Challenges to Sustaining Immunization Programs in the Americas

NVAC, WDC, September 2013

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Global and Regional coverage of DPT3
1980-2011

Immunization Vaccines and Biologicals, (IVB), World Health Organization.
194 WHO Member States. Date of slide: 18 July 2012.
Proportion of municipalities by range of coverage with DPT3 in children < 1 year of age, LAC, 2012*

Range of coverage

- ≥95%
- 80-94%
- <80%
- % municipalities not reported

Source: Reports from the countries in the joint report form (JRF) for notification of the PAHO-WHO/UNICEF, 2013. Preliminary data from Mexico
Percentage of municipalities by country, with coverage of DPT3 < 95% for < 1 year of age, Latin America, 2012

Source: Reports from the countries in the joint report form (JRF) for notification of the PAHO-WHO/UNICEF, 2013.
Strengthened surveillance
Outbreak control
Measles Elimination

Reported Measles and Rubella Cases, The Americas, 1980-2010*

*Data until EW 27/2010. Aruba and Netherland Antilles not reporting.
Source: EPI tables (1999-2003) and country reports to PAHO/WHO (since 2004).
The current outbreak in the Region put measles elimination at risk: Ecuador 2011 - 2012

Total confirmed cases = 328
Last confirmed case EW 28/2012

In 2011, 171 outbreaks due to imported measles viruses were documented, and the imported viruses have caused persistent transmissions in at least three countries

Source: Ministry of Health, Ecuador.
Preliminary data by EW 30/2012
ESTIMATED COSTS OF CONTAINING MEASLES OUTBREAKS IN SELECTED LAC COUNTRIES

<table>
<thead>
<tr>
<th>Country</th>
<th># of cases</th>
<th>Scope of outbreak control activities</th>
<th>Cost (USD)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile (2009)</td>
<td>1</td>
<td>Limited to 1 municipality</td>
<td>12,400</td>
</tr>
<tr>
<td>Peru (2009)</td>
<td>1</td>
<td>1 municipality in Peru and 1 in Ecuador</td>
<td>20,300</td>
</tr>
<tr>
<td>Ecuador (2011-12)</td>
<td>328</td>
<td>Nationwide</td>
<td>8.5 million</td>
</tr>
</tbody>
</table>

*Estimated costs include outbreak investigation, follow-up of contacts and vaccination activities

Source: Country reports to FGL/IM
Measles outbreaks don’t come cheap

Utah tallies costs as measles outbreak runs its course

A measles outbreak in Salt Lake City, Utah, in early 2011, resulted in nine cases, and cost the local public health department approximately $300,000, excluding indirect costs, diagnosis and treatment covered by individual insurance, and loss of income by individuals who were quarantined.  The Salt Lake Tribune, May 17, 2011
Containment costs for a measles outbreak in Indiana, USA - 2005

Total number of cases was 34; the majority was among 5-19 years old and 32 lacked evidence of measles vaccination.

<table>
<thead>
<tr>
<th>Costs item</th>
<th>Unitary cost (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per patient</td>
<td>4,932</td>
</tr>
<tr>
<td>Wages and salaries</td>
<td>108,592</td>
</tr>
<tr>
<td>Overhead</td>
<td>30,431</td>
</tr>
<tr>
<td>MMR vaccine and immune globulin</td>
<td>21,692</td>
</tr>
<tr>
<td>Mileage</td>
<td>1,610</td>
</tr>
<tr>
<td>Other</td>
<td>5,360</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>167,685</strong></td>
</tr>
</tbody>
</table>

Number of childhood vaccines routinely used in industrialized countries and in Latin America and the Caribbean, 1975-2010
Objectives of the ProVac Initiative

Objective 1
Strengthen infrastructure for decision making
- NITAG strengthening
- Legal frameworks
- South-south academic network

Objective 2
Develop tools for EE and provide training to multidisciplinary teams
- Cost-effectiveness models
- Program costing model
- Regional training workshops

Objective 3
Collect data, perform analysis and gather the framework of evidence
- Direct country support
- Methodological guidelines

Objective 4
Advocate for evidence based decision making
- Results presented to authorities
- Technical reports & policy briefs

Objective 5
Support an effective & sustainable NU VI
- Costing exercises to inform new vaccine intro
ProVac’s technical cooperation

Countries have requested technical support from PAHO to help integrate economic studies into the national decision-making process for immunization - *2006 Directing Council resolution (CD47.R10)*
### Year of the universal introduction of pneumococcal conjugate, rotavirus and HPV vaccines
### Countries and territories of the Region of the Americas, May 2013.

