

Immunization Newsletter

Pan American Health Organization



Volume XLII Number 4

Immunize and Protect Your Family

December 2020

Keeping the Trust: Fighting Vaccine Misinformation

Dr. Tedros Adhanom Ghebreyesus, Director General of the World Health Organization (WHO), said in February 2020 that the world is fighting not only COVID-19, but also an “infodemic” — the overwhelming amount of information, both true and false, spread innocently or maliciously — that floods the public about this pandemic. Unfortunately, information related to candidate vaccines for COVID-19 is not exempt and questions, doubts, and rumors swirl on social media, text messages, media, and conversations with friends and family.

These rumors are one of the factors helping to fuel concerns from the public that COVID-19 vaccines will not be safe. Even without any COVID-19 vaccines approved for use in the general population as of November 2020, surveys have already shown that in some places, many people would be unwilling to accept a COVID-19 vaccine. For instance, surveys conducted starting in July 2020 as part of the Johns Hopkins University Center for Communication Programs KAP COVID Dashboard (<https://ccp.jhu.edu/kap-covid/>) project show that in Latin America, 85% of people would accept a COVID vaccine in Brazil, 72% in Argentina, 69% in Mexico, and 63% in Uruguay (the lowest in Latin America), whereas in the Caribbean, Jamaica has the lowest COVID-19 vaccine acceptance rate in the Region of the Americas at 35%, followed by Trinidad and Tobago at 51%.

We know that behavior change is complex and requires more than simply informing people of facts and figures in order to get them to seek vaccination, whether we’re considering a familiar vaccine that’s been used for many years, or one that’s brand new. An integrated approach is needed for community engagement to understand the concerns around a vaccine, work with community leaders and other trusted individuals and groups to empower them to become advocates for immunization, and use emotional appeals to encourage people to get vaccinated. The above mentioned will help tackle misinformation and doubts surrounding COVID-19 vaccines.

PAHO’s response

PAHO is working to address vaccine-related rumors and combat misinformation, keeping in mind that they could not only hinder population uptake of COVID-19 vaccines when they’re available, but also shake the public’s confidence in routine immunization programs and leave communities vulnerable to outbreaks of vaccine-preventable diseases if coverage rates drop as a result.

First and foremost, PAHO is working on a regional communications and demand generation plan and strategy to guide the organization’s work in these areas to prepare for COVID-19 vaccine introduction. The document considers misinformation around COVID-19 vaccines as a principle challenge that must be overcome to facilitate vaccine uptake in the Region.

While many guides, communications materials, and activities under this plan and strategy are still in the pipeline, several resources are already available for countries and the public to use, including:

- A web page on COVID-19 vaccines, including Frequently Asked Questions (FAQs), available here: <https://www.paho.org/en/covid-19-vaccines>
- A recording of an online training for journalists on how to cover COVID-19 vaccines



What I Have Learned as an Immunization Advisor during the COVID-19 Pandemic...

By Dr. Karen Broome, PAHO/WHO Immunization Advisor for the Caribbean Sub-region

On April 20, 2020, I started my temporary assignment as the immunization advisor for the Caribbean Sub-region. At that time, there were 8,471 cases of COVID-19 in the Caribbean Sub-region. Nine months later, as of December 10, 2020, 66,978 cases have been confirmed, with more than 51,603 recoveries and 1,357 deaths attributed to COVID-19 in the Caribbean Sub-region. As the year 2020 comes to an end, it is the opportune time to reflect on a year that was filled with more valleys than hills and in which “COVID” was the most popular word.

It was with great enthusiasm that I took up the temporary mantle of immunization advisor for my beloved Caribbean islands, not basking under the Caribbean sun, but rather the glowing mandate of the Pan American Health Organization (PAHO) which continued to provide support to the countries of the Americas with COVID-19 surveillance, prevention, preparedness, and control. I was able to experience first-hand the incredible collaborative effort that facilitated funding from the European Union in partnership with the Caribbean Public Health Agency (CARPHA), through PAHO, securing down payments to purchase over 1 million doses of the expected COVID-19 vaccine(s) for Caribbean Member States. I have been fortunate in my short tenure to observe how much Member States value and depend on technical and financial assistance from PAHO and its partners, in the continued fight to reduce the morbidity and mortality associated with COVID-19 and to ensure access to and readiness for COVID-19 vaccine(s) when they become available in 2021.

