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In this issue:

Sustaining National Immunization Programs in the Context of Introducing New Vaccines and Achieving the Millennium Development Goals

A Briefing Session on Sustaining National Immunization Programs in the Context of Introducing New Vaccines and Achieving the Millennium Development Goals (MDGs) was held as part of the 46th PAHO's Directing Council Meeting in Washington D.C. on 28 September 2005. The objectives of this meeting were:

- To promote the strengthening of partnerships between Ministries of Health and Finance;
- To reaffirm PAHO's role and responsibility for negotiating affordable prices for new vaccines with manufacturers;
- To foster a deeper understanding of fiscal issues; and
- To strengthen regional capacity for existing vaccine production as well as research and development of new vaccines.

Dr. Carissa Etienne, PAHO Assistant Director, opened the session on behalf of PAHO Director. Dr. Etienne emphasized the importance of immunization as essential to reducing child mortality. She also stressed that, to ensure that new technologies are accessible to all in an equitable manner, Pan Americanism will be critical.

Dr. Pilar Mazzetti Soler, Minister of Health of Peru acted as Chair. Other panelists included Dr. Jon Andrus, Chief, Immunization Unit (IM), PAHO; Mr. John Fitzsimmons, Technical Officer, IM; Dr. Peter Heller, Deputy Director, Fiscal Affairs Department, International Monetary Fund; Dr. Steve Landry, Senior Health Advisor, Bill and Melinda Gates Foundation; and Dr. John Wecker, Director, Rotavirus Vaccine Program, PATH.

The five key topics covered were:

1. The Unfinished Agenda and Achieving the MDGs with Immunization

Dr. Andrus presented a regional policy framework for addressing the unfinished immunization agenda, as

J. Fitzsimmons (PAHO) addressing the audience. At the Head Table, from left to right, are Dr. S. Landry (Bill and Melinda Gates Foundation), Dr. J. Andrus (PAHO), Dr. P. Mazzetti Soler (Minister of Health, Peru), Dr. C. Etienne (PAHO), and Dr. P. Heller (International Monetary Fund). Not seen on the picture is Dr. J. Wecker (PATH).

Vaccination Considerations in the Event of an Impending Influenza Pandemic

Background

Influenza is an infectious disease associated with seasonal epidemics each year. Moreover, influenza can also generate pandemics, understood as epidemics that spread to several countries. These pandemics are associated with high morbidity, increased mortality, major social disruption, and substantial economic losses. The Spanish flu pandemic of 1918 was responsible for some 40 to 50 million deaths worldwide, killing more people than World War I.

Epidemiological models forecast that an influenza pandemic is impending. It could result in 57 to 132 million medical consultations, 1 to 3.23 million hospital admissions, and 280,000 to 650,000 deaths in less than two years in the industrialized countries alone. In 2004 and 2005, outbreaks of the highly pathogenic avian flu caused by the H5N1 virus in birds occurred throughout much of Asia. This virus has crossed the species barrier and infected humans, raising concerns regarding its pandemic potential. However, the capacity for person-to-person transmission is currently very limited.

See **INFLUENZA** page 2

related to the achievement of the MDGs. The evidence presented indicated that, even in the context of spectacular child mortality reduction results, significant immunization access and equity issues remain. Further progress toward achieving the MDGs would require different approaches including improving the uptake of under utilized vaccines for priority diseases outside the traditional vaccine-preventable childhood diseases, expanding the use of vaccine legislation as tools for sustaining programs, and continuing to forge new partnerships to deliver basic health services, including immunization, to those currently underserved by the health system.

2. **Positioning the Revolving Fund for the Future**
Mr. Fitzsimmons presented the lessons learned in managing vaccine supply and demand in the Americas in the context of improving operations and reducing costs of the PAHO EPI Revolving Fund (RF). Drawing on evidence of effective performance in achieving improved uptake of under-utilized and new vaccines and an increasing gap between fund capitalization and regional vaccine expenditure, the case was made for an expanded role for the RF. It was stressed that participation in the Fund by all PAHO Member States within the principle of Pan Americanism is fundamental for maintaining the benefits that can accrue by its use.