<table>
<thead>
<tr>
<th>Year</th>
<th>Rotavirus: 16 countries/territories</th>
<th>Pneumococcal: 21 countries &amp; 5 territories</th>
<th>HPV: 9 countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>NA</td>
<td>USA</td>
<td>NA</td>
</tr>
<tr>
<td>2006</td>
<td>BRA, ELS, USA, MEX, NIC, PAN, VEN</td>
<td>-</td>
<td>USA</td>
</tr>
<tr>
<td>2007</td>
<td>ECU</td>
<td>COR</td>
<td>CAN</td>
</tr>
<tr>
<td>2008</td>
<td>BOL</td>
<td>MEX, URU, GUY FRA</td>
<td>PAN</td>
</tr>
<tr>
<td>2009</td>
<td>COL, HON, PER, CAYMAN ISL.</td>
<td>PER, BAR, CAYMAN ISL</td>
<td>-</td>
</tr>
<tr>
<td>2010</td>
<td>GUT, GUY, PAR</td>
<td>ARU, BRA, ECU, ELS, PAN, NIC</td>
<td>-</td>
</tr>
<tr>
<td>2011</td>
<td>-</td>
<td>HON, GUY, CHI, COL, CUR</td>
<td>*PER, ARG, MEX</td>
</tr>
<tr>
<td>2012</td>
<td>DOR</td>
<td>ARG, BAH, GUT, PAR, TRT</td>
<td>COL, PAR</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
New vaccines in the national immunization programs

- **Pneumo, Rota, HPV**
  1. Colombia
  2. México
  3. Panamá
  4. Peru
  5. USA

- **HPV**
  1. Bonaire
  2. Guadalupe
  3. Martinique
  4. Saba
  5. St Eustatious

- **Pneumococcal**
  1. Aruba
  2. Bahamas
  3. Barbados
  4. Bermuda
  5. Chile
  6. Costa Rica
  7. Curacao
  8. Trinidad & Tobago
  9. Uruguay

- **Pneumo, Rota**
  1. Brazil
  2. Cayman I.
  3. Ecuador
  4. El Salvador
  5. Guatemala
  6. Guyana
  7. Honduras
  8. Nicaragua
  9. Paraguay

- **Rota**
  1. Bolivia
  2. Dominican Republic
  3. Venezuela

Pan American Health Organization

World Health Organization (Americas)
Evidence base for NUVI in LAC

- Special supplement on methods to generate evidence for decision making
- Highlights work conducted by ProVac Centers of Excellence
- Instrumental to share the lessons learned from the ProVac Initiative
- English and Spanish!
ProVac in other regions of the world: the ProVac International Working Group

- To transfer ProVac tools and methods to other WHO Regions:
  - AFRO
  - EMRO
  - EURO
- Two-year pilot phase (2012-13)
- Partners:
The Regional Immunization Program in Latin America & the Caribbean:

Laws and Source of Funds

- national funds
- external funds
- immunization laws
In summary, there is no magic bullet to ensuring equitable and sustainable immunization programs and introduction of new vaccines into developing countries. Ultimately, the solution requires a strategic vision grounded in long-term goals, not short-term fixes.

http://www.paho.org/immunization
Acknowledgements

• Comprehensive Family Immunization Unit (IM), Department of Family, Gender and Life Course (FGL), PAHO. Dr. Cuauhtemoc Ruiz and team.
Countries with Pneumococcal Conjugate Vaccine (PCV) in the National Immunization Program (NIP)

Data Source: WHO/IVB Database, as at 29 May 2013
Map production: Immunization Vaccines and Biologicals (IVB), World Health Organization
Date of slide: 29 May 2013
"New vaccines" in the Americas, 2012

• 90% of the birth cohort in the Region is in countries that already include the pneumococcal vaccine in its regular program (60% of the cohort of LAC)
• 87% of cohort is living in countries that already use rotavirus vaccine (60% of the cohort of LAC)
• 58% of girls 10 - 14 years old live in countries that have the HPV vaccine
Global Immunization Vision and Strategy (GIVS)

- Family Immunization
  - reaching more...
- Disease reduction targets for Rotavirus, Pneumococcus
  - introducing new...
- Partnerships
  - linking with others...
- Assured supply of safe vaccines
  - global interdependence...

Regional Immunization Vision and Strategy (RIVS)

Global Vaccination Action Plan (GVAP)
GENERAL OBJECTIVES OF THE Regional Immunization Vision and Strategy (RIVS)

1) Maintain the achievements:
   ✓ Sustain polio, measles and rubella elimination.
   ✓ Control of diphtheria, pertussis, *Haemophilus influenzae*, hepatitis B.

2) Complete the unfinished agenda
   ✓ Improve coverage in all municipalities.
   ✓ Eliminate measles, CRS and maternal and neonatal tetanus.
   ✓ Transition program focus from child to family.
   ✓ Increase the use of underutilized vaccines.

3) Face new challenges:
   • Strengthen operational capacity and surveillance infrastructure.
   • Strengthen national capacity for evidence based decision-making.
   • Introduce of new vaccines.
   • Promote sustainability and technical excellence.

Global Vaccination Action Plan (GVAP)

1) Achieve a world free of poliomyelitis.

2) Meet global and regional elimination targets.

3) Meet vaccination coverage targets in every region, country and community.

4) Develop and introduce new and improved vaccines and technologies.

5) Exceed the Millennium Development Goal 4 target for reducing child mortality.