

RESEARCH PAPER



Moroccan National Immunization Technical Advisory Group: a valuable asset for the national immunization program and the immunization agenda in the EMRO region

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ABSTRACT

The main mission of a National Immunization Technical Advisory Group (NITAG) is to provide impartial, evidence-based recommendations on immunization to the Ministry of Health. We report on the findings from an evaluation of the Moroccan NITAG with emphasis on its functionality, quality of work processes and outputs, and its integration into the immunization policy process. We conducted a cross-sectional study from October to December 2019. We used the standardized, US-CDC/WHO-developed “simplified assessment tool for national immunization technical advisory groups”. The evaluation included eight participants. The evaluation has shown that it fully complies with the WHO recommendations. Among its strengths, the Moroccan NITAG has a solid legal basis, diverse expertise and many years of combined experience. This composition contributed to the credibility and strength of its recommendations and facilitated their implementation. The NITAG could, however, benefit from implementing written declarations of interests and standardized operating procedures in addition to establishing a standardized methodology to guide and document the decision-making process. The Moroccan NITAG could also gain from inviting members with public health/epidemiology research experience and from exchanging with other NITAGs in the region and globally. Finally, ensuring sustainable funding for the NITAG’s activities will be crucial, so that it can continue its valuable support to the national immunization program.

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1. Introduction

National Immunization Technical Advisory Groups (NITAGs) are multidisciplinary groups of experts who provide independent, evidence-informed advice to policymakers and program managers on vaccine-related issues. Their recommendations take into account the latest scientific evidence as well as the specificities of the national context, for example, the local epidemiology, available resources, cost-effectiveness and program sustainability.^{1–4} According to WHO’s 2009 recommendations,⁵ NITAGs should be formal (established by a ministerial decree or equivalent), technical (the terms of reference specifying only a technical advisory role), and independent (members signing declarations of interest and having a clear policy for the management of conflicts of interest in place). When they show rigor in their structuring and functioning, and continuity in their production, they play a pivotal role in decision making and in achieving national health goals while increasing ownership of immunization policies. Indeed, it has become imperative that NITAGs demonstrate a high level of expertise and commitment, given the ever-growing number of new vaccines available, the difficulty in obtaining sustainable financial resources for immunization programs, competing health priorities and the frequently complex public health situations that require rapid, efficient and ethical decision making.

In 2010, the WHO and Duclos Ph et al. have proposed a gold standard for NITAG functionality and deliberation processes.^{3,4} However, a study conducted two years after to estimate the progress in the establishment and strengthening of national immunization technical advisory groups⁶ showed that despite these recommendations, there was still substantial heterogeneity in NITAG practices among countries and suboptimal implementation of the recommended good practices. Moreover, qualitative studies conducted both in developed countries and in low and middle income countries^{7,8} showed that NITAGs faced many challenges such as unreliable funding, insufficient diversity of members expertise, inadequate conflict of interest management, insufficient capacity to access and use evidence, lack of transparency, and limited integration into the national decision-making processes, thus reducing their recognition and consideration of NITAGs recommendations. Disparities in NITAGs processes and functioning could partially explain the differences observed, across countries and regions, in the impact of NITAGs recommendations on immunization policy and their adoption and implementation by immunization programs.⁹ Despite these differences and given their relevance for the ministry of health, NITAGs have been established in a large number of countries, with their total number doubling between 2010 and 2016.¹⁰ As of 2020, there are 170 reported NITAGs in the world.¹¹ More precisely,

according to the 2019 global vaccine action plan report;¹⁰ the number of countries served by NITAG which are meeting the six functional criteria jumped from 40 in 2010 to 114 in 2018. In Africa,⁸ the number of countries reporting the existence of a NITAG increased from 15 (28%) in 2010 to 26 (48%) in 2016. While in the Eastern Mediterranean Regional (EMRO), constituted by 21 Member States, 100% reported the existence of a NITAG with formal terms of reference, and about 62% (13/21) reported that they are meeting all six criteria.

In addition to the six indicators of good functionality of NITAGs defined by WHO,^{12,13} namely: (1) having a legislative or administrative basis, (2) having formal terms of reference, (3) having at least five areas of expertise represented among its membership, (4) having at least one meeting per year, (5) distribution of the agenda and background documents at least one week prior to meetings, and (6) having mandatory disclosure of conflict of interests,³ that allow a global monitoring of NITAGs progress as a reflection of countries' commitment to immunization, WHO's Strategic Advisory Group of Experts (SAGE) on immunization¹⁴ has recommended to periodically assess NITAGs functionality, quality of work process and integration into the policy process. For that purpose and in response to countries' needs, the Center of Diseases Control and Prevention (CDC), World Health Organization (WHO) and international partners developed a simple NITAG assessment tool¹⁵ to evaluate NITAGs status and performance, and eventually establish a baseline to monitor their growth over time.

