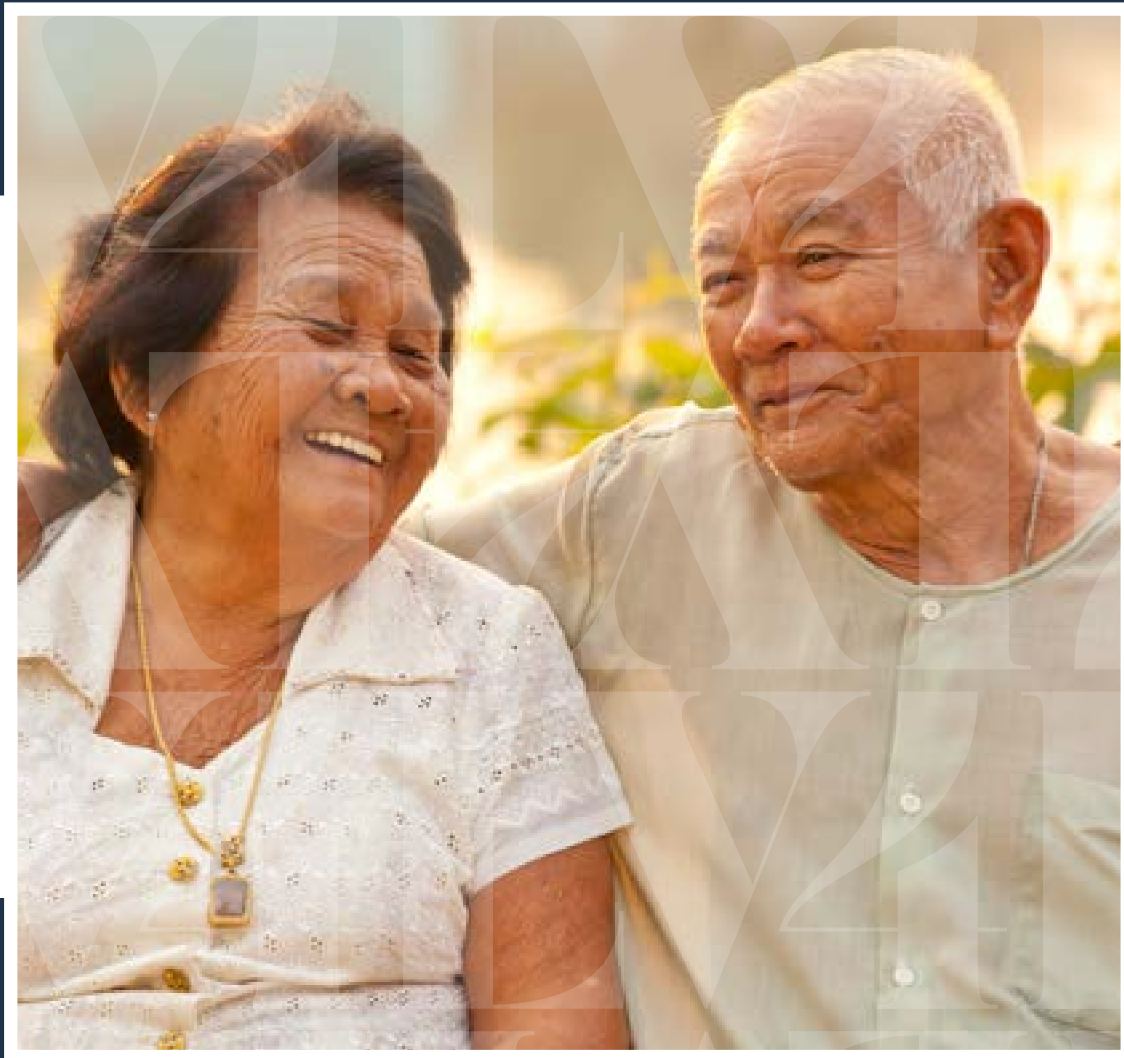
International Federation on Ageing

Vaccines 4 Life

a contribution to the Decade of healthy ageing

Evidence to Action: A review of the National Immunization Technical Advisory Groups (NITAGs)

Technical Report



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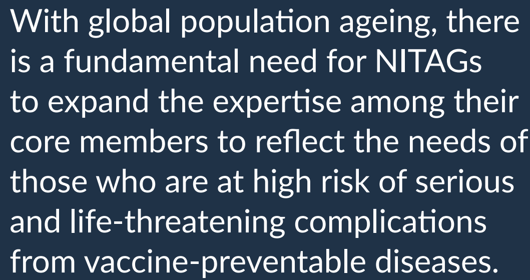


Executive Summary

National Immunization Technical Advisory Groups (NITAGs) are multidisciplinary country-level expert committees tasked with providing independent, evidence-based advice to policymakers and program managers on immunization and vaccine policy issues. NITAGs play a role in fostering healthy ageing, and as such are inextricably linked to the United Nations (UN) Immunization Agenda 2030 and the UN Decade of Healthy Ageing (the Decade) 2021-2030, yet adult vaccination rates are suboptimal globally. To achieve the implementation of a life course approach to immunization the composition of NITAGs must incorporate geriatricians and / or members with specific expertise in the applied science of immunosenescence and weakened immunity associated with older age and chronic medical condition.