3. **Policy Development and Creating Fiscal Space**
Dr. Heller presented the policy options open to national decision-makers for creating and accessing fiscal space to sustainably fund meritorious interventions such as immunization. The presentation addressed three key questions: How is fiscal space created? How much fiscal space is needed for new vaccine introduction? How can this fiscal space be accessed by immunization planners? Even for expensive vaccines, the additional fiscal space needed will be very modest when compared with the overall size of a national economy. However, in assessing the fiscal sustainability of interventions, issues including likely future competition for funds from interventions of similar merit would need to be carefully analyzed.

4. **Promoting and Strengthening Partnerships**
The Partnerships presentation was shared between Dr. Landry and Dr. Wecker. The presentation by Dr. Landry focused on GAVI (Global Alliance for Vaccines and Immunization) and its current activities related to vaccine demand, supply, and financing. This included support for Accelerated Development and Introduction Plan (ADIPs) for vaccines against rotavirus and pneumococcus, as well as significant investment in the evidence base for decision-making on the introduction of vaccines against *Haemophilus influenzae* type b (Hib). The presentation by Dr. Wecker focused on the Rotavirus Vaccine Project as an example of an international partnership focused on the accelerated introduction of vaccines against this priority disease for Latin America and the Caribbean. Further examples of vaccine supply partnerships within the Region included public-private technology transfer agreements and public-public vaccine research and development initiatives in Brazil. Technical partnerships will obviously be critical to the future of vaccine research, development, and production in the Region.

5. **Country Perspectives: Cross-Sectorial Coordination with Finance**
Dr. Mazzetti Soler discussed lessons learned in the dialogue between Ministries of Health and Finance. The lessons included the prioritization of interventions within the Ministry of Health and the demonstration of optimal use of resources as the major points in a dialogue for securing and enhancing flow of funds. In addition, the promotion and maintenance of partnerships between Ministries of Health and Finance through shared understanding of issues and an enhanced inter-ministerial communication vocabulary was presented as a key factor to the success of sustainable immunization funding negotiations.

The discussion between Ministers attending the session was focused around a reaffirmation of the need for solidarity in negotiating supply contracts, by acting as a regional block through the PAHO Revolving Fund; the need to explore new modalities of RF operation, as a means of addressing constraints to wider participation by some countries; and the need for support for pandemic preparedness, including contingency planning and operational response, especially in view of the emergence of avian influenza and the risks of a human pandemic.

Following the discussion, the Chairperson summarized the recommendations as follows:

1. The Directing Council 2006 should include an agenda item to follow-up on the sustainability of national immunization programs.
2. Member States should reaffirm their commitment to maintain their strong solidarity and use of the RF.
3. With PAHO support, the countries' top priority should be to complete the unfinished immunization agenda and achieve the MDGs.
4. Policy on introduction of new and underutilized vaccines should be evidence-based and consistent with overall health budget priorities and country characteristics.
5. Sustainable immunization programs through the study of fiscal space should be a top priority for all countries.
6. PAHO should continue to engage global partnerships to enhance the likelihood that new vaccines become available to those who need them most ■

INFLUENZA from page 1

National Preparedness Plans for an Influenza Pandemic

The World Health Organization (WHO) has issued technical guidelines for national preparedness plans for an influenza pandemic since 1999. In March 2005, WHO published a checklist to assist countries with their preparedness plans for such a pandemic.

Given the imminence of an influenza pandemic, drafting preparedness plans should be a top priority in all countries. These plans will not prevent a pandemic, but rather aim to make the best use of available resources to curb the spread of the disease, mitigate the impact of secondary catastrophes, and prevent panic in the population.

A pandemic preparedness plan should include the following:

- Strengthening of the epidemiological surveillance system;
- A hospital and health services contingency plan;
- Clinical management and infection control protocols;
- Strategies for vaccination and the use of antivirals in different scenarios;
- A plan to supply drugs, vaccines, other supplies, and the necessary logistics; and
- A risk communication plan.

WHO has also recommended the creation of national pandemic preparedness committees to devise appropriate strategies for their

countries. The national committee should be a permanent body with responsibilities varying according to the global and national influenza situation. Its composition should be flexible and depend on each country's institutional and political framework. It is suggested that the following types of organizations or experts be represented on, or consulted by, the committee: National and regional public health authorities; medical, nursing, and pharmacists' associations; virologists and epidemiologists; personnel in charge of vaccination; ethics committees; veterinary authorities and experts in animal influenza viruses; pharmaceutical producers and distributors; emergency response teams, whether military or governmental; nongovernmental organizations; and the media, among others.