Several countries have recently conducted evaluations of their NITAG¹⁶⁻¹⁸ by using this systematic questionnaire which allows comparisons between countries and includes aspects relating to the functionality, quality of work process and integration of its recommendations. Morocco took also part in this initiative in 2019, whereas in EMRO, to our knowledge, to this date no country in the region has conducted an evaluation of its NITAG or at least has not shared its results on the NITAG resource center website,¹⁹ we identified only 6 evaluation reports issued from other regions.

We aimed to evaluate the Moroccan NITAG, using the simplified NITAG assessment tool. More specifically, we aimed to identify areas in which the Moroccan NITAG may require improvements and further support to optimize its functionality, quality of work process and integration into the policy-making process.

2. Materials and methods

We conducted a quantitative cross-sectional study with a semi-structured questionnaire. We started by gaging the interest of the Moroccan NITAG and its secretariat at the ministry of health in conducting an evaluation of its functionality and performance. Both approved and formally authorized the initiative and provided us with a list of NITAG members including their title, position and affiliation, areas of expertise and contact details. Also, they provided us the ministerial decree and legal documents establishing the Moroccan NITAG.

We first contacted members via telephone and proposed face to face interviews. We administered the consent form

before proceeding with the interview. The informed consent specified the purpose of the interview, its duration and the tool used. It also explained that the results would be reported anonymously. As aforementioned, we used the simplified NITAG assessment tool* in its French version. We completed it based on the following components:

a) Participant's identification: The title and domain of expertise of each member and the number of years of experience in their respective field were collected. Interviewees were also asked about the frequency of their contribution in decision making as NITAG member since their nomination, the duration of their membership, the number of meetings they have attended.

b) NITAG's Functionality: we collected information on the structural viability, the functional capacity and the productivity.

c) NITAG's Quality of work processes and outputs: this item examined the NITAG capacity, quality of analytical process, quality of its outputs.

d) Integration of the NITAG into the policy process: we evaluated the transparency, interactions with decision makers and other national stakeholders and the recognition by peers and other immunization stakeholders.

For each of the above components, participants had to classify whether the NITAG fully, partially or did not meet a series of specific recommendations. We also allowed for "no information", "not applicable" option. We offered the possibility to each participants through a semi directives questions to add (when they wished to) their own perception or argument regarding the application or not of a given concept.

e) Finally, the overall Strengths, Challenges and Proposed actions were summarized in a table.

The assessment lasted from October to December 2019.

3. Results

The NITAG was formally established through the ministerial decree number 012536 on the 6th of July 2015. Its mission was defined as strengthening the National Immunization Program on technical and scientific aspects related to vaccines and vaccination. More specifically, it is responsible for providing scientific and technical advice to the Minister of health on national vaccination policies, the latest advances, innovations and scientific recommendations in the field of vaccination, and revisions or updates to the national immunization schedule. The NITAG can also contribute to preparing information and advocacy campaigns in favor of vaccination.

The current Moroccan Technical Advisory Group on Immunization (NITAG) was designated by the Minister of health in 2019. The committee members are 36 experts from the public or private sector and represent the following disciplines or areas of expertise: pediatrics, infectious diseases, microbiology, public health, neonatology, epidemiology, immunology, clinical research, adult medicine and health economics. The NITAG also includes ex-officio members from the ministry of health or relevant government institutions, and liaison members representing professional associations and civil society organizations.

The Moroccan NITAG is constituted by 36 members. Twenty interviewees were contacted by phone and initially 13 (65%) agreed to participate in interviews. Among them, two decided to windrow without disclosing a reason, one declined because he was considering leaving the committee. Two members who agreed to participate in the evaluation were ultimately ineligible because they had never attended a NITAG meeting before, as they had recently joined the committee. The final total number of participants was eight.

We conducted 40–60 minutes face-to-face interviews at the time and place of convenience of NITAG members. All specialties and areas of expertise were represented among the respondents, namely pediatrics, neonatology, infectious diseases, microbiology, immunology, health economics and public health. Among the participants, the average number of years of professional experience in their discipline was 17 years, ranging from 5 years to 30 years. Four members had been sitting at the NITAG since its creation while four were at their first term. All the NITAG members were appointed by the minister of health and chosen in their quality of experts in their field. Few claimed to be researchers or conducting research in the field of immunization.

All participants agreed that the NITAG adhered to the defined meeting frequency and organized ad hoc meetings as needed. They also reported that the group did not have its own work agenda, considering that their role was to respond primarily to the ministry of health's specific requests. Nevertheless, the members acknowledged that the secretariat was very efficient in organizing the meetings despite having no specific resources dedicated to this activity.

The main strength highlighted by all interviewees was the multidisciplinary of its core members, who also came from all regions of Morocco and represented various sectors involved in the immunization activities. Also, all of them showed high commitment and availability to respond to the various requests for support from the Ministry of Health. All members occupied important/recognized positions, whether in medical practice whereby they participated in the surveillance of vaccine-preventable diseases (VPDs) or contributed to increasing the body of clinical knowledge on VPDs. Moreover, scientific societies actively intervene in the continuing education of the medical doctors and pediatricians throughout Morocco and in drafting protocols for the clinical management of infectious diseases. It is noteworthy that while scientific and professional associations have a significant experience in training and influencing health policy makers, they have limited involvement in operational research.