As countries prepare for the introduction and deployment of COVID-19 vaccine(s), the need for a communication campaign targeted towards vaccine priority groups is essential to increase demand, dispel myths, and promote the benefits of the vaccine. The introduction of a COVID-19 vaccine will entail a massive logistical effort, involving a variety of national stakeholders and civil society groups. The newly developed COVID-19 vaccines have become significant sources of mis- and disinformation, leading to public mistrust and concerns over vaccine safety. The extent to which this infodemic has affected and influenced the knowl-

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in a responsible and evidence-based manner, available here: <https://www.paho.org/en/events/webinar-journalists-and-communicators-covering-covid-19-vaccines-responsible-and-evidence>

- A recording of one of the Facebook live sessions “Ask the experts: Vaccination during the pandemic,” available here: https://www.facebook.com/watch/live/?v=2031940633604133&ref=watch_permalink

FAQs: COVID-19 candidate Vaccines and Access Mechanisms (Revolving Fund and COVAX Facility)

Is there a vaccine against COVID-19?	Who might be the priority groups to get vaccinated against COVID-19 when a vaccine is available?
How many candidate vaccines against COVID-19 are currently being developed?	Why are vaccine clinical trials sometimes temporarily stopped?
Which countries in the Region are participating in the different COVID-19 candidate vaccine clinical trials?	How will individuals access COVID-19 vaccines?
What is the process to develop a vaccine that's safe and effective?	What is the PAHO Revolving Fund for Access to Vaccines?
What is the desired level of efficacy that WHO indicated for COVID-19 vaccines?	How is PAHO supporting countries to ensure equitable access vaccines against COVID-19?
When will a vaccine against COVID-19 be available?	Can countries in the Americas access COVID-19 vaccines outside of the COVAX Facility and the Revolving Fund?
How are the current COVID-19 vaccine clinical trials sped up?	How will COVID-19 vaccine costs be calculated for countries participating in the COVAX Facility?
Which ages and population groups are participating in the most advanced trials of candidate vaccines against COVID-19?	

To strengthen trust in immunization during the pandemic, PAHO has developed the following materials:

- Short animated videos answering questions about immunization during the pandemic and videos about influenza vaccination and COVID-19, available here: <https://who.canto.global/s/U84FH?viewindex=0&from=fitView&display=curatedView>
- Infographics with tips on immunization during the pandemic for parents, available here: <https://www.paho.org/en/documents/infographic-vaccination-during-pandemic-ten-tips-parents>
- Infographic with tips on immunization during the pandemic for health care workers, available here: <https://www.paho.org/en/documents/infographic-vaccination-during-pandemic-10-tips-health-workers>
- Infographic with tips on immunization during the pandemic for health services, available here: <https://www.paho.org/en/documents/infographic-immunizations-and-health-services-during-covid-19-pandemic>

To strengthen trust in routine immunization programs, PAHO has also published web pages with FAQs on other related topics:

- General immunization myths, available here: <https://www.paho.org/en/topics/immunization/debunking-immunization-myths>
- Myths on HPV vaccination, available here: <https://www.paho.org/en/topics/immunization/debunking-myths-about-human-papilloma-virus-hpv-vaccine>
- Myths on influenza vaccination, available here: <https://www.paho.org/en/topics/immunization/debunking-myths-about-flu-vaccine>

These materials have been developed in response to questions and concerns identified throughout the Region. More will be developed and posted online as time goes on.

Additionally, PAHO is collaborating closely with WHO and other partners to adapt COVID-19 vaccine communications materials for the Region of the Americas. These, and other materials and events, will continue to be published at the following link: <https://www.paho.org/en/covid-19-vaccines>.

Health care workers: Key allies in stopping the spread of misinformation

Health care workers have traditionally been considered one of the most trusted sources of information on vaccines and vaccination for the general public; as such, it is imperative that they are well informed on these topics and able to communicate clearly with patients and communities to bust myths and respond to questions and doubts people might have. As such, PAHO has developed a guide for health care workers on communicating about vaccine safety.¹ While the guide touches on COVID-19, it is not specific just to this disease, but rather covers immunization in general, with brief sections on the HPV, influenza, and measles vaccines, as these tend to generate questions and doubts among the population.

When considering health care workers in the context of the COVID-19 pandemic, we must also recognize why they are a doubly important audience for vaccination communication: not only are they going to be key messengers to their communities about the importance and safety of COVID-19 vaccines, but they are also likely to be among the very first to be vaccinated once vaccines are available. For this reason, communication geared specifically to health care workers is going to be vital.

Resources from WHO on infodemic management



In September 2020, WHO, UN, UNICEF, UNDP, UNESCO, UNAIDS, ITU, UN Global Pulse, and IFRC released a joint statement titled “Managing the COVID-19 infodemic: Promoting healthy behaviours and mitigating the harm from misinformation and disinformation.” The statement recognizes “misinformation costs lives. Without the appropriate trust and correct information, diagnostic tests go unused, immunization campaigns (or campaigns to promote effective vaccines) will not meet their targets, and the virus will continue to thrive” and urges Member States to do the following:

- Develop and implement action plans to manage the infodemic both by promoting the timely dissemination of accurate information, based on science and evidence, to all communities, and in particular high-risk groups; and preventing its spread through combating mis- and disinformation, while also respecting freedoms of expression.
- Engage and listen to their communities as they develop their national action plans and empower communities to develop solutions and resilience against mis- and disinformation.