A high-level review of the NITAGs was conducted to better understand the process rigour, transparency, accountability, and composition of experts in line with the life course approach to immunization. Comprehensive environmental scans of NITAGs in 34 countries across all WHO regions were performed using a framework that integrates the TAPIC governance framework (Transparency, Accountability, Participation, Integrity, and Capacity) and the six WHO processes indicators of functional NITAGs.

The framework was leveraged to compile and evaluate the missions and responsibilities, mechanics of operations, and recommendation processes to garner the maturity and level of development of each NITAG.

Significant variations were revealed across NITAGs with respect to the transparency and publically available information. Meeting minutes, procedures and memberships were limited for a number of countries. Processes in place to make evidence-informed recommendations varied across countries, where some did not disclose any information on how NITAGs develop and grade evidence- informed recommendations for their respective Ministries of Health.

The lack of NITAG data and information was not exclusive to low and middle-income countries and therefore appears not be associated with the maturity of the NITAGs based on country income or demographic change. In regard to the composition of experts on the NITAG there was little or no representation from the field of ageing to support the needs of older populations. Of the 34 countries, 29 countries (85%) have representation from the pediatrics field among their core/associate members, whereas only three countries had experts in adult vaccination, geriatrics or the population ageing.

With global population ageing, there is a fundamental need for NITAGs to expand the expertise among their core members to reflect the needs of those who are at high risk of serious and life-threatening complications from vaccine-preventable diseases. It is recommended that NITAGs broaden its membership in line with the life course approach to healthy ageing to guide comprehensive national vaccination programs beyond childhood in order to achieve the strategic priorities of the Immunization Agenda 2030. This may also call for a re-evaluation of the WHO process indicators to require NITAGs to include representatives across the entire life course. Currently, there are gaps in data publicly available on several components in NITAGs, and this calls for nations to improve transparency and accountability. The findings of this study, lessons learned from each country, and overarching recommendations can be used as a guide in promoting practices to improve the effectiveness of NITAGs and arguably the population coverage of people of all ages.

Context

Population ageing is a rapid global phenomenon that has profound implications for all aspects of health and wellbeing and health systems development. By 2030, about 1 in 6 people or about 1.4 billion people, will be aged 60 years or over. By 2050, this number is expected to double to 2.1 billion people. [1] With the significant shift in age distributions globally, there is an urgent need for increased efforts to support a healthy ageing population. Low to middle-income countries (LMICs), in the main, will experience the greatest changes. By 2050 two-thirds of the world's population over 60 years of age will live in the Global South.

Parallel to population ageing, the risk of noncommunicable diseases (NCDs) and chronic conditions is increasing. NCDs alone kill 41 million people each year, equivalent to 71% of all global deaths. Older adults with chronic conditions are also at risk of vaccine-preventable diseases (VPDs) such as influenza, pneumococcal pneumonia, shingles, diphtheria, tetanus, and hepatitis.[2] With the anticipated rise of ageing populations and the complex relationship between NCDs and VPDs, which innately increase morbidity and mortality rates among older adults, there is an unprecedented demand for the implementation of comprehensive life course immunization programs. Vaccination is a significant driver in advancing life expectancy by reducing deaths due to infectious diseases and complications of coexisting chronic conditions.[3] Governments and national advisory bodies are responsible for making evidence-informed policies to protect nations against VPDs and improve the health and well-being of populations of every age group.

Life course approach to ageing and immunization

> The IA2030 has an ambitious vision and strategy for immunization for the decade 2021-2030. The intention of the agenda is to align and inspire global stakeholders in immunization to maximize health in all stages of life and progress towards the Sustainable Development Goals (SDGs).

Global agendas, including the WHO Immunization Agenda (IA2030) and the UN Decade of Healthy Ageing, outline strategic actions and guidance to help implement policies to promote health and well-being at all ages. A life course approach to healthy ageing, considers that the process of developing and maintaining the functional ability that enables well-being in older age is impacted by the interactions between the individual and the environment.

The IA2030 encompasses four core principles: people-centred, country-owned, partnership-based, and data-guided.The strategic framework will help guide the implementation of immunization policies throughout life and establish targeted public health interventions.

A life course approach to immunization presumes that all people benefit from recommended immunizations throughout life.[4] Decades of research have proven the importance of integrating adult immunization in healthcare systems to serve as a disease prevention strategy and promote healthy ageing.[5]

National Immunization Technical Advisory Groups (NITAGs)

> The World Health Organization (WHO) has deemed that NITAGS "are integral to country ownership of immunization programs and have a key role to play as the number and diversity of vaccine products increase."

National Immunization Technical Advisory Groups (NITAGs) are multidisciplinary country-level expert committees tasked with providing independent, evidence-based advice to policymakers and program managers on immunization and vaccine policy issues.

The Global Vaccine Action Plan (GVAP) from 2011-2020 noted that all countries should have a functional NITAG by 2020 and in 2012 Member States endorsed this resolution at the 65th World Health Assembly.[6] Regional committees followed by endorsing regional vaccine action plans, most of which also contained specific targets for establishing NITAGs.

NITAGs provide recommendations to their respective Ministry of Health (MoH) to inform the National Immunization Plan (NIP) and these processes differ between countries.

