

Immunization Newsletter

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June 2022

Vaccination Week in the Americas 2022: “Are You Fully Vaccinated? Get All Your Shots”

The 20th Vaccination Week in the Americas (VWA) was celebrated from 23 to 30 April 2022 with a call to action: “Are you fully vaccinated? Get all your shots” (Figure 1).

This year's VWA campaign was aimed at helping countries close immunization gaps, wherever they are found. Its main objective was to reach people who had not yet received all the benefits of routine immunization or the COVID-19 vaccine and accelerate achievement of WHO's global target of vaccinating 70% of the population in every country in the world.

VWA in the Region of the Americas

As a result of the activities carried out under the VWA platform, more than 1.03 billion people have been vaccinated against multiple diseases in the past 20 years. In 2021 and 2022, countries have also taken advantage of VWA to continue COVID-19 vaccination initiatives. To mark the 20th anniversary of VWA, 44 countries and territories in the Region participated in the initiative with the goal of reaching 139 million people to ensure their vaccination against vaccine-preventable diseases, including COVID-19.

According to national plans reported this year:

- 17 countries in the Region took advantage of VWA to continue COVID-19 vaccination activities, administering more than 12 million doses that week.
- 22 countries and territories planned to take advantage of the 2022 campaign to bolster national immunization programs and administer multiple vaccines to improve vaccination coverage, which has been affected by the COVID-19 pandemic.
- 18 countries in the Region planned to take advantage of VWA to vaccinate more than 15 million children against measles and move closer to meeting the objective of regional elimination. The preliminary data indicate that more than 2.9 million doses of this vaccine were administered in Brazil.
- 15 countries planned activities to protect the achievement of polio eradication.



Figure 1. VWA Campaign 2022

What I Have Learned...

Ana Elena Chávez, Senior Technical Advisor, Revolving Fund for Access to Vaccines

Twenty-five years have taught me the importance of vaccinators and that teamwork, innovation, and solidarity are essential. Since February 1997, I have had the privilege of working in immunization, initially as national coordinator of the immunization program in my country, El Salvador, and then in mid-2006 as a member of the extraordinary team of international experts of PAHO's Expanded Program on Immunization (EPI), to support the countries in planning, organizing, deploying, and evaluating the sweeping vaccination campaigns to eliminate measles and rubella.

In early 2008, I had the opportunity to participate in an exchange of technical support between PAHO and the WHO Regional Office for Africa to assist African countries with polio cases in their eradication activities, and support vaccination campaigns in the states of Kwara and Niger in north central Nigeria. Following this experience, I received an invitation that same year to join the polio team at the WHO office in Nigeria and work shoulder to shoulder with the outstanding staff of the National Primary Health Care Development Agency, as well as state and local health authorities of that country.

On my return to PAHO, I worked in the Representative Offices in Guatemala and Paraguay and with the excellent teams of these countries' immunization programs, epidemiology departments, and national laboratories. Since May 2017, I have had the honor of serving on the regional team of the Comprehensive Family Immunization Unit, where I have worked to coordinate polio, diphtheria, tetanus, and pertussis activities, and since March 2020, COVID-19 vaccination as well.

Since January 2022, I have served on the team of PAHO's Revolving Fund for Access to Vaccines, where I continue to support the initiatives of the countries and territories of the Americas in the control, elimination, and when possible, eradication of diseases through vaccination.

These labors of 25 years have given me an unparalleled opportunity to get to know extraordinary people, teams, and communities, from whom I have learned and continue to learn a great deal, especially the following:

- **The importance of teamwork.** Teamwork is and has always been essential in the EPI. It was at the core of major achievements, such as the elimination of polio, measles, rubella, and neonatal tetanus. I learned that teams in

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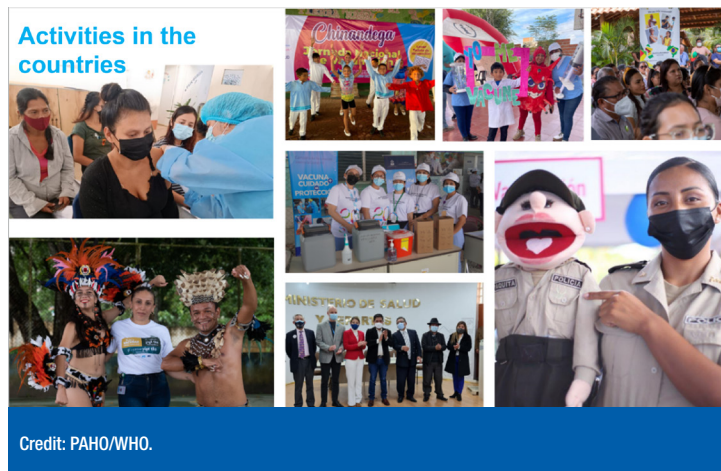
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- 17 countries took advantage of the VWA 2022 platform to vaccinate priority groups against influenza, attempting to reach more than 79 million people. The preliminary data indicate that Brazil, the country with the most extensive campaign, vaccinated more than 17 million people from risk groups that week and expects to meet the goal of over 70 million people vaccinated by the end of June. Ecuador focused on the influenza vaccination campaign.
- 14 countries stressed vaccinating adolescents against human papillomavirus (HPV) during the campaign.
- 22 countries reported plans to reach specific priority population groups, such as pregnant people, health workers and essential workers, older persons, and indigenous, migrant, and Afro-descendant populations, to protect them against diseases such as influenza, COVID-19, and measles.
- 22 countries took advantage of the week to carry out activities in social communication, risk communication, and commitment to community to raise public awareness about the importance of immunization to good health. Some of these activities included training health workers in interpersonal communication and collaborating with religious figures, public opinion-makers, and the private sector to support vaccination throughout life.
- 14 countries took advantage of the opportunity offered by VWA to include other health activities, as they had in years prior to the pandemic. Some initiatives focused on COVID-19 prevention and others on blood glucose and blood pressure measurement, the administration of vitamin A supplements, and the vaccination of animals.