Likewise, other stakeholders – including the media, researchers, social media platforms, civil societies leaders, technologists, and influencers – are called on “to collaborate with the UN system, with Member States and with each other, and to further strengthen their actions to disseminate accurate information and prevent the spread of mis- and disinformation.”

For more information, see WHO guidance on infodemic management here: <https://www.who.int/publications/i/item/9789240010314%20/> or these tips to flatten the infodemic curve: <https://www.who.int/news-room/spotlight/let-s-flatten-the-infodemic-curve>. ■

¹ “Communicating about Vaccine Safety: Guidelines to Help Health Workers Communicate with Parents, Caregivers, and Patients,” available at <https://iris.paho.org/handle/10665.2/53167>

Frequently Asked Questions (FAQs) on COVID-19 Vaccination²

Questions and Answers from WHO – 28 October 2020³

1. When will COVID-19 vaccines be ready for distribution?

We don't yet know exactly when a safe and effective COVID-19 vaccine will be ready for distribution, but we estimate that it could be in early 2021. Before COVID-19 vaccines can be delivered, several important challenges must be overcome:

- The vaccines must be proven safe and effective in large (phase III) clinical trials. Many potential vaccines for COVID-19 are being studied, and some of the large clinical trials may report results in late 2020 or early 2021.⁴
- A series of independent reviews of the efficacy and safety evidence is required, including regulatory review and approval in the country where the vaccine is manufactured, before WHO considers a vaccine product for prequalification. Part of this process also involves the Global Advisory Committee on Vaccine Safety.
- An external panel of experts convened by WHO, the Strategic Advisory Group of Experts (SAGE) on immunization, will analyze the results from clinical trials and along with evidence on the disease, age groups affected, risk factors for disease, and other information, they will recommend whether and how the vaccines should be used. Officials in individual countries will decide whether to approve the vaccines for national use and develop policies for how to use the vaccines in their country based on the WHO recommendations.
- The vaccines must be manufactured in large quantities, which will be a major and unprecedented challenge – all the while continuing to produce all the other important life-saving vaccines already in use.
- As a final step, vaccines will be distributed through a complex logistical process, with rigorous stock management and temperature control.

2. How will we know if COVID-19 vaccines are safe?

There are many strict protections in place to help ensure that COVID-19 vaccines will be safe. Like all vaccines, COVID-19 vaccines should go through a rigorous, multi-stage testing process, including large (phase III) trials that involve tens of thousands of people. These trials, which include people at high risk for COVID-19, are specifically designed to identify any common side effects or other safety concerns.

After a COVID-19 vaccine is introduced, WHO will support work with vaccine manufacturers, health officials in each country, and other partners to monitor for any safety concerns on an ongoing basis.

3. How quickly could COVID-19 vaccines stop the pandemic?

The impact of COVID-19 vaccines on the pandemic will depend on several factors. These include factors such as the effectiveness of the vaccines; how quickly they are approved, manufactured, and delivered; and how many people get vaccinated.

Most scientists anticipate that, like most other vaccines, COVID-19 vaccines will not be 100% effective. WHO is working to help ensure that any approved vaccines are as effective as possible, so they can have the greatest impact on the pandemic.

Access to COVID-19 Vaccination

4. Who will be the priority population groups to receive COVID-19 vaccination first?

When a COVID-19 vaccine becomes available, there will be a huge demand and supply will be limited. Priority populations for the first round of vaccinations will be defined based on the vaccination goal: a) protect the health system and allow the continuity of essential health services

(likely include essential workers, including healthcare workers), b) reduce severe COVID-19 morbidity and mortality in high-risk groups (adults over the age of 65 and other high-risk adults with underlying health conditions), and c) reduce transmission (vaccination of young adults). WHO's SAGE on immunization, PAHO's Technical Advisory Group (TAG) on Vaccine-Preventable Diseases, and National Immunization Technical Advisory Groups (NITAGs) will play a key role providing guidance and recommendations. Each country will determine priority groups to vaccinate based on scientific evidence and the pandemic's epidemiological situation.

5. What will be the best vaccine delivery strategy?

Countries should plan for different vaccine strategies to reach the targeted groups. It will be also important for countries to assess their cold chain capacities and sort out their inventory of equipment and training needs. Lessons learned from the delivery of the H1N1 pandemic vaccine and other new vaccine introductions could be leveraged.

6. What will be the price of COVID-19 vaccines?

This information is still unknown and will be based on numerous different complicated factors like: market dynamics, manufacturers' pricing strategy, engagement with any advance market commitment mechanisms, cost of research and development, cost of scaling manufacturing capacities, reliability of demand and risk sharing approaches, etc. Based on initial available information, while some manufacturers are committing to minimal returns (no profit approach) on their pipeline products, other manufacturers indicate their pricing approach to be tiering countries based on income classifications (differentiated prices).