In some countries NITAGs assist authorities in establishing immunization policies and strategies, advising on the public health needs for VPDs, and are instrumental in addressing vaccine quality and safety issues.[7]

NITAGs also report to the Regional Immunization Technical Advisory Groups (RITAGs) on the implementation of recommendations such as immunization goals, congruity of roles and identified needs. The RITAGs are tasked with interpreting the global recommendations of advisory bodies such as the WHO Strategic Advisory Group of Experts on Immunization (SAGE).[8]

The Problem

Since the launch of NITAGs, there appears to be a lack of information and / or refereed literature on their governance, management, and impact. Findings from a 2018 study that reviewed the implementation of NITAGs in six countries (Armenia, Ghana, Indonesia, Nigeria, Senegal, and Uganda), recommended improved evidence-based decision-making in immunization.[9]

Currently, 69% of NITAGs (119 of 172) meet the six process indicators of the WHO to be considered functional. However, there are real questions about the transparency, accountability, level of authority and degree to which the composition of membership represents a life course approach to immunization and therein supports healthy ageing.[10] Today, national immunization plans largely focus on reducing mortality and morbidity in children, although VPDs confer a substantial economic and clinical burden among adults and especially older adults.[11]

Fostering healthy ageing is a hallmark of the UN Decade of Healthy Ageing (the Decade) 2021-2030, yet adult vaccination rates are suboptimal globally. The IA2030 and the Decade are aligned in their life course approach to immunization as an effective public health intervention that promotes healthy ageing.

National Immunization Strategies (NIS) are informed by population-based NITAG recommendations across the life course which must include those most at-risk of vaccine-preventable diseases (VPD) including older adults.[3]

Vaccination throughout life can be enacted through the lens of the four action areas of UN Decade (integrated care, long term care age-friendly environments and combatting ageing) using the key enablers (voice and engagement, leadership, capacity building and research and innovation) to maintain and improve intrinsic capacity and functional ability.[4]

The engagement of NITAGs with other immunization advisory groups (such as RITAGs) can aid in the development of public health programs which support an integrated life course approach to vaccination in accordance with the IA2030, and in doing so contribute to improving uptake rates of adult immunization.[4]

Methodology

The objective of this study is to help influence and shape a high-level review of the NITAGs, including but not limited to the representation in cluding but not limited to the representation of its membership in line with life course and integration. A comprehensive review of NITAGs in 34 countries across all WHO regions was conducted including the examination of publicly accessible information, such as data available on government websites (such as the Ministry of Health), press releases and peer-reviewed reports.

For each country, demographic data were collected, which described income level, gross domestic product (GDP), population age distribution, and the prevalence of noncommunicable diseases (NCDs) among older adult populations.

The United Nations World Population Prospects 2022 reports that Europe and North America had the highest proportion of older adults in 2022, and that by 2050 every one in four persons could be over the age of 65. In contrast, Sub- Saharan Africa is projected to have a smaller growth of the ageing population. [13]

Figure 1: Selected Countries from 6 WHO regions

The countries studied represent nations that have a varied rate of population ageing to ensure a representative sample for a comprehensive review of the NITAGs.

Table 1: Economies of Selected Countries

WHO Regional Office	Economies		
	High Income	Upper Middle-Income	Lower Middle-Income
AFRO - Regional Office for Africa		South Africa	Zambia, Kenya
EMBRO - Regional Office for the Eastern Mediterranean	Bahrain, United Arab Emirates (UAE), Qatar	Lebanon	Iran
WPRO - Regional Office for the Western Pacific Region	Australia, Japan, Singapore	China	South Korea
PAHO - Regional Office for the Americas	Canada, Chile, United States of America (USA)	Argentina, Brazil, Mexico	Bolivia, El Salvador, Honduras
EURO - Regional Office for Europe	Denmark, France, Germany, Greece, Italy, England, Sweden	Turkey	Ukraine
SEARO - Regional Office for South East Asia		Thailand	Bhutan, India

Many lower-middle-income countries currently do not have policies or programs for vaccinating older adults and are thus excluded; however, the findings from this project will be used to address those gaps.

Thirty-four countries, categorized by WHO regions and income level were selected based on four criteria: 1- existence of NITAG meeting all six WHO process indicators[14], 2- publically available information on NITAGs, 3- publications in English, and 4- access to relatively recent information.

Information was then systematically organized to assess composition, mechanisms of operation, nomination and selection processes, mission, responsibilities and recommendation processes, and finally the degree to which there was accordance with the WHO indicators. The synthesis of this detailed data was recorded in an excel spreadsheet in the form of a matrix to better understand the NITAG functions, maturity, and governance and the relationship with demography and income of each country. The WHO six process indicators, listed below, are used to determine the degree of functionality of the NITAG and also to measureand monitor progress.

1. Legislative or administrative basis for the advisory groups;
2. Formal written terms of reference (TOR);
3. Diverse expertise/representation among core members;
4. At least one meeting per year;
5. Circulation of agenda and background documents at least one week prior to meeting;
6. Mandatory disclosure of any conflict of interest (COI)[15].