Launch and Regional Activities



Credit: PAHO/WHO.

The regional launch of VWA20 was transmitted live from Roseau, Dominica, on 25 April 2022. Led by Director Carissa F. Etienne in collaboration with the Government of Dominica, more than 150 people from the Region participated. Pre-recorded congratulations were received from the presidents of Chile, Ecuador, and Honduras, as well as the Director of the Centers for Disease Control and Prevention (CDC), United States of America, and the Secretary-General of the Caribbean Community (CARICOM).

- [Press release](#)
- [Photographs](#)
- [Recording of the regional presentation](#)



The press releases issued were very well received, appearing more than 60 times in international, regional, and national media. Furthermore, more than 50 pieces in media across the Region reported on VWA or PAHO.

The campaign website reached a wide audience. In the period from 16 March to 4 May 2022, the Spanish page received 466 602 views and the English page, 4086 views. The interaction time was 1:30-2:50 minutes, a very positive metric, since users ordinarily remain only 40-50 seconds on websites.

The campaign received many messages on all social media platforms, including for the first time, video presentations on Instagram. The campaign reached more than 181 million screens through PAHO's regional social network accounts: Facebook, Twitter, Instagram, LinkedIn, and YouTube, generating more than 3 million reactions in individual messages published in Spanish, English, and Portuguese under #PonteTodasTusVacunas, #GetAllYourShots, and #TomeTodasAsVacinas. During the 20th anniversary of VWA, the #SVA20 and #VWA20 hashtags were added.

On Thursday, 28 April, two conversations (in Spanish and English) were held with experts from PAHO and the Technical Advisory Group (TAG) on Vaccine-Preventable Diseases, during which questions from the public about vaccines against COVID-19 and other diseases were answered. The recordings can be accessed [here](#) and [here](#). The results were as follows:

- **Spanish:** YouTube: 986 views; Facebook: 83 400 people reached, 7300 reposts, 457 reactions, comments, and questions.
- **English:** YouTube: 143 views; Facebook: 287 reproductions, 17 reactions, comments, and questions.

As in previous years, acclaimed Uruguayan soccer player Edinson Cavani collaborated. Cavani's message was posted on his social media: [Instagram](#), [Twitter](#), and [Facebook](#). Furthermore, as in previous years, Sesame Street partners lent their image and published positive messages about PAHO and vaccination in their social networks: [Twitter](#) and [Facebook](#). Reaching more and new audiences of different ages with varying interests is very important; the fact that Edinson Cavani and Sesame Street participated in the campaign again is significant.

VWA has become a key driver of vaccination progress in the Region of the Americas and has offered countries an annual opportunity to showcase the essential work of their national immunization programs. VWA is an exceptional example of what can be accomplished when countries work together across national borders and in different languages to improve the health of the population and ensure that no one is left behind. ■

Studying COVID-19 Vaccine Hesitancy in the Caribbean

PAHO's Caribbean Subregional Office, in collaboration with the Comprehensive Family Immunization Unit (IM), continues to work closely with Caribbean countries and territories to support the deployment and administration of COVID-19 vaccines. To date, vaccine coverage in Caribbean countries and territories ranges from approximately 22% to 94.65%. Nine countries and one territory did not reach the WHO goal of 40% coverage with the COVID-19 vaccine by 31 December 2021.

Countering misinformation and disinformation and leveraging digital technologies are critical ways to increase health literacy, tackle public mistrust and complacency, and address concerns over vaccine safety in the Caribbean. Effective strategies to achieve improved vaccine acceptance in Caribbean countries are urgently needed to reduce hospitalizations, burdens on health systems, and impacts on social and economic life.

To this end, the Caribbean Subregional Office coordinated a meeting of PAHO/WHO Representatives on 3 February 2022 with the following objectives:

1. Discuss the results and recommendations from recent studies on vaccine hesitancy performed in the Caribbean.
2. Present the best practices and lessons learned from Latin American countries that have achieved high coverage with COVID-19 vaccines in their populations.
3. Recommend specific actions for PAHO/WHO Representatives on promoting strategies to improve vaccine acceptance in the Caribbean.

This article will briefly describe and present the aforementioned studies.

COVID-19 Vaccination in the Caribbean

COVID-19 vaccination coverage in the Caribbean ranges from approximately 22% to 94.65%, with nine countries and 1 territory below 40% coverage. Three research studies were conducted in the Caribbean in 2021 to understand and address the reasons for these coverage rates. The findings of each study are summarized below, and links to the complete study reports are provided in the footnotes.

PAHO Study: Concerns, Attitudes, and Intended Practices of Healthcare Workers toward COVID-19 Vaccination in the Caribbean¹

The objectives of this PAHO-led study were to gather and use quality data on the behavioral and social drivers of vaccination and COVID-19 vaccines among healthcare workers in the Caribbean, and to improve implementation strategies and tailor communication approaches on COVID-19 vaccines and vaccines in general, with the final aim to contribute to increasing vaccination acceptance and improving vaccine confidence among healthcare workers.