ACT Accelerator and COVAX Facility

7. What is the ACT-Accelerator?⁵

The Access to COVID-19 Tools (ACT) Accelerator is a mechanism that brings together numerous partners under one global effort to support equal access to the three pillars related to COVID-19: diagnostics, treatments, and vaccines. The vaccine pillar includes three components: development and manufacturing, coordinated by the Coalition for Epidemic Preparedness Innovations (CEPI); policy and allocation, coordinated by WHO; and procurement and delivery at a global scale, coordinated by Gavi with participation from other partners, including WHO. To get more information, please see the following link: <https://www.who.int/initiatives/act-accelerator>

8. What would be the benefit of a global access mechanism for COVID-19 vaccines?

Three potential situations might present themselves (not mutually exclusive) for a country to consider accessing potential COVID-19 vaccines:

- **National access mechanism:** countries negotiate agreements directly with manufacturers. There is a risk of concentrating the resources in a few potentially unsuccessful COVID-19 vaccine candidates.
- **Grouped access mechanism:** countries from regional groups or blocs negotiate supply agreements with manufacturers. There is also a risk of concentrating the resources in a few potentially unsuccessful COVID-19 vaccine candidates.
- **Global access mechanism:** countries participate in a global mechanism to procure and access COVID-19 vaccines. Participating in a globally coordinated mechanism, countries will be able to hedge the risk and increase chances for success by contributing to a large and diverse portfolio of COVID-19 vaccines. At the same time, through such a global mechanism, governments with limited or no ability to finance their own bilateral procurement can be assured access to life-saving vaccines that would otherwise have been beyond their reach.

² This text has been edited from original publication "Frequently Asked Questions (FAQs) about COVID-19 Candidate Vaccines and Access Mechanisms," published at <https://www.paho.org/en/documents/frequently-asked-questions-faqs-about-covid-19-candidate-vaccines-and-access-mechanisms>

³ Questions 1-3 original publication "Coronavirus disease (COVID-19): Vaccines 28 October 2020 Q&A," published at Coronavirus disease (COVID-19): Vaccines [https://www.who.int/news-room/q-a-detail/coronavirus-disease-\(covid-19\)-vaccines](https://www.who.int/news-room/q-a-detail/coronavirus-disease-(covid-19)-vaccines)

⁴ For the most updated list of candidate vaccines published by WHO, please visit <https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines>

⁵ The Access to COVID-19 Tools (ACT) Accelerator: <https://www.who.int/initiatives/act-accelerator>

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9. What is the COVAX Facility?

The COVID-19 Vaccine Global Access (COVAX) Facility represents a global multilateral collaboration intended to accelerate the development, production, and equitable access to COVID-19 vaccines when they become available. For more information, please see the following link: <https://www.gavi.org/covid19/covax-facility>. To date, nine vaccines are part of the COVAX portfolio, and 172 countries have expressed interest in participating in the COVAX mechanism. For more information, see the following link: <https://www.who.int/news/item/24-08-2020-172-countries-and-multiple-candidate-vaccines-engaged-in-covid-19-vaccine-global-access-facility>.

10. What is the Gavi COVAX Advance Market Commitment (AMC)?

Within the COVAX Facility, there are two groupings of countries. The first grouping is composed by the self-financing countries. The second grouping is composed by the 92 countries that may receive a subsidy to help cover the cost of new COVID-19 vaccines. In the Americas, ten countries meet the requirements to receive COVAX AMC support: Bolivia, Dominica, El Salvador, Grenada, Guyana, Haiti, Honduras, Nicaragua, St. Lucia, and St. Vincent and the Grenadines. The list of countries is available at: <https://www.gavi.org/news/media-room/92-low-middle-income-economies-eligible-access-covid-19-vaccines-gavi-covax-amc>. To get more information about the Gavi COVAX AMC, see the following link: <https://www.gavi.org/sites/default/files/2020-06/Gavi-COVAX-AMC-IO.pdf>

11. How will the COVID-19 vaccines be allocated among countries?

A methodology is required to fairly allocate a COVID-19 vaccine, and it

will need to prioritize vaccine supply to reduce the impact of the virus as quickly as possible. Global partners are working together to set up the framework and mechanism required to ensure fair allocation through the WHO Fair Allocation Framework and the COVAX Facility. These vaccines will be delivered to all participating countries, in a manner that is proportional to their populations and in a way that they are initially provided to 3% of the population and later expanding to cover up to 20%. Further doses will then be made available based on country need, vulnerability, and COVID-19 threat.

