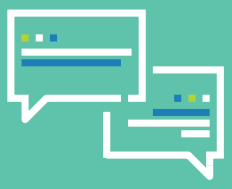
ANALYSIS & DISCUSSION

Workshop to Analyze Vaccination Coverage in the Region of the Americas

Lima, Peru
6-8 December 2017

PAHO
Pan American Health Organization
World Health Organization
REGIONAL OFFICE FOR THE Americas



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Contents

1

BACKGROUND

Background

Immunization programs in the Region of the Americas have contributed to meeting the Millennium Development Goals and are a key element in achieving the Sustainable Development Goals. However, there is evidence that coverage with the third dose of the diphtheria-pertussis-tetanus vaccine (DTP-3) declined in the Region from 94% in 2011 to 91% in 2015, where it has remained to the present date. Moreover, in half of the Region's municipalities, coverage does not exceed 95%.

In September 2015, at the 54th Directing Council of the Pan American Health Organization (PAHO), the Regional Immunization Action Plan (RIAP) was approved as a guiding framework for immunization in the Region of the Americas. This plan is in line with the Global Vaccine Action Plan (GVAP) of the World Health Organization (WHO), which aims to continue efforts to overcome the immunization-related challenges confronting the countries of the Region.

In this context, PAHO hosted a regional workshop on 6-8 December 2017 in Lima, Peru, to determine possible causes of declining and stagnating coverage, and to identify the interventions in the Region that have been most successful in maintaining vaccination coverage at optimal levels.

Objective

To describe the status of vaccination coverage in the Region of the Americas, establish best practices for maintaining optimal coverage, and identify technical assistance that Member States need to implement those practices.

Methodology

The workshop to analyze and discuss vaccination coverage in the Region of the Americas was held in Lima, Peru, on 6-8 December 2017, drawing on participation from 25 professionals with experience in managing immunization programs in countries of the Region (see Annex 1 of this report for a list of participants), along with a team of facilitators from PAHO.[1]

The opening session was followed by a presentation describing the status of vaccination coverage in the Region, with an emphasis on the disparities seen at the subnational (municipal) level. Country representatives explained the problems they have faced in seeking to expand vaccination coverage, and regarding the innovative strategies they are implementing. These contributions fueled group discussions in which the participants analyzed the most serious challenges facing the Region, as well as the most viable national and regional interventions for addressing them. A participatory exercise, facilitated by a computer application,[2] led to a consensus on priority problems and interventions. (See Annex 3 for selected results of this study.)

At the end of the workshop, the participants discussed a number of interventions that could be implemented in the short term to overcome problems in vaccination coverage, while PAHO's team of regional advisors committed to supporting national initiatives and to promoting certain regional interventions described in this report.

1 Martha Velandia and Marcela Contreras, PAHO regional advisors. Edgar Barillas, short-term consultant, edited this report.
2 Mentimeter® (https://www.mentimeter.com).

2

RESULTS

Situation analysis

Most vaccine-preventable diseases no longer constitute a problem in the Region's public health systems. Coverage has been kept consistently above 90% at the national and regional levels, with regional DTP3 coverage of 91% in 2016.[3] However, municipal-level data shows major disparities in coverage. Suboptimal coverage, over several years, has led to a growing number of persons susceptible to these diseases, leading in turn to the emergence of outbreaks.

