of age. The anterolateral aspect of the thigh is the preferred site for children under one year as it provides a large muscle mass into which vaccines can be safely injected.

Q. As premature babies limbs are so small, should three injections still be given?
   A. Yes. It is important that the premature infants have their immunisations at the appropriate chronological age, according to the schedule. There is no evidence that premature babies are at an increased risk of adverse reactions from vaccines.

Q. Why not give one of these vaccines at a later date?
   A. Vaccinations should be completed according to the recommended schedule because it ensures that children are fully protected from serious disease as early as possible. The department of Health recommends that 3 vaccines be given at the same time.

Q. Will these extra injections overload a child’s immune system?
   A. No. There is no scientific or medical evidence suggesting that immunisations in any way overload the immune system of infants.

Q. Do any of the new vaccines contain thiomersal?
   A. No
Hib/MenC vaccine

Q. Why the change to the MenC vaccine schedule?
A. Studies have shown that two dose of MenC in the first year of life provides the same level of protection as three doses. This new schedule of a booster at 12 months provides children with longer-term protection against meningococcal disease.

Q. Why the change to the Hib vaccine schedule?
A. Evidence has shown that to ensure that Hib disease levels remain low and the protection offered to children continues well into their childhood, an additional booster dose of Hib vaccine is needed in the second year of life.

Q. What about older children who won’t have received PCV or a booster dose of Hib/MenC?
A. Pneumococcal and Hib are significantly less common or less serious in older children. However, if someone under 25 years of age presents with no history of vaccination against meningococcal C disease they should be offered MenC. Hib should be offered to unimmunised children up to the age of 10 years.

Q. Is this a one-off booster campaign or permanent booster dose?
A. It’s permanent

Pneumococcal vaccine

Q. Why does the pneumococcal conjugate vaccine (PCV) dose-regime within the vaccine package-insert differ from the UK national programme?
A. The package-insert of PCV states that for children 2-6 months of age the dose is 3 primary injections (at 1 month intervals) followed by a booster dose in the second year of life. Recommendations for older children also differ slightly from the UK schedule.

The UK programme is regulated by the Department of Health (DH) under recommendations by the Joint Committee on Vaccines and Immunisation (JCVI). After licensing, vaccines undergo continual research to ensure safety and maximum efficacy. Accredited evidence from the research is scrutinized by the JCVI and using this data the Committee recommends the regime that it considers gives the best protection to children.

Prevenar ® (PCV) was licensed in the United States 7 years ago and the primary dose-regime was set as stated in the package-insert. Since the US programme was introduced, research data from it and other programmes involving very large numbers of children has given JCVI sufficient evidence to recommend a revised schedule to the DH which has now been accepted by the Chief Medical Officer in Scotland.

Q. Does the PCV booster have to be given at same time as MMR? Can’t it be delayed?
A. We do not recommend delaying either PCV or MMR because the aim is to protect children as soon as possible.

Q. How do we know it is safe to have PCV at the same time as MMR vaccine?
A. MMR vaccine and PCV have been given together routinely as part of the US childhood immunisation programme since 2000. Its safety has been closely monitored and it has an excellent safety profile.

Q. What does PCV protect against and how effective is it?
A. It protects against 7 common strains of pneumococcal bacteria responsible for ~ 80% invasive pneumococcal disease in young children. In clinical trials it has been shown to be 96% effective in preventing IPD caused by the 7 serotypes in the vaccine.

Q. How long does protection from pneumococcal vaccine last?
A. PCV has been used in USA since 2000 and so far has provided good protection against pneumococcal disease.

Q. Is this the same vaccine that is given to people over 65 years of age?
A. No. The vaccine for older people is a polysaccharide vaccine (Pneumovax®) that protects against 23 common pneumococcal strains. The vaccine is not suitable for children under 2 years of age as it doesn’t produce a good immune response.

ENDNOTE: Greater Glasgow PHPU and Argyll & Clyde PHPU are now one! All PHPU staff are situated in Dalian House and available on 041 201 4917.