Findings were viewed through the lens of the TAPIC governance framework developed by the European Observatory on Health Systems and Policies. This framework incorporates the attributes of good governance, transparency, accountability, participation, integrity, and policy-making capacity (TAPIC).[16]

The evaluation of the five domains of the TAPIC framework helps to align the gaps with the adoption and implementation of recommendations.[17]

Table 2: Integrated Framework ro Assess NITAGs

Framework	6 WHO Process Indicators	TAPIC Governance
Assesment Criteria	**Performance Indicators**	
Mission and Responsibilities	There is a legislative or administrative basis for NITAG	
	Mission is to develop evidence informed recommendations on immunization to strengthen National Immunization Programs (NIP)	
	Mission of NITAG includes using local epidemiology to inform recommendations	
	NITAG reports to the Ministry of Health and/or other Government Ministries (information is publicly available)	
	NITAG has some autonomy in making recommendations to the Ministry of Health	
Composition of NITAG	At least 5 different areas of expertise represented among core members	
	Roles of core members are publicly available	
	Responsibilities of core members are defined and publicly available	
	Presence of a strong Secretariat to provide support	
	NITAG has processes to manage conflict of interest (COI) for all members	
Nomination and Selection Processes	Information on nomination of members is publicly available	
	Selection processes for NITAG members are publicly available	
Mechanisms for Operations	Terms of Reference (TOR) are formally written	
	At least 1 NITAG meeting a year	
	Circulation of agenda and background documents at least 1 week prior to meetings	
	Processes to develop and grade evidence-based recommendations are available online	
	NITAG meetings allow relevant parties, civil societies, stakeholders, or external experts to participate in processes and provide input	
Transparency	Meetings are transparent and information is publicly available	
	Meeting minutes are available online	

Findings

Through the lens of the TAPIC governance framework developed by the European Observatory on Health Systems and Policies each NITAG has been analyzed according to the five domains of transparency, accountability, participation, integrity, and policy-making capacity.

NITAGs function independently of the government in most but not all of the 34 countries studied. Although the recommendations of the advisory groups are not conclusive, each Ministry of Health (MoH) uses them to inform policy decisions and immunization programs.

Table 3: Summary of Key Findings using the TAPIC Framework

TAPIC Framework	Attributes of Good Governance	Study Findings
Transparency	Good practices include open meetings to the public and comments during meetings are considered in decision making processes.	32% of NITAGs (Canada, Chile, England, France, Germany, South Korea, Japan, Honduras, Thailand, USA, and Ukraine) have their recommendations accessible online through government websites. NITAGs in all the participating countries except for South Africa, Zambia, Qatar, Lebanon, Japan, Chile, Bolivia, El Salvador, France, Italy had publicly available processes to develop and grade evidence-based recommendations.
Accountability	To ensure public confidence, objectivity, and to maintain NITAG's autonomous reputation, candidates for membership should report all circumstances that may create potential conflicts of interest during their participation in the advisory group.	56% of countries (Australia, Lebanon, Iran, USA, Brazil, El Salvador, Honduras, Canada, France, Germany, Greece, United Kingdom, Sweden, Ukraine, Bhutan, India, South Africa, Zambia, and Kenya) had processes and policies in place to manage conflict of interests.
Participation	Participation of relevant stakeholders encourages collaboration and coalition building and enables collective contributions to rigorous and transparent decision-making processes.	Nearly half of the country NITAGs (Bahrain, Australia, Canada, Chile, USA, Denmark, Germany, England, Sweden, South Africa, Lebanon, Argentina, Thailand, South Korea, El Salvador, Honduras, Ukraine, and India) publicly noted that meetings included external experts. NITAGs did not include external participants such as civil society organizations and community advocates in deliberations.
Integrity	Clearly defined terms if references are critical to sound governance and management processes.	60% of country NITAGs (South Africa, Zambia, Kenya, Qatar, Iran, Japan, China, South Korea, Canada, US, Brazil, Bolivia, El Salvador, Honduras, Denmark, Germany, France, Italy, Greece, Sweden, Turkey) did not circulate the agenda and background documents at least one week prior to the meeting.
Capacity	NITAGs are valued for their expertise and technical capacity inform the Ministry of Health on population-based vaccine policy and practice. According to the 6 WHO process indicators, NITAGs are to have a composition of at least 5 different areas of expertise among its core members.	In 86% of countries studied pediatricians were represented as core and/or associate members. Only France, Canada and El Salvador have an expert or expertise in the field of ageing and / or adult immunisation.

Transparency

Agendas and necessary papers associated with NITAG meetings and those of subcommittees are not routinely in the public domain. About one-third (32%) of the countries studied (Argentina, Australia, Chile, Sweden, USA, Canada, Honduras, France, UK, Germany, and India) had meeting minutes and agendas available online. NITAG minutes in Thailand were not publicly available, however individuals and organizations could request them in writing if reasons for the request are clearly stated. [18]

Almost one-third (32%) of NITAGs studied (Canada, Chile, England, France, Germany, South Korea, Japan, Honduras, Thailand, USA, and Ukraine) make recommendations public through government websites. Seventy-one per cent had publicly available processes to develop and grade evidence-based recommendations. A cross section of countries namely South Africa, Zambia, Qatar, Lebanon, Japan, Chile, Bolivia, El Salvador, France, Italy did not have this information available.

While 68% of countries published relevant information on the Global NITAG Network (GNN) resource center website such as emerging data, new recommendations, and scientific publications [19] it is notable that Bhutan, El Salvador, Greece, Italy, Japan, Kenya, Lebanon, Qatar, Singapore, Turkey, and Ukraine do not.

