# Immunization Newsletter

### Pan American Health Organization

Volume XXXV Number 6

Immunize and Protect Your Family

December 2013

### **Caribbean Expanded Program on Immunization** (EPI) Managers Meet in Jamaica

Ninety-one participants representing thirty countries in the Caribbean sub-region, including the French and Dutch-speaking Caribbean, the Caribbean Public Health Agency (CARPHA), the United Kingdom Overseas Territories, the Netherlands, University of the West Indies, Jamaica Ministry of Health (MOH), and PAHO met in Runaway Bay, St. Ann, Jamaica on 19–21 November 2013 to analyze and share their experiences with the Expanded Program on Immunization (EPI).

The governments and people of the Caribbean community are committed to the sustainability of the immunization program. Completing the activities involved with the verification and documentation of measles, rubella and congenital rubella syndrome (CRS) elimination in the Caribbean had been one of the main achievements of the previous year. The vaccination coverage for administered vaccines for 2012 had shown overall improvement compared to the years before. Nevertheless, 2013 was challenging, due to the maintenance of current services and the implementation of activities related to the transfer of the EPI office at Caribbean Epidemiology Centre (CAREC) to the PAHO office in Jamaica, starting on 1 January 2013. One significant milestone in disease surveillance in 2013 was the installation of the ISIS database system, a PAHO platform for vaccine-preventable disease (VPD) surveillance, in the EPI unit in PAHO-Jamaica and in the surveillance unit of the Jamaica MOH. On November 18, a one-day training workshop on immunization was held for the EPI Managers. The purpose of the workshop was to present technical updates, clarify selected issues and discuss the changes within the Program.

The "Henry C. Smith Immunization Award" was presented this year to islands of Turks and Caicos. Barbados received the first price for surveillance, while the second and third places went to Montserrat and Belize, respectively. ■



Participants at the EPI Managers meeting in Runaway Bay, St. Ann, Jamaica, November 2013.

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### Second Workshop Conducted in Brazil to Share the Lessons Learned in the Development and Implementation of Electronic Immunization Registries

Representatives from 17 countries of the Americas, including 21 participants from the sub-national levels of Brazil, Albania, Angola, Ghana, Sri Lanka, Tanzania; the Open Source Medical Informatics initiative (IMeCA) for Latin America; the World Health Organization (WHO) and the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) met in Brasilia, Brazil on 18-19 November, 2013 to share practical experiences regarding the development and implementation of electronic immunization registries (EIRS). Colleagues from PAHO, the Bill and Melinda Gates Foundation. the US Centers for Disease Control and Prevention (CDC), the GAVI Alliance, UNICEF, and other WHO regions received a web link to follow the workshop online.

The main purposes of the workshop included promoting EIR strengthening, defining the lessons learned and best practices employed to aid in the development and implementation of EIRs, discussing countries' needs for a practical EIR field guide, and defining the next steps in the EIR work among countries of the Americas and with PAHO/WHO.

Representatives from Brazil's Ministry of Health (MOH) and PAHO-Brazil welcomed participants to the meeting, highlighting the importance of having accurate data to monitor increasingly complex immunization programs. EIRs were cited as a powerful tool to improve vaccination monitoring in order to increase coverage rates in an equitable manner. PAHO presented an overview of the current situation on the development and implementation of EIRs in Latin America, along with the most Volume XXXV Number 6

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Participants at the Electronic Immunization Registry Workshop in Brasilia, Brazil, November 2013.

recent recommendation of PAHO's Technical Advisory Group (TAG) on vaccine-preventable diseases and the objectives of the workshop. The host country, Brazil, presented its experience implementing their national EIR.

The workshop was divided in plenary sessions and work groups. Day one of the workshop focused on practical issues related to primary data collection (including form design), flow and data entry, online and offline EIRs, strategies to ensure EIR completeness, unique identifiers and confidentiality and management of potential duplicate records. The groups also discussed the conditions and risks to consider when proposing an immunization registry and how to monitor the implementation of an EIR (data quality, denominator completeness, software functioning and acceptability, among others).

