Seasonal influenza vaccination In Latin America and the Caribbean

Symposium on Seasonal Influenza Vaccination Policy Development and Implementation

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Beijing, 17-18 June, 2017

Pan American Health Organization
World Health Organization
Regional Office for the Americas

Outline

- Progress in influenza vaccination in the Americas
- Seasonal influenza vaccination in tropical countries in LAC
- PAHO Revolving Fund for vaccines
- Operational challenges

Milestones in the 40 years of the EPI in the Americas

1977

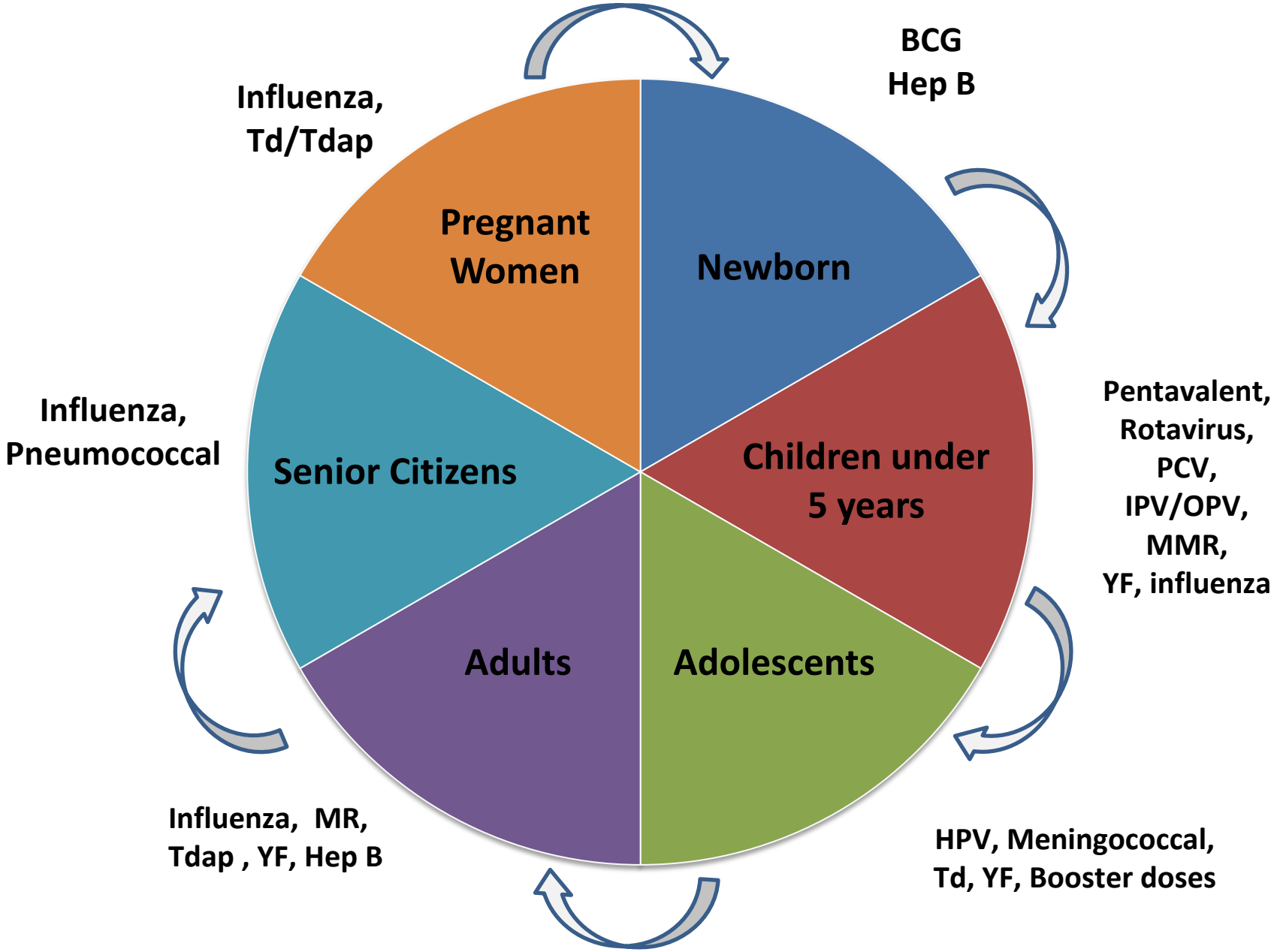
PAHO's Directing Council establishes the EPI

2016

2017

1979	***Creation of the Revolving Fund***
1980	**Creation of international evaluation methodology for the EPI**
1983	"Days of Tranquility"
1985	***Creation of the EPI Technical Advisory Group (TAG)***
1985	Creation of the Interagency Cooperation Committee
1991	**Last indigenous case of polio in Peru**
1994	Declaration of the goal to eliminate measles
1994	**1st Region certified free of polio**
2003	**1st Vaccination Week in the Americas**
2006	Launch of the Pro-Vac initiative
2010	Directing Council resolution on strengthening the EPI (RIVS)
2012	1st World Immunization Week
2013	**Directing Council resolution on the principles of the RF**
2015	***1st Region free of rubella***
2015	Directing Council resolution on the Regional Imm Action Plan
2016	**OPV Switch**
2016	***1st Region free of measles***

PAHO's Regional Vaccination Program: Across the Life Cycle



PAHO's TAG Influenza Recommendations 2004-2015

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)

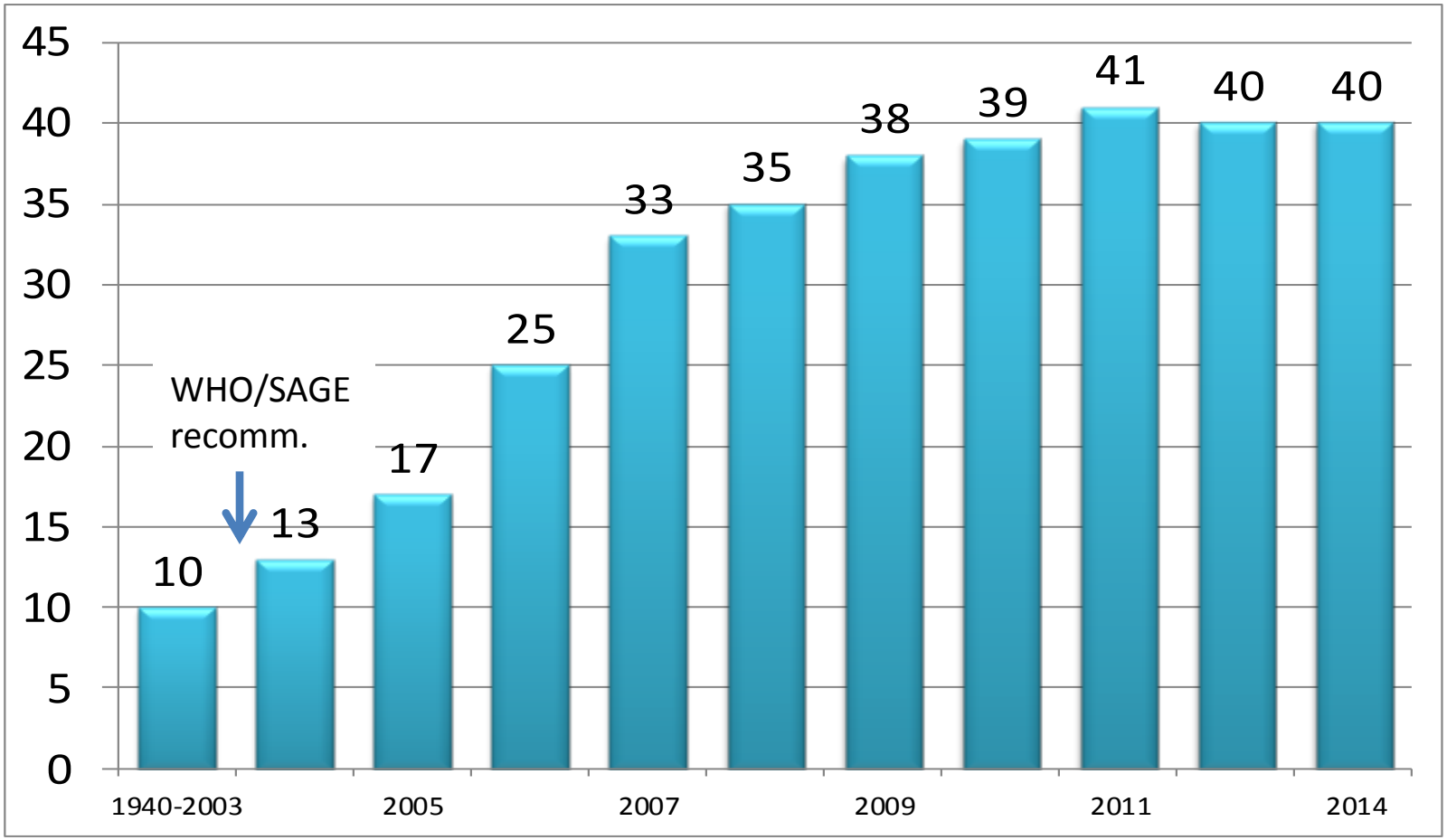
All countries should establish a seasonal influenza vaccination policy that seeks to vaccinate:

- individuals with chronic illness, the elderly and pregnant women
- children 6-23 months of age
- health workers

Countries using the vaccine should generate coverage data and document experiences and lessons learned from targeting high-risk groups.

