

Status of the national immunization technical advisory groups in the Americas: recommendations for improvement

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Suggested citation. Betancourt-Cravioto M, Trejo Varón R, Becerra-Posada F, Espinal C. Status of the national immunization technical advisory groups in the Americas: recommendations for improvement. *Rev Panam Salud Publica.* 2024;48:e63. <https://doi.org/10.26633/RPSP.2024.63>

ABSTRACT

Objectives. To evaluate the structure and operation of national immunization technical advisory groups (NITAGs) in Latin America and the Caribbean and to make recommendations for improvement.

Methods. A convenience sample of six current and eight former NITAG members representing 12 countries in the region were invited in 2022 to answer a web-based questionnaire on NITAG structure, organization, and procedures. The questionnaire used indicators similar to those in the Joint Reporting Form on Immunization. Participants were also asked about the role their NITAGs played in coronavirus disease 2019 (COVID-19) immunization policies.

Results. Brazil, Dominican Republic, and Venezuela (Bolivarian Republic of) reported not having an active NITAG. The nine active NITAGs are structured and organized according to World Health Organization and Pan American Health Organization recommendations, with variations between countries. Most NITAGs include representatives of the five recommended medical specialties with the participation of additional members possible. Only Bolivia (Plurinational State of) and Mexico have no explicit policy for managing members' potential conflicts of interest. All NITAGs have an exclusively technical advisory role and generally meet once a quarter. Usually, NITAGs are asked by health ministries to analyze issues and make recommendations. All NITAGs, except for Peru's, actively participated in supporting decision-making for immunization policy on COVID-19.

Conclusions. NITAGs have successfully supported vaccine policy-making through evidence-based recommendations. However, improvement in their structure, operation, and transparency is needed to help them keep up with the rapidly evolving field of immunization. Research on the impact of NITAGs is important to support the development of recommendations for improvement.

Keywords

Immunization; evidence-informed policy; Latin America; Caribbean Region.

The increasing complexity of immunization programs, due to the availability of more vaccines aimed at preventing disease in children and throughout the life cycle, requires significant effort from national immunization programs to ensure that populations have access to the best possible vaccination schedule [1].

To support the decision-making process for planning and operating national immunization programs, countries throughout

the world have set up National Immunization Technical Advisory Groups (NITAGs) [1, 2]. According to international recommendations, NITAGs are independent, multidisciplinary groups of national and international experts that have a wide variety of expertise and can provide governments, policy-makers, and program managers of immunization programs with impartial, non-biased, evidence-informed advice and

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policy recommendations on vaccines and vaccine-related issues. Their independence gives them the capacity to resist possible pressure from different interest groups [3]. NITAG recommendations can serve to strengthen health policy and programs, with the ultimate goal of improving population health. They are embedded in the decision-making process through interaction with ministries of health [4–6].

The importance of NITAGs in ensuring that national immunization programs operate correctly, and their essential role in decision-making and achieving national health goals have been highlighted by different calls on governments to establish and strengthen these advisory bodies [4]. The Global Vaccine Action Plan 2011–2020 of the World Health Organization (WHO) called for “all countries to establish or have access to a NITAG by 2020” as part as its objective to create national ownership of immunization programs. The development of strong NITAGs provides a solid basis for resilient and credible national immunization programs [7, 8].

To meet existing and emerging challenges after the Global Vaccine Action Plan, WHO launched the Immunization Agenda 2030 to ensure that current gains can be maintained and that gaps in access to vaccines for the most vulnerable populations are closed [9]. The IA2030 includes, as part of its core principles, the strengthening of NITAGs to “guide country programmes in extending vaccines beyond infancy throughout the lifecourse to reflect specific national and subnational contexts” [9]. The IA2030 has been endorsed by the Pan American Health Organization’s (PAHO’s) 59th Directing Council [10].

Central to NITAGs are their operating procedures, which ensure the groups’ independence, transparency, and freedom from conflicts of interest in generating recommendations for national immunization programs. Table 1 shows the main organizational and operating procedures of a global vaccine advisory body (WHO’s Strategic Advisory Group of Experts on Immunizations), a regional vaccine advisory body (PAHO’s Technical Advisory Group on Vaccines and Immunization), and a long-standing NITAG (the United States (U.S.) Advisory Committee on Immunizations Practices). The operating procedures of these three bodies are models for the operation of other NITAGs in the region and elsewhere.

According to WHO, in 2022, 173 countries around the world reported that they had established and regularly operated an NITAG, 40 of which were countries and territories of the Americas. The countries and territories in the region that had not reported having a functional committee were the Dominican Republic, Monserrat, and Venezuela (Bolivarian Republic of) [11]. Puerto Rico and the U.S. Virgin Islands do not have a declared NITAG; however, due to their status as unincorporated territories of the U.S., they follow the recommendations of the U.S. Advisory Committee on Immunization Practices [12]. A similar situation occurs with Guadeloupe and Martinique, which are overseas departments of France and follow recommendations of the French Technical Vaccination Committee [13].

