COVID-19 Vaccination in the Region of the Americas: Targets Met and Future Challenges

On 5 May 2023, the Director-General of the World Health Organization (WHO), Dr. Tedros Adhanom Ghebreyesus, declared an end to the COVID-19 public health emergency of international concern, as recommended by the WHO Emergency Committee. However, he cautioned that this does not mean that COVID-19 is no longer a threat to global health: it remains a global public health priority and must continue to be managed and controlled, along with other infectious diseases. The risk posed by COVID-19 persists because the virus is here to stay. Therefore, countries and their health systems and populations cannot let their guard down. These are some of the key recommendations:

• Preserve the national capacity that has been developed and prepare for future events.
• Incorporate COVID-19 vaccination into regular life-course vaccination programs and continue efforts to increase vaccination coverage for all people in high-priority groups.
• Prepare for vaccines, diagnostics, and therapeutics to be authorized within national regulatory frameworks to ensure long-term availability and supply.
• Continue to work with communities to develop strong, resilient, and inclusive risk communications and community engagement (RCCE) and infodemic management programs.
• Continue to support research to improve vaccines and better understand post-COVID-19 condition ("long COVID").

In addition, the recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE), the Pan American Health Organization (PAHO) Technical Advisory Group (TAG), and the National Immunization Technical Advisory Groups (NITAGs) have been instrumental in guiding technical decision-making on how to make the most of available vaccines and reach the groups who need it most. This has been given the highest level of commitment from presidents, ministers, academia, regulatory authorities, and especially from national immunization programs and health personnel, who have played a fundamental role in ensuring everyone is included in COVID-19 vaccination programs and in updating the regular immunization schedule.

During the SAGE meeting held in March 2023, the road map for prioritizing COVID-19 vaccine uptake was reviewed and proposed to reflect the impact of the Omicron variant of the virus and the high population immunity resulting from infection and vaccination. This road map calls for continuing to prioritize the protection of populations at highest risk of death and severe illness from SARS-CoV-2 infection, as well as the continuity of robust, resilient health systems. It also includes revised recommendations on additional booster doses and spacing.
The COVID-19 vaccination process has required a major effort from countries, international organizations and, especially, all health workers involved in this immense task. This work has had a major impact in terms of deaths and hospitalizations avoided. As of 30 May 2023, 13.3 billion doses of vaccine had been administered globally.\(^1\) Without the effect of the vaccines, the scenario would have been much worse, so we must not let our guard down.

A remaining challenge in several of the countries and territories of the Region of the Americas, where vaccination coverage is heterogeneous, is to achieve the coverage targets established by PAHO.\(^2\) It is therefore important to strengthen coverage monitoring systems, ensuring that they provide timely and complete information and break out information according to the different risk groups and other sociodemographic variables, to enable the planning of targeted, more efficient, and more effective vaccination strategies.

COVID-19 vaccination began slowly in December 2020, due to lack of access to vaccines. There was sustained acceleration through 2021 as countries and territories received and introduced vaccines. Then, 2022 began with a slowdown and reached a plateau in April, as administration of booster doses began. Resistance to vaccination in certain population groups, coupled with prioritization of booster doses, may have affected follow-up and completion of the primary series (Figure 1). In the Region, 19.4% of the population is unvaccinated, representing approximately 200 million people who have not received even a single dose of COVID-19 vaccine.

Of the 51 countries and territories in the Region of the Americas, 41 reached the 40% vaccination target set by WHO for 31 December 2021, and 17 reached the 70% target set for 30 June 2022. Of the 10 countries and territories that remain below the 40% threshold, most are in the Caribbean, with the exception of Guatemala. Haiti remains the only country in the Region with a vaccination coverage rate below 10%.