Introduction of influenza vaccines the Americas

No. countries with policies for seasonal flu vaccination



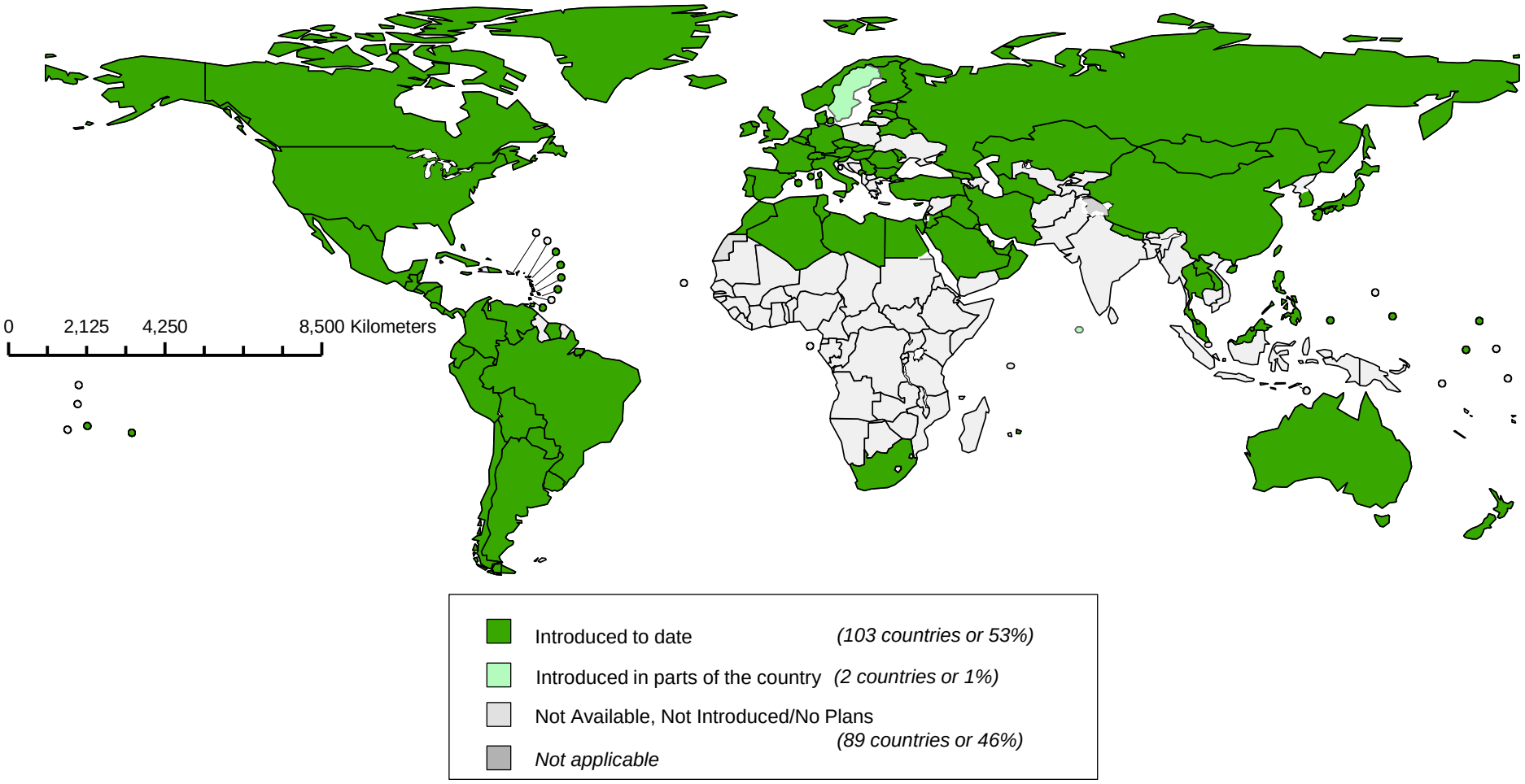
Countries and Territories in the Americas with Policies for seasonal influenza vaccination, 2004-2015

Number (%) of countries that have:	2004	2008	2015
Policies for influenza vaccination	**13**	**35**	**40/45** ***(89%)***
Vaccination of healthy children ***(expansion of age range)*** Vaccination of children with chronic diseases	6	22	25 ***(56%)*** ***4*** 5 ***(11%)***
Vaccination of the elderly ***(expansion of age range)***	12	33	39 ***(87%)*** ***5***
Vaccination of persons with chronic diseases	9	24	35 ***(78%)***
Vaccination of health care workers	3	32	38 ***(84%)***
Vaccination of pregnant women	3	7	31 ***(69%)***

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

Data not collected from the French Departments (French Guiana, Guadeloupe, Martinique).

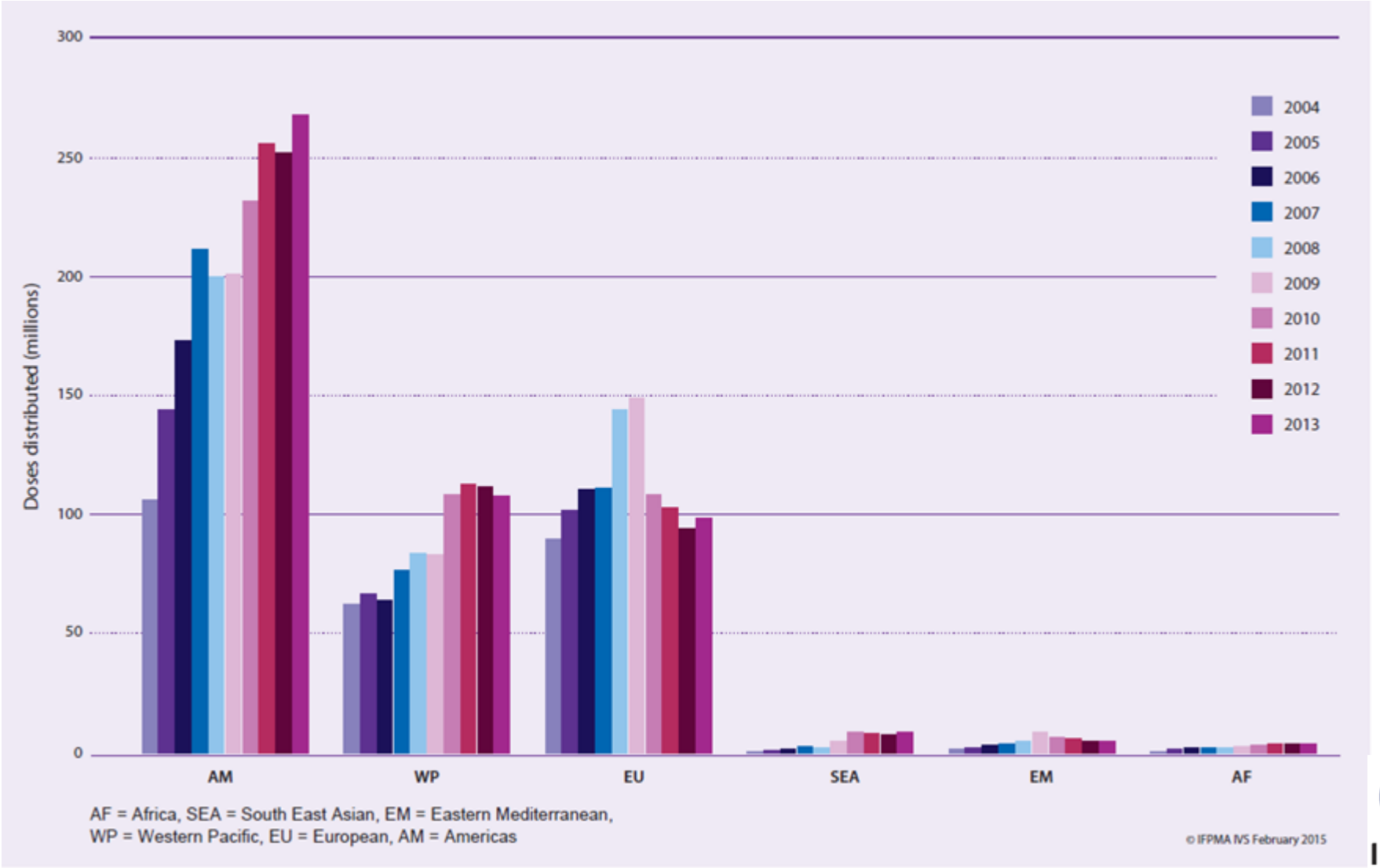
Countries with influenza vaccination policies



Data source: WHO/IVB Database, as of 29 September 2015
Map production Immunization Vaccines and Biologicals (IVB), World Health Organization