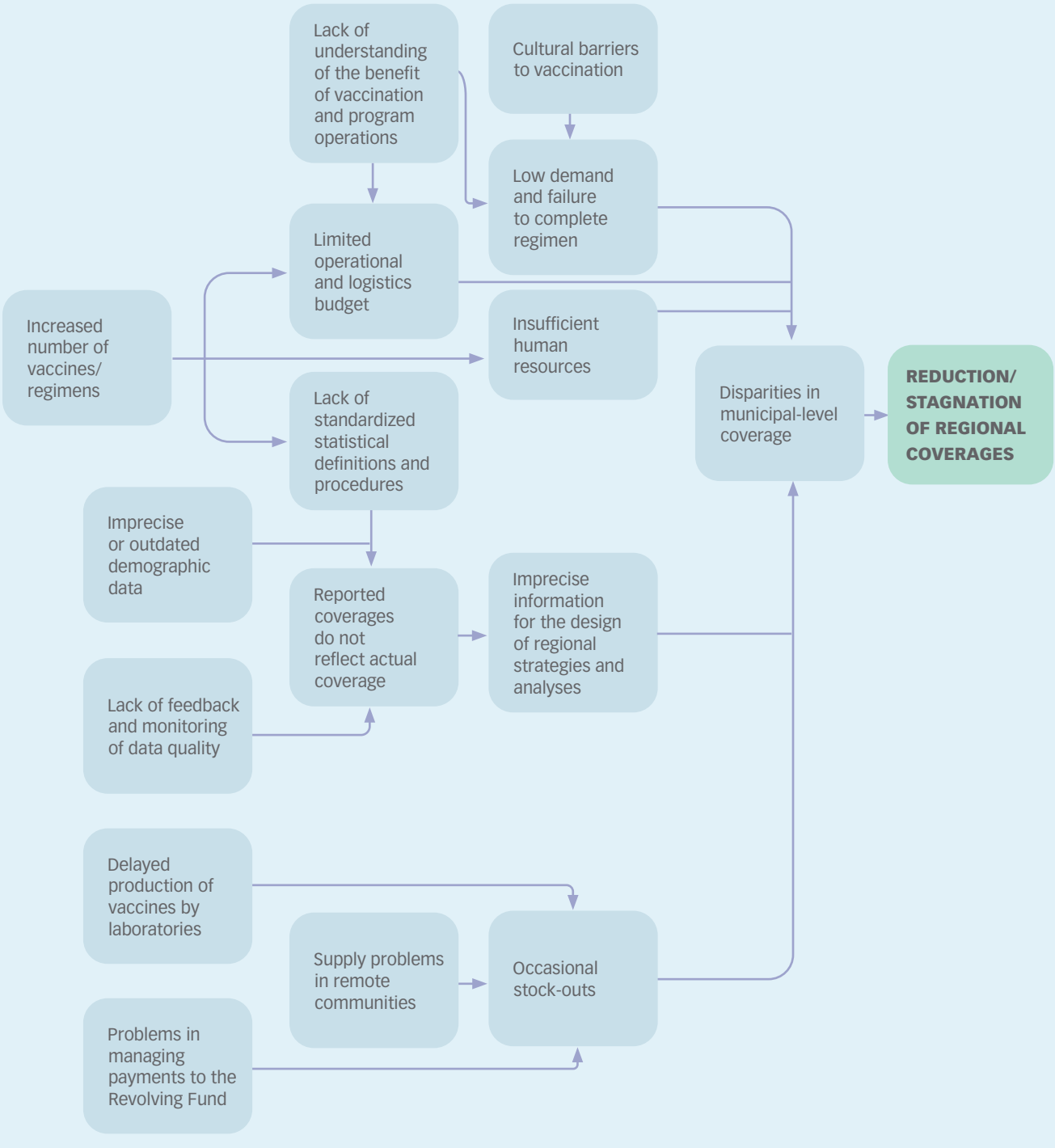
The factors responsible for reduced vaccination coverage discussed during the workshop include the following:

- **Availability of vaccines:** Reference was made to stock-outs of some vaccines, due to problems of international production and inadequate management of, and communication with, the PAHO Revolving Fund.[4]
- **Access:** Physical barriers to access continue to be a major problem in some remote areas accessible only by air or water. In addition, in some countries with indigenous communities, cultural barriers continue to hinder the expansion of vaccination coverage.[5]
- **Information systems:** Some reported problems in coverage involve the sources of demographic data used in constructing indicators,[6] a lack of standardized definitions,[7] and errors in initial data entry and in the transcription of data to nominal and consolidated electronic databases.[8] Some countries are in the process of introducing nominal and automated data registries, but fail to cover the entire national territory.[9] As a result of these problems, reported coverage differs from actual coverage, skewing procurement estimates, limiting comparative analysis (between municipalities within a country and between countries of the Region), making it difficult to design intervention strategies.
- **Changes in vaccination regimens:** The introduction of new vaccines and changes in vaccination regimens and target groups have placed additional demands on health workers.[10] This additional burden has not been matched, however, by increases in operating budgets or personnel. This has had an adverse effect on work that requires greater human and financial resources, such as active case searches for unvaccinated people and patient monitoring.[11] Moreover, the simultaneous administration of several vaccines is a disincentive for both health workers and heads of households.
- **Training and social media campaigns:** With increased public spending on procurement of biologicals and inputs, and on the management of some immunization programs, ensuring accountability to government auditors and to the public is an important concern. This investment, however, has not been accompanied by efforts to train health personnel, state auditors, and social communicators. Because of this lack of training, some countries have imposed financial penalties on vaccinators for unused vaccine doses,[12] while in other countries, poorly conceived

