Vaccination against seasonal and pandemic influenza

Alba María Ropero Alvarez
Geneva , 12-14 July 2011
Outline

• Introduction and use of seasonal influenza vaccine in the Americas

• Review of vaccination against pandemic influenza

• Conclusions
Introduction and use of seasonal influenza vaccine in the Americas
Influenza Vaccine Recommendations

Resolution WHA.56 (2003)
Coverage of >50% of older adults by 2006
Coverage of >75% of older adults by 2010

TAG 2004 and 2006
All countries should strengthen their surveillance systems in order to determine:
• influenza disease burden
• cost-effectiveness of influenza vaccine introduction
• best vaccination strategy to use, formulation and when (especially in tropical countries)

All countries should establish a seasonal influenza vaccination policy that seeks to vaccinate:
• individuals with chronic illness, the elderly and pregnant women
• children 6-23 months of age
• health workers

Countries using the vaccine should document experiences and lessons learned from targeting high-risk groups.
Influenza Vaccine Recommendations

TAG July 2011

- Reiterates previous recommendations that countries vaccinate older adults, children, those with underlying conditions, and healthcare workers.

- Urges countries to increase vaccine uptake of pregnant women given their vulnerability to complications from influenza infection.

- Urges countries to document influenza vaccination coverage in high-risk populations. As more countries in the Region are introducing influenza vaccine, it becomes more important to assess the impact of influenza and conduct vaccine effectiveness studies in high-risk populations.

- Urges PAHO to continue to promote the transfer of technology for influenza vaccine production in the Region, in order to increase its availability.
Number of Countries and Territories in the Americas with Vaccination Policies for Seasonal Influenza

Out of 45 countries and territories reporting in the Americas

Pending introduction:
- Dominica
- Guyana
- Haiti
- St Kitts
- St Maarten
- St Vincent

Source: Country Reports to PAHO, MOH web pages, PAHO/WHO Surveys
Note: Data was not collected from the French Departments (French Guiana, Guadeloupe, Martinique)
Case study: Costa Rica

Influenza Vaccination among Risk Groups in Costa Rica:
An Evidence-based Decision

Influenza is a highly infectious viral disease characterized by seasonal outbreaks. Attack rates are usually high, resulting in an increase in doctor visits and hospitalizations that can be quite concerning in view of the threat of a pandemic. Influenza mortality refers not only to the disease caused by the virus, but also to the complications it can cause among people suffering from chronic diseases and among demographic groups at risk.

Figure 1. Discharges and three month running averages of discharges from influenza, Costa Rica, 1990 to 2002

Source: Database of hospital discharges, Caja Costarricense de Seguro Social (1990-2002)
Seasonal Influenza Vaccination in Countries and Territories

<table>
<thead>
<tr>
<th>Number of countries with:</th>
<th>2004</th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Public policies for influenza vaccination</td>
<td>13</td>
<td>35</td>
<td>39</td>
</tr>
<tr>
<td>- Vaccination of children</td>
<td>6</td>
<td>22</td>
<td>29</td>
</tr>
<tr>
<td>- Vaccination of elderly</td>
<td>12</td>
<td>33</td>
<td>39</td>
</tr>
<tr>
<td>- Vaccination of persons with chronic diseases</td>
<td>9</td>
<td>24</td>
<td>26</td>
</tr>
<tr>
<td>- Vaccination of health workers</td>
<td>3</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>- Vaccination of pregnant women</td>
<td>3</td>
<td>7</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Country Reports to PAHO, MOH web pages, PAHO/WHO Surveys

Note: Data was not collected from the French Departments (French Guiana, Guadeloupe, Martinique)
Use of seasonal influenza vaccine and formulations in the Americas 2011

Source: Country and territory reports to PAHO, MOH websites, WHO survey

Northern Hemisphere

Southern Hemisphere

Vaccine not yet introduced in the public sector
Persistent Challenges to Seasonal Influenza Vaccination

• Quality of information system
  – Coverage rates for all targeted populations groups are not routinely available
  – WHO/UNICEF joint reporting form does not capture vaccine coverage among pregnant women
• Two-dose schedule for children <9y vaccinated for first time
  – Challenges to complete schedules
  – Challenges to calculate vaccine coverage
• Low vaccine uptake
  – Pregnant women
  – Health care workers
Seasonal Influenza Vaccination Coverage Among the Elderly in Selected Countries

Source: Country and territory reports to PAHO
Seasonal Influenza Vaccination of Health Care Workers

- PERU 86% (2009)*
- EL SALVADOR 79% (2009)*
- PANAMA 74% (2009)*
- USA 62% (2009)†
- MEXICO 53% (2008)‡
- PARAGUAY 47% (2009)*
- GUATEMALA 38* (2009)*