Revolving Fund and COVAX Facility

12. What is PAHO's Revolving Fund?

PAHO's Revolving Fund for Access to Vaccines is a regional pooled procurement mechanism. For more than 40 years, the Revolving Fund has facilitated demand forecasts and uses of national resources to procure high-quality life-saving vaccines and related products at the most affordable price for countries in the Americas. Currently, 42 Member States and territories benefit from services offered by the Revolving Fund. For more information, please see the following link: <https://www.paho.org/en/resources/paho-revolving-fund>

13. How is PAHO's Revolving Fund engaged with the COVAX Facility?

As the largest pooled vaccine procurement mechanism in the world for self-financing countries, PAHO contributed to designing the COVAX Facility. In the COVAX Facility Technical Design Document from 11 June, PAHO's Revolving Fund mechanism was recognized as a unified bloc, representing 39 countries that expressed their interest. ■

Validation of Risk Categorization Tool for Cold Chain Monitoring at the Local Level

Everyone wants to know when a COVID-19 vaccine will arrive. However, beyond the COVID-19 vaccine or vaccines themselves, it is of great importance to prepare a vaccine introduction plan that includes all of the components needed to receive, store, and distribute the available vaccines while ensuring compliance with the manufacturer-recommended temperatures throughout the supply chain, thus safeguarding the vaccine's potency. To this end, both health authorities and governments should adapt their delivery logistics and prepare a strengthened cold chain for adequate vaccine conservation and storage.

Vaccines require special storage conditions to guarantee their immunogenicity and protective efficacy, from the time they leave the manufacturing laboratory to the moment they are administered to people. For the cold chain to be effective, it is necessary to have not only adequate equipment in good working condition, but also trained human resources who can handle the vaccines and supplies appropriately.

In order to have a tool to monitor the cold chain at vaccination centers, a form was designed that, in addition to characterizing risk, makes it possible to make decisions and monitor changes over time. The tool not only highlights information about personnel and their training, but also has added elements for evaluation, such as basic knowledge required by human resources who work in vaccination centers. Examples include concepts related to vaccine thermostability and the correlation between knowledge and processes. The form can also be used for updates on new devices such as the use of sensors, containers, or thermal boxes.

Risk categorization tool

This tool is based on compliance with different processes, through items that are defined and divided into major and minor criteria that contribute to established categories of high, intermediate, and low risk. The results are prioritized according to subsequent monitoring and the implementation of corrective and follow-up measures within the designated timeframe.

The risk categorization tool is intended for use both during supervisory visits and for health workers themselves to carry out a self-assessment of their cold chain. The tool enables them to analyze the cold chain conditions at their vaccination centers using clear, concrete instructions.

Classification of criteria

Major criteria (7): These are elements that in and of themselves already represent high risk, since they strongly impact the cold chain due to the level of safety, quality, or level of protection.

- Personnel have not taken the EPI course (basic course that provides the corresponding training to be a vaccinator)
- Refrigerators are not used exclusively for vaccines
- Temperature control forms are incomplete
- Temperatures inside the refrigerators are not in the optimal range
- Drugs are present
- Expired vaccines are present
- Food or laboratory samples are present

Minor criteria (16): These are elements that individually are not serious, but several of them together are serious.

- There are vaccines touching the walls
- There are vaccines in the door
- There are vaccines in the vegetable or fruit drawer
- The refrigerator is opened only at the beginning and end of the day
- There are not at least 3 bottles of water in the refrigerator
- There is more than 10 mm. of frost in the freezer
- The refrigerator is not cleaned at least once a month

RISK CATEGORIZATION TOOL cont. from page 4

Criteria	Risk	Items	Yes	No	
Major	High (presence of 1 or more points)	Personnel who have not completed the EPI course	Yes	No	
		Refrigerators are not exclusively for vaccines	Yes	No	
		Temperature control forms are incomplete	Yes	No	
		Temperatures inside the refrigerators are not in the optimal range	Yes	No	
		Drugs are present	Yes	No	
		Food or laboratory samples are present	Yes	No	
		Expired vaccines are present	Yes	No	
		There are vaccines touching the walls	Yes	No	
		There are vaccines located in the door	Yes	No	
		Minor	High (presence of 16 to 12 points)	There are vaccines in the vegetable or fruit drawer	Yes
The refrigerator is opened only at the beginning and end of the day	Yes			No	
There are not at least 3 bottles of water in the refrigerator	Yes			No	
There is more than 10 mm. of frost in the freezer	Yes			No	
The refrigerator is not cleaned at least once a month	Yes			No	
Intermediate (presence of 11 to 4 points)	The contingency plan is not written and visible			Yes	No
	There is no information about harm to vaccines at high temperatures (above 8°C)			Yes	No
	There is no information about harm to vaccines at low temperatures (below 0°C)			Yes	No
	The agitation test is not known			Yes	No
	The location of the vaccines is not identified according to their thermostability			Yes	No
	Low (presence of 3 to 1 points)	The open vial policy is not known	Yes	No	
		The recommendation for the use of ice packs is not known	Yes	No	
		The temperature sensors are not known	Yes	No	
The multidose vials of Td and hepatitis B vaccines are not labeled		Yes	No		

- The contingency plan is not written and visible
- There is no information about harm to vaccines at high temperatures (above 8°C)
- There is no information about harm to vaccines at low temperatures (below 0°C)
- The agitation test is not known
- The location of the vaccines is not identified according to their thermostability
- The open vial policy is not known
- The recommendation for the use of ice packs is not known
- The temperature sensors are not known
- The multidose vials of Td and hepatitis B vaccines are not labeled

Classification of risk

- **High risk:** Classified as critical, given that when one of the major criteria is present, immediate corrective actions and special monitoring of these vaccination centers are triggered. One exception is basic training for personnel, which will be prioritized in the coming months.