Thirty-five percent of countries (Australia, Canada, South Korea, USA, Argentina, El Salvador, Honduras, France, Germany, Sweden, Ukraine and India) had publicly available selection processes for expert membership. The remaining countries (South Africa, Zambia, Kenya, Bahrain, UAE, Qatar, Lebanon, Iran, Japan, Singapore, China, Chile, Mexico, Bolivia, Honduras, Denmark, Greece, Italy, Turkey, Ukraine, Thailand and Bhutan) did not have the responsibilities of core members defined and publicly available.

NITAG meetings are generally not open to the public, but there were several exceptions. In South Korea meetings are open to the public and those wishing to attend must complete a written application at least 5 days prior to the meeting. However, the Chairperson can hold a meeting behind closed doors for particularly sensitive topics.[20] In the United States meetings are also open to the public and comments are solicited during each meeting and considered in the decision-making process.[21] Finally in Ukraine, the meetings may be open or closed depending upon the nature of the meeting and the direction of the MoH.[22]

Accountability

NITAGs are accountable through legislation and/or by administrative processes that establish the advisory group. NITAGs mainly function autonomously and are accountable to the MoH.

Just over one-half (56%) of countries including Australia, Canada, USA, France, Germany, Greece, England, Sweden, South Africa, Lebanon, Brazil, Zambia, Kenya, Iran, El Salvador, Honduras, Ukraine, India, and Bhutan had processes and policies to manage this for all members and working groups. Conflict of interest policies involved members signing a written declaration of confidentiality. When deciding whether to accept a nominee into the advisory group, the secretariat and NITAG members consider associations between the candidate and a vaccine supplier or producer, for example if they own stocks in a pharmaceutical company that developed and manufactured vaccines or received funding from a vaccine producer.

In Thailand, there were no formal rules for conflict of interest among nominees for membership and full members. In such cases, the Thailand NITAG made a judgement on whether the nominee's relationship with the company is significant enough to bias their views and affect their partiality.[22]

Participation

The composition of NITAGs generally includedcore members and non-core members (the secretariat and liaison members, ex-officio). Core members are experts who independently serve in their own capacity. They contribute to the decision-making process leading to recommendations and in certain situations may have voting privileges. The secretariat is responsible for providing administrative support in the preparation for NITAG meetings. The ex officio members often represent government agencies, while liaison members are from relevant professional societies and associations. On occasion some members may be technical partners of the WHO. [23]

About one-half of countries studied (Bahrain, Australia, Canada, Chile, USA, Denmark, Germany, United Kingdom, Sweden, South Africa, Lebanon, Argentina, Thailand, South Korea, El Salvador, Honduras, Ukraine, and India) publicly reported that meetings included external experts such as consultants from the WHO, industry experts and specialists.

External experts contributed to specific topics that are deemed necessary to inform decisions but were not permitted to vote or participate in deliberations. Similarly, while liaison and ex officio members are integral to the work and bring essential knowledge and perspectives in general they also do not vote on recommendations. In a departure from these principles in the United States, if fewer than eight voting committee members are present, ex-officio members may be designated temporarily as voting members. [21] In Iran, ex-officio members may also vote to reach a consensus. [24]

NITAGs did not include external participants such as civil society organizations and community advocates in deliberations. The USA NITAG (Advisory Committee on Immunization Practices [ACIP]) solicited public comments at each meeting and these were considered in the decision-making process. Comments were summarized by the working group and options were presented to the ACIP for final consideration and vote. [21]

Integrity

NITAGs convey their independent evidence-based recommendations on vaccines as a mechanism to help the government determine population-based immunization policy through life.

Responsibilities to the MoH may include scientific and technical guidance on matters relating to vaccines, vaccine-preventable diseases and immunization policy, such as the introduction of new vaccines or the modification of existing vaccine schedules in the national immunization plan.

In most cases, the appointed NITAG members elect a chairperson from among themselves. The Chairperson is usually independent from the MoH and the national immunization program. In India, however, the chair is the Secretary of the Ministry of Health and Family Welfare (MoHFW). [25] In Thailand, the chair is the Director of the Department of Disease Control (DDC) and it is the mandate of the Thailand NITAG to advise the DDC. [22]

Sixty per cent of NITAGs (South Africa, Zambia, Kenya, Qatar, Iran, Japan, China, South Korea, Canada, US, Brazil, Bolivia, El Salvador, Honduras, Denmark, Germany, France, Italy, Greece, Sweden, and Turkey) did not circulate the agenda and background documents at least one week prior to the meeting. As informed by the TAPIC framework, all countries except South Africa, Qatar, Japan, Mexico, Greece, Italy and Turkey use local epidemiological data to inform recommendations. For countries that do not use epidemiological data to inform recommendations there was no further information available on their evidence informed recommendation processes. More than one-quarter (26%) of countries did not have clearly defined terms of reference (Qatar, Japan, Singapore, Mexico, Bolivia, France, Germany, Greece, and Italy) publicly available.

The process for making decisions or recommendations varied across countries.

In Singapore, South Korea, Thailand, Argentina, and Iran, recommendations were made by consensus while in 41% of the countries (Canada, Chile, France, Germany, Kenya, Mexico, Thailand, Ukraine, UAE, USA, Zambia, India, Iran, and South Africa) the recommendations were voted upon and majority rules. In Bahrain, Chile, El Salvador, Honduras, Iran, and South Africa decisions could be made either by consensus or voting.

Capacity

NITAGs provide a scientific basis for decisions on population-based immunization programs. Members in all countries were professionals with a diverse range of skills and expertise in disciplines including paediatrics, internal medicine, family medicine, immunology, public health, preventive medicine, vaccine research and policy, virology and economics.

