Adolescent Health programme and its contribution to the success of vaccination

Country: Greece
1) Childhood vaccination schedule

<table>
<thead>
<tr>
<th>Age</th>
<th>DTaP</th>
<th>IPV</th>
<th>HIB</th>
<th>Hep B¹</th>
<th>MMR</th>
<th>dTaP</th>
<th>VZV²</th>
<th>MeningC³</th>
<th>Prevenar⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 months(1)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>4 months</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>6 months</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>12-15 months</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 months</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-6 years</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-12 years</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;18</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. HepB is given at birth with HBIG if mother HBsAg(+); if mother HBsAg(-) then 3 doses in infancy usually in combined vaccines (DTaP-IPV-Hep/Hib or Hep/Hib).

2. Catch up vaccination in older children/adolescents. Not yet 2nd dose recommended.

3. Most pediatricians give one dose at 12 months of age.

4. If started later 1, 2, or 3 doses according to recommendations.

#BCG is still given at 6 years in many schools.
2.1) How are the children/adolescents reached? School medicine system.

- No there is no school medicine system. Only BCG is given at first grade (6 years old) following Mantoux testing, but not in 100% of schools.
- All children have to provide medical certificate at school entry and every three years thereafter with medical and vaccination history but no catch up vaccination is provided by school in under-immunized children.
2.2) How are the children/adolescents reached?  
Other channels

- Only by voluntary visit to pediatrician (public i.e. through insurance or private).
- No other channels available.
3) Who are the vaccinators?

- Vaccines are administered by pediatricians:
  - Private pediatricians
  - Children with insurance by pediatricians in the public sector.
  - Children with no insurance by pediatrician or nurse in special agency.

- Vaccines are mainly administered by pediatricians and in some public sectors by nurse practitioners.
4) Training of the vaccinators?

- No specific training; pediatric residency and training of nurses.
5) Financing of child and adolescent vaccination

- Public sector:
  - All costs by insurance
  - Parents pay only 25% for the cost of few new vaccines such as the conjugated vaccines for pneumococcus/meningococcus and varicella vaccine

- Private sector:
  - All costs covered by parents mainly through private insurance. In many instances parents purchase vaccine through public insurance and go to private pediatrician with vaccine, to get vaccinated.
6) Decisions on introduction of new vaccines

• National committee for vaccination decides on introduction of new vaccines and makes the recommendations. Once a vaccine is officially recommended, it is also reimbursed.

• Recently, dTaP has been available for adolescent vaccination but not as yet introduced in the public sector so many adolescents still receive dT vaccine.

• HPV vaccine is available but no official recommendation is made yet mainly because of cost.
7) Coverage data  (Old data from 1996-1997)

<table>
<thead>
<tr>
<th>Vaccine coverage</th>
<th>1st grade (6-7 y.o.)</th>
<th>9th grade (14-15 y.o.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP 3 doses by 1 yo</td>
<td>82%</td>
<td>75% (72%)*</td>
</tr>
<tr>
<td>DTP 4 doses by 2 yo</td>
<td>65%</td>
<td>67% (54%)*</td>
</tr>
<tr>
<td>DTP 5 doses any age</td>
<td>80% (46%)*</td>
<td>90% (14%)*</td>
</tr>
<tr>
<td>MMR 1 dose by 2 yo</td>
<td>64-71%**</td>
<td>12-45%**</td>
</tr>
<tr>
<td>MMR 2 doses</td>
<td>Not examined; 2nd MMR introduced 1991</td>
<td>18-37%**</td>
</tr>
<tr>
<td>HepB 3 doses</td>
<td>57.9%</td>
<td>45.5%</td>
</tr>
<tr>
<td>HepA 3 doses</td>
<td>0.6%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Hib</td>
<td>14.7%</td>
<td>0.1%</td>
</tr>
<tr>
<td>BCG</td>
<td>38.8%</td>
<td>67.9%</td>
</tr>
</tbody>
</table>

*Lower rates for pertussis, mainly because of use of dT vaccine for booster at 6 y.o. and adolescents. Only recent decade DTaP is given at 4-6 y.o.

**Higher rates for measles

Panagiotopoulos T et al. Arch Hellenic Medicine 1999

New survey in primary schools under analysis
8) Strengths of the immunization programmes

- School programme exists only for primary schools, works well for public schools but some private schools difficult to reach.
- Success varies significantly between different regions.
9) Challenges of the immunization programmes

- Parents are influenced by private pediatrician. Therefore although almost 100% of children undergo Mantoux testing only ~30% of parents give consent for BCG vaccination since most pediatricians are against.
- It will be difficult for pediatric society to give up adolescent vaccination to school medicine for financial reasons.
10) Conclusions

- Voluntary vaccination, most vaccines for free.
- No vaccine needed to get into school.
- Vaccination coverage lower than other EU countries.
- Pediatricians vaccinate most children.
- School medicine exists only for BCG administration in first grade.
- Adolescents especially difficult to reach, but unlikely that pediatric society will accept to give up vaccination to a school system.