4 For example, the introduction of a new financial system hindered advance payments to the Revolving Fund in Panama; in Colombia, the devaluation of the currency caused cash-flow problems.
5 Coverage in the Ngobe-Bugle community in Panama, for example, is below the national average for this reason.
6 In Guatemala, for example, official birth statistics and population projections may be more than four years old.
7 For example, the country representatives cited different criteria for reporting complete vaccination against polio (polio-3), pneumococcus, and influenza.
8 DTP3 coverage reported in Brasilia (14%) was low due to a data entry error.
9 Vaccination data in some Mexican states are recorded on electronic tablets that upload data to the central database.
10 The representatives of the countries participating in the meeting reported regular administration of more than 14 vaccines.
11 The reported dropout rate in Venezuela, for instance, is 19%. Brazil is conducting a study of the operational costs of the immunization program, which may prove instructive for other countries of the Region; it is also supporting the incorporation of new financial resources.
12 In Guatemala, vaccination personnel are required to reimburse the value of unused or wasted vaccine doses. The adopted strategy dictates vaccination on selected days, thus missing opportunities offered by daily immunization programs.

social media campaigns for certain vaccines have failed to motivate people to vaccinate.[13] In almost all the countries, the lack of widespread publicity about routine immunization programs has reduced spontaneous demand for vaccination. This may partially account for the decrease in coverage, particularly in large cities.

FIGURE 1. **PROBLEMS RELATED TO REDUCED VACCINATION COVERAGE**



13 In Honduras, dissemination in the media of unconfirmed news regarding adverse effects of the human papillomavirus vaccine suppressed demand.

Interventions considered

1. **Vaccine availability and access:** Most countries in the Region obtain their vaccines through the PAHO Revolving Fund. Where laboratories are unable to ensure regular production, countries must adjust their buffer stocks to reduce the risk of stock-outs. Levels of reserves in remote communities should be reviewed to ensure sufficient stocks to guarantee continuous and simultaneous vaccination in situations where weather conditions or natural disasters may interrupt communications.

Ministries of health, in coordination with treasuries or their equivalent, should review procedures for procurement through the Revolving Fund, so that payments can be made before delivery of the products (pursuant to the agreement) or by presentation of a letter of credit. The countries suggest that the Revolving Fund consider making its requirements more flexible in emergency situations.

Countries	• Improve planning for the management of inventories and consider adjusting buffer stocks at central warehouses and in remote communities. • Coordinate with treasuries to establish procedures for payments to the Revolving Fund.
PAHO	• Negotiate with manufacturing laboratories. • Make the Revolving Fund requirements more flexible in emergency situations.

2. **Information systems:** Countries that have problems recording quality data should strengthen their immunization information systems and consider appropriate use of basic records (vaccination files, forms, cards, etc.). Given the value of having indicators disaggregated at the municipal level, countries should strengthen their analysis to provide disaggregation at the subnational level. In countries with unreliable denominators, analysis can be supplemented by information that relies more heavily on the numerator (doses administered), on other population-based sources (live-birth records, civil registry, etc.), and on surveys.

Countries that meet the required conditions should implement nominal electronic immunization registries (EIRs) on a national scale, while countries that have begun implementing such systems are advised to expand them to the national level, link them to vital statistics systems and integrated public health information platforms, utilize the system's information, and systematically monitor data quality.[14] PAHO can offer assistance on such initiatives and help bring the systems into widespread use.

PAHO, for its part, can provide support for standardizing definitions, indicators, statistical procedures, and data quality evaluation (for manual systems and automated nominal systems), as well as offering support, in selected cases, for conducting vaccination coverage surveys. Whatever manuals and procedures that PAHO develops should reflect the support of PAHO's statistics department and be subject to review and validation by the Technical Advisory Group (TAG) on Vaccine-preventable Diseases, or by working groups created for the purpose.