During day two, presentations and discussions focused on interoperability, confidentiality, data security, EIR relationship with other Health Information Systems, and the potential role of mHealth. Groups proposed recommendations on EIR outputs for managers (reports, maps, graphs), making the EIR useful at the local level (follow-up, recall/reminders), and on how to make EIRs interoperable with other national information systems. As with the first Latin American workshop on EIRs in 2011<sup>1</sup>, the openness and willingness of the participant countries to share experiences, products, successes and failures was commendable.

PAHO acknowledges the generous contributions of the Brazilian MOH and the Bill and Melinda Gates Foundation in making this workshop possible.

<sup>1</sup> "National Computerized Nominal Immunization Registries: Workshop to Share 'Lessons Learned'". Immunization Newsletter. February 2011; Vol. XXXIII No. 1 (p.4).

### **Information Systems Projects Become Easier with the PATH/WHO Toolkit**



An online version of the Information and Communication Technology (ICT) Toolkit developed by Project Optimize has been published on the TechNet-21.org website. The original document, entitled "Planning an Information Systems Project: A Toolkit for Public Health Managers," is available as a PDF on the PATH and WHO websites. It provides guidance to public health managers planning the implementation of information and communications technology in health information systems. It also draws on lessons learned by Project Optimize, a five-year collaboration between the World Health Organization and the Program for Appropriate Technology in Health (PATH), to help optimize the vaccine supply chain. The ICT Toolkit focuses on the planning phase of an information systems project. It proposes an eight-step process that can help managers:

Choose the solution that best fits their needs and context.

Obtain the external help and expertise they need.

Develop, scale, and then sustain their chosen solution.

The online version of the toolkit provides links to internet content such as documents, websites and YouTube movies that the PDF was not able to include. It also enables registered TechNet users to comment on and rate individual pages. Jan Grevendonk, co-author of the ICT Toolkit, explains the benefits of these new features: "We wanted to take the PDF and turn it into something dynamic and interactive, a place for public health managers to share experiences and learn from each other. Hopefully this will help to stimulate more in-depth discussion within the immunization community about ICT project planning." Visit the online version of the ICT Toolkit today at http://ict.technet-21.org/

PAHO is working with WHO and PATH to make this toolkit available in Spanish and Portuguese.

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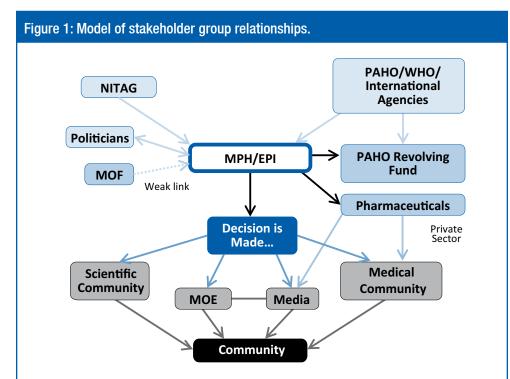
### Analysis of Key Stakeholders in Vaccine Decision-Making: A Pilot Study in Ecuador

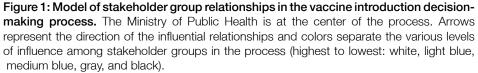
During the "Decade of Vaccines," the World Health Organization (WHO) and its partners hope to see as many as 21 new or improved vaccines on the market, along with new vaccine technologies for delivery.1 Although these predictions are promising and crucial for the prevention of life-threatening diseases, they also pose new challenges for national decision-makers. Countries with finite resources and multiple health priorities must be able to efficiently and effectively prioritize their agendas and make decisions on the appropriate vaccines to introduce to their national programs.<sup>2</sup> Decision-making processes in regards to vaccine introduction have not been well studied so far.<sup>3</sup>

In alignment with the mission of PAHO's ProVac Initiative to strengthen national capacity for evidence-based decision-making on new vaccine introduction in Latin America and the Caribbean,<sup>4</sup> a pilot study was designed to analyze the vaccine introduction decisionmaking process in Ecuador. We focused on recent decisions surrounding the introduction of the human papillomavirus (HPV) vaccine as a case study. The key objectives of the study were: (1) to determine stakeholders' preferred information in order to make an evidence-based decision and (2) to investigate the factors that influence each stakeholder's decision-making process.