WHO

Influenza vaccine distribution by WHO Regions 2004-2013



IFPMA

Influenza vaccination strategies

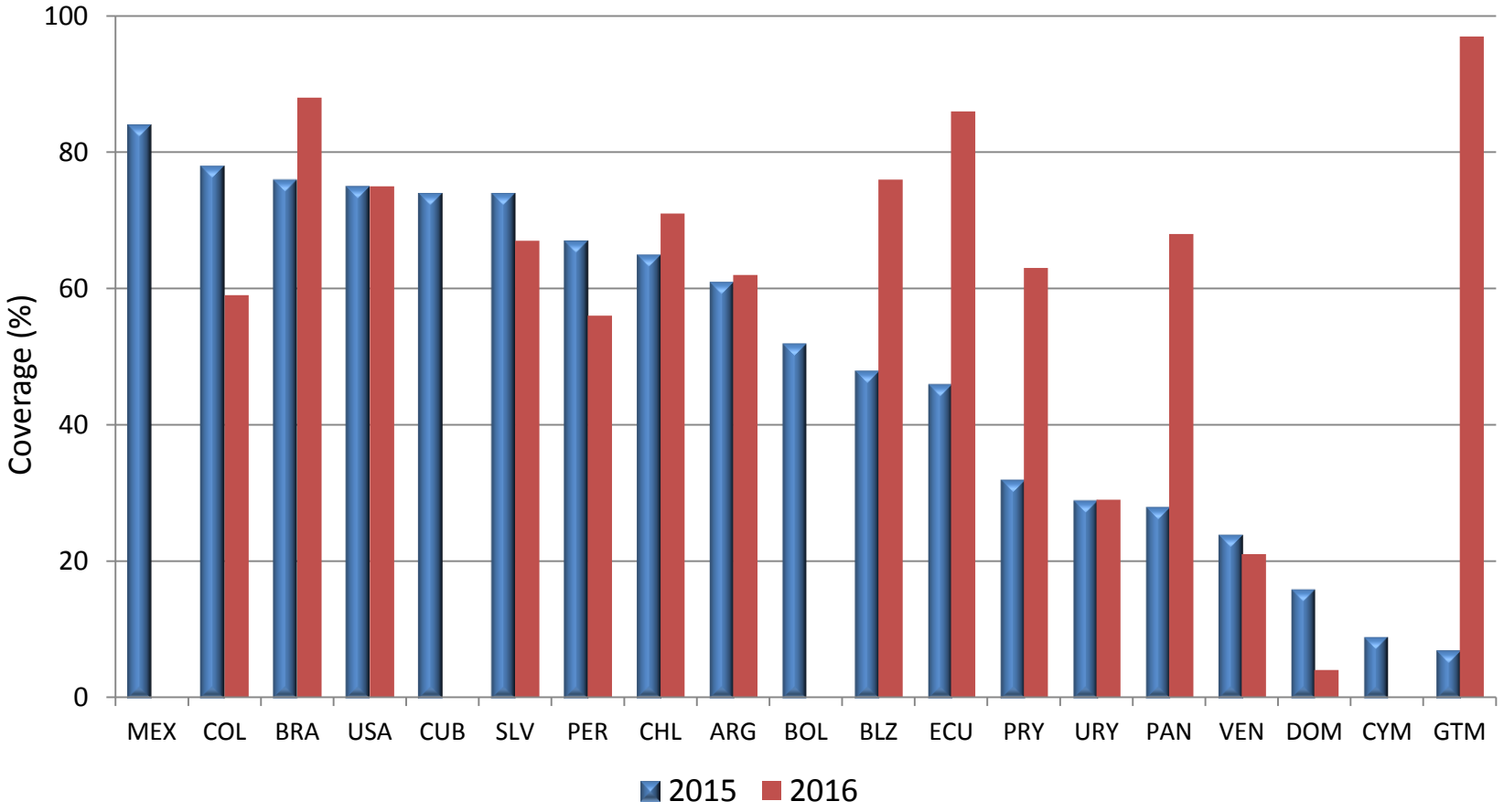
Countries use combined vaccination strategies to reach high risk Groups:

- **Short**, intensive vaccination campaigns - Vaccination Week (SHF),
- Following up with **routine vaccination** through health services during the influenza season, or until until stocks exhaust or expire

Example of Influenza vaccination campaign in Brazil, 2016

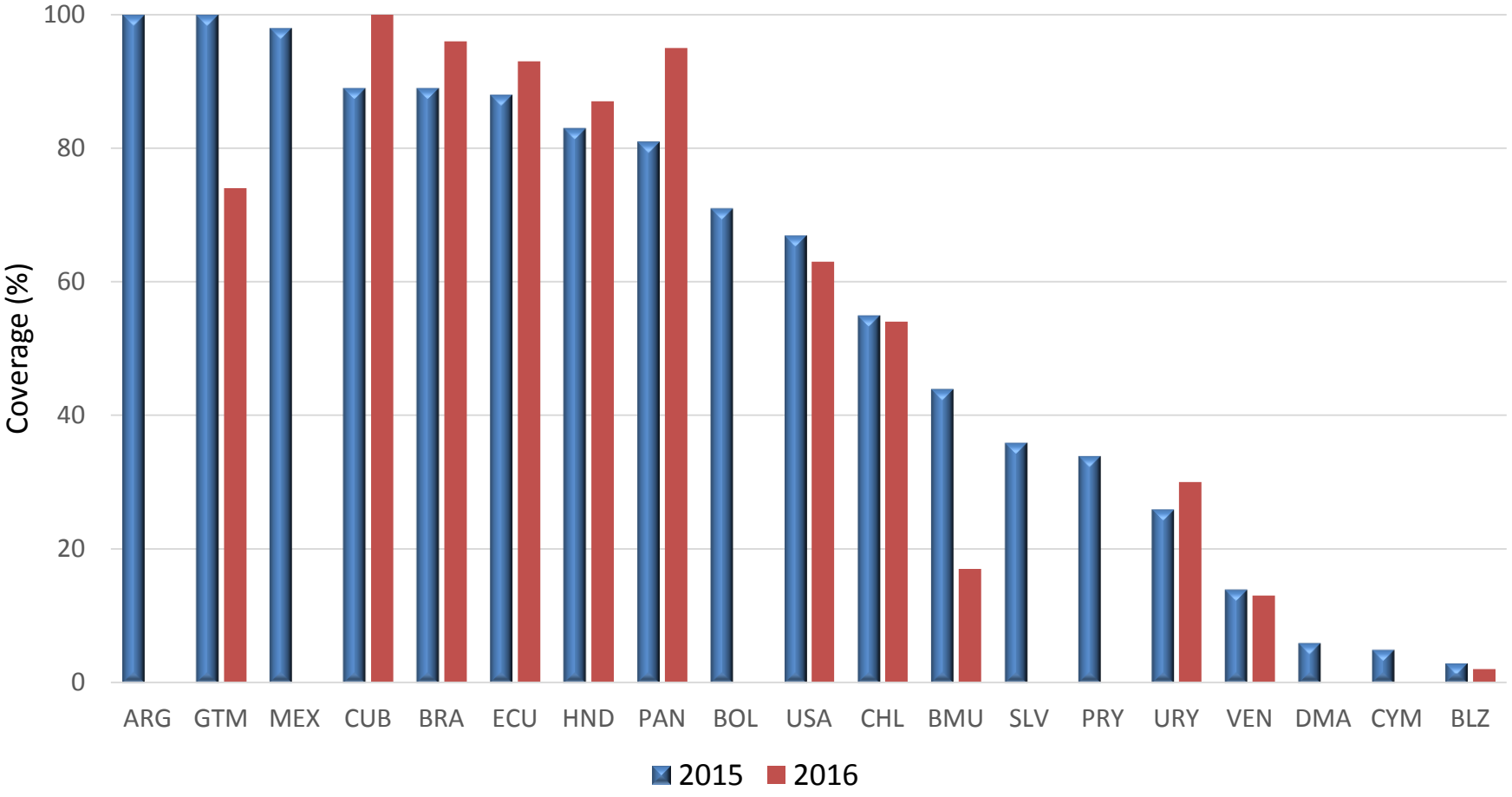
Population	Target	% coverage
Children (6mo to <5yrs)	12.824.6818	66,47
Healthcare workers	4.081.346	86,50
Pregnant women*	2.232.160	56,63
Post-partum ≤45 days*	366.930	79,37
Elderly	20.889.849	72,92
Indigeneous Pop.	620.318	38,80
Total (include Others)	**49.880.838**	**70,51**

Seasonal influenza coverage in children 6-23 months in reporting countries. LAC, 2015-2016



Source: Country reports through the PAHO-WHO Joint Reporting Forms (JRF), 2016 and 2017; USA data 2015 (2014-2015 season) and 2016 data (2015-2016 season)
Note: Pediatric coverage formula: ((2nd dose+single dose)/denominator)*100
* Provisional data