In 86% of countries studied (Bahrain, Brazil, Canada, China, Denmark, England, France, Germany, Kenya, Mexico, Singapore, South Korea, Sweden, United States, Zambia, Argentina, Bhutan, Chile, Greece, India, Iran, South Africa, Turkey, El Salvador, Honduras, Qatar, Thailand, UAE, and Ukraine) pediatricians are highly represented as core and/or associate members. In Honduras, all seven members were paediatricians. In France a geriatrician [26] is a member of the NITAG and in El Salvador there is a representative of the Salvadoran Association of Geriatrics. [27] In Canada, there is a geriatric specialist among their 16 appointed members. [28]

With the exception of Qatar, Italy, Sweden, and Thailand NITAGs have autonomy in making recommendations to the MoH. With the exception of Qatar, Italy, Sweden, and Thailand NITAGs have autonomy in making recommendations to the MoH. In Thailand due to the absence of laws or regulations new immunization policies were sometimes enacted without consideration of the advisory group. [22] In Sweden, the NITAG was established by the Public Health Agency (PHA) of Sweden and is the entity responsible for developing evidence-based supporting material for determining which diseases should be covered by the National Vaccination Programmes (NVP) [29] The Swedish NITAG reviews and comments on materials and supports the PHA in identifying and prioritizing changes to the NVP.

Almost three-quarters of NITAGs have a strong secretariat that supported meetings with necessary background documents, generated reports and compiled recommendations. Bhutan does not have a dedicated secretariat so members are responsible for preparing background documents with assistance from the WHO team in Bhutan. [30]

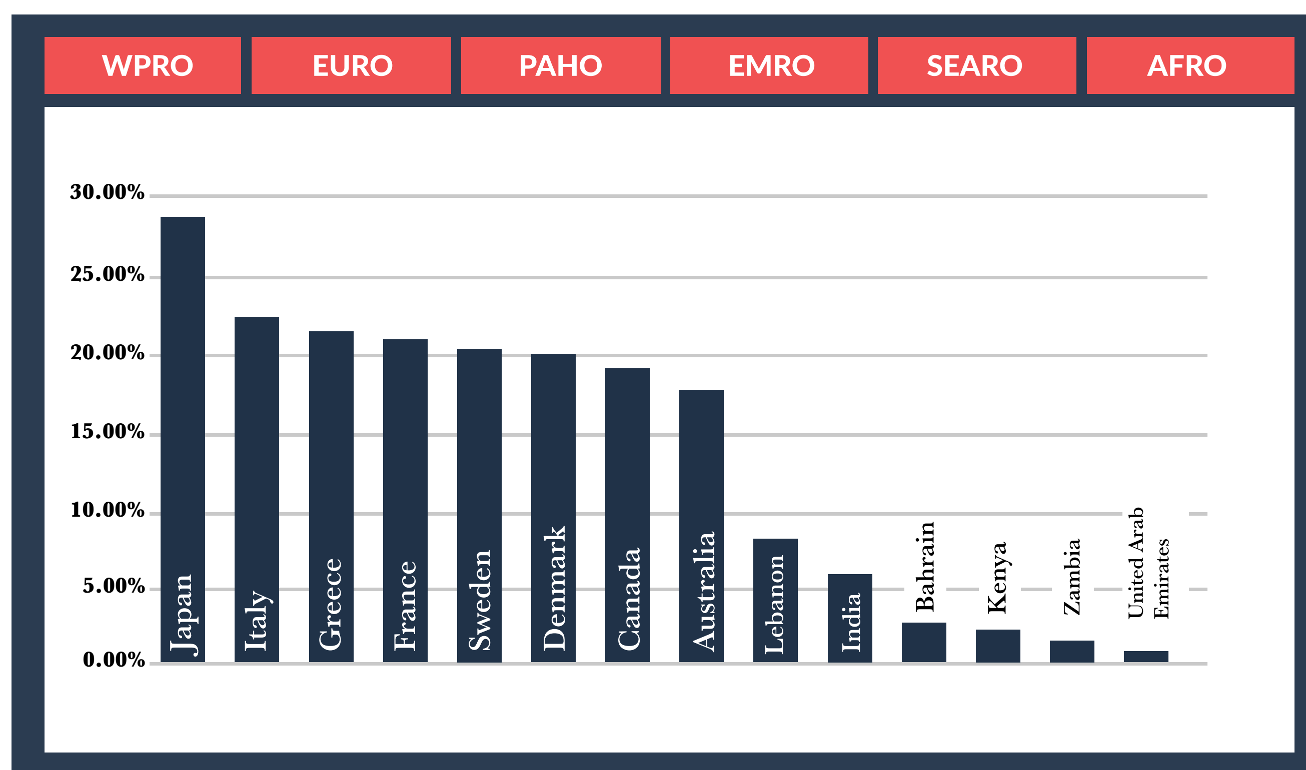
The NITAG in Honduras benefitted from support of the WHO Regional Office - Pan-American Health Organization (PAHO). National and international consultants from PAHO served as liaison members and as such do not vote or participate in the deliberations of the advisory group. PAHO who initiated the NITAG in the Americas region plays a role in the formulation of recommendations by providing necessary data to inform decisions. They may also assist in strengthening the policymaking processes and capacity, with for example health economics evaluations. [31]

Population ageing and NITAGs

Rapid population ageing is a global phenomenon, which will cause the health and social systems of all countries to face novel challenges in response to the major demographic shift. From a public health standpoint, there is a need to reassess the physical and social environments of older adults in order to improve the lives and health outcomes of the growing population.1 However, the degree to which governments have developed public health programs that include adult vaccinations as part of the life course implementation varies significantly.

