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EVIDENCE-SUPPORT NETWORK for Canada

Evidence synthesis

# Optimizing the design, operation and evaluation of Scientific Advisory Bodies and Expert Panels in pandemic and interpandemic contexts: Rapid Evidence Synthesis

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## Context

The COVID-19 pandemic highlighted the critical role of scientific expertise in informing government decision-making during rapidly evolving public health emergencies. Governments were required to make policy decisions under conditions of uncertainty and continuously evolving evidence, making scientific advisory mechanisms essential for synthesizing knowledge and supporting evidence-informed responses (1). At the same time, this pandemic exposed important challenges in how scientific advice is organized, coordinated, communicated, and integrated into policy and operational decision-making processes.

Evidence from OECD countries suggests that effective science-advice systems must function across the full continuum of crisis management, including preparedness before a crisis, response during emergencies, and post-crisis learning and adaptation. Establishing advisory mechanisms, governance arrangements, and expert networks during periods of stability can help ensure that expertise is mobilized rapidly and effectively when crises emerge (2). These considerations underscore the importance of understanding how Scientific Advisory Bodies and Expert Panels (SABs/EPs) operate not only during emergencies, but also during interpandemic periods when institutional structures, operational processes, and relationships with decision-makers are developed and maintained.

Recent public health emergencies, including the COVID-19 pandemic and emerging threats such as H5Nx, have reinforced the need for timely, trusted, transparent, and equity-informed science advice supported by clear governance structures, well-defined processes, and effective coordination across SABs/EPs. These considerations are relevant across jurisdictions seeking to strengthen evidence-informed decision-making for pandemic preparedness and health emergencies. Within this broader context, the Public Health Agency of Canada (PHAC), through its Applied Public Health Sciences Directorate, commissioned this review to better understand how SABs/EPs are structured, function, and contribute to evidence-informed decision-making.

This evidence synthesis is guided by a systems-oriented analytical framework developed to examine how Scientific Advisory Bodies and Expert Panels (SABs/EPs) operate within broader policy and governance systems. The framework comprises five interconnected domains: (1) context and system characteristics, describing the institutional and policy environment in which advisory mechanisms operate; (2) institutional design of advisory bodies, including governance arrangements, mandates, membership structures, expertise, conflict-of-interest management, and equity considerations; (3) advisory processes and operations, including agenda-setting, evidence use, deliberation, coordination, communication, and interactions with decision-makers; (4) outputs and products of advice, including the types, dissemination, and formalization of advisory outputs; and (5) evaluation, including frameworks and indicators used to assess the functioning, effectiveness, and impact of advisory systems. The framework also incorporates impact as a transversal dimension, capturing reported influence on decision-making, policy uptake, trust and legitimacy, and institutional learning. In addition, equity, transparency, and adaptability are examined as cross-cutting dimensions that shape the functioning of advisory systems across all domains.

Given the need to generate timely and policy-relevant insights for decision-makers, the project is being conducted as a rapid evidence synthesis using a structured three-phase approach. This report presents the findings from Phase 1, which focuses on the institutional design of Scientific Advisory Bodies and Expert Panels (SABs/EPs). Specifically, this phase examines governance arrangements, mandates, membership composition and expertise, membership structures and appointment models, conflict-of-interest management, and mechanisms to promote equity, diversity, and inclusion within advisory bodies. It also explores how these design features are associated with advisory effectiveness, trust and legitimacy, policy influence, and system learning, as reported in the literature.

Subsequent reports will address Phases 2 and 3. Phase 2 will examine priority-setting and activation mechanisms within advisory systems, including how advisory topics are identified, prioritized, and placed on agendas; the criteria and conditions used to activate, escalate, de-escalate, or deactivate advisory mechanisms; and the taxonomy and contextual use of different types of advisory bodies. Phase 3 will focus on the roles, operations, outputs, and evaluation of SABs/EPs. This phase will examine coordination and communication mechanisms, interactions with decision-makers, advisory products and outputs, approaches to formalizing scientific advice, and the roles that advisory bodies play within complex decision-making environments. It will also assess evaluation frameworks and indicators used to measure the functioning, effectiveness, and impact of advisory systems, including evidence regarding the feasibility, practicality, and validity of these evaluation approaches.