Vaccine Production

Influenza vaccine is produced in fertilized chicken eggs, with the full production cycle taking 6 to 9 months once the circulating viruses are identified. The production of vaccines to fight seasonal influenza is very limited, with approximately 300 million doses currently produced worldwide, mainly in Australia, Europe, Japan, and North America. In a pandemic, two doses of vaccine will be required to protect each individual. Thus, only a small proportion of the world population, concentrated in vaccine-producing countries, would have access to a monovalent vaccine in the early months of a pandemic.

Country pandemic preparedness plans should state the amount of vaccine required, the groups to vaccinate, the strategies to deploy, and how the vaccine will be distributed. This information will provide the data and incentives needed to boost global production. To this end, PAHO is working with potential manufacturers of flu vaccine in the Region of the Americas to determine the availability of the production infrastructure.

Given the limitations of vaccine production, national authorities should adopt a wide range of non-medical interventions early on in a pandemic, especially interventions related to public gatherings (school and movie theater closures; curtailment of public transportation) and interpersonal contact (hand washing, personal hygiene, covering the mouth when coughing, quarantine in specific situations, and travel restrictions). This information should be part of each country's risk communication plan, since measures of this type can slow transmission at the start of the pandemic. Nevertheless, these measures cannot stop the pandemic altogether.

Increasing production and use of seasonal vaccine in developing countries will help boost production capacity to respond to a pandemic.

Vaccination in a Pandemic

During a pandemic, vaccination is one of the most effective interventions for influenza control. National pandemic preparedness plans should clearly define which high-risk populations should be given priority for vaccination. This should be done before the crisis hits, not in the midst of it, since supplies of the vaccine will be extremely limited during the first wave of the pandemic, especially in countries that do not produce vaccine. The plan should also specify how to distribute the vaccine and how to monitor its safety and efficacy.

Setting goals and priorities involves logistical, ethical, moral, cultural, and legal considerations, as well as continuous analysis of the epidemiological situation to target measures to the most affected groups. Based on these considerations, countries should prioritize the vaccination of population groups according to the following:

1. Essential services personnel (to prevent interruption of services during the pandemic): Clinical health workers; personnel essential for vaccine and drug production; staff of nursing homes and long-term care facilities; the police; firefighters; the armed forces; and the staff responsible for the operations of other public utilities;
2. People at higher risk of mortality from influenza: Residents of nursing homes or long-term care facilities; people aged 65 with chronic heart and lung disease; pregnant women in the second and third trimester; children aged 6-23 months; children aged 6 months to 18 years under a chronic aspirin regimen; and other vulnerable groups, such as indigenous people living in isolated communities.
3. Individuals in close contact with people at high risk: Health workers and nursing home staff; family members in daily contact with people at risk; and people in daily contact with children aged 0-5 months;
4. Preschool and elementary schoolchildren, considered frequent transmitters of the disease in the community; and
5. People without risk factors for complications: This is the largest population group and includes healthy adults and children. The main objective is to lower the demand for medical services and enable individuals to continue their daily activities and avoid greater social disruption. This decision depends on vaccine availability and the epidemiological situation.

Final Considerations

An influenza pandemic can affect a very high proportion of the population and have a tremendous socioeconomic impact. Thus, all countries should launch or strengthen preparedness activities. Vaccination is the best tool for the prevention and control of a pandemic, but vaccines will be in very short supply during the initial phase of the pandemic.

In various political and scientific forums in the Region of the Americas, PAHO has urged Member States to develop national preparedness plans for an influenza pandemic. PAHO is also working with potential producers to bolster vaccine production capacity in Latin America.

