Vaccination at school – future challenges

Dr Claire Cameron
Epidemiologist (Immunisation)
Health Protection Scotland

Prevention and control of viral hepatitis through adolescent health programmes in Europe
Ljubljana, Slovenia
15-16 March 2007
Future challenges for school vaccination

• Why vaccinate at school?

• Experience of vaccination at school

• Practicalities

• Acceptability and uptake

• Costs

• Summary and conclusions
Why vaccinate at school?

- High proportions of adolescents are required to attend school
Enrolment in Secondary Education

Source: http://www.sasi.group.shef.ac.uk/worldmapper/display.php?selected=200

Why vaccinate at school?

- High proportions of adolescents are required to attend school
- Lower proportions of adolescents routinely attend primary care
Why vaccinate at school?

- High proportions of adolescents are required to attend school
- Low proportions of adolescents routinely attend primary care
- Often higher uptake
- Often more cost-effective
  - (e.g. Guay et al Effectiveness and cost comparison of two strategies for hepatitis B vaccination of school children. (Can. J. Public Health Rev. 2003; 94:64-67.)
Why vaccinate at school?

- High proportions of adolescents are required to attend school
- Low proportions of adolescents routinely attend primary care
- Often higher uptake
- Often more cost-effective
- Integrated opportunities for health promotion activities
- Concept of ‘health promoting’ schools being advocated
European Network of Health Promoting Schools
http://www.euro.who.int/ENHPS

WHO
# Experience of vaccination at school

## School vaccination in the UK

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Age</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>10-14 years</td>
<td>1953-2005</td>
</tr>
<tr>
<td>Diphtheria/tetanus/polio</td>
<td>13-18 years</td>
<td>1960s-ongoing</td>
</tr>
<tr>
<td>Rubella (girls only)</td>
<td>13 years</td>
<td>1971-1994</td>
</tr>
<tr>
<td>Measles/rubella</td>
<td>5-16 years</td>
<td>1994</td>
</tr>
<tr>
<td>MenC</td>
<td>5-18 years</td>
<td>1999-2000</td>
</tr>
</tbody>
</table>
Experience of vaccination at school

School vaccination in the UK

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Age</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>10-14 years</td>
<td>1953-2005</td>
</tr>
<tr>
<td>Diphtheria/tetanus/polio</td>
<td>13-18 years</td>
<td>1960s-ongoing</td>
</tr>
<tr>
<td>Rubella (girls only)</td>
<td>13 years</td>
<td>1971-1994</td>
</tr>
<tr>
<td>Measles/rubella</td>
<td>5-16 years</td>
<td>1994</td>
</tr>
<tr>
<td>MenC</td>
<td>5-18 years</td>
<td>1999-2000</td>
</tr>
<tr>
<td><em>HepB (Glasgow only)</em></td>
<td>11-12 years</td>
<td>2001-2</td>
</tr>
</tbody>
</table>
## Experience of vaccination at school

### School vaccination in the UK

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Age</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>10-14 years</td>
<td>1953-2005</td>
</tr>
<tr>
<td>Diphtheria/tetanus/polio</td>
<td>13-18 years</td>
<td>1960s-ongoing</td>
</tr>
<tr>
<td>Rubella (girls only)</td>
<td>13 years</td>
<td>1971-1994</td>
</tr>
<tr>
<td>Measles/rubella</td>
<td>5-16 years</td>
<td>1994</td>
</tr>
<tr>
<td>MenC</td>
<td>5-18 years</td>
<td>1999-2000</td>
</tr>
</tbody>
</table>

*HepB (Glasgow only)*  
11-12 years  
2001-2
Experience of vaccination at school

**School vaccination in the UK**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Age</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>10-14 years</td>
<td>1953-2005</td>
</tr>
<tr>
<td>Diphtheria/tetanus/polio</td>
<td>13-18 years</td>
<td>1960s-ongoing</td>
</tr>
<tr>
<td>Rubella (girls only)</td>
<td>13 years</td>
<td>1971-1994</td>
</tr>
<tr>
<td>Measles/rubella</td>
<td>5-16 years</td>
<td>1994</td>
</tr>
<tr>
<td>MenC</td>
<td>5-18 years</td>
<td>1999-2000</td>
</tr>
<tr>
<td><em>HepB (Glasgow only)</em></td>
<td>11-12 years</td>
<td>2001-2</td>
</tr>
</tbody>
</table>

**Equity**
- All schools – state and private
- Free of charge

**Freedom**
- Voluntary
- Lack of incentives
Practicalities
Practicalities

Vaccination

• Nurse-led in most places; previously more medical input
• Nurses employed by Community Health Care Partnerships
• Extra agency nurses sometimes required, especially for campaigns
• Each school has a named school nurse (1 per 2380 children; RCN 2005)
• Work in partnership with other stakeholders
• Immunisation is a core part of nurses’ service delivery
• Ongoing training (based on national standards & core curriculum)
Practicalities