*Source: Country and territory reports to PAHO
Review of vaccination against Pandemic Influenza
# Recommendations for Progressive Vaccination Against Pandemic Influenza

**SAGE (WHO) 7 July 2009**

1. Health workers
2. Pregnant women
3. Population >6 m with history of chronic diseases
4. Healthy young adults (>15 and <49 years)
5. Healthy Children (<15 years)
6. Healthy adults (>49 & <65 y)
7. Adults >65 years

**TAG (PAHO) 24 August 2009**

1. Health workers
2. Pregnant women
3. Population >6 m with history of chronic diseases
4. Healthy population:
   * 6 m- 4 y
   * school-age (>5 & <18 y)
   * young adults (19-49 y)
PAHO Technical Cooperation in Influenza Vaccination during the pandemic

- Immediate support of seasonal influenza vaccination for countries not yet using the vaccine
- Technical cooperation in planning for pandemic vaccination campaigns (development of technical guidelines)
- Support in pandemic vaccine acquisition
- Monitoring vaccine use and surveillance of adverse events
- Documenting and disseminating information in real time
More than 224 million doses applied in the Region
- 144 million in LAC
- 81 million in USA
H1N1 vaccine coverage in target groups, LAC

144 million people vaccinated:
98% coverage in LAC
H1N1 vaccine coverage by Risk Group in selected countries, 2010

Coverage >100% reflects problems with denominator estimation.

- Argentina
- Bolivia
- Brasil
- Cuba
- Chile
- Guatemala
- Mexico
- Nicaragua
- Paraguay

Legend:
- Total Coverage
- Health Personnel
- Pregnant Women
- Chronic Diseases
- Others

Inmunización Integral de la Familia
Salud Familiar y Comunitaria
Influenza Vaccination Among Pregnant Women

• Pregnant women emerged as a group particularly vulnerable to complications from influenza

• Pandemic appears to have led to changes in influenza vaccine policy regarding pregnant women
  – Before H1N1, 7 countries/territories vaccinating
  – In 2010, 17 countries/territories vaccinating*

• Vaccination of this groups should be undertaken under MDG’s framework and Regional Plans for maternal and infant mortality reduction.

*PAHO/WHO Influenza Survey 2010
## Surveillance of Adverse Events

<table>
<thead>
<tr>
<th>Event</th>
<th>N</th>
<th>Notified cases per million doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total ESAVI</td>
<td>13,621</td>
<td>94.59</td>
</tr>
<tr>
<td>Severe ESAVI</td>
<td>846</td>
<td>5.88</td>
</tr>
<tr>
<td>Seizures</td>
<td>27</td>
<td>0.19</td>
</tr>
<tr>
<td>Anaphylaxis</td>
<td>72</td>
<td>0.50</td>
</tr>
<tr>
<td>GBS</td>
<td>101</td>
<td>0.70</td>
</tr>
<tr>
<td>Other neurological events</td>
<td>19</td>
<td>0.13</td>
</tr>
<tr>
<td>Pneumonia/ Bronchitis</td>
<td>8</td>
<td>0.06</td>
</tr>
<tr>
<td>Other severe events</td>
<td>619</td>
<td>4.30</td>
</tr>
</tbody>
</table>

*As of December 2010. 144 million doses administered.*
Evaluation of Pandemic Vaccination Campaigns

• Consolidation of lessons learned
  – Support of countries evaluation of lessons learned
  – Regional consolidation of best practices identified during pandemic vaccination campaigns

• Evaluation of impact of pandemic vaccination through CDC’s Model Decision 2009
Lessons Learned

- Vaccination campaigns must be included as part of National Influenza Pandemic Preparedness Plans.
- Engagement of scientific/professional organizations and societies crucial to reach target groups
- Complexity of campaign strengthened national EPI teams & AEFI’s National Committees
- Communication strategies also need to be developed for specific audiences and make use of more diverse media
- Information sharing platforms essential –experiences of other countries proved invaluable during campaigns
Conclusions

• The experience in the Americas using seasonal influenza vaccine served to prepare for the introduction of a pandemic vaccine
• More than 31 countries and territories carried out pandemic vaccination campaigns
• H1N1 vaccination campaigns provided opportunity to strengthen AEFI surveillance
• Important for countries to continue to strengthen seasonal influenza vaccination for all at risk populations, with special emphasis on:
  – Pregnant women
  – Healthcare workers
  – Persons with chronic illness
• Urgent need to strengthen information systems for influenza vaccine coverage data among all groups
• Need to increase production capacity of Influenza vaccine in the Region
Thank you