The countries selected for this study exhibit high proportions of ageing populations, particularly within the Regional Office for the Western Pacific (WPRO) and the Regional Office of Europe (EURO).

Figure 2: Proportion of Ageing Population Across WHO Regions



During 2021 in the WPRO region, Japan had the largest ageing population (over the age of 65 years) at 28.40%, followed by Italy (23.4% in the EURO region). [32,33]

There was no distinguishing pattern between the demographic changes of the countries studied and the maturity of the NITAG. There was a broad variation in the information available online and this finding was not exclusive to low to middle-income countries. Also, there was no association between country-level income and GDP with the level of NITAG development and maturity.

In the South-East Asia Regional Office (SEARO) and Regional Office for Africa (AFRO) of WHO the level of development among NITAGs varied alongside higher income countries in the global north. The growing capacity and capabilities of some NITAGs in LMICs can be attributed to the guidance and support received from the Supporting Independent Immunization and Vaccine Advisory Committees (SIVAC) since 2008. NITAGs in LMICs have been perceived as valuable advisory bodies using local evidence to inform national immunization recommendations.[34]

Role of NITAGs in IA2030 Framework for Action

The IA2030 Framework for Action outlines four elements for quality improvement of immunization programs to achieve the IA2030 vision. Element one refers to coordinated operational planning to prioritize actions at country levels, regions, and partners with the support of technical bodies in achieving the seven IA2030 strategic priorities. The development of the operational planning model in 2020 was guided by extensive consultations with various stakeholders including representatives of NITAGs and RITAGs. According to section 2.5 of the IA2030 framework action, each country is responsible for developing coordinated national immunization strategies to achieve aligned contributions to the IA2030 targets. NITAGs and RITAGs are to leverage guidance from SAGE to shift the priorities of their respective Ministries of Health. [35]

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elements for quality improvement of immunization programs to achieve the IA2030 vision. Element one refers to coordinated operational planning to prioritize actions at country levels, regions, and partners with the support of technical bodies in achieving the seven IA2030 strategic priorities. The development of the operational planning model in 2020 was guided by extensive consultations with various stakeholders including representatives of NITAGs and RITAGs. According to section 2.5 of the IA2030 framework action, each country is responsible for developing coordinated national immunization strategies to achieve aligned contributions to the IA2030 targets. NITAGs and RITAGs are to leverage guidance from SAGE to shift the priorities of their respective Ministries of Health. [35]

Strategic Priority four of the IA2030 outlines the goal of all people benefiting from recommended immunizations throughout life by strengthening these policies and establishing public health interventions for target age groups. [36]

Achievement of healthy global ageing through the life course approach advances the critical need for NITAG groups to enhance transparency and representation of members in line with the life course approach. [3]

Discussion

NITAGs have a vital role in providing governments with evidence-based recommendations to inform policy decisions on immunization across the life course. Regardless of the level of GDP or rate of population ageing countries displayed differences and similarities in the governance structure and attributes of transparency, accountability, participation, integrity, and capacity.

Study findings helped to articulate the functional roles of country-level NITAGs and to profile the membership in line with the life course approach to healthy ageing and immunization. Currently, there are gaps in data publicly available on several components of NITAGs, including the six WHO NITAG process indicators. However, the absence of data does not reflect the maturity and / or development of the NITAGs.

Publicly available data on the structure and functional operations of NITAGs is mainly patchy and at times sparse. The COVID-19 pandemic has resulted in both novel and greater focus on preexisting challenges with vaccination for older age groups globally. The IA2030 calls for nations to refine and develop national policies and services which include older adults in strategic immunization priorities. However, the absence of publicly available data does not support and strengthen the capacity of NITAGs to achieve the IA2030 goals and priorities for a life course approach to immunization.

Transparency

Positions, opinions, and decisions shared with the general public help to build trust across all members of the community. NITAG working documents (meeting minutes and agenda) serve as a means to understand the criteria, considerations and deliberations that lead to recommendations. The absence of this material in the public domain in some countries is cause for concern and may lead to skepticism and hesitancy by the general public. The NITAG (ACIP) in the United States, however, mirrored good practice in that meetings are open to the public and comments are solicited during each meeting and considered in the decision-making process.

The selection processes of NITAGs members in some countries are not transparent and the absence of processes to develop and grade evidence-based recommendations is notable.

To enhance transparency, NITAG standard operating procedures (SOP) and terms of reference (TOR) should optimally define the criteria for decision-making and describe the processes from evidence to recommendations. The selection procedures of NITAG members should also be disclosed to encourage trust.

Accountability

While NITAGs are independent bodies of experts, greater accountability could strengthen relationships with stakeholders who help to champion immunization throughout life and advocate for improved policies.

To ensure public confidence, objectivity, and to maintain NITAG's reputation of being autonomous, candidates for membership should report all circumstances that may create potential conflicts of interest during their participation in the advisory group. Mechanisms should be in place to support and oversee NITAG processes and adherence to terms of reference and conflict of interest policies. Monitoring and improving the compliance of such policies is essential to strengthening the NITAG role in health system governance.