## Questions

**Primary question**:

- How can the design and operation of Scientific Advisory Bodies and Expert Panels (SABs/EPs) be optimized to: (a) enhance the integration of science advice into decision-making and (b) enable rigorous evaluation of SAB/EP impact and effectiveness in Canada and other OECD countries?
    - During both pandemic and interpandemic periods
    - With consideration of emerging developments such as AI-enabled living evidence systems (LESs) and their potential implications for advisory systems.

**Phase 1**

- What approaches to governance, mandate, membership models, deliberation practices, engagement with decision-makers, transparency, and communications are associated with improved uptake of advice and demonstrable impact in Canada and across OECD jurisdictions?
- How do governance and design features vary between topic-specific versus strategic advisory bodies, and between those oriented to public versus internal audiences?
- What are the key considerations for assembling multidisciplinary expertise and managing Conflict of interest (COI) without compromising timeliness and quality of advice?
- What design and operational strategies ensure equity, diversity, inclusion, and ethics-informed processes and outputs? (in both pandemic and inter-pandemic contexts)?

- When considering equity dimensions of SAB effectiveness, what mechanisms or processes are used to ensure that the experiences of equity-deserving populations and at-risk/vulnerable populations are meaningfully incorporated into advisory processes?
- How is this information identified, collected, and used within advisory processes?
- Why and how are multiple sectors engaged, e.g. through different types of membership or contributions (e.g. private sector engagement as ex officio members vs. invited guests for specific discussions)?

## Box 1: Evidence and other types of information

***Global evidence drawn upon***
*Research evidence examining Scientific Advisory Bodies and Expert Panels (SABs/EPs) involved in public health and policy decision-making across Canada and other OECD jurisdictions, including pandemic and interpandemic contexts.*

***Types of evidence included***
*Primary studies, evidence syntheses, policy and governance analyses, and other research-based reports examining the institutional design, governance, membership, advisory processes, outputs, evaluation, and impact of SABs/EPs.*

***Additional notable features***
*Prepared over a 30-business-day rapid review process using structured extraction and narrative synthesis approaches.*

## High-level summary of key findings

- The literature on SABs/EPs was highly heterogeneous and dominated by descriptive, conceptual, and qualitative studies, with National Immunization Technical Advisory Groups (NITAGs) emerging as the most extensively studied advisory model across jurisdictions. While many studies examined COVID-19 and other crisis contexts, a substantial portion of the literature also focused on interpandemic governance, institutionalization, preparedness, immunization policymaking, and long-term advisory system functioning. Evidence on AI-enabled advisory systems remained very limited.
- Hybrid and government-embedded advisory models were the most common, while fully independent advisory bodies were relatively uncommon. Embedded systems often facilitated policy integration, whereas independent bodies were more frequently associated with credibility, legitimacy, and public trust.
- Most SABs combined strategic and technical mandates rather than operating with narrowly defined functions. Advisory roles commonly extended beyond evidence appraisal to include coordination, prioritization, policy support, crisis response, and adaptation of global recommendations to local contexts.
- Effective policy uptake depended on strong institutional relationships, trusted communication channels, and perceived advisory credibility. However, implementation was frequently constrained by political interference, fragmented governance structures, and the non-binding nature of recommendations.

- Advisory systems were predominantly composed of biomedical and public health experts, while other forms of disciplinary expertise—including social sciences, behavioural sciences, ethics, economics, and implementation science —were frequently underrepresented. Flexible membership structures combining permanent and ad hoc experts were important facilitators of adaptability.
- COI management was consistently framed as essential for legitimacy, independence, and trust. Although many advisory systems implemented disclosure and recusal procedures, substantial gaps persisted in transparency, formalization, enforcement, and public disclosure practices.
- Equity and inclusion were increasingly recognized as critical for legitimacy and contextual relevance. In terms of SAB/EP composition, several studies highlighted persistent dominance of biomedical expertise and limited representation of social sciences, ethics, patients, civil society, and equity-deserving populations. In advisory processes, evidence showed uneven incorporation of equity considerations into deliberation, priority-setting, and recommendation development, with many systems relying on limited or non-systematic mechanisms to integrate the perspectives and needs of vulnerable populations.
- Transparency was repeatedly identified as a foundational condition for advisory legitimacy, independence, and public trust. Nonetheless, many studies documented opaque appointment processes, limited public communication, and unclear boundaries between scientific advice and political decision-making, particularly during COVID-19.
- Crisis adaptability commonly involved the rapid creation of ad hoc committees, expansion of expertise, accelerated deliberation processes, and intensified coordination mechanisms. Systems with pre-existing structures, networks, and secretariat capacity were better positioned to respond effectively during emergencies.
- No study in the 104-document corpus reported the use of AI tools within SABs/EPs. Only one study identified the need for future research on integrating AI, modelling techniques, data analytics, and decision-support systems into advisory processes.