14 Mexico and Brazil are introducing EIRs, but the coverage is not at a national level. In Brazil, 40% of municipalities have no EIRs. The Ministry of Health of Brazil has allocated budgetary resources to promote use of such records.

Countries	• Strengthen the use of basic recording and reporting forms. • Improve data use and analysis and systematic reporting at the subnational (municipal) level. • Use numerator-based quality control and systematic analysis. • Expand EIR systems to the national level.
PAHO	• Institute multi-year analyses of subnational indicators. • Help to introduce EIRs in the Region and encourage their widespread use. • Standardize statistical definitions and procedures for the calculation and analysis of performance indicators associated with immunization programs. • Conduct data quality evaluations. • Support the use of vaccination surveys (in selected cases).

3. **Training and media campaigns:** The methodologies and guidelines already developed by PAHO[15] and those identified as necessary by the workshop's participants[16] should be published and disseminated, and training in their use should be provided. On-site regional meetings can be combined with virtual courses or seminars to optimize the use of financial resources. Country representatives at the workshop also requested that PAHO hold workshops on data quality analysis and host meetings to share experiences on specific topics. Illustrative regional experiences could be collected and systematized during regional evaluations or training workshops, with the assistance of working groups formed for the purpose.

Training sessions and media campaigns should also be organized for specific groups involved in immunization programs. Four such target groups were identified:

- **Health professionals and new vaccinators:** Pediatricians, especially those working in the private sector, should receive training on immunization. [17] Due to high turnover, new vaccinators are another important target group. Special attention should be given to new vaccines, including their benefits and adverse effects, and to public sector measures to control the quality of biologicals. Training for new providers (e.g., NGOs and pharmacies) should cover recording and reporting routines.
- **Auditors and other public sector administrative personnel:** Training should focus on the cost-effectiveness of vaccination, procedures for procurement through international agencies, the importance of having financial resources available to avoid stock-outs, and the expected percentage of unused (and discarded) doses, even in highly efficient regular immunization programs.
- **Social communicators:** This group includes journalists, radio announcers, and television presenters. Training should focus on the benefit of vaccination, adverse reactions, and the risks that arise in the wake of unfounded and alarming news reports.
- **Parents, guardians, and community:** Community-focused media campaigns should remind heads of households about the risk of epidemics of diseases which, due to the success of immunization programs, had been largely forgotten. Such campaigns should also emphasize the benefits of the new vaccines and provide information about their potential adverse effects.