In June 2012, ProVac collaborated with the Immunization Advisor and team in the PAHO Ecuador office and developed a survey tool based on preexisting qualitative and quantitative survey questions, incorporating specific research topics for Ecuador. The study was to be exploratory and descriptive of the vaccine decision-making process in Ecuador and was based on the themes listed in **Table 1**.

The literature review provided insight on which stakeholder groups were expected to be involved in national decision-making processes. Key contacts in Quito, Ecuador were identified and asked to participate in an interview. Semi-structured interviews were conducted and a snowball sampling approach was adopted, in which respondents were asked to identify any additional stakeholders involved in the process. Since this study coincided with the country's decision to introduce the HPV vaccine,





### Table 1: Themes of the survey

- General overview of the decision
   -making process
- Identification of key stakeholders
- Objective 1: To determine stakeholders' preferred information in order to make an evidence-based decision
- Objective 2: To investigate the factors that influence each stakeholder's decision-making process
- Other information
  - Opinions on the HPV vaccine
  - Opinions on integrated approaches for cervical cancer
  - Programmatic aspects of the vaccine introduction

respondents were asked to relate their answers to that decision.

#### **Key Findings**

In total, 12 interviews were conducted representing seven different stakeholder groups (**Table 2**). We have focused our results to outline the general overview of the decision-making process in Ecuador, necessary data required by stakeholders, and stakeholder recommendations.

### General overview of decisionmaking process

The decision-making process for the HPV vaccine is visually modeled in **Figure 1**, according to stakeholder responses. The Ministry of Public Health (MPH) and the Expanded Program on Immunization (EPI) were identified as the central and final decision-makers for vaccine introduction. The arrows directed toward the MPH/EPI in the figure represent the stakeholders who influence the decision of the MPH.

The National Immunization Technical Advisory Group (NITAG) is an influential group convened by the MPH to address all aspects of the HPV vaccine and put forth a recommendation. To prepare, the NITAG conducts an extensive review of available research data on the HPV vaccine (e.g. quality, safety, efficacy, production process). Although the EPI relies on NITAG's recommendations, the Program conducts an independent technical review of the vaccine.

#### **ECUADOR** continued from page 3

International cooperation agencies declared that they only become involved upon request from the MPH, and then they often play a role in information sharing and advocacy. Among the stakeholders not involved in the decision (i.e. those in Fig. 1 without arrows directed towards the MPH), only the medical community members felt that they have valuable technical input from a technical point of view and should be included.

Additional stakeholders who, in some settings, could be expected to participate in the decision-making process (e.g. the local scientific community, medical community, Ministry of Education, and the news media) were not involved. They would only become involved once the decision to introduce has been made. However, the news media and the medical community do have a role within the private sector.

For those stakeholders involved in vaccine introduction decisions, it was unanimous that the decision-making process for the HPV vaccine has been similar to that of other vaccines. Differences that were mentioned, such as targeted cohort age and more required technical support, were considered minor and not relevant to create a new decision-making process.

### Necessary data for stakeholders to make evidence-based decisions

The majority of stakeholders (82%) asserted that the necessary data required to make a decision regarding the introduction of the HPV vaccine was similar to other new vaccines. **Table 2** shows that burden of disease, vaccine safety and efficacy, and cost-effectiveness were the three most important factors mentioned for making an evidence-based decision. Collecting accurate data on the prevalence and incidence of HPV in Ecuador was mentioned as the most difficult information to obtain. It was also stated that assessing the long-term benefits of the HPV vaccine in the Ecuadorian population is different from other vaccines.