A scenario also included in this high-risk category is when more than 75% of the minor criteria are identified as being present (16 to 12 of the points).

- **Intermediate risk:** Classified as of moderate risk, when 25% to 74% of the minor criteria are present (11 to 4 of the points). This triggers

corrective actions to resolve the situation in the medium term, within 15 days after the visit.

- **Low risk:** When less than 25% of the minor criteria are present (3 to 1 of the points). This triggers corrective actions to resolve the situation within 30 days after the visit.

Implementation of the tool reflects not only the vision of a vaccination center, but also reveals a general panorama of the elements assessed. This analysis makes it possible to program more directed trainings, compare different institutions (hospitals, health centers) and sectors (public, social security, private), report changes over time, and carry out monitoring.

Final comments

This tool was the end result of the thesis “Análisis de la gestión del Programa de Inmunizaciones de la Ciudad Autónoma de Buenos Aires, en el componente cadena de frío, para la elaboración de un plan de mejoras y recomendaciones” [Analysis of the management of the Immunization Program of the Autonomous City of Buenos Aires, in the cold chain component, for the preparation of an improvement and recommendation plan], within the framework of the Master’s Degree Program in Health Systems and Services Management and Administration at Favaloro University of Buenos Aires, Argentina, concluded in December 2019. The tool was validated at public vaccination centers in the Autonomous City of Buenos Aires. ■

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RISK CATEGORIZATION TOOL cont. from page 5

Summary of the classification of risks

Risk to the cold chain	Presence of criteria	Actions
High	One major criterion or 16 to 12 minor criteria	Immediate Special monitoring Specific measures
Intermediate	11 to 4 minor criteria	Correction within 15 days of the visit
Low	3 to 1 lower criteria	Correction within 30 days of the visit
Poses no risk	No criterion	

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To Aspirate or Not to Aspirate before Administering a Vaccine?

A frequently asked question in immunization is whether it is necessary to aspirate before administering a vaccine to make sure the needle is in the right place and the vaccine is not going to enter through a vein. Aspiration consists of pulling back the syringe plunger for 5-10 seconds after the needle has been inserted, to see whether any blood flows back into the syringe.

Two systematic literature reviews^{6,7} on a variety of published guidance found that this practice is unnecessary. This includes guidance from the

World Health Organization (WHO), International Council of Nurses (ICN), United States Centers for Disease Control and Prevention (CDC), United States Food and Drug Administration (FDA), National Health Service (NHS) of the United Kingdom, British Medical Association, Nursing and Midwifery Council (NMC) of the United Kingdom, Australian Nursing and Midwifery Accreditation Council (ANMAC), the Public Health Agency of Canada, and the Pakistan Medical Association (PMA), between March 2008 and March 2014. ■

Some highlights from these reviews:

- Guidance from the Advisory Committee on Immunization Practices of the American Academy of Pediatrics⁸ (published by the CDC), as well as guidance on immunization from the Public Health Agency of Canada, establish that aspiration is not a necessary practice because there are no large blood vessels in recommended injection sites. In addition, the aspiration process requires the needle to be inside the patient longer, making vaccination more painful for babies.⁹
- In the CDC's "Pink Book" (Epidemiology and Prevention of Vaccine-Preventable Diseases),¹⁰ not aspirating is presented to reduce pain, accompanied by other strategies such as breastfeeding, distraction, and tactile stimulation.
- Some of the auto-disable (AD) syringes recommended by PAHO/WHO for vaccination are designed to limit this practice.
- Aspiration can result in vaccine wastage.⁶
- During aspiration, it is more difficult to control a restless child, and this may cause local injuries. During vaccination using a single hand, without aspiration, the vaccinator can use the other hand to keep the child still.⁶
- The potential risks posed by eliminating aspiration from the administration of routine vaccines can be somewhat mitigated by a clear understanding of anatomy and of the key locations in recommended injection sites.