Self-reported country data from the NITAGs of countries of the Americas were collected in 2020 through the WHO/United Nations Children’s Fund (UNICEF) Joint Reporting Form on Immunization. Most countries and territories report full compliance with WHO/UNICEF indicators for NITAG operation; only Anguilla, Bermuda, Dominican Republic, and Venezuela (Bolivarian Republic of) reported that they did not have a standing NITAG [14].

Despite advances in setting up these mechanisms to support evidence-based decision-making in national immunization programs, the region is currently at high risk of an occurrence of outbreaks of new and re-emerging vaccine-preventable diseases [15]. This is in part due to reported setbacks in routine vaccination and surveillance performance. For example, a steady decline in vaccination coverage in the region has been reported since 2010. For instance, the coverage rate of the third dose of the diphtheria–tetanus–pertussis vaccine dropped from 94% to 84% in the last decade [16].

This decline can be attributed to many factors that include shifts in the political and economic context, migration and population displacements, natural disasters, and, in general, growing inequities in access to health care. This complicated situation and the resultant decline in coverage rates were exacerbated by the coronavirus disease 2019 (COVID-19) pandemic which forced governments to divert human and financial resources from immunization programs to the emergency response. In addition, restrictions on movement limited access to health facilities and people avoided going to them for fear of being infected [15].

Given all the challenges currently faced by national immunization programs, there is a need to support national immunization policies to reach previous immunization coverage rates and reduce epidemiological risks to the population of the region from the re-emergence of vaccine-preventable diseases. This study therefore aimed to obtain first-hand, updated information on the region’s NITAGs and use this information to make recommendations to strengthen and improve these groups. This is particularly relevant considering that existing functionality assessment tools for NITAGs, such as the WHO/UNICEF Joint Reporting Form, are limited in their ability to evaluate the performance and impact of specific NITAGs, and therefore cannot provide sufficient information to develop recommendations for improvement [17].

METHODS

A convenience sample of 14 NITAG members, six current and eight former participants, representing 12 countries in North (Mexico), Central (Costa Rica, El Salvador, and Honduras) and South America (Argentina, Bolivia (Plurinational State of), Brazil, Colombia, Ecuador, Peru, and Venezuela (Bolivarian Republic of)), and the Caribbean (Dominican Republic), were invited in January 2022 to answer a web-based questionnaire on the structure, organization, and procedures of the NITAGs, with indicators similar to those of the WHO/UNICEF Joint Reporting Form on Immunization [See Annex 1]. They were also asked about the role their NITAGs played in the establishment of COVID-19 immunization policies during the pandemic. Respondents were regional vaccination experts known by the authors and all accepted the invitation to participate.

The information obtained from the surveys was complemented with data extracted from publicly available on-line documents including NITAG charters, terms of reference, and standard operating procedures, so as to describe comprehensively the current structure and operation of NITAGs in the region in order to make recommendations for improvement.

RESULTS

Of the 12 countries represented, three were reported as not having an active and functional NITAG: Brazil, Dominican

TABLE 1. Features of a global, regional, and national immunization technical advisory group

Members	WHO – SAGE	PAHO – TAG	USA – ACIP
Voting members	<ul style="list-style-type: none"> Up to 20 members Appointed for up to 3 years and eligible for reappointment Serve in a personal capacity Represent a broad range of disciplines relevant to vaccines and immunization. All members are full participants and take part in the decision-making process of the meetings in which they are involved. 	<ul style="list-style-type: none"> Nine independent experts Appointed for an initial term of 4 years, with the possibility for a one-term renewal at the discretion of the PAHO Director Serve in a personal capacity Represent a broad range of disciplines: public health, epidemiology, vaccinology, immunology, pediatrics, internal medicine, infectious diseases, program management and health economics 	<ul style="list-style-type: none"> 19 medical profession members (physicians, nurses, nurse practitioners) Appointed for 4 years, non-renewable Represent clinical medical fields and public health One consumer representative: a technically qualified person knowledgeable on consumer perspectives and/or social and community aspects of immunization programs
Non-voting members	<ul style="list-style-type: none"> Not described in the terms of reference 	<ul style="list-style-type: none"> Not described in the terms of reference 	<ul style="list-style-type: none"> Eight ex officio non-voting members from different federal agencies 31 non-voting liaison representatives from professional societies and organizations responsible for immunization programs
Chairperson	<ul style="list-style-type: none"> Chairperson and deputy chairperson selected and appointed by WHO following an open call for experts 	<ul style="list-style-type: none"> TAG chairs required to serve as a TAG member for one term before selection and appointment. TAG chair may be appointed to serve for an additional term following the initial appointment for a maximum of three consecutive terms 	<ul style="list-style-type: none"> ACIP chair serves a 3-year term and is selected by the Secretariat from members serving at least 2 years and confirmed by the Secretary of Health and Human Services.
Secretariat	<ul style="list-style-type: none"> Secretariat for SAGE provided by WHO Necessary scientific, technical, administrative, and other support also provided by WHO 	<ul style="list-style-type: none"> Secretariat formed by the PAHO Comprehensive Family Immunization Unit of the Department of Family, Health Promotion and Life Course Executive Secretary function carried out by the Unit Chief 	<ul style="list-style-type: none"> CDC staff members led by an Executive Secretary, who is a senior consultant to the Director of the National Center for Immunization and Respiratory Diseases responsible for the committee's overall management and compliance
Steering committee	NA	NA	<ul style="list-style-type: none"> Representatives from major centers at CDC who meet before each ACIP meeting to plan the agenda and discuss the nomination of new members
Conflict of interest policy	<ul style="list-style-type: none"> SAGE members must be free of any real, potential, or apparent conflicts of interest. All members must complete a declaration of interests form. Appointment, continuation of appointment and participation in SAGE activities are subject to the evaluation of completed forms by the WHO Secretariat. SAGE members have an ongoing obligation to inform WHO of any situation that may give rise to a real, potential, or apparent conflict of interest. 	<ul style="list-style-type: none"> TAG members are asked to update their declarations of interest before each meeting. TAG members with potentially conflicting interests cannot participate in deliberations on specific topic(s) for which they would have a conflict of interest. 	<ul style="list-style-type: none"> Each voting member is required to file a government ethics form and a confidential financial disclosure report. Members or their immediate family must not be employed by vaccine manufacturers, cannot hold stock in vaccine manufacturers, may not be entitled to royalties or compensation related to vaccine manufacture, should not hold advisory or consulting roles with vaccine manufacturers (except participation in clinical trials or data monitoring boards), and may not accept honoraria from vaccine manufacturers for attending scientific meetings. Conflict of interest declarations are signed by Work Group members annually and changes should be announced during Work Group teleconferences.
Participation of vaccine manufacturers	<ul style="list-style-type: none"> WHO may invite external individuals to attend the open sessions as observers either in their personal capacity or as representatives from a governmental institution or intergovernmental organization, or from a non-State actor. Observers are required to complete a confidentiality undertaking and a declaration of interests form before attending an advisory group session. Observers cannot participate in the process of adopting decisions and recommendations of SAGE. 	<ul style="list-style-type: none"> Additional experts may be invited to participate in technical sessions, when relevant. 	<ul style="list-style-type: none"> Representatives of vaccine manufacturers cannot serve as members of a Work Group. Representatives of vaccine manufacturers may be asked to make presentations to the group and answer questions.