Several weaknesses were raised, such as the absence of an operating budget for the NITAG. For example, the travel expenses to attend the meetings were paid out-of-pocket by the NITAG members and there were no resources for local data collection that could inform decision-making and improve recommendations. Additionally, no budget was assigned for the training of the NITAG members. Concerning the quality of work processes and outputs of the NITAG, half of the interviewees considered that the decision-making process did not follow a defined set of criteria for decision making, or a clear evidence-based methodology to gather and evaluate the evidence. Decision-making processes were not described in a written document such as standard operating procedures

(SOPs) and recommendations elaboration did not use a specific standardized format. All members reported that the secretariat developed background documents for each policy question and that the written minutes were developed during every session and validated orally with all the present members. The declaration of interests was done verbally and at the start of each session. The NITAG had not yet adopted a written policy for the management of conflict of interest.

Finally, results regarding the integration of the NITAG into the policy process showed that all participants agreed that their committee was well recognized by the MoH and had a positive impact on immunization policies.

4. Discussion

The evaluation of the functionality, quality of work processes and outputs, and integration of the Moroccan NITAG into the immunization policy processes has shown that it fully complies with the WHO recommendations for having a formal (established by a ministerial decree), technical (the terms of reference specify only a technical advisory role), and independent NITAG. Our findings showed that the Moroccan NITAG was recognized as an important partner of the ministry of health and contributor to immunization policy through issuing sound recommendations on a wide range of topics related to vaccines and immunization. Its core members were all independent from the ministry of health and multidisciplinary with over 15 years of experience in their field, on average. This diversity was a major enabler for the NITAG to work toward expanding the focus of immunization from childhood vaccination to a life course approach. With 48% of the members working in a research structure, mainly public university hospitals and 40% of them being practicing physicians, their participation should facilitate the generation and use of relevant local evidence to guide the best decision for the Moroccan vaccination program. The success of the National Immunization Program is also crucial to advance toward the immunization goals for the EMRO region.

However, as seen in many other countries,^{20,21} areas of improvement were identified for the Moroccan NITAG. The NITAG would benefit from developing SOPs to increase the transparency of its processes including a clear policy for the management of conflict of interests. The SOPs could also describe the criteria and methodology for decision-making and approaches to evaluating the evidence. With that same perspective, NITAG members expressed interest in building their capacity along with the secretariat in evidence-based decision-making using methodologies such as PICO²² and GRADE.²³ Such training and capacity building in evidence-based recommendations development is essential to improve the work processes, the quality, reliability and reproducibility of its outputs. Moreover, some members suggested that the NITAG should consider creating thematic working group, in order to improve the level of the expertise on a specific vaccine or vaccine-preventable disease. This could boost the generation of data related to a particular topic and possibly result in a better assessment of the evidence for each policy question. Similarly, this empowerment could lead to

improved transparency of the NITAG decision-making process, with materials and recommendations made publicly available to public health training programs and health professionals. This could also encourage pro-activity in the establishment and prioritization of meeting agendas, as described in the “Guidelines for defining NITAG annual work plan.”²⁴ In the short term, the NITAG may consider identifying additional members with experience in public health research specifically in order to strengthen the evidence analysis and interpretation through fixed liaison or ex-officio members or members of working groups. In SAGE’s 2017 report,²⁵ the NITAG progress was particularly notable in LMICs. The number of NITAGs meeting the six performance criteria increased from 3% (1/30) to 35% (11/31) in low-income countries and from 19% (20/101) to 39% (42/109) in middle-income countries. This progress was made possible through advocacy and partnership development, direct support to NITAG establishment and strengthening, as well as indirect NITAG capacity-building through materials, publications and tools development.¹

Regarding the limitation of this evaluation, we were unable to attend a NITAG meeting for direct observation of the meeting and the group dynamics. Indeed, no meetings were scheduled during the data collection period. However, we believe that the results obtained through the face to face interviews provided valuable information that might not have been collected through a group discussion only.

The NITAG assessment tool was useful to gather key information on the components of NITAG functionality, quality of outputs and integration. However, there is room for improvement for the objective measurement of the impact of NITAG recommendations on immunization policy. Moreover, the perceptions of the NITAG members collected in this evaluation remain subjective, especially the items related to NITAG functionality. NITAG members had never shared experience with other NITAGs which could be beneficial to exchange best practices and discuss similar vaccine-related issues. We recommend that the Moroccan NITAG develop such relations with neighboring NITAGs or NITAGs with common policy questions directly or through the global NITAGs network.²⁶

5. Conclusions

As decisions on immunization become increasingly complex globally, as we were still living with the current Covid-19 pandemic, it is important that the value of the Moroccan NITAG continues to be recognized in Morocco. For that, the Moroccan NITAG could benefit from implementing SOPs including a written policy on the management of conflicts of interests, clearly defined criteria and methods for decision-making. So that will ensure providing continuously a quality support to the national immunization program and to be recognized as a reference in the EMRO region.

Disclosure of potential conflicts of interest

No potential conflicts of interest were disclosed.

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