In this manner, programs can design, target, and evaluate interventions to achieve greater impact with more efficiency and examine and understand comparable trends over time. Data collection for this study took place between 15 March and 30 April 2021. The questionnaire was administered via an online survey administration tool (Qualtrics®).

A total of 1197 healthcare workers across 14 Caribbean countries participated in the study. This study found that COVID-19 vaccine hesitancy among healthcare workers in the Caribbean was 23%. Only 4% of all participants stated an intention to refuse a COVID-19 vaccine altogether (8% male vs. 3% female). COVID-19 vaccine acceptance differed among various categories and specialties of healthcare workers. Hesitancy was higher among nurses and younger age groups. COVID-19 vaccine hesitancy varied depending on the vaccines available and was influenced by local, regional, and global events. It also varied with time.

Insights from the survey are helping PAHO address healthcare worker concerns with informative messages and support countries in policy development to increase vaccine confidence and coverage among Caribbean healthcare workers.

CARPHA Study: COVID-19 Vaccine Acceptance among Active Social Media Users in the Caribbean²

A cross-sectional study was conducted among active social media users aged 18 years and older in 26 Caribbean Public Health Agency (CARPHA) Member States between 17 February and 18 June 2021. Although all Member States participated in the survey, only six achieved the target sample size, namely, Barbados, Curaçao, Guyana, Jamaica, Saint Lucia, and Trinidad and Tobago.

The questionnaire was administered via an online survey tool (SurveyMonkey®) and launched on the CARPHA Facebook page and CARPHA WhatsApp groups. Member States and partners were also invited to share the advertisement on their Facebook and other social media platforms.

A total of 2302 individuals from six CARPHA Member States participated in the study. Some 51% (1181/2302) of the study participants had received a vaccine for COVID-19. Among those who were unvaccinated (1121):

- 46% (515/1121) reported that they “would get the vaccine if available”;
- 32% (358/1121) reported that they “may get the vaccine if available”;
- 22% (248/1121) reported that they “will not get the COVID-19 vaccine if available.”

Overall, COVID-19 vaccine acceptance was 74% (1696/2302), while 16% (358/2302) of the study participants were hesitant, and 11% (248/2302) reported that they would not accept a COVID-19 vaccine when it became available.

UNICEF Study: COVID-19 Vaccine Hesitancy Survey Report 2021³

This collaborative study by the United States Agency for International Development (USAID) and the United Nations Children's Fund (UNICEF) was conducted during October and November 2021 and sought to understand and explore the reasons why vaccine hesitancy exists. Where respondents were hesitant, the study looked at whether anything could change their minds and encourage them to be vaccinated. The survey also sought the views of respondents concerning the vaccination of their children.

The countries surveyed were Barbados, Dominica, Grenada, Saint Lucia, Saint Vincent and the Grenadines, and Trinidad and Tobago. In all countries, except for Saint Vincent and the Grenadines, surveys were conducted face-to-face using an instrument that was designed by Caribbean Development Research Services Inc. (CADRES) with the agreement of UNICEF and USAID. CADRES relied on random, stratified national samples ranging from 800 to 1500 respondents, depending on the size of the country being surveyed. The primary strata were age and sex,⁴ with interviewers instructed to ensure that 40% of respondents were parents (the Caribbean average), given that UNICEF is particularly interested in the attitudes of parents regarding vaccination.

The studies have limitations. For example, in two of the surveys the sample was not random. Moreover, the surveys capture a snapshot in time and do not reflect an evolving reality. ■

¹ Pan American Health Organization. Concerns, Attitudes, and Intended Practices of Healthcare Workers to COVID-19 Vaccination in the Caribbean. Washington, DC: PAHO; 2021 [accessed 3 June 2022]. Available from: https://iris.paho.org/bitstream/handle/10665.2/54964/PAHOCPCCOVID-19210001_eng.pdf.

² Caribbean Public Health Agency. COVID-19 Vaccine Acceptance among Active Social Media Users in the Caribbean. Port of Spain: CARPHA; 2022 [accessed 3 June 2022]. Available from: <https://www.carpha.org/Portals/0/Publications/Summary%20Results%20of%20COVID-19%20Vaccine%20Acceptance%20Survey.pdf>.

³ United Nations Children's Fund. COVID-19 Vaccine Hesitancy Survey Report 2021. Bridgetown, Barbados: UNICEF; 2021 [accessed 3 June 2022]. Available from: <https://www.unicef.org/easterncaribbean/media/3001/file/COVID%20vaccine%20hesitancy%20exe%20summary.pdf>.

⁴ The study aimed for 50% male and 50% female respondents, with 30% in the age range 18–30, 30% aged 31–50, and 30% aged 51 and over.

Vaccines without Needles Could Have Numerous Benefits but Require Further Investment⁵

11 March 2022 – by Linda Geddes

Microarray patches could overcome many of the logistical obstacles hindering measles and rubella elimination, but manufacturing facilities are urgently needed to produce them.

For those afraid of needles, vaccine patches may sound like a godsend, painlessly delivering life-saving doses into the skin through hundreds to thousands of micro projections. But so-called [microarray patches](#) could have numerous other benefits—particularly for vaccine delivery in low- and middle-income countries.

“This is a critical opportunity for global public health that cannot afford to be missed.”

In a new research paper, published in [Frontiers in Public Health](#), Mateusz Hasso-Agopsowicz and colleagues outline the advantages of delivering measles and rubella vaccines through microarray patches, and how investment in manufacturing facilities could also benefit delivery of other vaccines, such as influenza.