Administration

• Administrators also employed by Community Health Care Partnerships
• Ideal is electronic call-recall system (School Health Module)
• Some areas still paper-based

Logistics

• Vaccination generally performed in school halls
• Vaccines delivered from pharmacy, with consumables, that morning
Practicalities
Communication / Education
• Pupils and parents receive information in advance of immunisation
• Teachers
• Peer education?
• Consent forms are sent home for parent’s signature
• Young people’s rights are also considered
• Older pupils may consent themselves
Practicalities

Consent

This form should be completed and signed by school pupils aged 16 years and over, and by parents or guardians on behalf of younger children. Children under the age of 16 who have read this leaflet and who understand the facts about this immunisation should also sign the form for themselves. In these circumstances it is not necessary for the parent or guardian to sign the form as well, but it would be helpful if they did so.

Please also complete the tear-off slip at the bottom of the page so that we can inform your GP that the immunisation has been given.

- Most parents favoured a joint decision with child, but 19% would not take their child’s view into consideration
- 42% agreed that the child should be able to be vaccinated without parental consent; 48% opposed

Practicalities
Communication / Education
• Pupils and parents receive information in advance of immunisation
• Consent forms are sent home for parent’s signature
• Child’s rights are also considered
• Older children may consent themselves

• Other stakeholders are also informed/consulted

• Telephone numbers for queries
Practicalities

Co-ordination

- Strong central co-ordination
- Programme approach with project management methodology
- Development of auditable national standards for co-ordination

NATIONAL IMMUNISATION PROGRAMMES

Template for the programme approach
for reporting on development and implementation

- Epidemiology & Surveillance
- Data Management
- Service Delivery
- Public & Professional Communication & Education
Acceptability

- Focus group discussions in four secondary schools
- Discussion with S1 pupils (age 11-12 years) and parents
  - Assess perceptions of acceptability and attitudes to HepB vaccination
  - Investigate what would influence uptake
  - Explore reasons for participation and non-participation
  - Inform health education material

Acceptability

Schools
- Most pupils prefer having vaccines at school than in primary care
- Most parents favour schools, due to perceived children’s preferences

  Pupil: ‘If you see all your friends having it you’ll feel more confident.’

- Pupils didn’t want to know too far in advance – anxiety!
- Lack of privacy and embarrassment were barriers for a minority

HepB
- Most pupils knew little/nothing about HepB
- Knowledge that HepB could be spread through piercing and tattooing caused anxiety
- Parents also had low knowledge
  
  Parent: ‘I thought it was just drug users that got it’
Risk of HepB

• Parents realistic about child’s future risk
  
  Parent: ‘I mean we don’t know how promiscuous our children are going to be or if they are going to be drug users or not. We would all hope that they wouldn’t be but…’

Vaccination

• Pupils felt it was unfair that they were not offered vaccine, while young people in other countries were

Decision making

• May still seek advice/reassurance from primary care
  
• Concern about side-effects

• Majority pupils nearly all parents in favour of HepB vaccine

Uptake

• High uptake in schools based programmes is achievable

  - HepB: 92% consent, 91.3%, 89.2% and 80.3% (1, 2 or 3 doses)
  - dT & OPV: 86% (2001/2; age 14 years)
  - MenC: 90.9-83.4% in Secondary school

• Uptake varies by age
Vaccine Uptake in MenC Schools Campaign 1999-2000

Uptake (%)
Uptake

- High uptake in schools based programmes is achievable

HepB 92% consent
91.3%, 89.2% and 80.3% (1, 2 or 3 doses)

dT & OPV 86% (2001/2; age 14 years)

MenC 90.9-83.4% in Secondary school

- Uptake varies by age
- Uptake can vary by other factors. Lower uptake for:
  - males (78% vs 82% for 3 doses)
  - pupils living in more deprived areas (74% (highly deprived) vs 89% (most affluent))
  - schools with higher absentee rates (74% vs 83%)
  - pupils attending special needs schools (66% vs 80%)
  - schools with more non-Caucasian pupils (75% vs 80%)

Costs

• Can be more cost-effective than primary care


• In HepB pilot scheme, 70% economic costs were vaccine costs
• HepB £30 per course; HPV £200 per course

Summary & conclusions

• Integration with health promotion, especially sexual health
• Retention and/or creation of appropriate infrastructures
• Early engagement with key stakeholders
• Capacity for electronic call-recall systems
• Balancing priorities within school health
• Reduction in inequalities
Thank You

HepB
Lesley Wallace
Syed Ahmed
Rina Duff
David Goldberg

Alison Hinds