WHO, World Health Organization; SAGE, Strategic Advisory Group of Experts on Immunization; PAHO, Pan American Health Organization; TAG, Technical Advisory Group; USA, United States of America; ACIP, Advisory Committee on Immunization Practices; CDC, Centers for Disease Control and Prevention; NA, information not available.

Sources: World Health Organization. Terms of reference for the Strategic Advisory Group of Experts (SAGE) on Immunization. Geneva: WHO; 2022 [cited: 2024 Apr 16]. Available from: https://cdn.who.int/media/docs/default-source/immunization/sage/sage-pages/tors_sage_june2022.pdf; Pan American Health Organization. PAHO's Technical Advisory Group on Vaccine-preventable Diseases (TAG) Terms of Reference. 2023. Washington, DC: PAHO; 2023 [cited: 2024 Apr 16]. Available from: https://www3.paho.org/hq/index.php?option=com_content&view=article&id=14086-tag-onvpd-tor&Itemid=40296&lang=en; Centers for Disease Control and Prevention. Charter of the Advisory Committee on Immunization Practices. 2022. Atlanta: CDC; 2022 [cited: 2024 Apr 16]. Available from: <https://www.cdc.gov/vaccines/acip/committee/acip-charter.pdf>

Republic, and Venezuela (Bolivarian Republic of). The remaining nine countries had an active and functional NITAG based on a written legal framework. Table 2 presents the general information of these nine NITAGs according to the responses to the questionnaire.

NITAG structure and membership

The nine NITAGs are structured and organized according to WHO/PAHO recommendations and consist of a core group, a secretariat, and ad hoc additional participants who vary between countries. In some countries, such as Colombia and El Salvador, scientific societies of, for example, pediatrics or infection have an assigned number of seats in the core group. These representatives are chosen directly from among the members of the societies or by open invitation to members who are then vetted by the health authorities. Often, presidents of these

societies are ex officio members of the NITAG. In countries such as Argentina and Honduras, members of the NITAG are invited to participate in the core group by the health authorities based on their experience and curricula vitae and are elected by members of the core group by consensus. In Costa Rica and Mexico, membership is assigned to heads of governmental departments and organizations relevant to immunizations and not to individuals (Table 3).

Most NITAGs included representatives of the five medical specialties recommended: pediatrics, infection, immunology, public health, and epidemiology. There is the possibility of having participation of additional members, including representatives of other specialties such as gynecology and primary health care, scientific societies, national regulatory agencies, and PAHO (Table 4).

Two different processes were reported for selecting the president of the NITAG. Some countries select the president from among core group members (Argentina, Bolivia (Plurinational State of), Ecuador, El Salvador, Honduras, and Peru), while in others (Colombia, Costa Rica, and México), the Minister of Health acts as the NITAG president.