### Stakeholder recommendations for optimizing the decision making process for new vaccine introduction

All interviews were concluded by asking each stakeholder for recommendations on acceler-

ating the decision-making process for new vaccine introduction in Ecuador. The NITAG and three MPH stakeholders offered no recommendations. Remaining stakeholders made the following suggestions:

- Include more stakeholders in the decisionmaking process.
- Improve health information systems (e.g. to determine and measure burden of disease).
- Promote stronger disease awareness programs/prevention campaigns to bring health issues to the public agenda.
- Plan ahead. For example, the PAHO Revolving Fund needs to be notified well in advance of vaccine introduction, to ensure that suppliers can meet the country's demand and timeframe.
- Advise decision-makers to consider new vaccine field implementation issues, including documenting the introduction process.

**Table 2:** Stakeholders interviewed about vaccine introduction in Ecuador and their responses to necessary data. Stakeholders were asked what data they needed in order to make a decision about HPV vaccine introduction (burden of disease; cost-effectiveness analysis; etc.)

Stakeholder groups (# interviewed)	Data needed to make a decision on HPV vaccine introduction
NITAG (1)	Incidence and burden of disease; primary objective is to ensure the vaccine "meets the require- ments of quality, safety and efficacy."
Ministry of Health (incl. EPI) (3)	Cost-effectiveness and impact analysis (i.e. cases averted); burden of disease; clinical trials; financial feasibility; epidemiological profile; political support; benefits for involved parties. Emphasis was placed on cost-effectiveness analysis to prioritize country needs and political direction.
Ministry of Finance SENPLADES (1)	Incidence and prevalence. Alignment with Ecuador's National Development Plan.
Pharmaceutical (1)	Efficacy and safety. Good cost-effectiveness analysis relation in order to cover all Ecuadorian women.
International cooperation agencies & donor agencies (4)	Epidemiological status; financial feasibility; cold chain capacity; burden of disease; needs of priority in Ecuador; cost-effectiveness analysis; efficacy and safety; sustainability; impact on current routine vaccination program.
Medical / Scientific Community (1)	Vaccine safety; effectiveness and efficiency; burden of disease and cost-effectiveness.

<sup>&</sup>lt;sup>1</sup> Global Vaccine Action Plan 2011- 2020. World Health Organization, 2013. Available at: http://www.dovcollaboration.org/action-plan/.

<sup>&</sup>lt;sup>2</sup> Andrus, J.K., Toscano C.M., Lewis M., Oliveira L., Ropero A.M., Dávila M. & Fitzsimmons. (2007). A model for enhancing evidence-based capacity to make informed policy decisions on the introduction of new vaccines in the Americas: PAHO's ProVac Initiative. Public Health Reports, 122: 811-816.

 <sup>&</sup>lt;sup>3</sup> Burchett, H.E.D., Mounier-Jack, S., Griffiths, U.K. & A J Mills. (2012). National decision-making on adopting new vaccines: a systematic review. Health Policy and Planning, 27: ii62-ii76.
 <sup>4</sup> Jauregui, B., Sinha, A., Clark, A.D., Bolanos, B.M., Resch, S., Toscano, C.M., Matus, C.R., & J. K. Andrus. (2010). Strengthening the technical capacity at country-level to make informed decisions on new vaccine introduction: Lessons learned by PAHO's ProVac Initiative. Vaccine, 29: 1099-1106.

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**ECUADOR** continued from page 4

#### Discussion

Recommendations made by the stakeholders to accelerate the decision-making process were valuable and identified key steps to optimize the process. Many stakeholders are expected to have a role in the decision-making process for vaccine introduction, but based on this observation, only a few organizations are included. This is similar to what other experts have found in other low- to middle-income countries. Even if certain stakeholders do not participate directly in the final stages of the decision, it is important that the MPH include various stakeholders at an early stage in order to gain valuable input, promote transparency and ultimately encourage accelerated vaccine introduction, where the evidence supports it. Coordination among the various stakeholders for implementing a new policy is required.