Advantages of Microarray Patches

Vaccination against [measles](#) prevents more child deaths and offers a greater return on investment than any other vaccine, yet gaps in coverage resulted in more than 200 000 deaths globally in 2019. This figure is expected to rise as the COVID-19 pandemic continues to disrupt vaccine delivery.

Current measles and rubella vaccines supplied to low- and middle-income countries are packaged in five- or ten-dose vials and need to be kept refrigerated during storage and transport. They must then be reconstituted and delivered by skilled healthcare workers, with any unused vaccine discarded 6 hours after preparation.

All of this can result in precious doses being wasted, due to logistical failures; errors in storage, preparation, or administration; or children being refused vaccination at clinics because a vaccine vial might not be open and the vaccine isn't ready for administration.

Microarray patches could help to overcome many of these problems, because they arrive ready to use, are expected to be more stable at non-refrigerated temperatures, and could potentially be delivered relatively painlessly by community health

workers with limited training. As such, they could enable more children to be vaccinated in remote and challenging settings, such as war zones, humanitarian crisis regions, or to communities of refugees and displaced persons. Reaching more children in these settings could put the goal of eradicating measles within reach.

The unit cost of such vaccines is likely to be higher than currently available measles and rubella vaccines, but this could be partially offset through savings in programmatic delivery costs, as well as health and economic gains.

Progress towards Developing Them

Two measles and rubella microarray patch candidates recently entered phase 1 clinical trials to assess their safety and tolerability, and the magnitude of people's immune responses to the vaccines.

One of these patches contains vaccine-coated micro projections, the other uses dissolving microneedles that gradually release the vaccine as they dissolve. Both of these platforms have demonstrated safety and clinical proof-of-concept with seasonal influenza vaccine, where they triggered equivalent or improved immune responses to conventional vaccines.

However, there's still a way to go. Without immediate large-scale investment in pilot-scale manufacturing infrastructure, measles and rubella microarray patches will not be prequalified by WHO before 2029 at the earliest. [Prequalification](#) is the process through which the quality, safety, and efficacy of new drugs and vaccines is assessed. It is a prerequisite for Gavi financing and subsequent procurement by UNICEF.

To speed this process up, manufacturing facilities need to be built in parallel to the clinical development of these candidate vaccines. However, manufacturers are not incentivized to do this until the vaccines show significant benefits in clinical trials and the demand for them is clear. Otherwise, there's no guarantee of a return on their investment.

Possible Solutions

One way of reducing the risk for manufacturers would be to construct a pilot manufacturing facility that could enable completion of pivotal studies

necessary for the approval of measles and rubella microarray vaccines, immediately after clinical proof of concept studies. This could also support early supply and then be expanded to a commercial full-scale manufacturing facility once the demand to justify investment was sufficient. This could be built and qualified within three years at a cost of around US\$ 20 million to US\$ 40 million.

These risks could be further reduced by ensuring this pilot facility was flexible enough to allow manufacture of related microarray patches, such as a measles, mumps, and rubella patch, or other vaccine or drug patches—although some active ingredients may require dedicated facilities.

Also needed is a strong commercial incentive for manufacturers, in the form of a clearly articulated demand for these products from recipient countries, and a clear financing strategy.

In 2020, the [Gavi-led Vaccine Innovation Prioritization Strategy \(VIPS\) Alliance](#) identified microarray patches as the highest priority innovation to improve vaccine coverage and contribute to pandemic preparedness. It has since developed an integrated end-to-end (from product development to country uptake) strategy to hasten their availability, with input from vaccine manufacturers and developers.

Even so, further work is needed to quantify the full value of microarray patches for recipient countries and communities, and to assess the feasibility of delivering microarray vaccines for measles and rubella alongside conventional vaccines within the same immunization program.

“Measles and rubella microarray patches are poised to contribute to realizing the dream of measles eradication and reach the [roughly] 20 million children in every annual birth cohort that are currently missing out on life-saving measles and rubella vaccines,” Hasso-Agopsowicz and colleagues wrote. “This is a critical opportunity for global public health that cannot afford to be missed.” ■

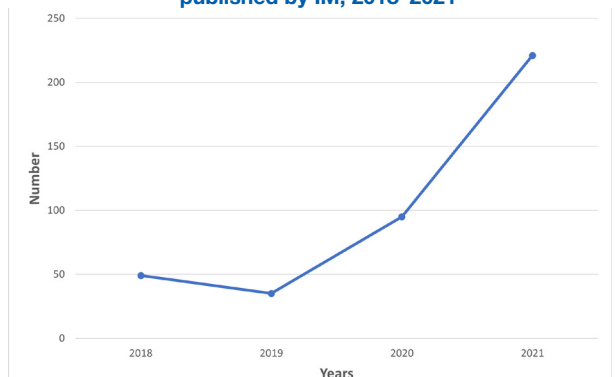
Credit: Gavi, The Vaccine Alliance and #VaccinesWork.

Increase in Number of Communications Materials Published by IM, 2018–2021

PAHO's Comprehensive Family Immunization Unit (IM) has regularly published communications materials, but the volume of these has reached an all-time high during the past two years with the COVID-19 pandemic heavily impacting the Region of the Americas since March 2020. The reason for this high volume of materials is the increased need to provide guidance to countries in preparation for national COVID-19 immunization programs prior to vaccines becoming available, as well as guidance on vaccinating when they did. In addition to this, it has been of utmost importance to continue supporting regular immunization programs in countries, and materials have continued to be developed with these vaccines in mind.