TABLE 2. Name and year of creation of active NITAGs, Region of the Americas

Country	Name of the NITAG	Year of creation
Argentina	Comisión Nacional de Inmunizaciones	2012
Bolivia (Plurinational State of)	Comité Nacional de Inmunizaciones	2000
Colombia	Comité Nacional de Prácticas en Inmunización	2010
Costa Rica	Comisión Nacional de Vacunación y Epidemiología	NA
Ecuador	Comisión Asesora de Prácticas de Inmunizaciones	2018
El Salvador	Comité Asesor de las Prácticas de Inmunización	2001
Honduras	Consejo Consultivo Nacional de Inmunizaciones	1999
Mexico	Consejo Nacional de Vacunación	1991
Peru	Comité de Expertos de Vacunas	2004

NITAG, national immunization technical advisory group; NA, information not available. **Source:** prepared by authors based on responses on key informant questionnaires.

Conflicts of interest

Besides independence from national health authorities, NITAG members must also avoid conflicts of interest in developing recommendations for national immunization policies. Only two of the participating countries (Bolivia (Plurinational State of) and Mexico) do not have an explicit policy for managing members' potential conflicts of interest. The other countries have such a policy in place; in Peru, for example, voting members are required to declare potential conflicts of interest before each session.

NITAG roles, functions, and operations

All participants responded that the NITAGs in their countries had only a technical advisory role. None had participated in regulatory, operational, or political decisions.

To carry out their advisory functions, all NITAGs have sessions several times a year in which they evaluate the available

TABLE 3. Organizational procedures of active NITAGs by country, Region of the Americas

Country	Terms of reference for NITAG member participation	Selection procedure for core group members	Selection procedure for NITAG president	Procedure for core group member rotation	Operating procedures for NITAG	NITAG president independent of MoH/EPI	Policy on management of conflicts of interest	Conflict of interest declarations for members
Argentina	Yes	No	NA	Yes	Yes	Yes	Yes	Yes
Bolivia (Plurinational State of)	Yes	No	Yes	No	No	Yes	No	No
Colombia	Yes	Yes	No	No	NA	No	Yes	Yes
Costa Rica	Yes	Yes	Yes	NA	NA	No	Yes	Yes
Ecuador	Yes	Yes	Yes	No	No	No	Yes	Yes
El Salvador	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Honduras	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Mexico	No	Yes	Yes	No	Yes	No	No	No
Peru	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

NITAG, national immunization technical advisory group; MoH, Ministry of Health; EPI, National Expanded Program of Immunization; NA, information not available. **Source:** prepared by authors based on responses on key informant questionnaires.

TABLE 4. Technical representation and additional members of active national immunization technical advisory groups by country, Region of the Americas

Country	Pediatrics	Infection	Immunology	Public health	Epidemiology	Additional members
Argentina	Yes	Yes	Yes	Yes	Yes	Representatives of scientific societies, heads of the immunization program, NRA
Bolivia (Plurinational State of)	Yes	Yes	Yes	Yes	Yes	Gynecologists, neurologists, primary care physicians
Colombia	Yes	Yes	No	Yes	Yes	PAHO representatives, representatives of scientific societies
Costa Rica	Yes	Yes	Yes	Yes	Yes	PAHO representative
Ecuador	Yes	Yes	Yes	Yes	NA	Representatives of scientific societies, national institute of public health
El Salvador	Yes	Yes	Yes	No	Yes	Representatives of scientific societies (geriatrics, gynecology, veterinary medicine), ad hoc specialists or experts
Honduras	Yes	Yes	Yes	Yes	No	Representatives of the EPI and the health surveillance unit, PAHO representative, ad hoc experts
Mexico	No	No	No	No	No	Representatives of international civil society and private organizations relevant to the prevention and control of vaccine-preventable diseases
Peru	Yes	Yes	NA	Yes	Yes	Ad hoc experts

NA, information not available; NRA: National Regulatory Agency; PAHO, Pan American Health Organization; EPI, Expanded Program on Immunization.
Source: prepared by authors based on responses on key informant questionnaires.

evidence on, for example, immunization coverage rates, epidemiological trends of vaccine-preventable diseases, and results of clinical trials of new vaccines. Based on this analysis, NITAGs will then draw up recommendations to develop or adjust national immunization policies.

NITAG operations did not vary much between countries. Committees sit on average once every quarter, although some countries (e.g., Costa Rica) have monthly NITAG sessions. In all cases, NITAGs are asked by the health ministry to analyze specific issues and make recommendations. These requests are presented to the NITAGs by the secretariat which in most cases is the country's health authorities.

Although, in general, NITAG operations are not independent of health authorities, the committees in most countries (Bolivia (Plurinational State of), Colombia, Costa Rica, Ecuador, El Salvador, Honduras, and Peru) have developed independent recommendations for the health ministries. Whether those recommendations are accepted by the authorities is not clear; however, it is important to note that in all cases, NITAG recommendations are non-binding for the authorities.

NITAG participation in COVID-19 immunization policy

According to our survey, all NITAGs except for Peru's actively participated in the response to the COVID-19 pandemic by supporting decision-making in areas such as devising the national response and immunization strategies, vaccine selection, and epidemiological surveillance and impact evaluation.

The Mexican case is noteworthy in that a new entity was created, the Technical Advisory Group on Immunization – COVID-19, which included members of the National Council for Immunizations (CONAVA) – Mexico's NITAG – as well as 11 new ad hoc members. It is not clear why the authorities did

not simply create a special technical advisory group within the NITAG framework [18, 19].