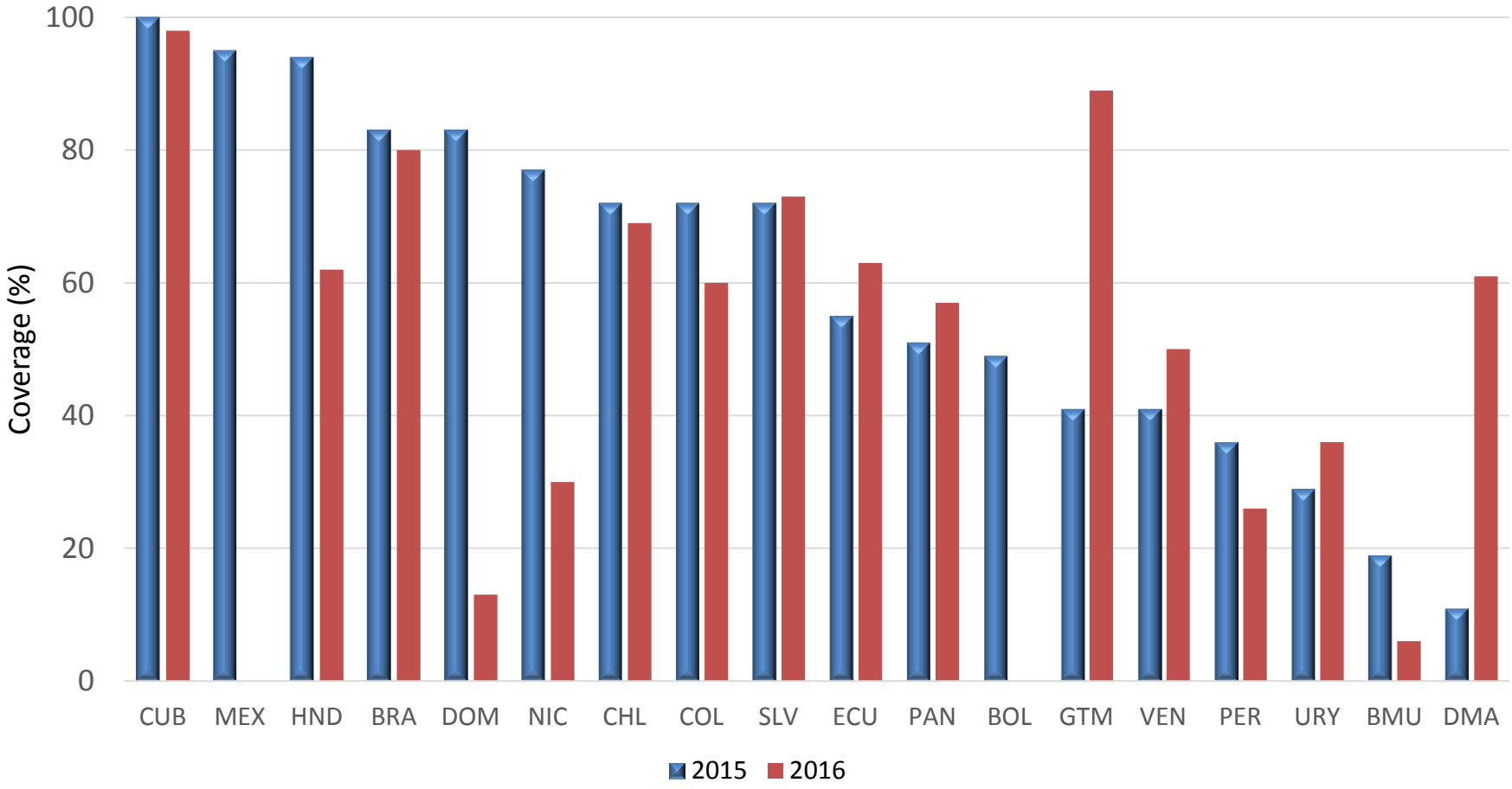
Seasonal influenza coverage in >60 years in reporting countries. LAC, 2015-2016*



Source: Country reports through the PAHO-WHO Joint Reporting Forms (JRF), 2016 and 2017; USA data 2015 (2014-2015 season) and 2016 data (2015-2016 season)

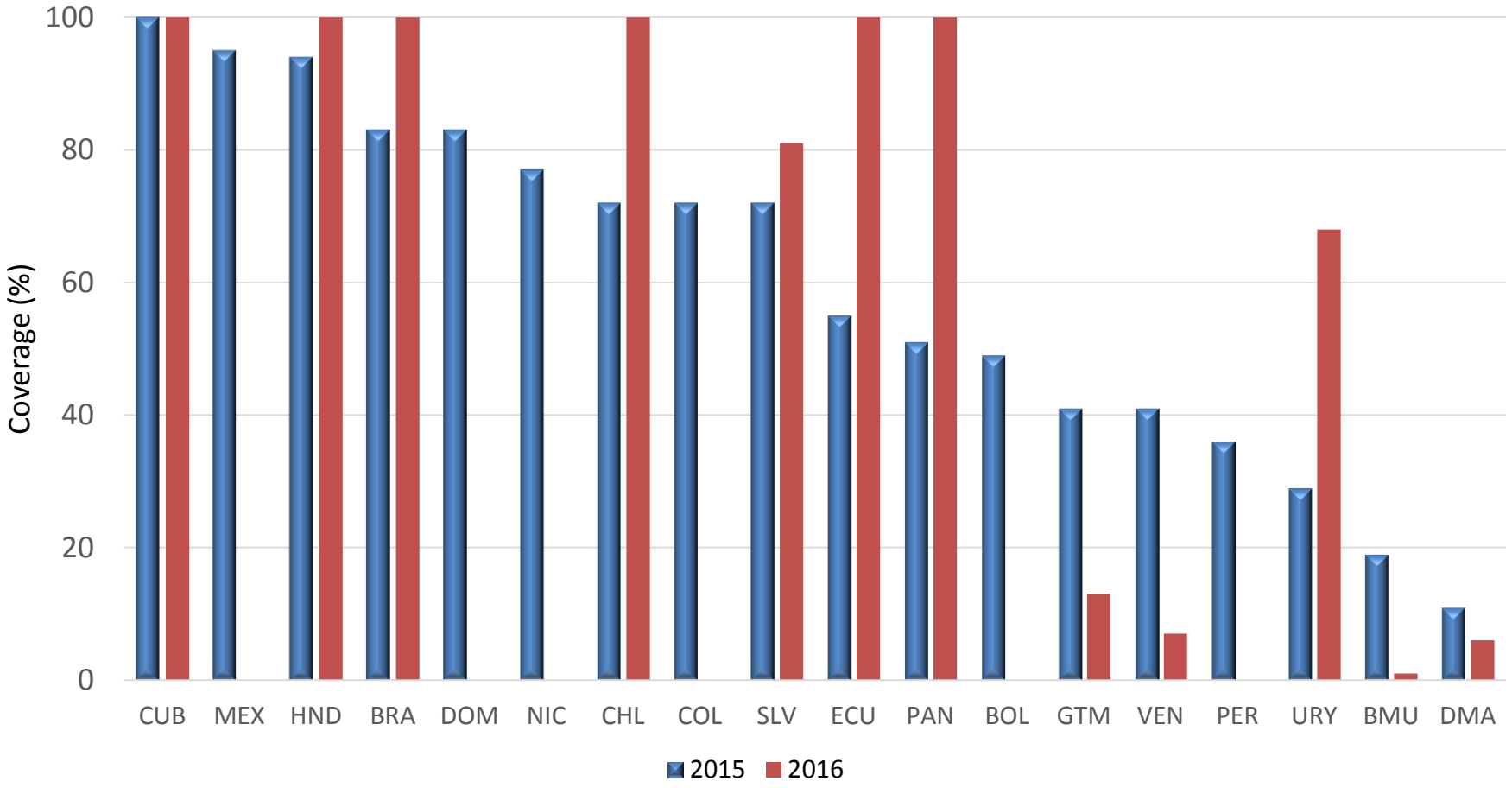
* Provisional data

Seasonal influenza coverage in pregnant women in reporting countries. LAC, 2015-2016*



Source: Country reports through the PAHO-WHO Joint Reporting Forms (JRF), 2016 and 2017.
* Provisional data

Seasonal influenza coverage in healthcare workers in reporting countries. LAC, 2015-2016*



Source: Country reports through the PAHO-WHO Joint Reporting Forms (JRF), 2016 and 2017.
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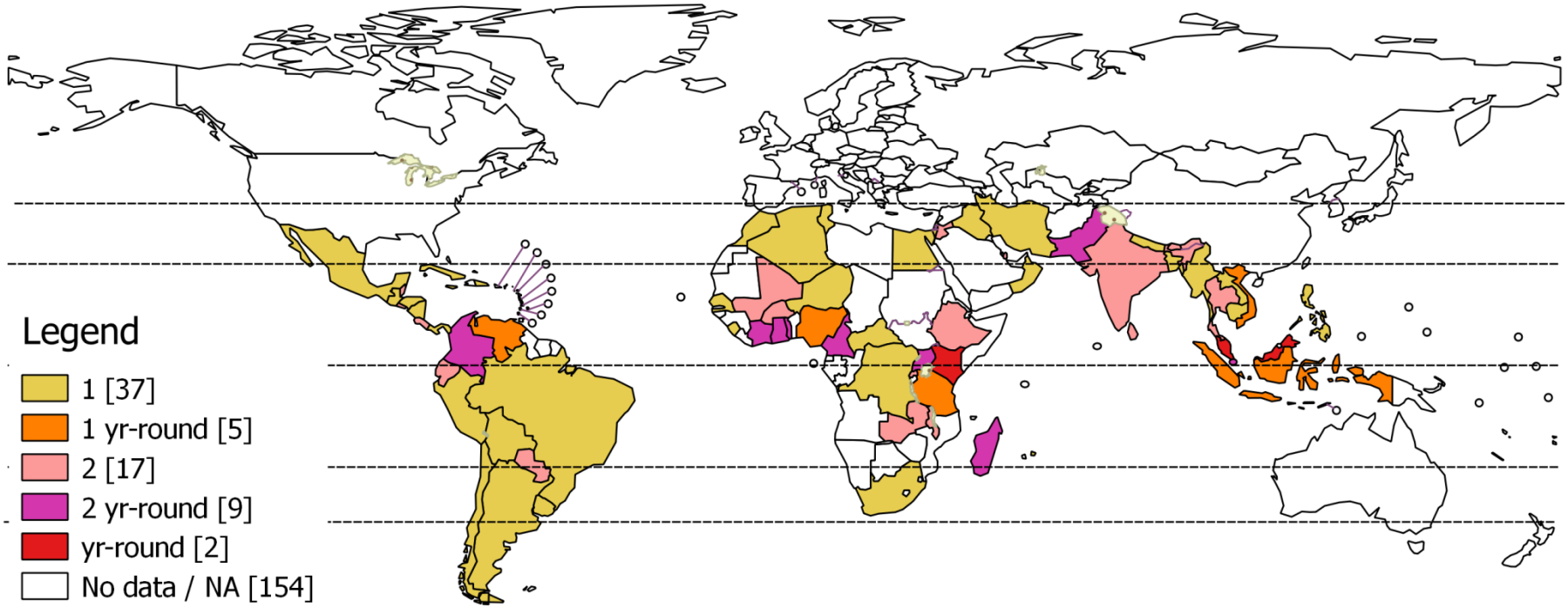
Seasonality-Influenza peaks