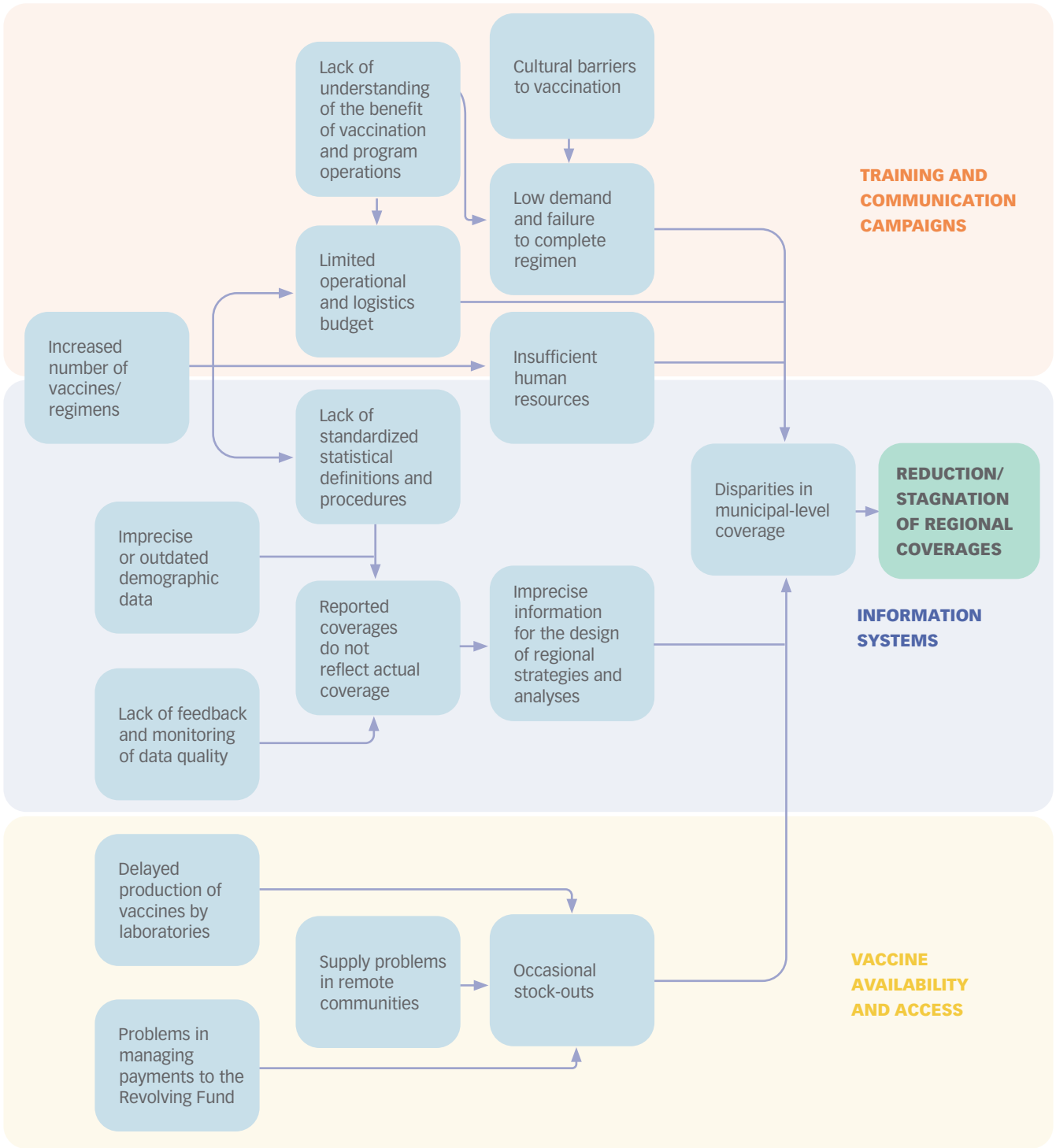
15 Missed vaccination opportunities methodology; adjusted EPI monitoring and evaluation modules; guide for the introduction of EIRs; micro-planning guide.
16 Standardization of vaccination-related definitions, indicators, and statistical procedures.
17 Some countries have incorporated or plan to incorporate new collaborating institutions in the vaccination network (e.g. NGOs or private pharmacies).

PAHO can assist in developing educational materials and communication strategies, which can then be implemented by country teams. Figure 2 shows the relationship between problems identified and areas of intervention.

Countries	• Training and media campaigns targeting specific groups.
PAHO	• Training using existing manuals and guides. • Development of generic training materials to be adapted by the countries. • Regional workshops on data quality and analysis. • Collection, systematization, and sharing of regional experiences.

Participants from workshop on analyzing and discussing vaccination coverages in the Region of the Americas, Peru, December 2017.
Source: PAHO/WHO.

FIGURE 2. **LINKAGE BETWEEN MAIN PROBLEMS AND AREAS OF INTERVENTION**



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ANNEXES

ANNEX 1
Participants

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PAHO/WHO: Pan American Health Organization/World Health Organization.
EPI: Expanded Program on Immunization.

ANNEX 2
Agenda and methodology

6 DECEMBER 2017

Day and time	Session	Responsible party	Methodological note
2:00-2:30pm	Welcome and opening remarks	Representative of the Ministry of Health of Peru, PAHO Representative, Dr. Cuauhtémoc Ruiz	
2:30-2:45pm	Workshop objectives and methodology	Edgar Barillas	Summary presentation of methodology and objectives. Introduction of participants.
2:45-3:15pm	Status of immunization coverage in the Americas	Martha Velandia	This 20-minute presentation focuses on the lack of progress in increasing vaccination coverage, and is followed by a 10-minute question-and-answer session.
3:15-4:00pm	Discussion of the regional situation	Plenary discussion	Discussion of the following points is encouraged: What is your impression of the current situation? From the regional standpoint (individual cases will then be discussed), what progress and setbacks have occurred?
4:00-4:30pm	Break		
4:30-5:30pm	Panel 1: Obstacles to achieving the coverage goals	Participants from three countries	15-minute presentations with PowerPoint support.