Influenza pandemic preparedness plans are only in the preliminary phase in some countries and much remains to be done. Political and financial priority must be given to the prompt preparation and validation of these plans ■

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Update on Thimerosal and Autism

Thimerosal or thiomersal, a mercury-containing preservative, is found in many biologics and vaccines that are routinely recommended for children. Since the 1930's thimerosal has been proven especially effective when added to multidose containers, preventing bacterial and fungal contamination. However, a number of consumer groups have recently became concerned about the cumulative levels of mercury to which infants were being exposed as a result of receiving the recommended series of childhood immunizations. Parents were also becoming increasingly concerned that autism might be an expression of mercury poisoning. However, thimerosal is composed of ethyl mercury, which is very different from the neurotoxic methyl mercury. It is methyl mercury, not ethyl mercury, that causes histopathological lesions of the brain. In addition, these lesions are distinct from the lesions present in autistic children.

It is important to clarify that MMR vaccine does not contain thimerosal. It was a temporal association of MMR vaccines given in many countries at 15 months of age and the onset of autism's early symptoms after one year of life that generated suspicion of a causal relationship. This relationship has been rejected on the basis of epidemiological evidence.

Concerned parents of autistic children are particularly driven to determine the cause and develop a cure for autism. Mercury poisoning and autism both affect the central nervous system and share a number of nonspecific symptoms. However, upon closer investigation, the clinical signs and histopathology show that the specific sites of involvement in the brain and the brain cell types affected are different in the two disorders.

A number of epidemiological studies were conducted to determine the potential effects of exposure to thimerosal during routine pediatric vaccination. No evidence to support a correlation between thimerosal-containing vaccines and the occurrence of autism was found in Denmark, where the incidence of autism continued to increase from 1991 to 2000 after the removal of thimerosal-containing vaccines. Similarly, in Sweden, autism rates continued to increase after the removal of thimerosal from vaccines in 1992. A retrospective cohort study performed in England dispelled concerns about the possible toxicity of thimerosal exposure levels via DTP/DT vaccines in children born between 1988 and 1997, concluding that there was no evidence to link thimerosal exposure to neurodevelopmental disorders. In summary, these experiences showed that even when thimerosal was removed, autism continued increasing, suggesting that a causal relationship does not exist.

In 2000 the U.S. Centers for Disease Control and Prevention (CDC) and the National Institute of Health asked the Institute of Medicine (IOM) to evaluate newly released scientific evidence concerning the safety of the current recommended childhood immunization schedule. In May 2004, the IOM concluded that current epidemiological evidence fails to support "a causal relationship between thimerosal-containing vaccines and autism." In 2000 the World Health Organization appointed the Global Advisory Committee on Vaccine Safety (GACVS) to evaluate safety concerns regarding the use of thimerosal. In 2003, GACVS concluded that there was no need to change immunization practices regarding thimerosal-containing vaccines. In 2005, GACVS restated its view that there is no evidence supporting a causal association between neurobehavioral disorders and thimerosal-containing vaccines.

The Pan American Health Organization (PAHO) genuinely supports the discovery of the cause and cure for autism. However, due to lack of evidence proving a correlation between exposure to thimerosal and neurodevelopmental disorders, PAHO recommends the continued use of thimerosal-containing vaccines and adherence to current childhood immunization schedules ■

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Vaccination Week in the Americas 2005: Achievements and Recommendations

The third Vaccination Week in the Americas (VWA) took place from 24-30 April 2005. To adequatly prepare for this activity, managers of the Region's immunization programs met in late 2004 to define objectives and priorities (Table 1).

VWA 2005 was regionally launched in Washington, D.C. on 25 April. Throughout the Americas, countries launched their own campaigns at official events attended by national and local leaders, ministers of health, first ladies, and representatives of international institutions. The presidents of Bolivia, Nicaragua, and Paraguay, and the First Ladies of Colombia and the Dominican Republic attended national and local launching events.

At the United States–Mexico border, a large awareness campaign targeted health practitioners and communities in four border states: Texas, California, New Mexico, and Arizona. Meetings and workshops were planned to discuss the benefits of vaccination and how important it is for children to be up-to-date with their vaccination schedules. VWA was the occasion to initiate bi- and multi-national efforts that include two follow-up campaigns (in August and October) to encourage the completion of schedules.

Strategic alliances were essential for organizing and implementing VWA 2005. PAHO, the U.S. Centers for Disease Control and Prevention, UNICEF, Head Start, country governments, the *Red de Municipios de Latinoamérica* (Latin American Municipality Network), and other regional, national, and local agencies joined forces to achieve country goals and a higher visibility for immunization programs throughout the Region.