The types of documents that have been published by IM include COVID-19 infographics, meeting reports, COVID-19 technical documents, immunization newsletters, immunization coverage data brochures, support materials for healthcare workers on vaccine safety, technical guidelines, and weekly epidemiological bulletins on polio, measles, rubella, among many others. There were 49 materials published in 2018, 35 in 2019, 95 in 2020, and 221 in 2021. **Figure 2** illustrates the annual difference in materials published from 2018 to 2021. ■

Figure 2. Trend of communications materials published by IM, 2018–2021



Source: PAHO/IM publications website: <https://www.paho.org/en/documents/4823>

⁵ Gavi, The Vaccine Alliance. Geneva: Gavi; 11 March 2022 [accessed 3 June 2022]. Vaccines without needles could have numerous benefits, but require further investment. Available from: <https://www.gavi.org/vaccineswork/vaccines-without-needles-could-have-numerous-benefits-require-further-investment>.

Immunization, Life Course, and Mental Health: Technical Cooperation in Cuba to Respond to the Pandemic⁶



New refrigerators for the EPI in Cuba. © PAHO

On 11 March 2020, after the WHO declaration of the COVID-19 pandemic, Cuba confirmed its first cases. This led to a reorganization of the technical cooperation of the Department of Family, Health Promotion, and Life Course (FPL) of PAHO to support the country response in vulnerable groups such as children, adolescents, and older persons.

Through the initiative for effective vaccine management in the Region of the Americas, and with Gavi, the Vaccine Alliance, 400 600 1 ml syringes were procured for the EPI to administer COVID-19 vaccines, along with 500 thermoses with twin ice packs for vaccine transport, safety goggles, 200 conventional refrigerators with a 100–200-liter capacity, 80 WHO-prequalified refrigerators, and 1580 units for continuous temperature recording with an external reading device. In addition, 90 000 copies were made of the model form for recording events supposedly attributable to vaccination or immunization (ESAVI).

Furthermore, through emergency funds allocated to the immunization component of the COVID-19 response, 55 additional prequalified refrigerators were procured that, like the 80 previous ones, have a 98.5-liter capacity for vaccine storage and autonomous operation of more than 50 hours. The 335 refrigerators purchased between 2020 and 2021 increased storage capacity at vaccination points by more than 33 200 liters. Together, these purchases have improved the control, safety, and quality of vaccination in hard-to-reach polyclinics and medical offices in every province in the country and seven maternity facilities in Havana.

In Camagüey Province, studies to complete the serological surveys and on laboratory detection of polio immunity markers in mucous membrane continued, both conducted by the Pedro Kourí Institute of Tropical Medicine in collaboration with the WHO Global Polio Eradication Initiative. Equipment and clinical and non-clinical furniture were procured for this initiative to improve effective vaccine management.

A number of technical and training meetings were held on topics such as monitoring the regional ESAVI surveillance system and updating online reporting forms, such as the WHO-UNICEF Electronic Joint Reporting Form (eJRF). In addition, a

presentation for the countries, on the WHO decision support tool (CAPACITI)⁷ was given for specialists from the Ministry of Public Health (MINSAP) and the Finlay Institute of Vaccines; this tool consists of an evaluation for setting immunization priorities. Furthermore, a training event on poliovirus certification was also held for auditors of the third Global Action Plan for Poliovirus Containment (GAP3)⁸ of WHO, in which specialists from the Center for State Control of Medicines and Medical Equipment and Devices and the Civil Defense Authority participated.

Due to the complex epidemiological situation of the COVID-19 pandemic, 104 virtual meetings (seminars, workshops, and technical exchanges) were held in coordination with FPL to pool experiences, evidence, and progress in the response to the disease. In maternal and childcare, virtual sessions on surveillance, potential treatments, vaccination, and media campaigns in times of COVID-19 were held that emphasized the surveillance of extremely severe maternal morbidity in Latin America and the Caribbean.

With regard to life course, some of the exchanges on care for older persons dealt with topics such as the protection, surveillance, and monitoring of people with noncommunicable diseases, with a view to preventing and treating the worsening of their condition as a consequence of the pandemic. There was also a presentation on the “Toward a Decade of Healthy Aging in the Americas” campaign and on the “Human Rights of Older Persons: Knowledge for Analysis and for Action” course, the latter organized by the Inter-American Conference on Social Security, in coordination with PAHO and the subregional headquarters of the Economic Commission for Latin America and the Caribbean and attended by 20 geriatrics professionals in Cuba.

In addition, pediatric health services were strengthened with the procurement of 100 standard pulse oximeters and 100 with flexible bands for neonatology services, while, for maternal care and the prevention of morbidity, four preeclampsia diagnostic kits with 100 tests each were provided to facilitate timely case management. Furthermore, the MUSA (assistance to women during miscarriage/abortion) network of PAHO’s Latin American Center for Perinatology, Women’s Health, and Reproductive Health (CLAP/WR) continued its work at the America Arias Maternity Hospital. Moreover, as a part of the work of the PAHO/WHO Collaborating Center on human reproduction, a systematic review of the persistence of the SARS-CoV-2 virus in bodily fluids was conducted jointly with international and regional sexual and reproductive health experts from CLAP/WR.

In addition, 17100 forms on prenatal care case history forms and pre- and postnatal care case history models were printed for distribution in family doctors’ and maternity nurses’ offices, respectively,



Use of 1 ml syringes to administer the hepatitis B vaccine. © PAHO

and 475 000 children’s health cards were printed for maternity hospitals.