Integrity

Clearly defined terms of reference are critical to sound governance and management processes, yet several NITAGs did not appear to have this fundamental framework. A periodic review of the TOR ensures relevance to the present government priorities and policy context when informing the NIP.

Processes for decision-making varied among countries, through general agreement (consensus), and voting by secret ballots.

To ensure the credibility of the NITAGs the members and chairperson should be independent from the MoH and the NIP. This is not always the case as reported in India and Thailand where the chairs have a direct affiliation with the MoH.

Capacity

NITAGs, valued for their expertise and technical capacity, inform the MoH on population-based vaccine policy and practice. An important process indicator to assess function is the composition of the NITAG having at least 5 different areas of expertise among its core members. Some countries failed to reach this standard, which is most reflected in the lack of expertise in the field of older people and those with chronic medical conditions.

Alignment of the WHO Immunization Agenda 2030 and the UN Decade of Healthy Ageing should help to ensure that healthy ageing is achieved globally through the life course approach to immunization. This can be contributed to through careful attention to the composition of members on NITAGs. Rapid global population ageing calls for NITAGs to help inform national immunization plans to support the health and well-being of people of all ages. [37]

The technical capacity of NITAGs could also be strengthened by considering a more inclusive membership, beyond conventional medical and public health experts. Incorporating individuals with a high-level expertise in health economics could build the capacity for policy analysis.

In 2020 all 194 WHO member states endorsed the GVAP framework and agreed to have a functional NITAG by 2020 [6] to ensure country ownership of immunization programs. Given that NITAGs have a legislative or administrative basis for their establishment, it is imperative that autonomy is a key feature in making recommendations.

WHO process indicators: Membership Composition

The WHO process indicators are a measure of the performance of NITAGs and can arguably be used to evaluate evidence-based processes to inform immunization-related policies. [10] With respect to NITAG membership almost every country has expertise in pediatrics but lacks it in the field of older adults.

This study was not conducted to determine the overall performance and development of NITAGs, but rather to use available data to understand the degree of development in line with the life course approach. While other indicators assess the legitimacy and independence of the NITAGs, the indicator, which requires at least five areas of

expertise among core members, does not specify the types of members. Overall, there is need for NITAGs to diversify the expertise among their core members to reflect the needs of an ageing population and guide a more comprehensive approach to immunization policies across the life span.

The COVID-19 pandemic has highlighted the critical importance of NITAGs in making recommendations based on the best available epidemiological data. Now more than ever there is value in reviewing the monitoring and surveillance systems to ensure age-disaggregate data is collected to better inform the NITAG deliberations. It is the responsibility of NITAGs to help inform national and provincial immunization programs beyond childhood towards achieving the IA2030 strategic priorities. [35]

Key Recommendations

NITAGs play an integral role in shaping evidence-based immunization policies, directly impacting population health across the life course. The findings from this study demonstrate gaps in the transparency, governance and functions of NITAGs and most importantly the degree to which the composition of membership represents a life course approach to immunization and therein supports healthy ageing.

To achieve the immunization targets set out by the IA2030 framework for action and recommendations of the UN Decade of Healthy Ageing, there are several strategies to be considered to meet the needs of the global ageing population.

- Call upon the WHO to recommend that at least one of the five core members of the NITAG has expertise in a life course approach to immunization and most especially older adults and those with chronic medical conditions.
- Call upon governments to improve the availability of public information concerning the selection processes of NITAG members as well as the processes to develop and grade evidence-based recommendations. Transparency can be ensured by requiring NITAGs to define decision-making procedures within their respective standard operating procedures and terms of reference.
- Call upon governments to mandate reporting of all conflicts of interest of potential and current members of NITAG. Strengthening the NITAG role in health system governance requires robust procedures to oversee adherence to the terms of reference and monitoring of compliance with such policies. These procedures and sanctions should continuously be revised and updated as appropriate.
- Call upon governments to recognize the importance of the independence and autonomy of NITAGs in assessing and reviewing data and deliberating on decisions that inform government immunization policy and implementation.

Conclusion

National Immunization Advisory Technical Groups play an important role in priority setting and contribute to policies to prevent and control vaccine-preventable diseases. Although NITAG recommendations are non-binding, Ministries of Health use them to help inform the decision-making process and policy implementation of vaccines as a mechanism to improve population health. Considering the global impact that routine vaccine-preventable diseases (including COVID-19) has on the ageing population, the highest degree of transparency, accountability, participation, integrity, and capacity of NITAGs is essential.

Current demographic trends indicate an urgent need to support the health and well-being of the rapidly ageing global population. The gaps in adult vaccination policies and programs in a life course approach means that older people are being left behind, and their lives and livelihoods compromised and / or shortened because of functional decline and premature death. NITAGs have a responsibility to frame their deliberations through a population-health lens and help drive forward the national immunization plan in the context of the IA2030 agenda and healthy ageing.

This calls for purposeful actions to include experts in NITAGs across all stages of life including older adults to serve as a strategy to prevent diseases and support healthy ageing more broadly. 5 Lessons learned from each country and overarching recommendations derived from this comprehensive study aims to inform guidance in promoting and strengthening practices that improve the effectiveness of NITAGs.

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