This study found that burden of disease, vaccine safety and efficacy, and cost-effectiveness were the three most important factors mentioned. The importance of local evidence, notably in relation to burden of disease, has been reported in other countries. Andrus and other colleagues<sup>2</sup> presented a useful framework for national decision-makers in which three main factors need to be incorporated:

- 1. **Technical criteria** (including burden of disease, cost effectiveness of vaccine as compared to alternatives);
- 2. Programmatic and operational criteria (including logistics and methods of financing); and
- 3. Social criteria (including equity of providing the vaccine to the population, political support and the societal perspectives).<sup>4</sup>

### Conclusion

This study was designed to test a new tool for analyzing the role of key stakeholders in the vaccine introduction decision-making process, determine the preferred information they need in order to make an evidence-based decision, and investigate the factors that influence the process. This study in Ecuador provided a good pilot test. We attempted to pilot test the survey with each stakeholder group and were able to interview individuals from seven different groups.

In conclusion, with more vaccines available on the market, national decision-makers need to differentiate their needs from the regional and global priorities. Ecuador acknowledged that it needs to improve national coordination among key stakeholders for vaccine decisions.

PAHO will continue to support this improvement with a greater understanding of the national process. It is expected that this study will lead to recommendations on how to improve the process of generating and communicating evidence to immunization policy-makers in Ecuador and how it can serve as a pilot experience for other countries.

# **Regional Meeting on Sentinel Rotavirus, Bacterial Pneumonia and Meningitis Surveillance**

On 9-11 December 2013, new vaccine surveillance representatives from the Pan American Health Organization (PAHO), 23 countries, and partners met in Cancun, Mexico to review the latest sentinel surveillance information regarding rotavirus, bacterial pneumonia and meningitis, including the achievements and challenges it poses. They also met to follow-up on the results and challenges of laboratory network performance in sentinel surveillances and to discuss the results of the strategic review of new vaccine surveillance and its next steps. The meeting was a joint activity between PAHO and the Sabin Vaccine Institute. Following five years since the beginning of new vaccine surveillance in the Region of the Americas, this meeting was a good review and summary of what has been done in the Region regarding surveillance and what will be the next action steps for the coming years. During the last day of the meeting, the countries were divided into three groups to discuss data quality, epidemiological and laboratory integration, and the WHO Global New Vaccines Surveillance Network. The groups later presented better ways to analyze, integrate and report data, and the activities required to continue being a part of the WHO Global New Vaccines Surveillance Network.

### **Regional Workshop on EPI Planning and Program Costing Using the COSTVAC Method and Tool**

Managers and administrators of the Expanded Program on Immunization (EPI) from 20 countries of the Americas, international PAHO/WHO experts, and collaborators of PAHO's ProVac initiative met in Cancun, Mexico on 8-9 December 2013 to share PAHO's proposal to use a common framework for EPI planning (Plan of Action), reporting (PAHO/WHO-UNICEF Joint Reporting Form or JRF, GAVI) and EPI costing. Also on the meeting's agenda was a discussion of the new COSTVAC tool and methodology for EPI costing, as well as the potential uses of COSTVAC for annual and multiyear planning. The meeting also involved documenting the lessons learned from current country-level EPI planning, including challenges faced and opportunities for improvement.

PAHO presented the COSTVAC tool and methodology for EPI costing. The aim of this tool is to generate more precise EPI cost data to better inform program budgeting and planning. Meeting participants had the opportunity to familiarize themselves with the tool and to learn more about the differences and uses of economic and financial costs. Participants also compared the EPI budget and the budget execution for 2013. They discussed the possible reasons for discrepancies, in order to raise awareness and improve future planning and budgeting. A revised EPI Plan of Action template with twelve technical components was also presented at the meeting. Inconsistencies between the components used in EPI planning and other technical tools are common in the Region and efforts are being made to establish standardized definitions across reporting and planning tools. Participants shared their experiences with EPI planning, and gave feedback regarding the template and the tools presented. Country feedback from the meeting will be used in the next revision of COSTVAC and to finalize the EPI Plan of Action template in early 2014.