In 2023, the same 17 countries and territories appear as those having reached the primary-series vaccination target of 70% compared to the same date in 2022 (33%). Figure 2 shows the change in primary-series coverage in the periods from May 2021 to May 2022, and from May 2022 to May 2023. It can be observed that in 2021–2022 countries increased their coverage by between 12.3 and 78.7 percentage points (mean: 39.0) and in 2022–2023 by between 0 and 19.3 percentage points (mean: 1.50).

As the Director-General of WHO reiterated, one of the proposed objectives is to incorporate COVID-19 vaccination into regular schedules, with special emphasis on the life course approach and in accordance with technical recommendations issued by advisory bodies.

---


Just as there are differences in vaccination coverage between countries, there are also differences within them. Figure 3 shows the percent coverage for the primary vaccination series for a few stages of the life course in countries and territories where information is available for at least six of the seven stages of the life course.

Overall, there is a clear need for efforts to improve vaccination coverage among persons under 18 years of age. Special attention to pregnant women in the Region is also required. A significant number of countries do not report this information, and for those that do, vaccination coverage is lower than in the general population.

Figure 3. Percent coverage for the primary vaccination series, by stage in the life course

Considering the lack of early-stage vaccines, difficulties in accessing health services in the Region, and resistance to vaccination, countries and territories have made a commendable effort to achieve the proposed objectives. COVID-19 vaccination has played a key role in controlling the pandemic, representing a major undertaking by immunization programs globally. In the Region, heterogeneous results are observed between countries and in different stages of the life course within countries, so best practices and lessons learned must be documented and shared. PAHO will continue to make every effort to provide technical assistance and information, collaborating with partners, and pharmacovigilance.

Contributed by: Catalina Abarca, Dan Álvarez, Pamela Burgos, Rafael León, Ignacio Castro, Marcela Contreras, and Martha Velandia, Special Program for Comprehensive Immunization (CIM), PAHO.

New Resource: Communicating about Vaccine Risks

Trust is the bedrock of immunization programs. When populations trust their healthcare providers, the health system, and their country's ministry of health, they are more likely to follow the vaccination recommendations issued. However, when this trust is weak, eroded, or broken, vaccine uptake can falter and leave populations at risk for vaccine-preventable diseases (VPDs). Therefore, building and maintaining the public’s trust must be a priority for national immunization programs (NIPs) worldwide, since it is critical for the acceptance of new and routine vaccines throughout the life course. Also, trust is a critical component in the dialogue between public health authorities and the public when events supposedly attributable to vaccination or immunization (ESAVIs) occur. Real or perceived vaccine-related events can break the public’s trust in the benefits of vaccines, and public health authorities must be swift in providing information and addressing concerns. Otherwise, in the absence of clear communication, misinformation about the risks of vaccination, distrust in the immunization program, and refusal to get vaccinated can flourish.

Experiences with COVID-19 vaccine introduction have demonstrated the public’s enormous hunger for trustworthy, transparent, timely, and accessible communication that fills information gaps and answers the most urgent questions. While any dialogue with the public should aim to strengthen the public’s trust in vaccines and vaccination, the occurrence of an ESAVI case is a critical moment when governments and their representatives should follow risk communications and community engagement (RCCE) principles as they relate to issues of vaccine safety. When governments and healthcare workers follow RCCE principles correctly and in a timely fashion, they can provide the public with the information needed to decide when to receive vaccine doses for themselves and their loved ones. In order to support countries with their vaccination-related RCCE, the Pan American Health Organization (PAHO) has developed technical guidelines entitled Communicating about Vaccination-Related Risks. This document includes practical recommendations and lessons learned on the processes and principles of risk communication and community engagement, messaging, risk perceptions, handling false information, collaborating with partners, and pharmacovigilance. Also, the document includes real-world examples to show how some of these principles have been applied in the Americas. The publication is available in all four languages of the Organization.

Contributors: Lauren Vulanovic, Maite Vera Antelo, Margherita Ghiselli, Special Program for Comprehensive Immunization (CIM), PAHO.