Selected Achievements

During VWA 2005, 38 million children, women of childbearing age, older adults, and other groups at-risk were vaccinated, representing 92% of the goal targeted for vaccination. In Haiti, Honduras, Mexico, and Panama, over 17,000 children aged 1-4 years were vaccinated for the first time with pentavalent vaccine. In Colombia, Honduras, Mexico, and Panama, over 480,000 women of childbearing age were vaccinated with a first dose of Td.

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Regional Plan for Quality Control and Safety of Syringes

In 2004, PAHO developed a Regional Plan for Quality Control and Safety of Syringes to guarantee the quality and safety of the syringes purchased through its Revolving Fund (RF). This plan is comprehensive and aims to cover the entire life cycle of the syringes, from purchase to final disposal. It emphasizes compliance with international quality and safety standards, and promotes capacity-building within National Regulatory Authorities in the area of syringe quality and safety testing. The plan represents a collaborative activity between the Essential Medicines, Vaccines, and Health Technology Unit and the Immunization Unit to ensure that experiences and knowledge in the areas of immunization safety, injection safety, patient safety, regulation of medical devices, and technology management are integrated and applied to the specific needs of immunization programs.

The Regional Plan for Quality Control and Safety of Syringes is divided into three stages. The first stage, which is underway, aims to strengthen PAHO's capacity to establish mechanisms ensuring the quality and safety of syringes purchased through the RF. The second stage aims to build capacity at national level, decentralizing the quality assurance procedures and strengthening national immunization programs. The last stage, aims to transfer all the knowledge and know-how on syringe management to National Regulatory Authorities.

The Regional Plan for Quality Control and Safety of Syringes has the following objectives:

- To guarantee the quality, safety, and efficacy of syringes procured through the RF;
- To strengthen the acquisition, storage, distribution, and use of syringes;
- To develop and strengthen national capacity to verify syringe quality and compliance with international standards;
- To train health care workers on the use of auto-disable (AD) syringes and safe injection practices, including syringe disposal and final waste management;
- To promote syringe standardization;
- To promote safe injection practices; and
- To contribute to safe immunization and patient safety.

Syringe Acquisition

The RF initiates the syringe procurement process through a bid solicitation process considering the following technical requirements:

- Compliance with either ISO[1] quality regulations or with Good Manufacturing Practices (GMP);
- Compliance with ISO regulations specific for syringes and needles (design, manufacturing, packaging, labeling, and sterilization); and
- Evaluation of syringe samples.

Quality assurance

Quality assurance testing for manufacturing, design, and quality standards of syringes purchased through the RF is currently conducted in a reference laboratory.[2] The reference laboratory is in charge of developing protocols for laboratory procedures, validation tests, laboratory design, and equipment requirements. The collaboration aims to offer support to five countries to set up national laboratories for quality assurance, as well as provide training of the personnel conducting the validation tests. Selection of the 5 countries is underway. The personnel is trained on how to organize the testing laboratory; verify the quality and safety of the syringes; perform the actual laboratory tests; and establish indicators to monitor quality and impact.

Safety

As part of the safety component of the plan, an incident reporting system and a procedure to investigate and follow up those incidents have been developed. To allow for easy access to the reports, an Internet-based system using "SharePoint" has been introduced. The objectives of the incident reporting system are the following:

- Provide a forum to report quality or safety problems of syringes in use;
- Facilitate investigating and following the incidents reported;
- Publish the findings of incident investigations;
- Generate alerts based on the investigations conducted;

1 ISO: International Standard Organization. ISO dictates international standards of quality to certify processes of manufacturing, design, and management systems, thus contributing to ensure that the development, manufacturing, and supply of products are safe and efficient. ISO is the leading organization setting standards worldwide. ISO-quality standards are accepted globally.

2 A reference laboratory is a laboratory with the capacity to serve as center of expertise and standardization of techniques; it is charged with resolving all scientific and technical problems.