Summary of seasonality analysis by
CDC, NIVEL, PATH, WHO and published literature

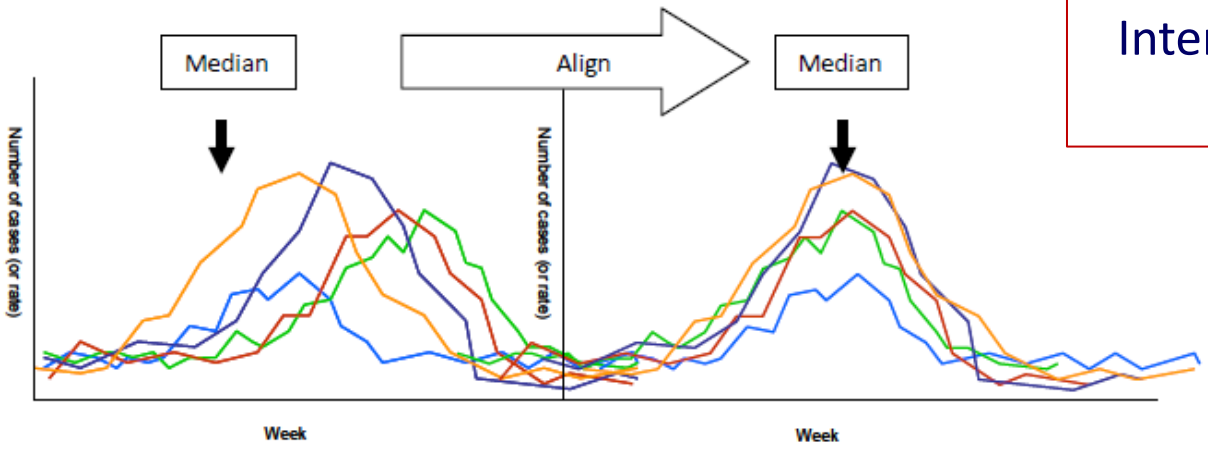
Influenza surveillance is key to guide vaccination policies

Data sources

- OMS-GISRS-FluNet
- SARI and ILI surveillance
- Research platforms across Central America
- REVELAC-i
- Strains characterization at WHO CC.
- Models for seasonality

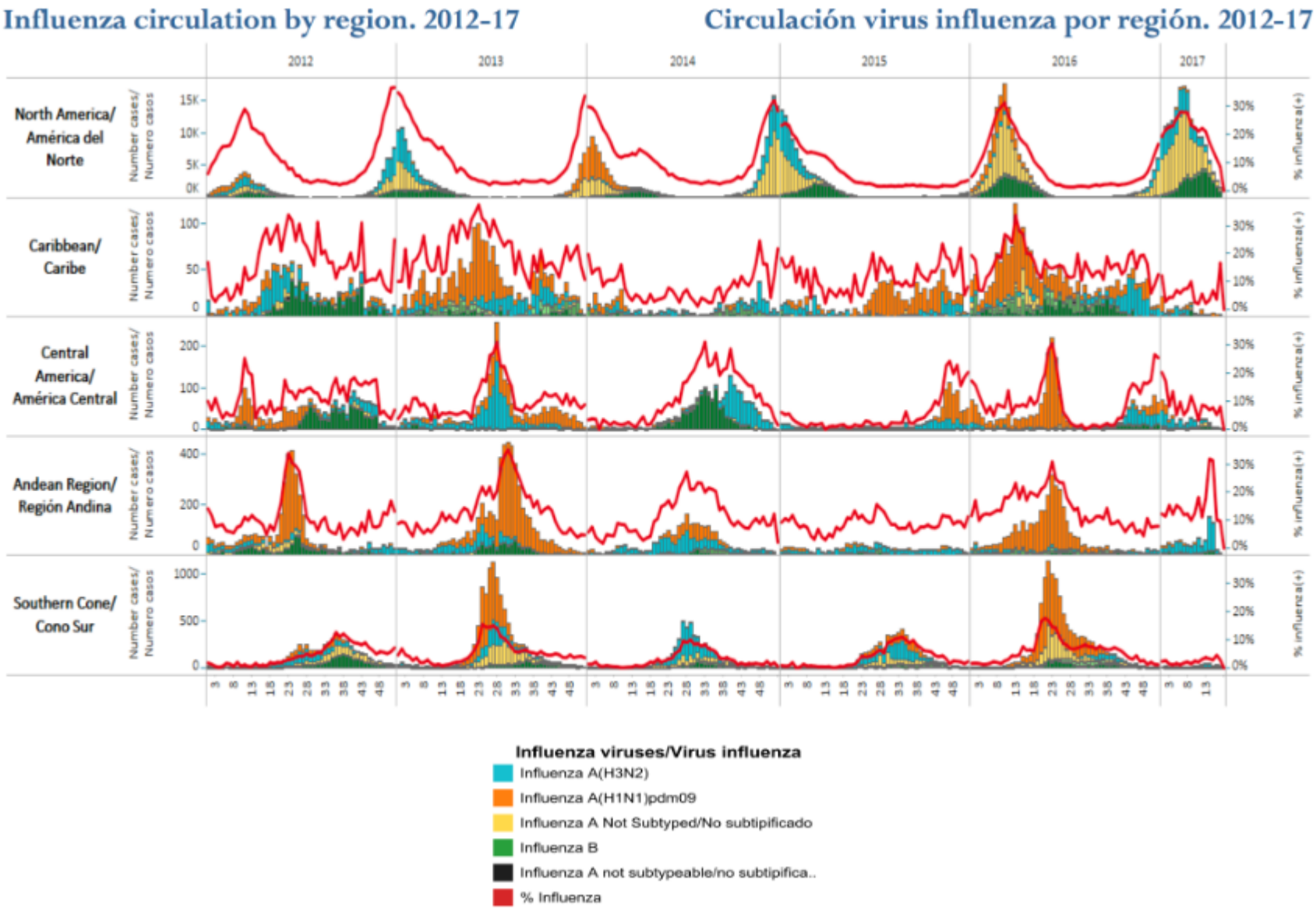
when to vaccinate and

what formulation to use?