The COVID-19 pandemic has affected people’s lives in different ways. Its consequences include mental health problems, higher demand for rehabilitation services and, in addition, increased addiction treatment needs. Within the framework of these and other cooperation areas, such as road safety, addressed by the PAHO Department of Noncommunicable Diseases and Mental Health, 73 virtual meetings were held to discuss the work and care of the human resources for health at the front line of the response and care for disability and its inclusion along with rehabilitation, physical activity, and nutrition at the different levels of health care. Other cooperation activities involved safe mobility in the countries of the Region and exchanges on the work of mental health communities of practice and psychosocial support. In addition, the Plan of Action on Mental Health for integrated addiction care and model mental health surveys were printed.^{9,10}

Furthermore, a compendium of scientific articles on the pandemic published by PAHO and the current list of training sessions on COVID-19 vaccines were distributed to MINSAP departments, and virtual self-learning courses available through the PAHO Virtual Campus for Public Health were publicized to enable professionals to acquire knowledge and skills to improve the quality of care.

The unprecedented crisis triggered by the COVID-19 pandemic has resulted in high levels of stress and exhaustion among health professionals and frontline workers and in other sequelae affecting the physical and mental health of the population—especially among groups in conditions of vulnerability. This article presents PAHO technical cooperation activities in Cuba to respond to this situation by strengthening exchanges and collaborative ties with country experts, in addition to the distribution of useful scientific materials, strategies, and directives for their work and decision-making. ■

⁶ Pan American Health Organization. Boletín de la Cooperación Técnica Cuba: “Andar la salud,” January–April 2022. Havana: PAHO; 2022. Available from: <https://iris.paho.org/handle/10665.2/55969>

⁷ World Health Organization. The CAPACITI Decision Support Tool. Geneva: WHO; 2022. Available from: <https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/vaccine-impact-value/economic-assessments/vaccine-prioritization>

⁸ World Health Organization. Global action plan to minimize facility-associated risk after type-specific eradication of wild polioviruses and sequential cessation of oral polio vaccine use. Geneva: WHO; 2015. Available from: https://apps.who.int/iris/bitstream/handle/10665/208872/WHO_POLIO_15_05_eng.pdf?sequence=1&isAllowed=y

⁹ Pan American Health Organization. Plan of Action on Mental Health. Washington, D.C.: PAHO; 2014. Available from: <https://www.paho.org/hq/dmdocuments/2016/CD53-8-e.pdf>

¹⁰ Pan American Health Organization. Plan of Action on Mental Health: Final Report. Washington, D.C.: PAHO; 2021. Available from: <https://www.paho.org/en/documents/cd59inf11-plan-action-mental-health-final-report>

Collaborative Efforts with Ancestral Authorities as a Key to Advancing COVID-19 Vaccination Coverage in Guatemala

Guatemala launched COVID-19 vaccination at the national level in February 2021, after prioritizing health workers in the first phase and then populations at higher risk due to age and comorbidities. Although vaccination coverage increased steadily, marked differences have been observed between geographic areas, with lower coverage in rural localities and those with Indigenous populations. Communication barriers were identified through an ethnoanthropological assessment in eight departments of the country. This assessment identified factors that affect decision-making to get vaccinated in Guatemala and provided key recommendations for more culturally relevant vaccination reporting.

A factor in preventing COVID-19 and promoting vaccination is the trust of the population in health personnel and institutional actions, without which greater efforts and investment of resources are required. Therefore, it has been necessary to raise awareness and link different sectors so that the health issue is approached in a participatory manner, and the Guatemalan Ministry of Health promotes the communication for development approach.

As part of PAHO's efforts to support the Ministry of Health in increasing demand for COVID-19 vaccines and based on a request made by the Maya, Xinka, and Garífuna Ancestral Authorities, a collaborative work plan was developed among Ancestral Authorities, leaders, and health personnel from local health areas to promote intercultural management of the COVID-19 pandemic and vaccination at the community level.



Dialogue with the Intersectoral Environment and Land working group, in collaboration with Ancestral Authorities and PAHO in south Petén, Guatemala, January 2022. Picture provided by FGER.

With support from the Guatemalan Federation of Radio Schools (FGER), local facilitators were identified in 81 communities, 23 municipalities, and 8 departments. The work involved ancestral leaders of the Maya, Xinka, and Garífuna peoples, as well as some Ministry of Health entities—such as the Education and Health Promotion Program (PROEDUSA), Comprehensive Health Care System (SIAS), and the Health Care Unit for Indigenous Peoples and Interculturality (UASPIIG)—holding a series of dialogues between November 2021 and January 2022 to strengthen knowledge and understanding on COVID-19 and promotion of vaccination with key actors at the community level and among Indigenous peoples.

The participation of ancestral and community leaders through so-called circular dialogues has

transferred reliable information to community members and opens opportunities to address limitations at the local level regarding access to health services and management of COVID-19 and vaccination with cultural relevance. This improved intercultural communication on comprehensive health care has allowed Ancestral Authorities, community authorities, and the Ministry of Health to work in a complementary way to increase the demand for COVID-19 vaccination in rural communities with low coverage.