Cover of Communicating about Vaccination-Related Risks.
Strategies for Increasing Vaccination Coverage in Children Under 2 in the State of Minas Gerais: An Action Research Project

Created in 1973, the Brazilian National Immunization Program (PNI) has a history of both achievements and challenges. Despite all its advances, such as the reduction in vaccine-preventable diseases in Brazil, there are still obstacles to overcome, including addressing the decline in vaccination coverage indicators, especially since 2016. Understanding the determinants that influence the drop in vaccination coverage is a complex process that requires broad intervention strategies. Evaluation and monitoring can be the central strategy for good practices in immunization program management. The aim of this action research project was to implement and evaluate strategies for increasing vaccination coverage in children under 2 years of age in the Brazilian state of Minas Gerais.

This intervention study was carried out in partnership with the Center for Vaccination Studies and Research (NUPESV) at the Federal University of Minas Gerais School of Nursing, and the Minas Gerais State Health Department’s Superintendency of Epidemiological Surveillance. A before-and-after community clinical trial involved the 853 municipalities belonging to the 28 Regional Health Management Offices and Superintendencies (GRS and SRS) in the state of Minas Gerais, Brazil.

The effort was divided into three stages: 1) a systematic literature review on strategies for increasing vaccination coverage in children; 2) an analytical ecological time series study of vaccination coverage;4 and 3) a community clinical trial with a public health intervention. The systematic review comprised six studies, while the analytical ecological study analyzed vaccination coverage in children under 1 year of age from 2015 to 2020. For the trend analysis, the Prais-Winsten autoregressive model was used, and the average annual percent change (AAPC) was calculated for each dependent variable analyzed.

In the community clinical trial, workshops were held to draw up municipal action plans, covering the following areas: people management, management coordination, vaccination infrastructure and logistics, strategic partnerships, and social communication. The agendas of the workshops included 1) a motivational session; 2) context-setting, with contextualization of the current state of immunization in the GRSs/SRSs; 3) microplanning, with each municipality drawing up its own plan; and 4) an integration session. Participants included municipal administrators, immunization experts, and coordinators from departments of epidemiological surveillance, immunization, and primary health care in the municipalities and GRSs/SRSs, as well as representatives from municipal health councils, the Council of Municipal Health Secretaries (COSEMS), and external partners.

To monitor the implementation and results of the actions proposed in the municipal plans, seven immunization indicators were analyzed, six of them related to work processes. Comparisons were made of the results of the pre-intervention and post-intervention indicators (including vaccination coverage), and of homogeneity in vaccination coverage and dropout rate in the state’s municipalities,5 for the years 2021 and 2022.

The systematic review demonstrated the need to implement and document strategies for increasing vaccination coverage among children. The analytical ecological time series study showed that the target for the BCG vaccine was met by all GRSs/SRSs in the state of Minas Gerais only in 2015. For the other years and immunobiologics studied, at least one GRS/SRS did not reach the target, a situation that was especially critical in 2020. These results reaffirmed the need for urgent intervention from state and municipal services. In the community clinical trial, an increase was observed in the medians and interquartile range (IQR) for all immunobiologics analyzed in the comparison between 2022 and 2021.

The varicella vaccine showed the highest percentage increase (16.81%), followed by dose 2 (D2) of the MMR vaccine (14.57%). An increase was also noted in the percentage of municipalities that reached the vaccination coverage targets for all the immunobiologics analyzed, when comparing the years 2021 and 2022.

For the homogeneity, dropout, and risk classification indicators, the results indicated a significant year-over-year improvement. The “acceptable” risk classification for vaccine coverage homogeneity (≥75% to ≤100%) increased from 19.34% in 2021 to 31.60% in 2022, with statistical significance (p = 0.022). According to the risk classification for the transmission of vaccine-preventable diseases, 80.66% of the 212 municipalities in the priority GRSs/SRSs were classified as “high” and “very high” risk in 2021.