7 DECEMBER 2017

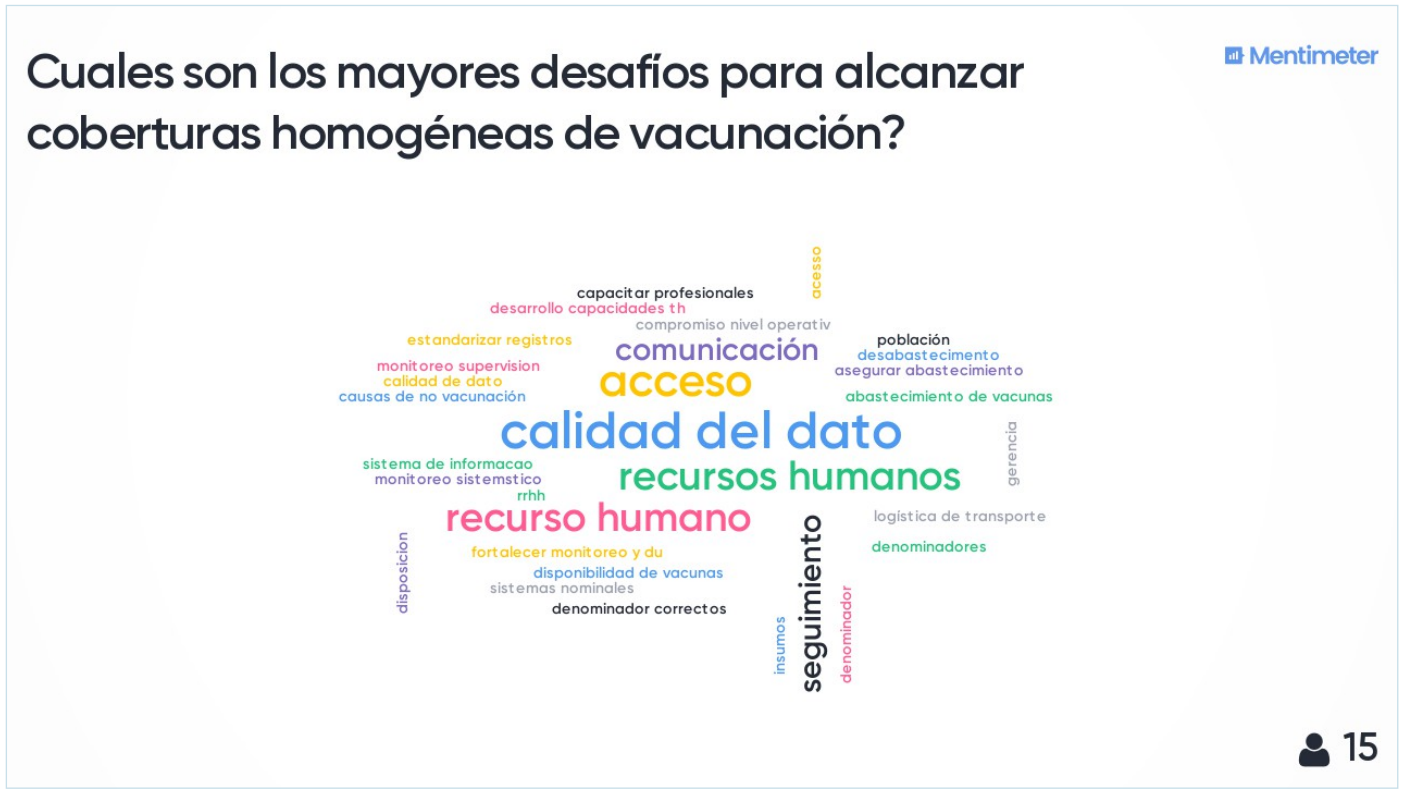
Day and time	Session	Responsible party	Methodological note
9:00-10:00am	Discussion of obstacles and challenges to overcome	Plenary discussion	Following the three presentations: • What common obstacles emerge? • What strategies, in addition to those presented, could help overcome the obstacles described?
10:00-11:00am	Panel 2: Innovative experiences to work toward achieving coverage goals	Participants from three countries	15-minute presentations with PowerPoint support.
11:00-11:30am	Recess		
11:30am-12:30pm	Lesson discussion and application in other countries	Plenary discussion	Following the 3 presentations: • What common innovative strategies emerge? • Are these strategies sustainable and applicable to other countries?
12:30-2:00pm	Lunch		