Table 1. PAHO-WHO Recommendations for Vaccine Administration: Route of Administration, Anatomical Area, Dose, and Type of Syringe

Antigen	Route of Administration/ Anatomical Area	Dose	Type of Syringe* for vaccine administration
BCG	Intradermal/deltoid region in the upper third of the right arm	0.1 ml	1cc – 26G x 3/8"
Hepatitis B	Deep intramuscular/external anterolateral mid-third of the thigh	0.5 ml	1cc – 23G x 1"
Pentavalent (DPT + Hep B + Hib)(Diphtheria, Pertussis, Tetanus, Hepatitis B, and *Haemophilus influenzae* type b)	Deep intramuscular/external anterolateral mid-third of the thigh	0.5 ml	1cc – 23G x 1"
Tetravalent (DPT + Hib)(Diphtheria, Pertussis, Tetanus, and *Haemophilus influenzae* type b)	Deep intramuscular/external anterolateral mid-third of the thigh	0.5 ml	1cc – 23G x 1"
Yellow Fever	Subcutaneous/deltoid region in the upper third of the right or left arm	0.5 ml	1cc – 25G x 5/8"
MMR (Measles, Mumps and Rubella)	Subcutaneous/deltoid region in the upper third of the right or left arm	0.5 ml	1cc – 25G x 5/8"
Adult dT(Diphtheria and Tetanus Toxoids)	Intramuscular/deltoid region in the upper third of the right or left arm	0.5 ml	1cc – 22G x 1 ½"
MR (Measles, Rubella)	Subcutaneous/deltoid region in the upper third of the right or left arm	0.5 ml	1cc – 25G x 5/8"
Pediatric DT (Diphtheria and Tetanus Toxoids)	Intramuscular/deltoid region in the upper third of the right or left arm	0.5 ml	1cc – 23G x 1"

*WHO exclusively recommends AD syringes for vaccine administration

Source: *Pan American Health Organization. Immunization Safety Modules. Module III: Safe Injection Practices. Immunization Unit, Washington, D.C., USA*

- Provide a forum to exchange information among network members;
- Create an information record on products, documents, and services for immunization program managers; and
- Post news and a list of upcoming events relevant to immunization programs.

Syringe Disposal

The plan also highlights the need to include the disposal and management of sharps and hazardous biological waste in accordance with national regulations. The plan promotes the use of safety boxes (also known as sharps containers), training of health care workers, and coordination between the Ministries of Health and Environment regarding the final disposal of sharps and biological waste.

Syringe Standardization

Syringes are standardized based on their presentation and the gauge (caliber) of the needle, which relates to the type of vaccine and vaccine dose.

The standardization component of the Plan complies with the recommendations from the 1999 Technical Advisory Group (TAG) on Vaccine-preventable Diseases regarding syringe type and needle gauge (caliber) for each vaccine and dose. Table 1 presents a summary of the types of syringes recommended according to injectable antigens.

Data from the RF for the purchase of AD and disposable syringes for the period 2002-2004 are presented in Table 2. The Plan promotes AD syringe use in the Region, as recommended by WHO. AD syringes prevent reusing syringes, thus ensuring the safety of patients, health workers, and the community. AD syringes use has increased slowly in the Region, from 10.7 million in 2002 to 13.9 million in 2004. Eleven countries purchased AD syringes from the RF in 2004 compared to 9 in 2002.

Standardization will facilitate procurement and quality control of syringes purchased through the RF and will contribute to a more efficient procurement process. The economies of scale achieved should, in turn, allow for better prices. Standardization will allow the RF to produce a more reliable forecast (Figure 1).

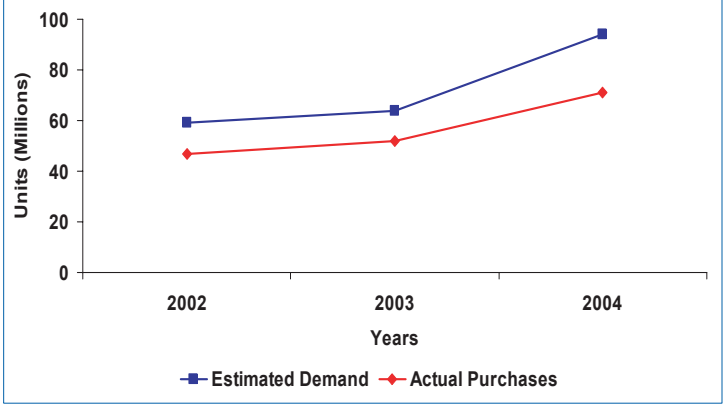
Table 2. Distribution of Syringes Purchased by the Revolving Fund, 2002-2004