In 2022, after the municipal interventions, only 68.40% of the 212 municipalities were categorized as “high” and “very high” risk, which was also statistically significant (p = 0.039). Finally, the results also showed a reduction in the number of children living in municipalities at “high” or “very high” risk for the transmission of vaccine-preventable diseases in the state of Minas Gerais.

Considering the observed need to implement strategies for increasing vaccination coverage among vulnerable groups, the delivery of workshops and the implementation of municipal action plans improved work processes around immunization. As a result, there has been a significant increase in vaccination coverage among children in the state of Minas Gerais.

Considering this study’s favorable results (which unquestionably contributed to the recovery of vaccination coverage among children in the state of Minas Gerais, in addition to having an impact on work processes related to immunization), it is recommended to continue the evaluation of intervention strategies, as well as continuous microplanning for increased vaccination coverage.

Outlook: Initially, this project was aimed at the eight GRSs/SRSs with downward trends in at least five immunobiologics and for children under 1, but from 2022 it was expanded to include the other GRSs/SRSs and children under 2. In 2023, it was expanded to include the state’s adolescent population, with the possibility of also covering other life stages (pregnant women, adults, and older people) and the entire country.

Contributions from: the Center for Studies and Research in Vaccination, at the Federal University of Minas Gerais School of Nursing (NUPESV/EEUFMG); Janaina Fonseca Almeida Souza, Thales Philipe Rodrigues da Silva, Sheila Aparecida Ferreira Lachtim, Adriana Coelho Soares, Ed Wilson Rodrigues Vieira, Bruna de Castro da Silva, Elysângela Dittz Duarte, Giselle Lima de Freitas, Eunice Francisca Martins, Elice Eliane Nobre Ribeiro, Vanessa Maria Rodrigues Coelho, Josianne Dias Gusmão, and Fernanda Penido Matozinhos, all from the Federal University of Minas Gerais (School of Nursing, Department of Maternal-Child Nursing and Public Health), NUPESV/EEUFMG; and the Minas Gerais State Secretariat of Health/Superintendency of Epidemiological Surveillance, Minas Gerais, Brazil.

---


First Vaccine/Vaccination Safety Meeting: Exchange of Experiences and Progress Made by the Countries of the Region

On 12, 13, and 14 April 2023, the First Regional Vaccine/Vaccination Safety meeting and HL7® FHIR® ESAVI Connectathon was held in Bogotá, Colombia. The objective of the event was to exchange experiences and to learn about the progress made in each country around the surveillance of events supposedly attributable to vaccination or immunization (ESAVIs) and adverse events of special interest (AESIs).

As a preface to the meeting, the report *Vacunación segura en las Américas: Experiencia sobre la vigilancia de los eventos supuestamente atribuibles a la vacunación o inmunización y la interoperabilidad de los datos* [Vaccine/Vaccination Safety in the Americas: Experience on Surveillance of Events Supposedly Attributable to Vaccination or Immunization and Interoperability of Data] was published. This report presents the background, achievements, and challenges of the regional vaccine safety system in the Americas.

The meeting, which was attended by delegations from 29 countries of the Region, was another step in the development of the regional vaccine safety system in the Americas. The system was launched in 2020, starting with the publication of the *Manual for Surveillance of Events Supposedly Attributable to Vaccination or Immunization in the Region of the Americas*. Subsequently, various technologies were developed to replace the manual submission of data from each country to PAHO, and to improve the quality, quantity, and timeliness of safety data throughout the Region.

This process facilitated the development of a regional database of ESAVIs associated with COVID-19 vaccines, the implementation of active surveillance strategies in a regional network of sentinel hospitals, and the strengthening of national capacities in all countries in the Region for ESAVI surveillance, in addition to multiple lines of action for the digital transformation of surveillance. With the implementation of a training strategy for the countries and technical support for the surveillance of ESAVIs related to COVID-19 vaccines, the production of vaccine safety information was strengthened and robust national systems were developed for responding to public health emergencies related to infectious diseases.