DISCUSSION

NITAGs in Latin America have a number of challenges with regard to their organization, operation, and relevance in policy-making [20]. These groups play a significant role in the region, providing experience, scientific evidence, and valuable recommendations to support policy- and decision-making on immunization programs. Nevertheless, the responses from our study participants show that several countries still lack active NITAGs and, of those that report having functioning NITAGs, it is unclear to what extent their recommendations and scientific contributions are taken on board by immunization programs and health authorities.

One of the main challenges is to establish, reactivate and/or maintain functioning NITAGs, based on recognized international recommendations that they should have: a legislative or administrative foundation; formal terms of reference; at least five areas of expertise represented among the membership; at least one meeting a year; the agenda and background documents distributed at least one week before meetings; and mandatory disclosure of conflict of interests. These conditions are needed to allow NITAGs to support technical decision-making of national immunization programs and help them achieve and sustain national and regional vaccination goals [21].

The current situation of NITAGs in the Americas is no different from that observed in other regions of the world. In the progress assessment towards the 2020 Global Vaccines Action Plan, almost 90% of countries had established an NITAG, but no information was available on the actual contribution of these groups to national immunization programs and their impact on the programs [22].

Another challenge for NITAGs relates to achievement of the objectives of WHO's Immunization Agenda 2030, which are linked to the United Nations Sustainable Development Goals (SDGs). According to the SDGs, countries need to strengthen evidence-based decision-making with technical contributions from bodies such as national technical advisory groups on immunization [9].

Within the context of COVID-19 control activities, the Sixth Ad Hoc meeting of PAHO's Technical Advisory Group on Vaccine-preventable Diseases highlighted the need to have NITAGs support the development of national plans for the introduction of COVID-19 vaccines and contribute to the identification of population groups that required COVID-19 vaccination and the budgets necessary for those activities [23].

To properly address these problems to maintain successful immunization and allow countries to expand their national vaccination programs, sound legal frameworks need to be built or strengthened to support independent and transparent evidence-based decision-making [24].

The region of the Americas has seen positive advances in the establishment of NITAGs; for example, countries reporting a functional group have grown from 21 in 2014 to 33 in 2020. However, there is a difference between reporting the existence of an NITAG and having an NITAG that operates according to the international recommendations described earlier [14].

It is understandable that NITAGs in different countries would have different mandates; however, some principles should always be maintained, such as the independent character of the expert members with respect to the government and national immunization program, the credibility and integrity of NITAG members, and a wide representation of key stakeholders relevant to decision-making on vaccination policy [25].

As shown in the survey's results, although most countries report to WHO and UNICEF that their NITAGs have all the required characteristics, deficiencies in organization and procedure were evident, which can affect the independence and credibility of NITAGs. These shortcomings include having government officials and governmental program directors occupying most of the committee seats, not having an explicit policy on disclosing conflicts of interest, or having limited representation of relevant nongovernment sectors [26]. In addition, the lack of recent publications on NITAG organization and operation are evidence of the need for further research on the topic.

NITAGs in the region need to be strengthened in their structure and operation according to WHO and PAHO recommendations. Following the example of successful experiences, such as the U.S. Advisory Committee on Immunizations Practices, could help achieve strengthened NITAGs [27].

It is essential that ministries of health regard NITAGs as essential allies to bring scientific evidence to decision-making in immunization policy. This requires strengthening operating procedures to ensure that meetings occur periodically in the year. Although not part of WHO's recommendations for NITAG conformity, we think that NITAGs should consider participation of finance, commerce, and other relevant government authorities, beyond just the regular members. Inclusion of these authorities could help promote and facilitate discussions on the feasibility of the introduction of new vaccines and new vaccine recommendations and stimulate suggestions on operational strategies.

Global and regional organizations such as GAVI, the Vaccine Alliance, and WHO/PAHO have established mechanisms to support and enhance the capacity of NITAGs in evidence-based decision-making processes, for example, the Supporting Independent Immunization and Vaccine Advisory Committees Initiative [28]. It is important that progress in NITAG operation and the impact of NITAG support initiatives are constantly evaluated to monitor and support NITAG operations globally. Currently, this role is being carried out by regional technical advisory groups, but further support is needed to provide information beyond what is officially reported by countries through WHO/UNICEF's Joint Reporting Form on Immunization. This monitoring should include identifying funding constraints, secretariat support, independence of members, and transparency in proceedings, and it can be done through qualitative studies with relevant national and international stakeholders. Furthermore, exchange of experiences and best practices between NITAGs should be encouraged [22].

Our study showed that some NITAGs in the region actively participated in the response to the COVID-19 pandemic. Nevertheless, some respondents also acknowledged that these groups were not adequately considered by national health authorities in the development and implementation of immunization policies. Therefore, it is essential to achieve proper uptake of NITAG guidelines and recommendations to contribute to the best possible immunization policy-making. This requires stronger support of NITAG organization and operation by WHO's Strategic Advisory Group of Experts on Immunizations and PAHO's technical advisory group through regional evaluation schemes and country-to-country cooperation.