### Proposed Components for the EPI Plan of Action

- 1. Political priority and legal basis
- 2. Planning and coordination
- 3. Immunobiologicals and supplies
  - a. Vaccines
  - b. Syringes
  - c. Supplies
- 4. Cold chain
- 5. Training
- 6. Social mobilization
- 7. Operational expenses
- 8. Supervision and monitoring
- Epidemiological surveillance and laboratory
- 10. Information system
- Investigation
- Evaluation

## Strengthening National Measles and Rubella Outbreak Response Capacity in the Post-Elimination Era

National surveillance officers from 29 countries of the Americas were trained on how to respond to measles and rubella outbreaks during the post-elimination era, following the Pan American Health Organization's (PAHO) new guidelines. The training workshop took place in Cancun, Mexico on 12-14 December 2013. PAHO's immunization focal points as well as experts from the World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC) also participated in the training.

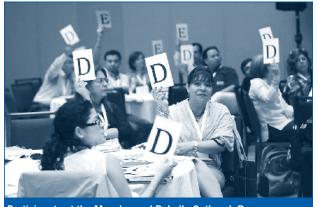
The specific objectives of the workshop were to share updated information on measles and rubella outbreak responses, including the lessons learned from recent field-country experiences, and to strengthen national preparation, surveillance and response capacities for measles and rubella outbreaks within the context of certain events (2014's Soccer World Cup).

The methodology used in the workshop was based on case studies that identified the differences between measles and rubella epidemiology in the pre, near, and postelimination phases, including outbreak investigation and control measures. Participants were split into groups and performed simulation exercises where each member played different roles during any given outbreak investigation (i.e., field epidemiologists, laboratory worker, health authority, etc.).

Participants provided insightful feedback to improve the methodology, which will be replicated at the subnational level as part of country preparations for the 2014 Soccer World Cup. In addition, a pool of regional facilitators was trained

according to this methodology, which will be available to support future in-country training.

Given that circulation of the endemic measles and rubella viruses was successfully interrupted in 2002 and 2009, respectively, the epidemiology of these diseases has changed. All reported cases have been associated with virus importations from regions where measles and rubella are still endemic and have presented limited secondary spread. Sustained measles