After all this preliminary work, the First Regional Vaccine/Vaccination Safety Meeting and Connectathon HL7® FHIR® ESAVI was held in Bogotá, as the first opportunity to learn about, share, and discuss the development of surveillance work in each of the countries, plus the progress, obstacles, challenges, and outlooks for joint work.

The event also included the participation of global experts on the experiences of other regions in the surveillance of ESAVIs and AESIs, with guest presentations from WHO, the U.S. Centers for Disease Control and Prevention, the European Medicines Agency, the Barcelona Institute for Global Health, the Verónica Children’s Foundation (Argentina), international agencies, and representatives of national immunization programs, national vaccine safety committees, scientific societies, and national regulatory authorities.

As part of the regional meeting, the first HL7® FHIR® ESAVI Connectathon was held as a special event where national experts in information systems carried out a series of trial exercises using the first regional ESAVI data interoperability guide (currently under development), following the HL7® FHIR® standard. This digital, automated mechanism was designed to replace each country’s manual submission to PAHO, and will improve the quality, quantity, and timeliness of data from the entire Region.

In addition to the general guidelines and the HL7® FHIR® ESAVI Implementation Guide prepared by PAHO, guidance on information systems and interoperability standards was offered by experts from PAHO and its partners, including HL7® Argentina, HL7® Brazil, HL7® Chile, HL7® Colombia, HL7® Mexico, the Uppsala Monitoring Centre (a WHO collaborating center), SNOMED International, MedDRA, the University of Oslo, and the American Cooperation Network for Electronic Health (sponsored by the Inter-American Development Bank).

During the regional event, the meeting of the Regional Network of Sentinel Hospitals for Monitoring ESAVIs and AESIs in the Region of the Americas, the meeting of national vaccine safety committees, and the special meeting for the English-speaking Caribbean were also held. These events included different activities that showcased the experiences of different countries and hospitals and enabled participants to strengthen ties through networking.

---

4 The abbreviation FHIR stands for Fast Healthcare Interoperability Resources, and the abbreviations HL7® FHIR® refer to a standard that defines how healthcare information can be exchanged between different computer systems, regardless of how it is stored in them. This enables healthcare information, including clinical and administrative data, to be available to those who need access to it and to those who are authorized to do so for the benefit of a patient receiving care. The HL7® (Health Level Seven®) standards development organization uses a collaborative approach to develop and upgrade FHIR. Source: https://www.healthit.gov/sites/default/files/2019-08/ONC/HR/WhatIsFHIR.pdf.


Each plenary and thematic session included a combination of technical updates on vaccine safety issues, presentations of experiences of countries in the Region on the strengthening of their systems, discussions with experts in specific knowledge areas (such as techniques used in the investigation of fatalities following vaccination), conferences for statistical data analysis and detection of signs of ESAVIs, developments in data management automation and interoperability, and more.

After intense and very interesting days filled with academic and technical activities, the First Regional Vaccine/Vaccination Safety Meeting and HL7® FHIR® ESAVI Connectathon closed by highlighting multiple institutional commitments, conclusions, and challenges, all of which are indispensable for the consolidation of the vaccine safety system in the Americas.

**Contributed by:** Desiree Pastor, Felipe Molina, and Claudia Ceron, from PAHO’s Special Program for Comprehensive Immunization (CIM).

---

**PAHO’s New Polio Surveillance Dashboard**

The team at PAHO’s Special Program for Comprehensive Immunization (CIM) is pleased to announce the new electronic platform for viewing polio data, available to all our users. We are confident that our tool will prove valuable and effective in supporting data-driven decision-making. This new dashboard has been carefully designed to offer an intuitive and efficient experience (Figure 4).

The dashboard has four tabs that house different information, as follows:

1. **Risk Assessment:** assessment of polio risk for the Region at the country and territory levels. Updated every year with country data.
2. **Surveillance:** the most relevant information on the surveillance of acute flaccid paralysis. Countries provide information weekly. Data can be filtered into two time ranges: the last 52 weeks or the previous year. All regional- or national-level surveillance indicators can also be reviewed.
3. **Laboratory:** information on laboratory indicators.
4. **Coverage:** data on vaccination coverage at regional, national, and subnational levels.