Day and time	Session	Responsible party	Methodological note
2:00-4:00pm	Working group session: Elements for the development of a national and regional work agenda	Working group session	Formation of two working groups. Mixture of countries with high and low coverage. Discussion of a working-group guide.
4:00-4:30pm	Recess		
4:30-5:30pm	Group presentation		Presentation of the table aligned with the working-group guide. 15 minutes per group.

8 DECEMBER 2017

Day and time	Session	Responsible party	Methodological note
9:00-10:30am	Discussion of the group presentations	Plenary discussion	Discussion of the working group sessions
10:30-11:00am	Break		
11:00am-12:30pm	Commitments		
12:30-1:00pm	Closing		

Selected results of the discussion and consensus exercise[18]



18 All the countries that responded to this survey are Spanish-speaking; all responses are therefore in Spanish.

Cuales son las intervenciones nacionales?

Mentimeter

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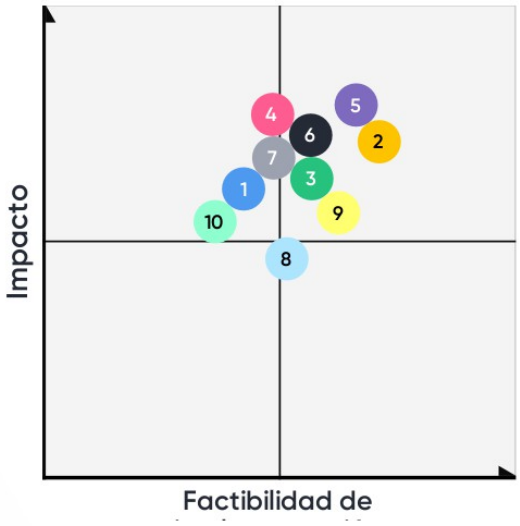
Impacto y factibilidad de intervenciones nacionales

Mentimeter



1. Financiamiento
2. Monitoreo de Numeradores
3. Ajuste/Estandarización de Denominadores
4. Implementar Registros nominales de vacunación
5. Capacitación continua
6. Trabajo interprogramático/intersector
7. Campanas de comunicación
8. Premio de la vacunación
9. Volver a las bases (tarjetero, microplanif., OPV, etc.)
10. Modificación de horario del servicio

19

Apoyo de la OPS

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Priorización del apoyo de la OPS

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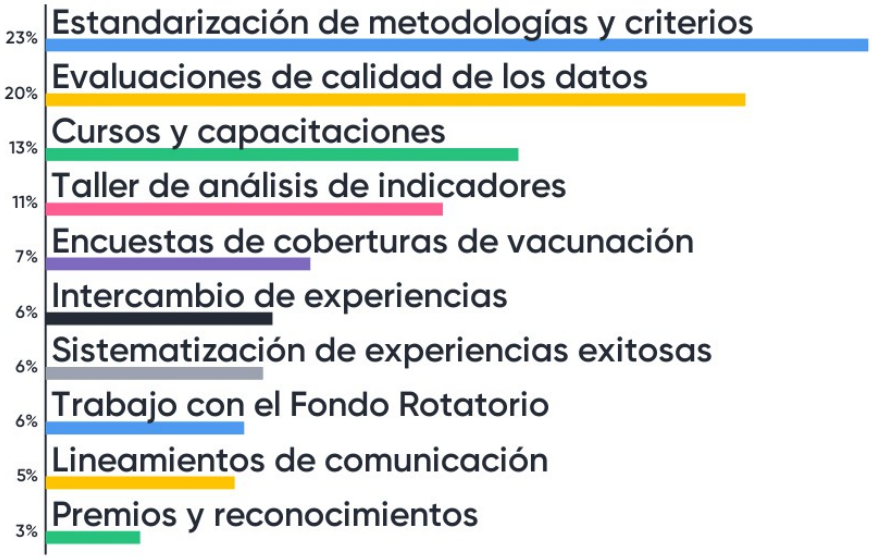

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