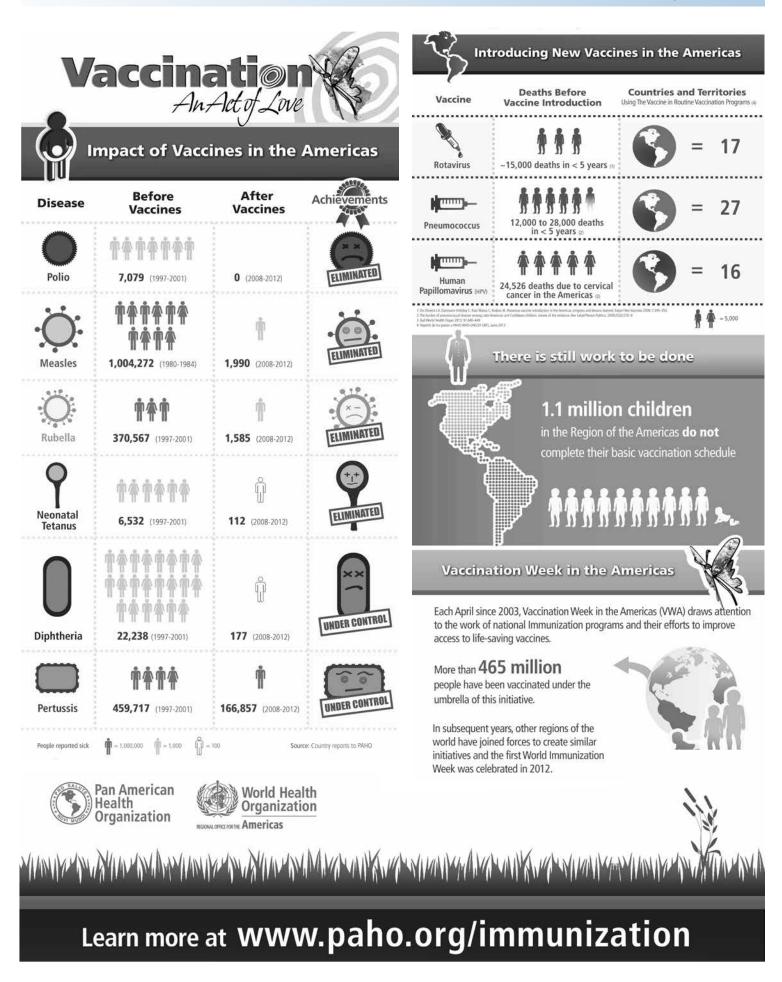


Participants at the Measles and Rubella Outbreak Response Workshop in Cancun, Mexico, December 2013.

transmission has been very sporadic and has demonstrated the ability of the virus to find susceptible individuals in areas with reportedly high vaccination coverage. International contact tracing and contact follow-up are required, especially given that the measles virus has affected international travelers, whom have become infected in airports, planes, cruises, etc. Therefore, the early detection of cases facilitates timely investigation and control in order to be ahead of measles and rubella. Volume XXXV Number 6

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The *Immunization Newsletter* is published every two months, in English, Spanish, and French by the Comprehensive Family Immunization Project of the Pan American Health Organization (PAHO), Regional Office for the Americas of the World Health Organization (WHO). The purpose of the *Immunization Newsletter* is to facilitate the exchange of ideas and information concerning immunization programs in the Region, in order to promote greater knowledge of the problems faced and possible solutions to those problems.

An electronic compilation of the *Newsletter*, "Thirty years of *Immunization Newsletter*: the History of the EPI in the Americas", is now available at: www.paho.org/inb.

References to commercial products and the publication of signed articles in this Newsletter do not constitute endorsement by PAHO/WHO, nor do they necessarily represent the policy of the Organization.

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### **Brazil Launches a Book Celebrating the 40<sup>th</sup> Anniversary of its National Immunization Program**

On 18 September 2013, the Brazilian Ministry of Health (MOH) celebrated the 40th anniversary of its National Immunization Program. To commemorate this anniversary, the Brazilian MOH published Programa Nacional 40 Anos: de Imunizações (40 Years: National Immunization Program). Participating in the celebration was Brazil's Secretary of Health Surveillance, Jarbas Barbosa, and National Immunization Program (NIP) coordinator, Carla Magda Domingues. The NIP's initial goal was to provide free vaccines to the entire Brazilian population at public health centers. Doctors Barbosa and Domingues contributed introductions to the book, indicating the gratitude and appreciation they have for Brazil's NIP and the strides the Program has made in the past forty years. The Brazilian NIP was described as very successful, incorporating an important variety of public health intervention components and accepted widely

and positively by the Brazilian population. Among the successes of the Program, they highlighted its impact on the elimination and reduction of diseases, such as smallpox, polio, measles, and rubella. The Brazilian MOH attributes the continuous success of the NIP to the commitment, dedication and hard work given by thousands of vaccinators. Health authorities also attributed the NIP success to a cooperative government, as well as task forces and activities conducted to promote health and disease prevention. Brazil's current NIP coordinator Carla Magda Domingues had kind words to say regarding the successful trajectory the NIP has had since its birth in 1973. It has been recognized both nationally and internationally as a brilliant execution in the scope of public health, defined by the prioritization of the promotion, prevention, and protection of the health of the Brazilian population. She looks to the future to keep rebuilding and strengthening the



40 Anos: Programa Nacional de Imunizações, commemorating the 40<sup>th</sup> anniversary of Brazil's National Immunization Program.

program, so countries and regions that have recently started a National Immunization Program can find motivation in the Brazilian experience.



#### **Comprehensive Family Immunization Unit**

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