The Surveillance and Laboratory tabs are updated every Monday with the information received from the countries.

The new dashboard can be accessed in a few different ways:

- By following the link: [https://www.paho.org/en/polio-surveillance-dashboard](https://www.paho.org/en/polio-surveillance-dashboard)
- On the PAHO website, under the topic “Poliomyelitis,” in the “Data/Statistics” section (see: [https://www.paho.org/en/topics/poliomyelitis](https://www.paho.org/en/topics/poliomyelitis))

The Spanish version is now available as well. If you have any questions or need support, our team will be happy to support at any time, at immunization@paho.org.

Enjoy exploring our new dashboard and make the most of its features!

**Contributed by:** Dan Alvarez, Christian Atavillos, Marcela Contreras, Paola Ojeda, Claudia Ortiz, Carmelita Pacis, Fernando Revilla, and Martha Velandia, from PAHO’s Special Program for Comprehensive Immunization (CIM) and the members of PAHO’s Polio Incident Command System.
The Revolving Fund Launches the Digital Demand-Planning Module for 38 Countries and Territories in Regional Meeting

The module, which is part of the Digital Portal for PAHO Member States, is the evolution of previous analog formats and will reduce manual workload. It was presented during the workshop on strengthening demand-planning and performance of expanded immunization programs, held in Panama City from 4 to 7 July.

[This note was originally published on 11 July 2023, at the following link: https://www.paho.org/en/news/11-7-2023-revolving-fund-launches-digital-demand-planning-module-38-countries-and-territories]. PAHO’s Revolving Fund for Access to Vaccines launched the digital demand-planning module in Panama City with a regional workshop attended by representatives of immunization programs from 38 countries and territories. The workshop also included topics of interest to attendees on the Revolving Fund’s processes, an overview of the vaccine market, and exchanges of experiences among countries.

The demand-planning module will replace the Microsoft Excel® form and seeks to provide a real-time information exchange process, as well as optimization of tasks and demand dispatch to improve the user experience. These digitalization efforts are part of the digital transformation that will help PAHO improve decision-making at all levels of health care.

This is the first module of the Member States Portal that PAHO’s Regional Revolving Funds, Revolving Fund, and the Strategic Fund are developing. It seeks to integrate crucial processes such as procurement and finance and allows requests to be tracked, from demand-planning to receipt of shipment, through a platform with consolidated and easily accessible information.

Workshop participants exchanged experiences among representatives and managers of expanded immunization programs, the Regional Revolving Funds team, immunization advisors from both PAHO headquarters and country offices, and other guests. Everyone involved learned not only how to use the new tool, but also the processes for planning, forecasting, demand consolidation, vaccine market, and procurement, in an interactive and engaging way.

In the days following the launch, attendees continued to receive updates on the Agenda 2030 for Immunization and discussed innovative ways to improve vaccination coverage in the Region under the leadership of the Special Program for Comprehensive Immunization (CIM).

Contributed by: Luisa Solano, Regional Revolving Funds, PAHO.

The NITAG Maturity Assessment Tool (NMAT)

National Immunization Technical Advisory Groups (NITAGs) in the Americas experienced a great deal of pressure and responsibility during the COVID-19 pandemic. One of the major lessons learned coming out of 2020 and 2021 is the need for NITAGs to improve and grow to be a more efficient and strengthened technical resource for national authorities and policymakers. In collaboration with the U.S. Centers for Disease Control and Prevention (CDC), PAHO invited all NITAG members in the Region on 15 May 2023 to participate in a virtual training on a recently developed NITAG Maturity Assessment Tool (NMAT), to assess and find out where NITAGs stand post-pandemic (see Figure 5). The objectives of the training were to introduce NITAG members to the tool and to orient them on how to use the results of the assessment to ensure future progress. A total of approximately 70 participants attended the training.