⁶ Sepah Y, Samad L, Altaf A et al. *Aspiration in injections: Should we continue or abandon the practice?* (doi: 10.12688/1100research.1113.3)

⁷ Sisson, H. (2015). Aspirating during the intramuscular injection procedure: a systematic literature review. *J Clin Nurs*, 24: 2368-2375. doi:10.1111/jocn.12824

⁸ Kroger AT, Duchin J, Vázquez M. General Best Practice Guidelines for Immunization. Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP) <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>

⁹ Ipp M, Taddio A, Sam J, Gladbach M, Parkin PC. Vaccine-related pain: randomised controlled trial of two injection techniques. *Arch Dis Child*. 2007;92(12):1105-1108. DOI: 10.1136/adc.2007.118695

¹⁰ Centers for Disease Control and Prevention. *Epidemiology and Prevention of Vaccine-Preventable Diseases*. Hamborsky J, Kroger A, Wolfe S, eds. 13th ed. Washington D.C. Public Health Foundation, 2015. <http://www.cdc.gov/vaccines/pubs/pinkbook/vac-admin.html>

Table 1. Prices for Vaccines Purchased through the PAHO Revolving Fund, 2020 (prices in US\$)

VACCINE		DOSES PER VIAL	AVERAGE COST PER DOSE
BCG		10	\$0.23100
Bivalent Oral Polio (bOPV)		10	\$0.17030
		20	\$0.12800
Cholera		1	\$1.70000
DTP	Pediatric	10	\$0.18130
DT	Pediatric	10	\$0.16000
DTaP Triple Acellular	Pediatric	1	\$16.2000
DTaP-IPV	Tetravalent Acellular (pre-filled syringe)	1	\$12.8400
DTaP-IPV-Hib	Pentavalent Acellular (pre-filled syringe)	1	\$15.8400
DTaP-IPV-Hep B-Hib	Hexavalent Acellular	1	\$21.1200
DTP	Hib Lyophilized (pediatric)	1	\$3.00000
DTP Hepatitis B Hib Pentavalent	Liquid (pediatric)	1	\$1.00830
Hepatitis A	Pediatric	1	\$8.16600
	Adult (vial and pre-filled syringe)	1	\$13.6294
Hepatitis B (Recombinant)	Adult	10	\$0.27000
	Adult	1	\$0.74020
	Pediatric	1	\$0.53170
Hib	Lyophilized	1	\$2.15000
Human papillomavirus (HPV)	Quadrivalent	1	\$9.98000
Inactivated Polio (IPV)		5	\$3.10000
Measles-Rubella		1	\$2.48000
		10	\$0.65600
Measles/Mumps (Jeryl-Lynn Strain)/Rubella		1	\$5.59000

VACCINE		DOSES PER VIAL	AVERAGE COST PER DOSE
Measles/Mumps (Zagreb Strain)/Rubella		1	\$2.75000
		5	\$1.43000
Meningococcal ACYW135		1	\$20.3000
Pneumococcal Conjugated Pediatric	10-valent (PCV-10)	1	\$12.8500
	13-valent (PCV-13)	1	\$14.5000
Pneumococcal Unconjugated	Adult 23-valent	1	\$8.63000
Rabies Human Use (Vero Cells)		1	\$9.92980
Rotavirus, Liquid	2-dose immunization schedule	1	\$6.50000
Seasonal Influenza Trivalent Southern Hemisphere 2020	Adult Korean origin	1	\$3.24000
	Adult Korean origin	10	\$2.39000
	Adult French origin	10	\$2.65000
	Adult French origin (pre-filled syringe)	1	\$3.20000
	Pediatric Korean origin	20	\$1.19500
	Pediatric French origin	20	\$1.32500
Seasonal Influenza Quadrivalent Southern Hemisphere 2020	Adult Korean origin	1	\$5.20000
	Adult Korean origin	10	\$4.40000
	Adult French origin	10	\$5.14000
Td	Adult	10	\$0.09840
Tdap Triple Acellular	Adolescent/adult	1	\$12.9378
Typhoid Polysaccharide		20	\$10.0000
Varicella		1	\$15.8500
Yellow Fever		10	\$1.43000
		5	\$1.28000

Table 2. Prices for Syringes Purchased through the PAHO Revolving Fund, 2020-2021 (prices in US\$)

CONVENTIONAL SYRINGES		
SIZE	PACKED PER CASE	PRICE PER UNIT*
1cc 22G x 1 1/2"	2400	\$0.0225
	1500	\$0.0230
1cc 23G x 1"	3200	\$0.0202
	2000	\$0.0243
	1500	\$0.0207
3cc 23G x 1"	2400	\$0.0225
	2000	\$0.0203
	1800	\$0.0282
5cc 22G x 1 1/2"	1800	\$0.0315
	1200	\$0.0287

* Prices FCA (Free Carrier) for each syringe.