Immunization advisory groups at the international, regional, and national level have proven successful in providing decision-makers with evidence-based recommendations for developing suitable vaccination policies. Nevertheless, there is ample room for improvement on the structure, operation, and transparency of immunization advisory groups to help them keep up with the rapidly evolving field and global agendas on immunization and global health. In addition, due to a lack of research and analysis on the impact of NITAGs, particularly in Latin America and the Caribbean, new research is needed to support the development of strong recommendations for improvement.

Author contributions. MB-C contributed to conceptualizing the study, devising the methods, analyzing the data, writing the first draft, and reviewing and editing the paper. RTV contributed to devising the methods, collecting data, and reviewing and editing the paper. FB-P contributed to devising the methods, validation, and reviewing and editing the paper. CE contributed to reviewing and editing the paper, validation, and supervision.

Acknowledgements. We thank those colleagues who participated in the survey and interviews, especially Dr. Maria Luisa Avila for her valuable insight and suggestions to improve the paper.

Conflicts of interest. None declared.

Funding. Global Health Consortium, Department of Global Health, Robert Stempel College of Public Health & Social Work Florida International University, Miami, Florida, United States of America (Project ID 2500196/800017704/800015206).

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Pública/Pan American Journal of Public Health and/or the Pan American Health Organization and the World Health Organization.