Figure 5. Components of NITAG Maturity Assessment Tool


Over the past several years, NITAGs have used three evaluation metrics and tools to assess and improve their performance: 1) the World Health Organization/United Nations Children’s Fund (WHO/UNICEF) Joint Reporting Form created in 1998; 2) a comprehensive tool developed by the Supporting Independent Immunization and Vaccine Advisory Committees (SIVAC) Initiative in 2017; and 3) a simplified assessment tool developed by CDC and WHO in 2018. These tools provide foundational information in the sense that they systematically evaluate how NITAGs function, and identify factors that affect NITAG operations, as well as opportunities to improve their functionality and quality of their working methods. However, these tools do not provide the specific steps necessary for NITAGs to take in order to improve their processes after the assessment has been conducted.

Global stakeholders agreed that a standardized tool was needed to better understand NITAG maturity and help facilitate targeted interventions for improvement, for both well-established and more recently established NITAGs. Creating a maturity model for NITAGs would not only help document best practices for transparent, evidence-based immunization policy-making, but also offer NITAG stakeholders the tools to identify and act on priorities for strengthening NITAG processes.

As a result, a multi-partner working group of persons with experience working with NITAGs was formed between November 2019 and June 2021. The working group included representatives from CDC, WHO/HQ, PAHO, WHO/AFRO, the Global NITAG Network (GNN), and the Wellcome Trust. A two-phased literature search was conducted whereby applications of maturity models in public health settings were reviewed during the first phase, and existing recommendations for strengthening and evaluating NITAGs were compiled in the second phase.
The process involved defining maturity levels; reviewing relevant NITAG manuscripts, guidance, indicators, and tools; identifying core NITAG capacities and functions; and defining criteria to be met for each sub-indicator and level of maturity. A Microsoft Excel®-based tool was developed, including indicator tables, as well as instructions, definitions, a self-populating report of findings, and a data collection tool. The NMAT was therefore developed as a practical planning, monitoring, and evaluation tool to guide NITAG development and strengthening.

Overall, the NMAT provides NITAGs and partners with a mechanism to assess the maturity of a NITAG and provides a framework for organizing and prioritizing tangible and achievable next steps for NITAG strengthening activities. The NMAT provides measurable steps in NITAG maturity, designed as a logical flow of policies and procedures in place, to progress from basic to leading edge. The tool is not prescriptive nor is it intended to replace existing regional or national NITAG strengthening strategies. Rather, it has been developed as a practical guide to developing a stepwise approach toward NITAG strengthening.

PAHO recommends that all 21 NITAGs in the Region conduct a self-assessment of their NITAG using the NMAT by September 2023, approximately. Based on the results found, and the learning needs of each NITAG, PAHO intends to help create mentorship and twinning programs between NITAGs by identifying potential pairs and clarifying expected roles and responsibilities for each NITAG. Evaluating and assessing NITAGs on an annual basis is essential to maintain the integrity, credibility, and effectiveness of NITAGs, and the NMAT tool will help NITAGs identify next steps in their development and strengthening.

Contributors: Jennifer Sanwogou, Special Program for Comprehensive Immunization (CIM), PAHO; Abigail Shefer, Global Immunization Division (GID), CDC.