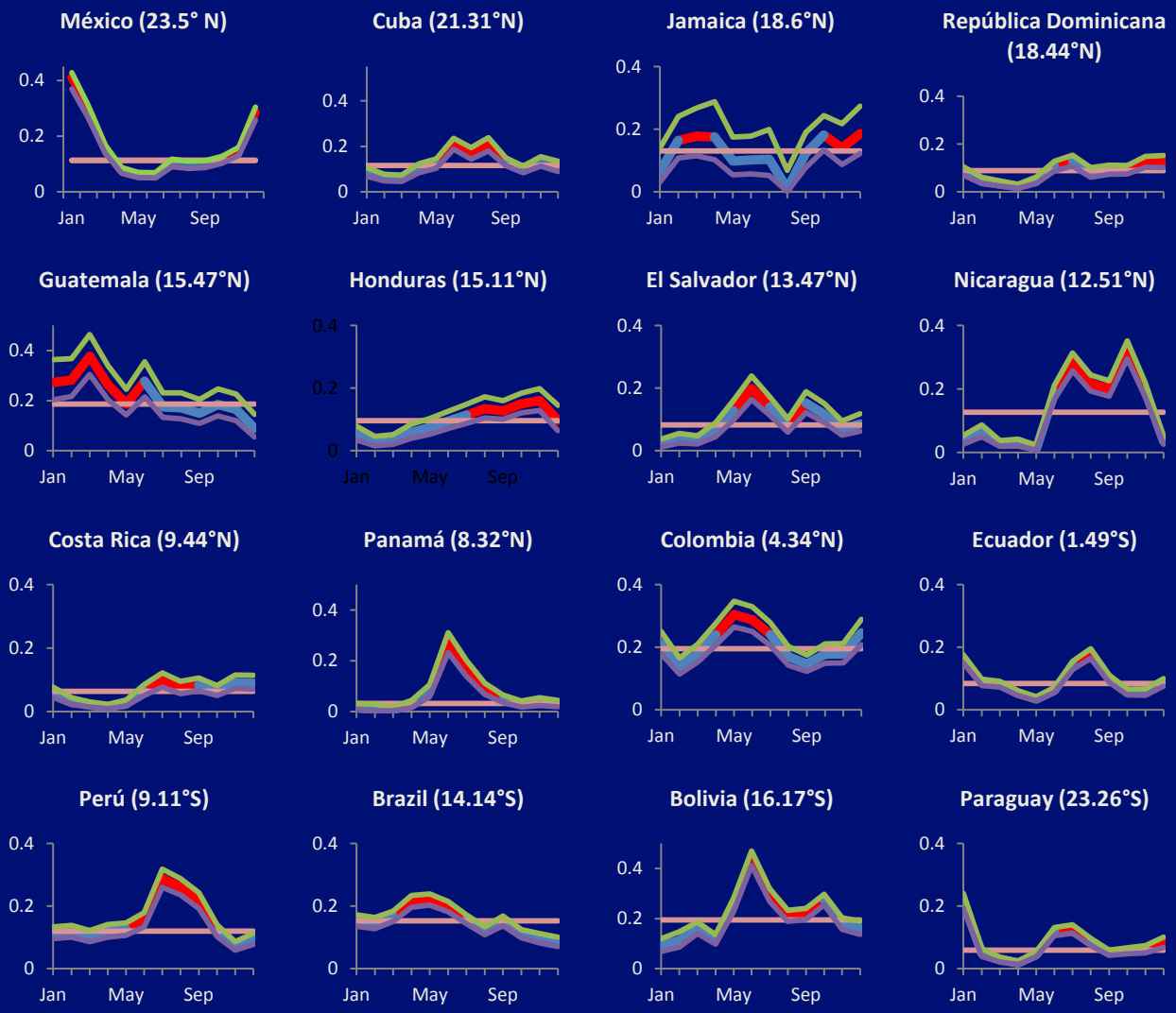


Inter-Institutional work

Influenza circulation by sub-region, LAC 2012-2017



Negative binomial model for influenza activity in the American Tropics

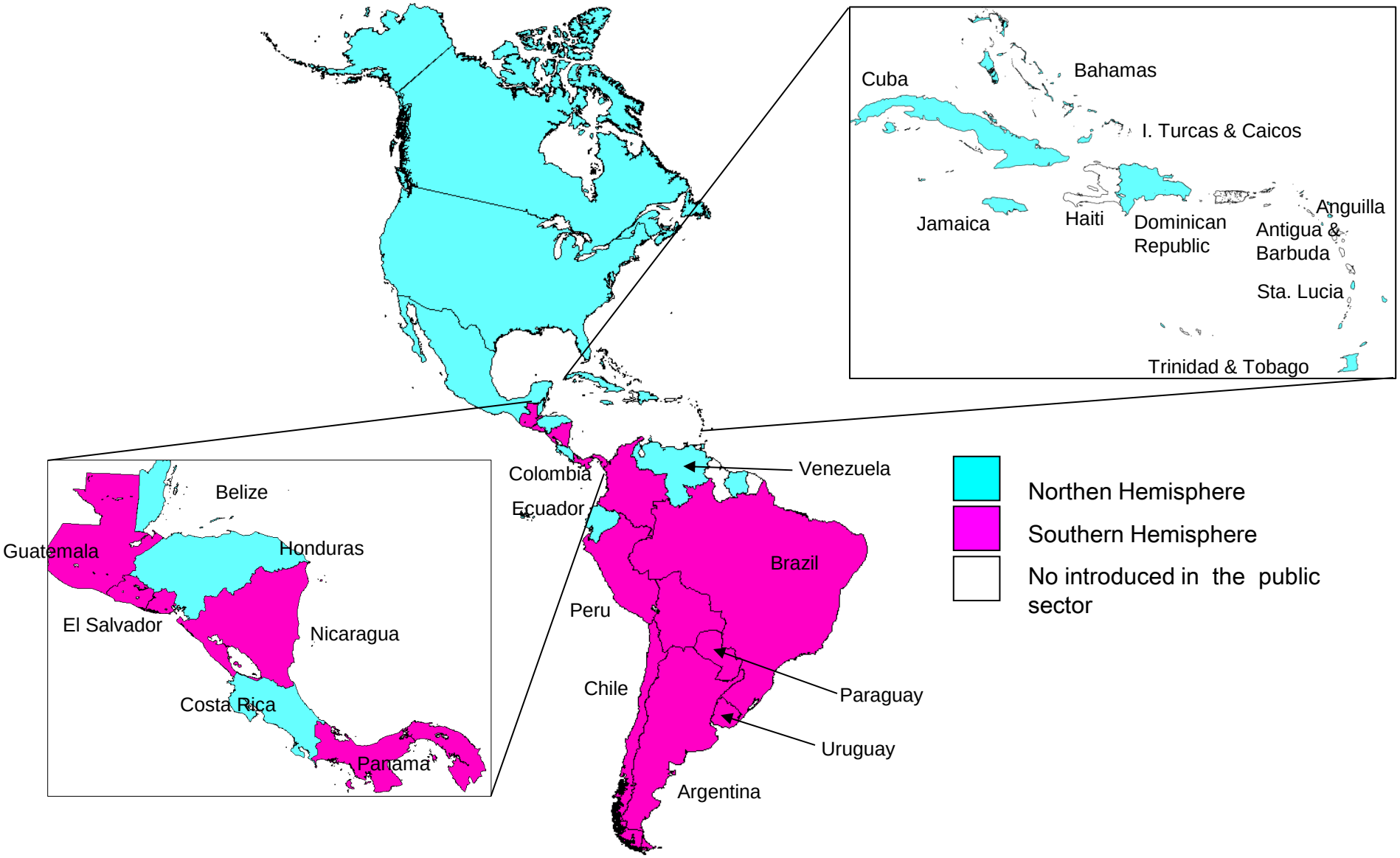


Durand L et a;. Timing of influenza activity and vaccine selection in the American Tropics. *Influenza Other Respir Viruses.* 2015 Dec 24. doi: 10.1111/irv.12371. [Epub ahead of print]

Predominant antigenic characterization of influenza strain compared with vaccine formulation during 2002–2014.

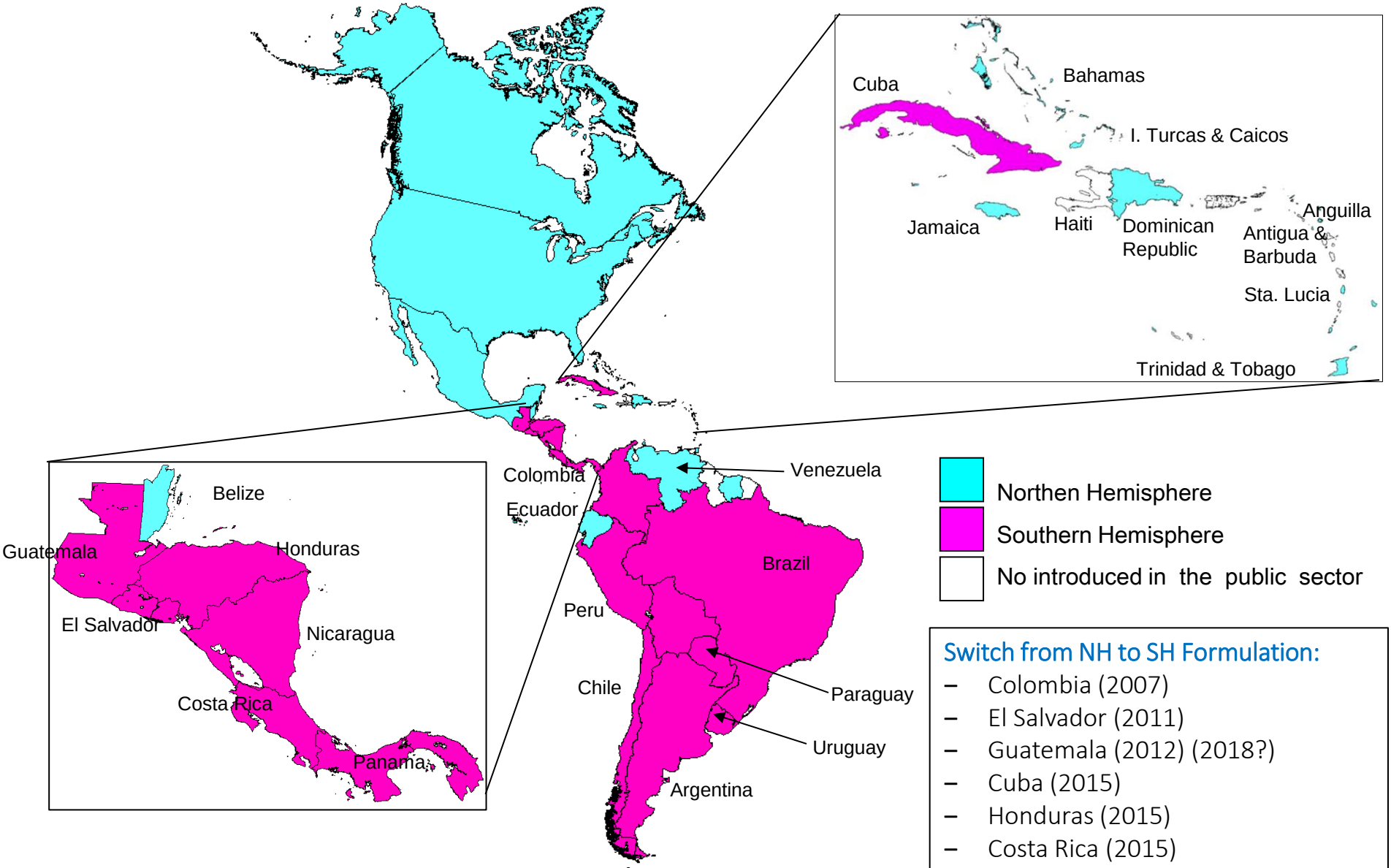
Country	Years of available data	Years predominant strain represented	
		Southern hemisphere vaccine	Northern hemisphere vaccine
Brazil	11	73%	55%
Costa Rica	8	50%	50%
El Salvador	9	56%	44%
Guatemala	7	71%	43%
Honduras	7	43%	43%
Nicaragua	7	57%	57%
Panama	9	44%	44%
Paraguay	9	89%	56%
Total	**67**	**61%**	**49%**