REFERENCES

- Duclos P. National immunization technical advisory groups (NITAGs): guidance for their establishment and strengthening. *Vaccine*. 2010;28(Suppl 1):A18–A25. <https://doi.org/10.1016/j.vaccine.2010.02.027>
- Steffen CA, Henaff L, Durupt A, El Omeiri N, Ndiaye S, Batmunkh N, et al. Evidence-informed vaccination decision-making in countries: progress, challenges and opportunities. *Vaccine*. 2021;39(15):2146–52. <https://doi.org/10.1016/j.vaccine.2021.02.055>
- Etienne CF. Expanded Program on Immunization in the Americas: 40 years. *Rev Panam Salud Publica*. 2017;41: e139. <https://doi.org/10.26633/RPSP.2017.139>
- Buffardi AL, Njambi-Szapka S. The role of national immunization technical advisory groups in evidence-informed decision-making. Enablers, constraints and future support options. London: ODI; 2019 [cited: 2023 Oct 19]. Available from: <https://cdn.odi.org/media/documents/12599.pdf>
- Adjagba A, MacDonald NE, Ortega-Pérez I, Duclos P. Strengthening and sustainability of national immunization technical advisory groups (NITAGs) globally: lessons and recommendations from the founding meeting of the global NITAG network. *Vaccine*. 2017;35(23):3007–1. <https://doi.org/10.1016/j.vaccine.2017.04.039>
- Adjagba A, Senouci K, Biellik R, Batmunkh N, Coumba Faye P, Durupt A, et al. Supporting countries in establishing and strengthening NITAGs: lessons learned from 5 years of the SIVAC initiative. *Vaccine*. 2015;33(5):588–95. <https://doi.org/10.1016/j.vaccine.2014.12.026>
- World Health Organization. Global Vaccine Action Plan – Secretariat Annual Report. Geneva: WHO; 2017 [cited: 2023 Oct 20]. Available from: <https://www.nitag-resource.org/media-center/document/3889-global-vaccine-action-plan-secretariat-annual-report-2017>
- World Health Organization. Global Vaccine Action Plan. Monitoring, evaluation and accountability. Secretariat Annual Report 2018. Geneva: WHO; 2018 [cited: 2023 Oct 19]. Available from: <https://www.who.int/publications/m/item/global-vaccine-action-plan-secretariat-report-2018>
- World Health Organization. Immunization Agenda 2030: a global strategy to leave no one behind. Geneva: WHO; 2020 [cited: 2023 Oct 18]. Available from: <https://www.who.int/publications/m/item/immunization-agenda-2030-a-global-strategy-to-leave-no-one-behind>
- Pan American Health Organization. Reinvigorating immunization as a public good for universal health. Washington, D.C.: PAHO; 2021 [cited: 2023 Oct 19]. Available from: <https://www.paho.org/en/documents/cd5910-reinvigorating-immunization-public-good-universal-health>
- Global NITAG Network. NITAG resource center [internet]. National Immunization Technical Advisory Groups; 2022 [cited: 2023 Oct 16]. Available from: <https://www.nitag-resource.org>
- Commonwealth of Puerto Rico, Office of the Comptroller. Do children and adolescents of Puerto Rico have access to immunization services? Special report. San Juan: Commonwealth of Puerto Rico; 2015 [cited: 2024 May 21]. Available from: <https://www.ocpr.gov.pr/wp-content/uploads/2023/04/DA-16-07-English.pdf>
- Obligation vaccinale aux Antilles [Vaccination obligation in the Antilles] [internet]. Paris: Ministère de L'Interieur et des Outre-Mer [cited: 2024 May 21]. Available from: <https://www.outre-mer.gouv.fr/obligation-vaccinale-aux-antilles>
- World Health Organization. National immunization advisory mechanism [internet]. Geneva: WHO [cited: 2024 Apr 16]. Available from: https://immunizationdata.who.int/global/wiise-detail-page/national-immunization-advisory-mechanism?ISO_3_CODE=GLOBAL
- Pan American Health Organization. Final report of the XXVI meeting of PAHO's Technical Advisory Group (TAG) on Vaccine-Preventable Diseases. Vaccines bring us closer, 14–16 July 2021 (virtual). Washington, D.C.: PAHO; 2021 [cited: 2023 Oct 17]. Available from: https://iris.paho.org/bitstream/handle/10665.2/54833/PAHOFPLIMCOVID-19210038_eng.pdf?sequence=1&isAllowed=y
- World Health Organization and United Nations Children's Fund. Progress and challenges with achieving universal immunization coverage: 2022 WHO/UNICEF estimates of national immunization coverage. Geneva: World Health Organization, 2022 [cited: 2023 Oct 19]. Available from: <https://data.unicef.org/resources/immunization-coverage-are-we-losing-ground/>
- Hadler SC, Shefer AM, Cavallaro KF, Ebama M, Tencza C, Kennedy ED, et al. Supporting national immunization technical advisory groups (NITAGs) in development of evidence-based vaccine recommendations and NITAG assessments – new tools and approaches. *Vaccine*. 2024;S0264-410X(24)00035-5. <https://doi.org/10.1016/j.vaccine.2024.01.035>
- Grupo Técnico Asesor de Vacunación Covid-19. Priorización inicial y consecutiva para la vacunación contra SARS-CoV-2 en la población mexicana. Recomendaciones preliminares [Initial and consecutive prioritization for vaccination against SARS-CoV-2 in the Mexican population. Preliminary recommendations]. *Salud Publica Mex*. 2021;63(2):286–307. <https://doi.org/10.21149/12399>
- Gobierno de México. Política Nacional de Vacunación contra el Virus SARS-CoV-2, para la Prevención de la COVID-19 en México. Documento Rector [National policy governing vaccination against SARS-CoV-2 for the prevention of COVID-19 in Mexico. Governing document]. México City: Government of Mexico; 2021 [cited: 2023 Oct 20]. Available from: https://coronavirus.gob.mx/wp-content/uploads/2021/04/28Abr2021_13h00_PNVx_COVID_19.pdf
- Evans-Gilbert T, Figueroa JP, Bonvehí P, Melgar M, Stecher D, Kfourri R, et al. Establishing priorities to strengthen national immunization technical advisory groups in Latin America and the Caribbean. *Vaccine*. 2024;42(9):2310–6. <https://doi.org/10.1016/j.vaccine.2024.02.082>
- Wiyeh AB, Sambala EZ, Ngcobo N, Wiysonge CS. Existence and functionality of national immunisation technical advisory groups in Africa from 2010 to 2016. *Hum Vaccin Immunother*. 2018;14(10):2447–51. <https://doi.org/10.1080/21645515.2018.1475815>
- Panero MS, Khuri-Bulos N, Biscayart C, Bonvehí P, Hayajneh W, Madhi SA. The role of national immunization technical advisory groups (NITAG) in strengthening health system governance: lessons from three middle-income countries-Argentina, Jordan, and South Africa (2017–2018). *Vaccine*. 2020;38(45):7118–28. <https://doi.org/10.1016/j.vaccine.2020.08.069>
- Organización Panamericana de la Salud. Sexta reunión ad hoc del Grupo Técnico Asesor de la OPS sobre Enfermedades Prevenibles por Vacunación. Estados Unidos de América (reunión virtual) 16 de noviembre del 2020 [Sixth ad hoc meeting of the PAHO Technical Advisory Group on Vaccine Preventable Diseases. United States of America (virtual meeting) November 16, 2020. Washington, D.C.: PAHO; 2020 [cited: 2023 Oct 20]. Available from: https://iris.paho.org/bitstream/handle/10665.2/53260/OPSPFLIMCOVID-19210001_spa.pdf?sequence=1&isAllowed=y
- Evans-Gilbert T, Lewis-Bell KN, Figueroa JP. The Caribbean Immunization Technical Advisory Group (CITAG): a unique NITAG. *Vaccine*. 2019;37(44):6584–7. <https://doi.org/10.1016/j.vaccine.2019.09.032>
- Duclos P, Ortynsky S, Abeyasinghe N, Cakmak N, Janusz CB, Jauregui B, et al. Monitoring of progress in the establishment and strengthening of national immunization technical advisory groups. *Vaccine*. 2012; 30(50):7147–52. <https://doi.org/10.1016/j.vaccine.2012.04.015>
- Tapia-Conyer R, Betancourt-Cravioto M, Saucedo-Martínez R, Motta-Murguía L, Gallardo-Rincón H. Strengthening vaccination policies in Latin America: an evidence-based approach. *Vaccine*. 2013;31(37):3826–33. <https://doi.org/10.1016/j.vaccine.2012.12.062>

27. Centers for Disease Control and Prevention. Charter of the Advisory Committee on Immunization Practices. Atlanta: CDC; 2022 [cited: 2023 Oct 16]. Available from: <https://www.cdc.gov/vaccines/acip/committee/acip-charter.pdf>
28. Senouci K, Blau J, Nyambat B, Coumba Faye P, Gautier L, Da Silva A, et al. The Supporting Independent Immunization and Vaccine Advisory Committees (SIVAC) Initiative: a country-driven, multi-partner program to support evidence-based decision making.