Syringe Type	Needle Gauge	Syringe Type/Total Syringes Purchased (%)		
		2002 N = 47,122,100	2003 N = 52,631,090	2004 N = 94,277,500
½cc Auto-disable Syringes	22G x 1/2	0%	0%	0%
	23 G x 1	4.4%	11.4%	6%
	25G x 5/8	16.6%	13.3%	9%
	27G x 1/2	1.7%	0%	0%
1cc Disposable Syringes	22G x 1 ¼	9.9%	13.1%	8%
	22G x 1 ½ *	6.5%	12.5%	12%
	23G x 1*	18%	22.70%	25%
	23G x 1 1/4	0%	0%	0%
	25G x 5/8 *	20.7%	17.9%	33%
	26G x 3/8 *	1.3%	2.8%	3%
	27G x 1/2	0%	0.9%	1%
	27G x 3/8	0.6%	2.1%	0%
3cc Disposable Syringes	25G x 5/8	17.8%	0%	0%
5cc Disposable Syringes	20G x 1	0.6%	1.1%	1%
	21G x 1	1.2%	0%	0%
	22G x 1 ¼	0%	1.2%	1%
	22G x 1 ½	0%	1%	1%
	23G x 1	0.7%	0%	1%

* Recommended by WHO (as AD syringes)

Source: *PAHO Revolving Fund*

Figure 1. Revolving Fund Syringes: Forecast Versus Purchases, 2002-2004



Source: *PAHO Revolving Fund*

Final Considerations

The expected results of the Plan are as follows:

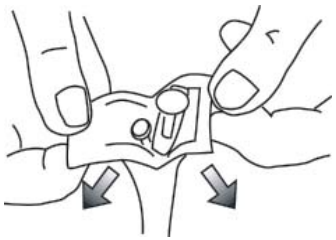
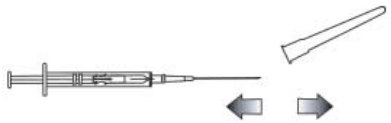
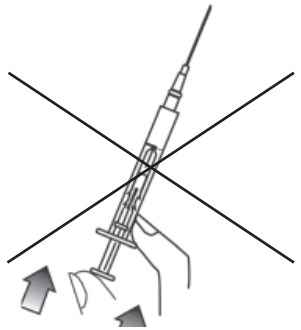
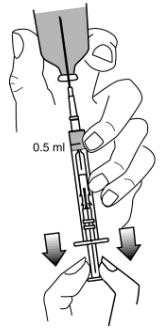
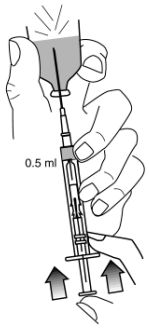
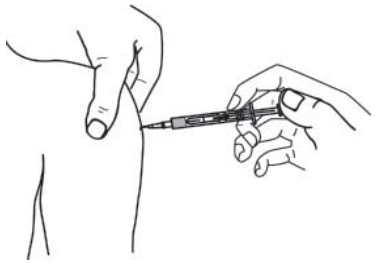
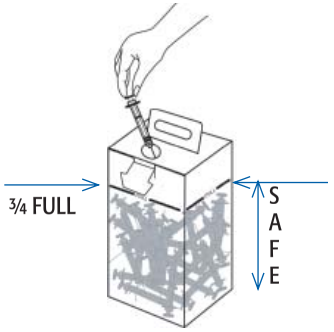
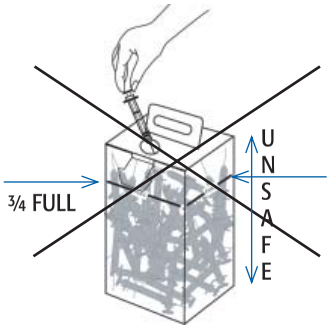
- To strengthen the process of syringe acquisition and management through the entire syringe life cycle, until final disposal;
- To build capacity for syringe quality assessment within the National Regulatory Authorities of five countries, emphasizing the training of personnel. Ultimately, it is expected that this knowledge can be transferred to the rest of the countries in the Region;
- To set up a dynamic incident reporting system for sharing data on incidents, posting alerts, research findings, and other relevant documents; and
- To promote and train on the proper use of AD syringes, risk management, safe injection practices, proper disposal, and final waste management.