**Prices for Syringes Purchased through the PAHO Revolving Fund, 2023 (prices in USD)**

<table>
<thead>
<tr>
<th>Size</th>
<th>Packed per Case</th>
<th>Price per unit*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5cc 22G x 1 1/2&quot; (China origin)</td>
<td>3000</td>
<td>$0.0280</td>
</tr>
<tr>
<td>0.5cc 22G x 1 1/2&quot; (India origin)</td>
<td>2000</td>
<td>$0.0351</td>
</tr>
<tr>
<td>0.5cc 22G x 1 1/2&quot; (UAE origin)</td>
<td>3000</td>
<td>$0.0480</td>
</tr>
<tr>
<td>0.5cc 23G x 1&quot; (China origin)**</td>
<td>3000</td>
<td>$0.0280</td>
</tr>
<tr>
<td>0.5cc 23G x 1&quot; (India origin)</td>
<td>2000</td>
<td>$0.0351</td>
</tr>
<tr>
<td>0.5cc 23G x 1&quot; (UAE origin)</td>
<td>3000</td>
<td>$0.0360</td>
</tr>
<tr>
<td>0.5cc 25G x 5/8&quot; (China origin)**</td>
<td>3000</td>
<td>$0.0280</td>
</tr>
<tr>
<td>0.5cc 25G x 5/8&quot; (India origin)</td>
<td>2000</td>
<td>$0.0351</td>
</tr>
<tr>
<td>0.5cc 25G x 5/8&quot; (UAE origin)</td>
<td>3000</td>
<td>$0.0370</td>
</tr>
<tr>
<td>0.1cc 27G x 3/8&quot; (China origin)</td>
<td>3000</td>
<td>$0.0280</td>
</tr>
<tr>
<td>0.1cc 27G x 3/8&quot; (India origin)</td>
<td>3200</td>
<td>$0.0391</td>
</tr>
<tr>
<td>0.05cc 26G x 3/8&quot; (UAE origin)</td>
<td>3000</td>
<td>$0.0380</td>
</tr>
<tr>
<td>0.2cc 23G x 1&quot; (India origin)</td>
<td>2000</td>
<td>$0.0438</td>
</tr>
<tr>
<td>0.25cc 23G x 1&quot; (India origin)</td>
<td>2000</td>
<td>$0.0438</td>
</tr>
<tr>
<td>0.3cc 23G x 1&quot; (China origin)</td>
<td>3000</td>
<td>$0.0370</td>
</tr>
<tr>
<td>Retractable: 0.5cc 23G x 1&quot; (USA/China origin)</td>
<td>800</td>
<td>$0.1800</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Packed per Case</th>
<th>Price per syringe*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1cc 22G x 1 1/2&quot; (China origin)</td>
<td>3000</td>
<td>$0.0430</td>
</tr>
<tr>
<td>1cc 23G x 1&quot; (China origin)</td>
<td>3000</td>
<td>$0.0430</td>
</tr>
<tr>
<td>5cc 22G x 1 1/2&quot; (India origin)</td>
<td>1200</td>
<td>$0.0378</td>
</tr>
</tbody>
</table>

**Notes:**
- These are indicative free carrier (FCA) prices for planning purposes and they do not include international logistics, insurance, and other operational costs. The actual price and other relevant costs will be clarified in procurement documents like price estimates.
- When the size of the syringes and the number packed per case are the same but they have different prices, it is because different providers are used.
- UAE: United Arab Emirates.
- USA: United States of America.

**Source:** https://www.paho.org/en/revolving-fund
The *Immunization Newsletter* is published four times a year, in English, Spanish, French, and Portuguese, by the Special Program for Comprehensive Immunization (CIM) 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 and beyond.

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.

Volume XLV | Number 3 | September 2023

We are pleased to note that with support from PAHO’s Knowledge Management Unit, all Immunization Newsletters from 1979 to the present are now in the Institutional Repository (IRIS), which can be found here: [https://iris.paho.org/handle/10665.2/33674](https://iris.paho.org/handle/10665.2/33674).

**Editors:** Daniel Salas, Octavia Silva, and Martha Velandia

**Design:** Juan José Vásquez

PAHO/CIM/23-0014


Some rights reserved.

This work is available under license [CC BY-NC-SA 3.0 IGO](https://creativecommons.org/licenses/by-nc-sa/3.0/igo/).

**Special Program for Comprehensive Immunization**

525 Twenty-third Street, N.W.
Washington, D.C. 20037 U.S.A.