The direct participation of Ancestral Authorities and community leaders has demonstrated their commitment to actively support implementation of health strategies with cultural relevance, aimed at valuing and strengthening the vaccination campaign against COVID-19 in Guatemala. It has also allowed an active approach to highlight the complementary role between institutional medicine and indigenous medicine in the management of the COVID-19 pandemic in Guatemala and the comprehensive improvement of health in vulnerable populations. The Ministry of Health will continue to coordinate this collaboration beyond the pandemic for the medium and long term. ■

Contributed by: Milton Guzmán, Emma Marcela Pérez Conguache, Giovany Ujpan, Santos Estuardo Alvarado, Yamanik Cholotío, Lourdes Álvarez, Claudia Jarquin, Evelyn Balsells, Marc Rondy, Guatemalan Ministry of Health and Social Welfare, the Guatemalan Federation of Radio Schools, and the Pan American Health Organization.

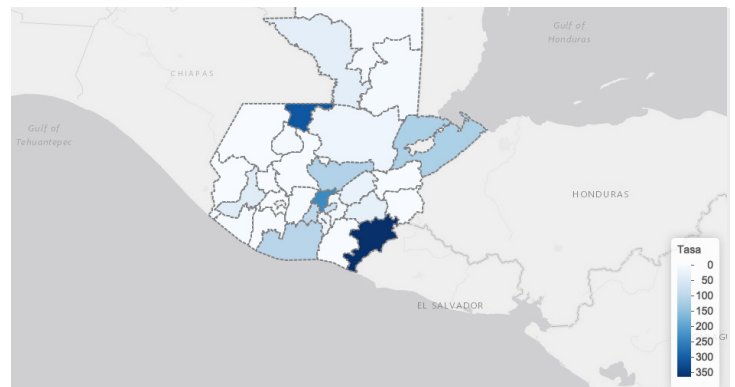
Implementing Active ESAVI Surveillance following COVID-19 Vaccination among Pregnant Women in Guatemala

COVID-19 vaccination among pregnant women was implemented in Guatemala in late August 2021. PAHO has supported the Guatemalan Ministry of Health in establishing an active surveillance system for events supposedly attributable to vaccination or immunization (ESAVI) through direct collaboration with its Department of Epidemiology. The support has included protocol and questionnaire development and implementation, including a pilot test and training reproductive health technicians in 29 health areas, as well as in data analysis, technical advisory, and monitoring at the national level.

This surveillance consists of telephone calls made by local reproductive health technicians to pregnant women at designated intervals following COVID-19 vaccination. Women are contacted at days 2, 7, 35–40 (Pfizer and Moderna vaccine recipients), and 60–65 (AstraZeneca vaccine recipients) post-vaccination, as well as seven days after their scheduled delivery dates. A standardized questionnaire is administered during each of these phone calls. The pilot test was implemented in four health areas in early October 2021.

Between mid-October 2021 and mid-January 2022, ESAVI surveillance personnel in health areas have carried out 3,986 monitoring calls and received 813 ESAVI notifications (following the administration of 33,369 vaccine doses) (Figure 3.). The most common symptoms reported are injection site reactions (60% of notifications), headache (43%), and fever (31%). Of these reports, three have been reported as serious events (0.4%), two of which were determined to be unrelated to the vaccine or vaccination process by the National Committee on Evaluation of Serious ESAVIs, and one is still under investigation. The active ESAVI surveillance in Guatemala adds to the evidence from

Figure 3. ESAVI monitoring rates among pregnant women following COVID-19 vaccination by health area, Guatemala, October 2021–January 2022



Source: Department of Epidemiology, Guatemala Ministry of Public Health.

other countries that mRNA and AstraZeneca COVID-19 vaccines are safe for pregnant women. ■

Contributed by: Suceth Santamarina, María Fernanda Velásquez, Jorge Hernández, Ingrid Contreras, Marc Rondy, Ericka Gaitán, Department of Epidemiology of the Guatemalan Ministry of Health and Social Welfare, and the Pan American Health Organization.