The Plan should be instrumental in broadening the knowledge about syringe quality, safety, and use, and creating a pool of human resources properly trained in the areas of safe injections and immunization safety, with patient safety as the ultimate goal ■

Guidelines for Use of Auto-disable (AD) Syringes

When administering an injection, always:

1. Verify the medication, the dose, the patient, the site, and the route of administration.
2. Check the sterile pack expiry date; if the expiry date has passed, it should be discarded.
3. Check whether the sterile pack is damaged or punctured. If damaged or punctured, it should be discarded.
4. For syringes wrapped in sterile (blister) paper packaging, peel open the package without touching the needle hub or syringe tip.
5. If the syringe has a detachable needle, attach the syringe firmly to the needle and twist.
6. Activate the syringe, if necessary.
7. Remove the protective caps on the piston and the needle, if present.
8. Remove the needle cap.
9. Insert needle into the vial, keeping the needle in the fluid until a complete dose is drawn up.
10. Remove air bubbles by tapping the barrel and pushing the piston to the correct dose mark, while the needle remains in the vial.
11. Check that the dose is correct.
12. Select the injection area indicated for the vaccine.
13. Inject the entire dose.
14. After injection, place the syringe with its needle immediately in a safety box

1	Peel open sterile wrapper.	**2**	Remove needle cap, without touching the needle.	**3**	**Do not push** piston forward before filling the syringe	**4**	Insert needle in clean rubber cap of inverted vaccine vial and draw up a dose.
							
5	Expel air or excess vaccine, adjusting piston to the indicated vaccine dose.	**6**	Inject vaccine.	**7**	Do not recap the needle. Immediately discard in the safety box.	**8**	Do not overfill the safety box
							

After use, the syringe should be handled safely. The health worker should:	1. **NEVER** recap the needle. 2. **NEVER** set the needle down before disposal. 3. **NEVER** carry the syringe from the area where the immunization was administered

The health worker should discard the used, uncapped syringe with its needle in a safety box at the point of use.

VACCINATION from page 4

Guatemala introduced the pentavalent vaccine, immunizing 55,000 children against five diseases (diphtheria, pertussis, tetanus, *Haemophilus influenzae* type b, and hepatitis B) with a single biological during VWA 2005. Paraguay launched a rubella vaccination campaign targeting over 3 million people and the elimination of rubella and congenital rubella syndrome. El Salvador worked on a critical vaccination law to ensure sustainability of the immunization program in the context of new vaccine introduction. Bolivia, Ecuador, and Nicaragua continued to give priority to their underserved populations by trying to improve routine immunization coverage.

Selected Recommendations:

Countries made several recommendations to improve future VWA efforts while strengthening national immunization programs. Selected recommendations included:

- VWA must be used as a tool to strengthen inter-agency cooperation, which will facilitate the distribution of financial resources and information material.
- Community health workers must continue their leading role during vaccination activities.
- Educational activities for community awareness must continue.
- Coordination of border launching activities must remain an essential component of VWA events as these activities help with establishing relationships among local leaders and promoting Pan Americanism.
- Efforts must be focused on reaching isolated populations and promoting greater awareness among local authorities and health workers toward groups who usually do not have regular access to public health services.
- Rapid coverage monitoring is instrumental for the completion of vaccination schedules. More countries need to report on rapid coverage monitoring results and plan additional activities to complete schedules accordingly.
- National and local level launchings have provided the critical political commitment for national immunization programs. These events should become a priority for countries and be included in their plan of action for national immunization programs ■

Table 1. VWA 2005: Objectives and Priorities

Objectives	Priorities
• Vaccinate children <5 years of age and WCBAs with 0-dose or incomplete schedule; • Vaccinate other groups such as adults and people >60; • Maintain the region free of polio and measles; • Support the implementation of plans to eliminate rubella and congenital rubella syndrome; and • Strengthen epidemiological surveillance	• Municipalities with low coverage; • Urban fringe areas, in particular those with poor peri-urban neighborhoods; • Border areas with high level of migration; • Indigenous groups; • Ethnic minorities; • Remote areas; and • Other populations, based on each country's priorities.

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