Use of seasonal influenza vaccine & formulation in the Americas, 2014



Source: Country reports to PAHO, MOHs Webpage, PAHO/WHO Surveys

Adjustment of Influenza vaccine policy in tropical countries in LAC, 2015



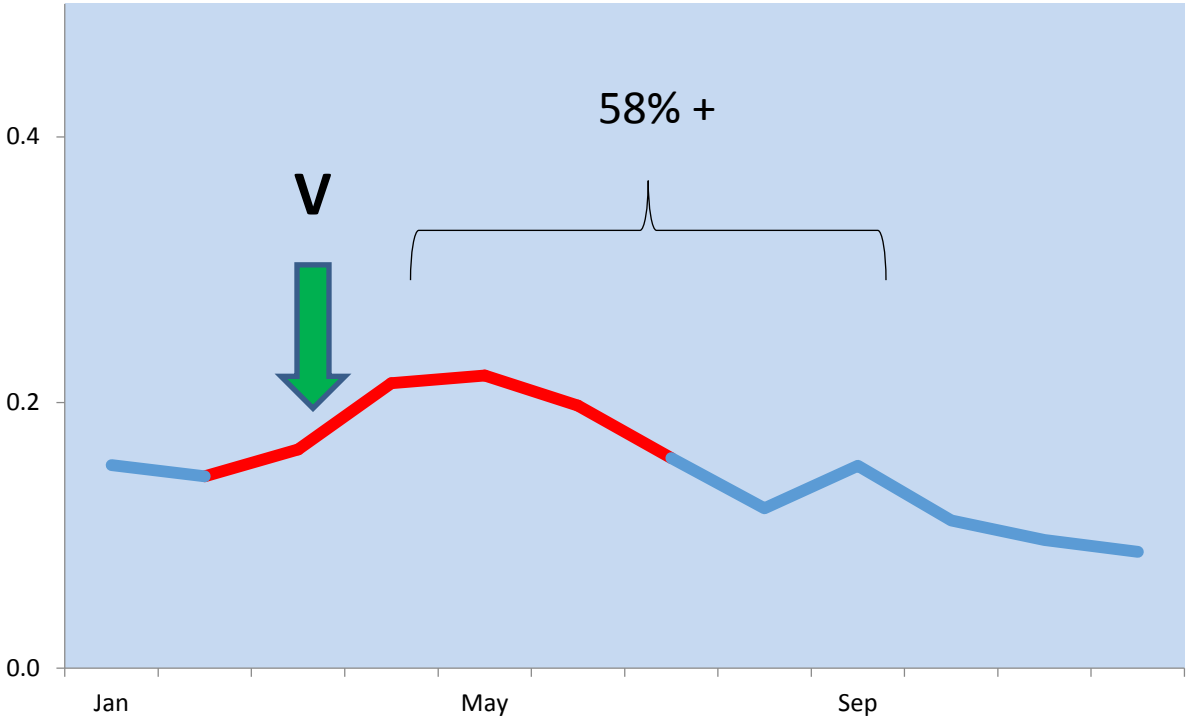
Switch from NH to SH Formulation:

- Colombia (2007)
- El Salvador (2011)
- Guatemala (2012) (2018?)
- Cuba (2015)
- Honduras (2015)
- Costa Rica (2015)

Source: Country reports to PAHO, MOHs Webpage, PAHO/WHO Surveys

TAG Recommendations for tropical areas, 2015

- Determine the period of **highest influenza activity** using various data sources and methods
- **Vaccinating** intensively prior to the primary peak, reaching high coverage, and follow-up through health services during the influenza season
- using the **most updated vaccine** available
- **Evaluate** the impact of the change in vaccine policy



Decision-making process to change to Southern Hem formulation in Honduras

Jul- Oct 2014

Technical review including feasibility

Nov-Dec 2014

Discussion: EPI, surv, NiTAG, PAHO & CDC

Dec 2015

Technical and political decision

Jan-Mar 2015

Implementation plan

Analysis for decision-making	
Technical-political	**Programmatic - feasibility**
✓Disease burden studies and seasonality analysis 2008-2012 ✓TAG/WHO Recomendatios ✓Quality Vaccines available. ✓Financial analysis: - Vaccine price at the Revolving Fund - National budget requested by 2015	✓National Experience on introduction of new vaccines ✓Cold chain capacity in all levels ✓Logistic and operational components

Main activities

- **Technical and operational guidelines** for the **transition**
- **Vaccine purchase** to the Revolving Fund
- Bulletins to inform about the transition
- Meetings with key stakeholders: private **sector, medical associations y pharma companies**
- **Communication strategy**
- Integration of influenza vaccine to **VWA**

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PAHO Member States and its Revolving Fund for Vaccines

- **1977 CD25.R27** "Establishment of the Expanded Program on Immunization (EPI) and the PAHO Revolving Fund"
- **2013 CD52R5** "Principles of the PAHO Revolving Fund for Vaccine Procurement"
- **2013 CD52/15** "Review of the Charge Assessed on the Procurement of Public Health Supplies for Member States"
- **2014 CD53/23 Report** "PAHO Revolving for vaccine procurement: Challenges and Opportunities"

Solidarity working together

Active participation

Regional Goals eliminating diseases, introducing new vaccines

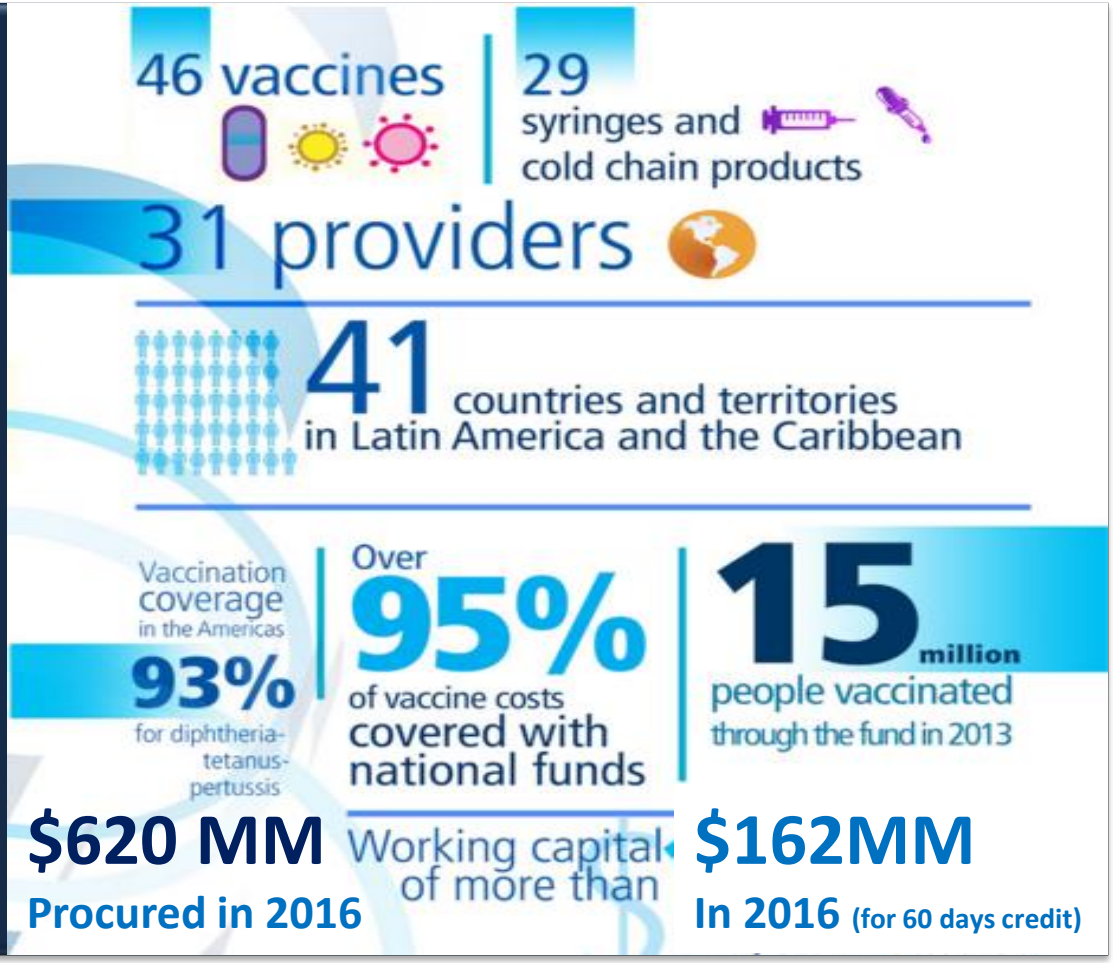
PAHO Revolving Fund:

"One Pillar in Success of Immunization Programs in the Americas"

1979 → 2017

PAHO Revolving Fund

1979: 37 years

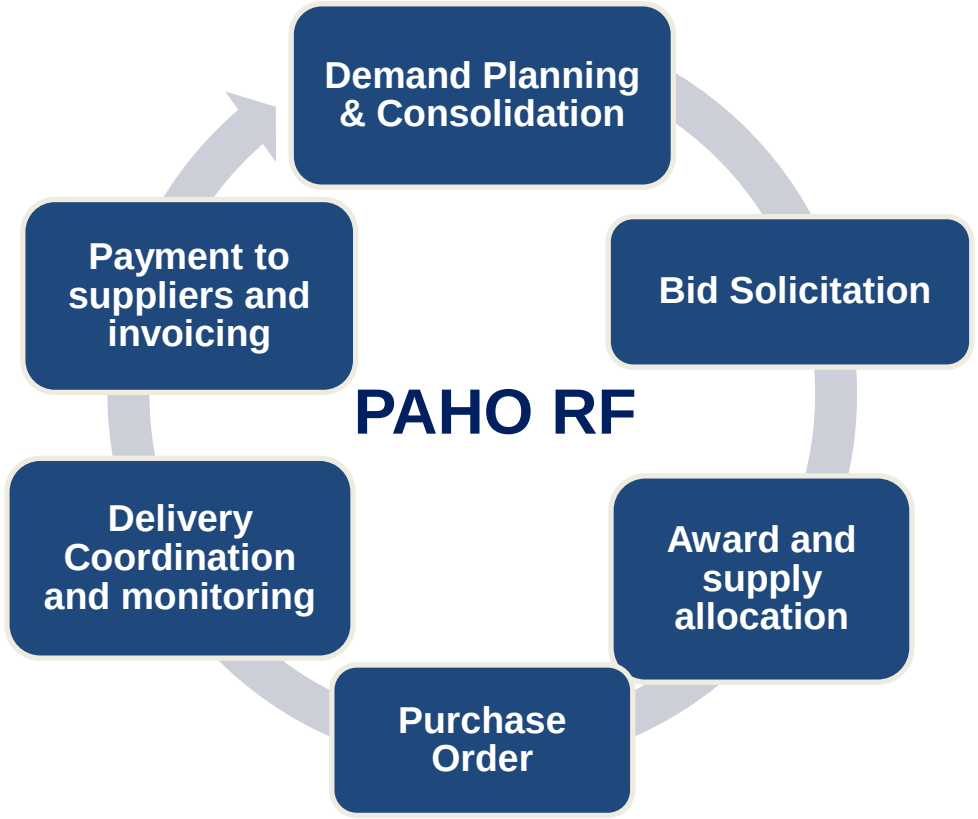


www.paho.org/revolvingfund

PAHO Revolving Fund: Procurement Cycle and Stakeholders

Ministries of Health (MoH):

- Demand plans
- Confirmation of shipment arrivals
- Customs clearance & distribution
- Payments



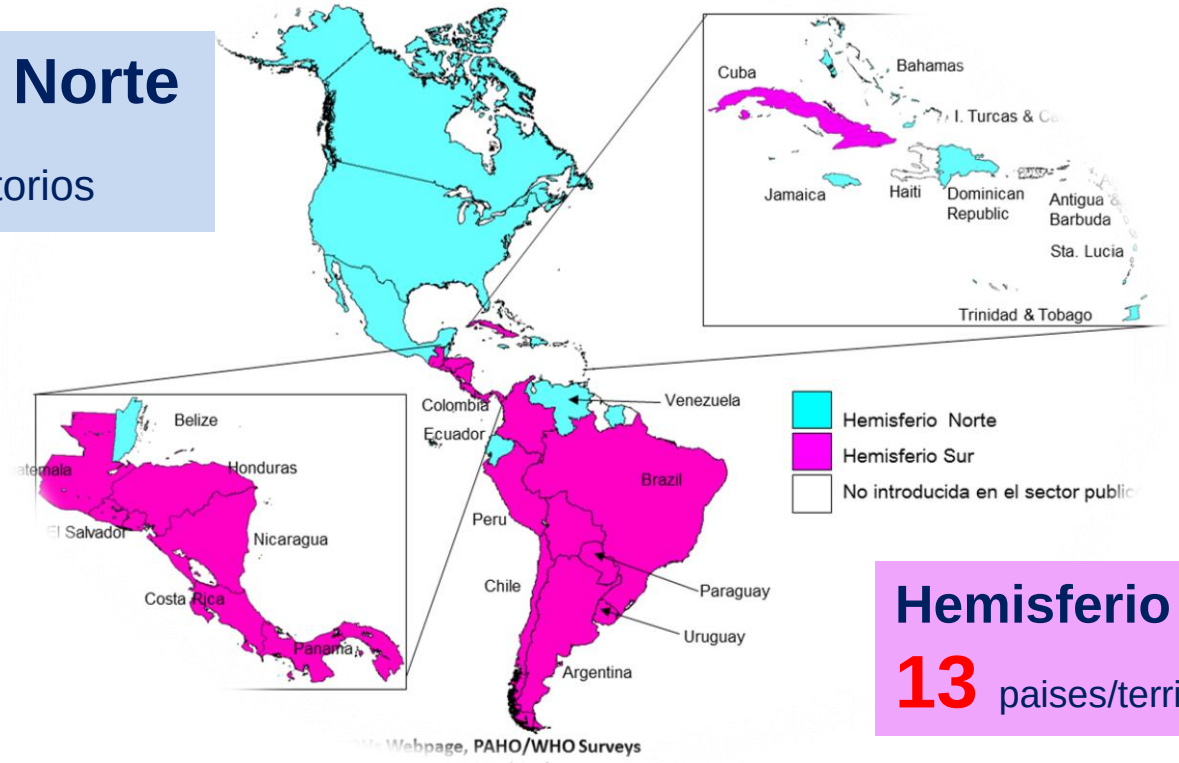
Suppliers:

- Supply
- Quality products
- Timely delivery
- Communicate

Information & Coordination

Influenza vaccine procurement through RF

Hemisferio Norte
20 paises/territorios



Hemisferio Sur
13 paises/territorios

ARG, BRA, CHI, MEX do not participate in the RF for Influenza vaccine procurement (Transfer technology agreements, public-private partnerships)

Seasonal Influenza Vaccination Operational Challenges

Estimating vaccination coverage:

- **Complexity** defining **denominators for persons with chronic conditions and healthcare workers**

- Difficult to record with the current information systems in many countries

- **Quality** of information systems:
  - Coverage rates for all targeted populations groups are not routinely available – absence of reliable denominators including pregnant women
  - Two-dose schedule for children <9y vaccinated for the first time
  - Electronic registries

Seasonal Influenza Vaccination
Operational challenges

Social communication strategies:

Source: PAHO

- Boost community confidence and generate demand to counter misinformation disseminated by anti-vaccine groups
- Opinion-makers and social communicators: appropriate information in order to provide extensive coverage on the vaccine's benefits - Champions
- Develop materials for different audiences
- Use of new technologies like social media to better disseminate information
- Communication campaigns must be timed adequately based on seasonality and vaccine availability

Communication skills for health care workers to support influenza vaccine uptake

Seasonal Influenza Vaccination
Operational challenges

Influenza vaccination in pregnant women:

- Generate **evidence** on influenza illnesses burden and vaccine effectiveness and impact among pregnant women and newborns
- Strengthen **AEFI surveillance** including active surveillance using sentinel sites
- Medical/scientific societies, physician vaccine **recommendations** are critical to achieve higher rates of vaccination
- Strengthen **collaborative efforts** among scientific societies/associations and NiTAGs, Agencies, Universities and Institutions working on MCH

Conclusions

- Progress in the generation of evidence for influenza adjustments to **vaccination policies in tropical countries** (surveillance, disease burden, vaccine performance, information systems and coverage monitoring-nominal registries)
- Countries still face **challenges to fully implement** influenza vaccination in target populations
- Quality of information systems
  - Coverage rates for all targeted populations groups are not routinely available – absence of reliable denominators including pregnant women
  - Two-dose schedule for children <9y vaccinated for the first time
- Need to continue the evaluation of vaccine effectiveness and impact

Acknowledgements

- Nathalie El Omeiri
- Jhon Fitzsimmons
- Daniel Rodriguez
- Carilu Pacis
- Ministries of Health