** If the quantity and size of syringe are the same but have different prices, this is generally due to different suppliers.
Source: <https://www.paho.org/en/resources/paho-revolving-fund>

AUTO-DISABLE SYRINGES		
SIZE	PACKED PER CASE	PRICE PER UNIT*
0.5cc 22G x 1 1/2"***	3000	\$0.0480
	3000	\$0.0525
0.5CC 23G X 1"***	3000	\$0.0338
	3000	\$0.0290
0.5cc 25G x 5/8"***	3000	\$0.0370
	3000	\$0.0380
0.1cc 27G x 3/8"***	3000	\$0.0380
	3000	\$0.0348
0.05CC 26G X 3/8"***	3000	\$0.0380

RETRACTABLE SYRINGES		
SIZE	PACKED PER CASE	PRICE PER UNIT*
0.5cc 23G x 1"	800	\$0.1600
0.05CC 26G X 3/8"	3000	\$0.0450

2020 Vaccine and Syringe Price Amendment

Member States will be billed according to these prices. PAHO invoices will include the cost of the vaccine, immunoglobulin, syringe or safety box, the actual charges for packing, freight, and insurance and a 4.25% fee. The fee is applicable only on the cost of the product and includes a 3% contribution to the Revolving Fund credit line for utilization by Member States and a 1.25% service fee.

The PAHO Revolving Fund for Access to Vaccines relies on close coordination with Member States to provide accurate and timely annual vaccine forecasts with updated demand reconfirmations by quarter. **The accuracy and timely availability of this information is critical to PAHO's work to ensure the timely access and affordability of these products to Member States.**

The Immunization Newsletter is published four times a year, in English, Spanish, French and Portuguese by the Comprehensive Family Immunization Unit 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.

ISSN 1814-6244

Volume XLII Number 4 • December 2020

Recommended Article:

Immunization Newsletter: Guidelines to Plan for COVID-19 Vaccine Introduction [Internet]. Washington, D.C.: Pan American Health Organization. Volume XLII Number 3, September 2020. Available at: <https://iris.paho.org/handle/10665.2/52953>.

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PAHO

BROOME cont. from page 1



Dr. Karen Broome.

edge and attitudes of healthcare workers is concerning. This group must be prioritized to ensure that they are well-informed, not only in terms of their vaccine acceptance, but also with regards to their advice to clients and other members of the public. Health officials and technical staff must be

empowered to champion this vaccine not only in health centers or other vaccine administration sites, but in their homes, communities, and meetings with stakeholders and other persons of interest. In 2021, demand for COVID-19 vaccine(s) must be created and maintained if countries are to protect public health and minimize social and economic impacts caused by COVID-19.

National immunization program (NIP) staff became a prized and highly sought-after commodity. For the last ten months the Caribbean has been responding to COVID-19 and NIP staff remained hard at work on the front lines, battling the spread of COVID-19.

Working as part of the outbreak team, these officers:

1. Readily assumed roles at operational and coordination levels, ensuring that pandemic management and control activities were conducted effectively and efficiently.

2. Gave the political directorate and other technical staff the confidence to support evidence-based recommendations targeting the control of the COVID-19 pandemic due to their vaccine base knowledge and skill set.
3. Worked in the field conducting contact tracing, strengthening surveillance at ports of entry, and most recently conducting assessments of cold chain capacities and completing their national deployment and vaccination plans for COVID-19 vaccines.

Unfortunately, these activities have at times been conducted at the expense of the NIP, leading to underperforming national surveillance and primary vaccine coverage targets. Continuous strengthening of the NIPs in the Caribbean has reaped major benefits in the sub-region using these highly trained officers in all aspects of COVID-19 monitoring, control, and prevention measures. 2020 has highlighted that NIPs are not just about syringes filled with vaccines in refrigerators ready to be administered into arms and thighs. They are about a diverse group of persons, whether nurses, doctors, clerks, or ancillary staff who have used their skills and experiences on the frontlines of the pandemic to protect their families, communities, and clients from morbidity and mortality associated with COVID-19.

My assignment created many opportunities for learning, not only about the work of the organization, but about the staff behind the scenes. I arrived at a time when most staff were working from home and virtual meetings and calls were the new norm. I have been involved in immunization at a national level in Barbados since 2014 and

was fortunate to interact on several previous occasions with my new work colleagues in the Comprehensive Family Immunization Unit at PAHO and other staff at the Barbados Country Office. I quickly realized that I was very privileged to be home and with my family as many of my colleagues were forced to watch from afar as their families abroad struggled to remain safe during the COVID-19 pandemic and some watched as friends and family members succumbed to illness. This was doubly hard as border closures and quarantine protocols made it impossible for some staff to travel to their home countries for months and they had to make do with glimpses of loved ones via video calls. Teleworking was at times isolating and mental health a concern for some, but the work of the organization never stopped. Through these trials, I witnessed staff meet deadlines, work tirelessly with countries and partners, attend virtual meeting after virtual meeting, and answer each unannounced Microsoft Teams call with pleasantries and words of comfort when needed. The mental and emotional strength of the team was tested this year and we all survived.

As the year 2020 draws to a close and the possibilities and promises of 2021 draw nigh, we must all reflect on what we have achieved and how it has strengthened our resolve for whatever the coming year brings. Through all that 2020 had to offer, I learned that with each new experience or unexpected health related event, there were always opportunities for personal growth and professional development, which strengthened not only who I was, but by extension the programs in which I worked and ultimately the NIPs that I assisted. ■