Vaccine. 2010;28(Suppl 1):A26–30. <https://doi.org/10.1016/j.vaccine.2010.02.028>

Manuscript received on 30 January 2024. Revised version accepted for publication on 24 April 2024.

Estado actual de los grupos técnicos asesores nacionales sobre inmunización en la Región de las Américas: recomendaciones para su mejora

RESUMEN

Objetivos. Evaluar la estructura y el funcionamiento de los grupos técnicos asesores nacionales sobre inmunización (NITAG, por su sigla en inglés) en América Latina y el Caribe y formular recomendaciones para su mejora.

Métodos. En el 2022, se seleccionó una muestra por conveniencia, formada por seis miembros actuales y ocho antiguos miembros de NITAG que representaban a 12 países de la Región, y se les invitó a responder un cuestionario en línea sobre la estructura, la organización y los procedimientos de los NITAG. El cuestionario utilizaba indicadores similares a los del formulario de notificación conjunta de datos sobre inmunización. También se preguntó a los participantes sobre el papel que desempeñaron sus NITAG en las políticas de inmunización contra la COVID-19.

Resultados. Brasil, República Dominicana y Venezuela (República Bolivariana de) informaron que no tenían un NITAG activo. Los nueve NITAG activos están estructurados y organizados según las recomendaciones de la Organización Mundial de la Salud y la Organización Panamericana de la Salud, con diferencias entre los países. La mayoría de los NITAG cuentan con representantes de las cinco especialidades médicas recomendadas, con la posibilidad de participación de miembros adicionales. Solo Bolivia (Estado Plurinacional de) y México carecen de una política explícita para gestionar los posibles conflictos de intereses de los miembros. Todos los NITAG tienen una función exclusivamente de asesoramiento técnico y suelen reunirse en forma trimestral. Por lo general, los ministerios de salud les solicitan el análisis de problemas y la formulación de recomendaciones. Salvo en el caso de Perú, todos los NITAG participaron activamente en la facilitación de la toma de decisiones sobre políticas de inmunización contra la COVID-19.

Conclusiones. Los NITAG han brindado apoyo con éxito a la formulación de políticas de vacunación mediante recomendaciones basadas en la evidencia. Sin embargo, es necesario mejorar su estructura, funcionamiento y transparencia para que puedan mantenerse al día en el campo de la inmunización en constante evolución. La investigación sobre el impacto de los NITAG es importante para respaldar la formulación de recomendaciones para su mejora.

Palabras clave

Inmunización; política informada por la evidencia; América Latina; Región del Caribe.

Situação dos Grupos Técnicos Assessores Nacionais sobre Imunização na Região das Américas: recomendações para melhorias

RESUMO

Objetivos. Avaliar a estrutura e o funcionamento dos Grupos Técnicos Assessores Nacionais sobre Imunização (NITAGs, na sigla em inglês) na América Latina e no Caribe e fazer recomendações para melhorá-los.

Métodos. Em 2022, uma amostra de conveniência de seis membros atuais e oito ex-membros de NITAGs, representando 12 países da Região, foi convidada a responder a um questionário on-line sobre a estrutura, a organização e os procedimentos dos NITAGs. O questionário usou indicadores semelhantes aos do formulário de notificação conjunta sobre imunização. Também se perguntou aos participantes sobre o papel que seus NITAGs haviam desempenhado nas políticas de imunização contra a doença pelo coronavírus 2019 (COVID-19).

Resultados. O Brasil, a República Dominicana e a Venezuela (República Bolivariana da) informaram não ter um NITAG ativo. Os nove NITAGs ativos são estruturados e organizados de acordo com as recomendações da Organização Mundial da Saúde e da Organização Pan-Americana da Saúde, com variações entre os países. A maioria dos NITAGs inclui representantes das cinco especialidades médicas recomendadas, sendo possível a participação de outros membros. Somente a Bolívia (Estado Plurinacional da) e o México não têm uma política explícita para gerenciar possíveis conflitos de interesse dos membros. Todos os NITAGs têm uma função exclusiva de assessoria técnica e geralmente se reúnem trimestralmente. Normalmente, os ministérios da Saúde solicitam aos NITAGs que analisem problemas e façam recomendações. Todos os NITAGs, exceto o do Peru, participaram ativamente no apoio ao processo decisório da política de imunização contra a COVID-19.

Conclusões. Os NITAGs conseguiram apoiar a formulação de políticas de vacinação por meio de recomendações baseadas em evidências. Entretanto, é necessário melhorar a estrutura, o funcionamento e a transparência dos NITAGs para ajudá-los a se manter em dia com o campo da imunização, que está evoluindo rapidamente. A pesquisa sobre o impacto dos NITAGs é importante para apoiar a elaboração de recomendações de melhoria.

Palavras-chave Imunização; política informada por evidências; América Latina; Região do Caribe.