Final Classification of Cases in the Region of the Americas, 2021

Country	Total Suspected Cases Notified	Confirmed Measles Cases			Confirmed Measles Cases			Congenital Rubella Syndrome Cases (CRS)		Reported Mumps Cases	Reported Pertussis Cases
	2021	2021			2021			2021		2020	2020
	Measles/ Rubella	Clinical	Laboratory	Total	Clinical	Laboratory	Total	Suspected	Confirmed		
Anguilla	0	0	0	0	0	0	0	0	0	0	0
Antigua and Barbuda	0	0	0	0	0	0	0	0	0	0	0
Argentina	80	0	0	0	0	0	0	0	0	3,776	162
Aruba	0	0	0	0	0	0	0	0	0	—	—
Bahamas	0	0	0	0	0	0	0	0	0	0	0
Barbados	4	0	0	0	0	0	0	0	0	0	0
Belize	1	0	0	0	0	0	0	0	0	4	0
Bermuda	0	0	0	0	0	0	0	0	0	1	8
BES*	—	—	—	—	—	—	—	—	—	—	—
Bolivia (Plurinational State of)	127	0	0	0	0	0	0	30	0	0	12
Brazil	2,644	149	527	676	0	0	0	68	0	0	229
British Virgin Islands	0	0	0	0	0	0	0	0	0	0	0
Canada	—	0	0	0	—	0	0	0	0	86	955
Cayman Islands	0	0	0	0	0	0	0	0	0	0	0
Chile	47	0	0	0	0	0	0	97	0	2,110	62
Colombia	1,036	0	0	0	0	0	0	775	0	5,125	68
Costa Rica	20	0	0	0	0	0	0	75	0	195	10
Cuba	728	0	0	0	0	0	0	0	0	0	0
Curaçao	0	0	0	0	0	0	0	0	0	—	—
Dominica	0	0	0	0	0	0	0	0	0	0	0
Dominican Republic	33	0	0	0	0	0	0	0	0	736	8
Ecuador	238	0	0	0	0	0	0	0	0	326	8
El Salvador	382	0	0	0	0	0	0	234	0	256	0
French Guiana	—	—	5	5	—	—	—	—	—	—	—
Grenada	0	0	0	0	0	0	0	0	0	0	0
Guadeloupe	—	—	—	0	—	—	—	—	—	—	—
Guatemala	89	0	0	0	0	0	0	1	0	398	13
Guyana	0	0	0	0	0	0	0	0	0	0	0
Haiti	162	0	0	0	0	0	0	27	0	—	0
Honduras	53	0	0	0	0	0	0	19	0	547	11
Jamaica	5	0	0	0	0	0	0	0	0	0	0
Martinique	—	—	—	0	—	—	—	—	—	—	—
Mexico	1405	0	0	0	0	0	0	0	0	3,522	251
Montserrat	0	0	0	0	0	0	0	0	0	—	—
Nicaragua	140	0	0	0	0	0	0	50	0	11	0
Panama	26	0	0	0	0	0	0	0	0	448	1
Paraguay	583	0	0	0	0	0	0	5	0	128	15
Peru	71	0	0	0	0	0	0	0	0	486	47
Puerto Rico	—	—	—	—	—	—	—	—	—	—	—
Sint Maarten (Dutch part)	0	0	0	0	0	0	0	0	0	—	—
Saint Kitts and Nevis	0	0	0	0	0	0	0	0	0	0	0
Saint Lucia	0	0	0	0	0	0	0	0	0	0	0
Saint Vincent and the Grenadines	0	0	0	0	0	0	0	0	0	0	0
Suriname	0	0	0	0	0	0	0	0	0	0	4
Trinidad and Tobago	0	0	0	0	0	0	0	0	0	0	0
Turks and Caicos	0	0	0	0	0	0	0	0	0	0	0
United States	—	—	49	49	—	1	1	—	0	3,780	18,617
Uruguay	0	0	2	2	0	0	0	0	0	185	22
Venezuela (Bolivarian Republic of)	1,287	0	0	0	0	0	0	0	0	83	1
Regional Total	9,161	149	581	730	0	1	1	1,381	0	22,203	20,504

...No information was provided.

*Bonaire, St. Eustatius, and Saba

Source: M-R-CRS: ISIS and country reports; mumps and pertussis: Country reports through the electronic PAHO-WHO/UNICEF Joint Reporting Form (eJRF), 2021.

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which people participate, that manage to develop true teamwork among different disciplines and levels, and especially those that listen and learn from the wisdom of all are the most effective ones.

- **Past experience helps us tackle the program's current and future challenges.** Learning from this experience requires self-criticism and analysis and helps to build a path toward success in immunization programs in the Americas. The experience and lessons learned from major campaigns to vaccinate adults against measles and rubella during annual seasonal flu vaccination and the transition from a child vaccination program to a family vaccination program prepared the countries and territories of the Region to implement effective vaccination strategies during the COVID 19 pandemic. Continuing to learn from mistakes and successes will be key, as it will help build confidence among current and future decision-makers, health workers, strategic partners—and even more importantly—the general population.
- **Solidarity expressed through Pan-Americanism.** The national immunization programs of the countries of the Americas are a clear example of one of PAHO's historic principles: Pan-Americanism. I have witnessed up close and experienced these country expressions of solidarity through Pan-Americanism whenever a favorable response to a request for an urgent loan of vaccines or immunoglobulins is received, whenever a country agrees to participate in an international mission, or when the delegates of the 52nd Directing Council of PAHO ratified the principles of the Revolving Fund for Vaccine Procurement (CD52/17).¹¹
- **Innovate, innovate, and keep innovating.** During the major vaccination campaigns in Nigeria, I learned the importance of innovating through the introduction and use of new technologies not only for conducting epidemiological surveillance, investigating, and documenting an outbreak, and evaluating the results of a vaccination campaign, but for supervising all components of the systematic vaccination program, to mention but a few areas. However, I also learned that innovation should not be limited to the use of technology but must go much farther: it should begin with an evaluation to determine how we can effect change in teams and modify behaviors, always in search of excellence and effectiveness.



Ana Elena Chévez, accompanied by Dr. Emmanuel Gali of WHO, in 2008, during an advocacy and coordination visit with a leader and another member of the community in the city of Kano, Kano State, Nigeria. Credit: Ana Elena Chévez.

- **The importance of advisory groups.** The formation of the first Advisory Committee on Immunization Practices in El Salvador in 2001 taught me the importance of the deliberations of a neutral independent forum for developing recommendations based on the best available evidence. This was confirmed in my exchanges with the Guatemala and Paraguay committees, as well as at the regional level, when I had the privilege of participating in the meetings of the PAHO Technical Advisory Group (TAG) on Vaccine-Preventable Diseases and the Regional Certification Commission (RCC) for the Polio Eradication Endgame in the Region of the Americas.

Finally, throughout all these years, and especially in the past two years in the context of the pandemic, I learned so much about the dedication and commitment of vaccinators. They are the true leaders, those who fight the great battles to maintain the gains against vaccine-preventable diseases at the local level. We all support and are essential to the delivery of vaccination services, but the importance of vaccinators to the immunization program is beyond everything else. ■

¹¹ Pan American Health Organization. Principles of the Pan American Health Organization Revolving Fund for Vaccine Procurement Washington, D.C.: PAHO; 2013. Available from: <https://www.paho.org/hq/dmdocuments/2013/CD52-17-e.pdf>