## Box 2: Approach and supporting materials

This evidence synthesis is being conducted using a phased rapid review approach to examine Scientific Advisory Bodies and Expert Panels (SABs/EPs). This report presents findings from Phase 1, which examines the contexts in which advisory systems operate and the institutional arrangements through which SABs/EPs are structured and governed, including their mandates, governance models, institutional positioning, membership composition and expertise, conflict-of-interest management, and equity considerations.

The review protocol was published in the Open Science Framework (DOI: 10.17605/OSF.IO/37VGH).

Evidence was identified through searches of PubMed, Embase, and Health Systems Evidence conducted between 6 and 8 April 2026. Eligible sources included evidence syntheses, primary studies, policy analyses, and other research-based reports relevant to SABs/EPs. Methodological quality was appraised using AMSTAR II and JBI critical appraisal tools, and equity considerations were examined using the PROGRESS-Plus framework when reported.

Findings were synthesized narratively using a structured analytical framework developed to guide data extraction and analysis. For this first phase, the domains of Context and System Characteristics and Institutional Design of Advisory Bodies were examined jointly, while findings related to the Impact domain and

the Cross-cutting Dimensions of equity, transparency, and adaptability were also integrated into the synthesis. The remaining framework domains will be addressed in subsequent phases of the review.

A separate appendix document includes:
1) Methodological details (Appendix 1)
2) Search strategies and PRISMA flow diagram (Appendix 2)
2) Details of each included study (Appendix 3)
4) Documents that were excluded in the final stages of review (Appendix 4).

At the beginning of the rapid review, members of the requesting team from the Public Health Agency of Canada (PHAC) contributed to refining the research questions and analytical framework to ensure policy relevance and contextual appropriateness. Additional input on the refinement of the research questions, analytical framework, and protocol was provided by experts from the McMaster Health Forum, including Michael Wilson, Kerry Waddell, and John Lavis. In addition, two citizen partners will support manuscript review and the development of complementary knowledge translation products.

## Framework to organize what we looked for

A structured analytical framework was developed to guide data extraction and synthesis across all phases of the review. This report presents findings from Phase 1, focusing on the Context and System Characteristics and Institutional Design of Advisory Bodies domains, while also incorporating findings related to Impact and the Cross-cutting Dimensions of equity, transparency, and adaptability. The remaining domains will be addressed in subsequent phases.

| Context and systems characteristics → | Institutional design of advisory bodies → | Advisory processes and operation → | Outputs and products of advice → | Evaluation |
|---|---|---|---|---|
| ↔Impact↔ | | | | |
| ↔ Cross-cutting dimensions↔ | | | | |

1. **Context and system characteristics**: Describes the environment in which the advisory system operates.
   a. Jurisdiction: Country, region, or international system where the advisory body operates.
   b. Policy/crisis context: Public health or policy context in which the advisory body operates.
   c. Level of governance: Institutional level at which the advisory body operates within the political or administrative system (national, regional, institutional).
   d. Institutional embedding: Organization or institution in which the advisory body is formally located or administratively hosted.
   e. Policy cycle stage: Stage of the policy process in which advisory input is provided (Agenda-setting, policy formulation, implementation, evaluation).
2. **Institutional Design of Advisory Bodies**: Focuses on how SABs/EPs are structured.
   a. Type of advisory body: Organizational form of the advisory mechanism providing scientific advice.
   b. Mandate: Purpose of the advisory body, mandate, and scope of the advisory role.
   c. Governance model: Degree of institutional independence from government decision-makers. Location relative to the government (internal, external, hybrid).
   d. Advisory roles and participation: Core members, invited experts, observers, coordination across agencies, expert networks, cross-country coordination, etc.

e. Membership composition and expertise: Types of actors included in the advisory body and the range of disciplinary or sectoral expertise represented.
f. Membership structure and appointment model: Rules governing membership selection, appointment, and duration of participation
g. Conflict-of-interest management: Policies and procedures used to identify, disclose and manage conflicts of interest among members of the advisory body.
h. Equity considerations: Mechanisms to ensure representation of diverse perspectives and equity-relevant expertise within the advisory body.

3. **Advisory Processes and Operations**: Focuses on how advisory bodies function.
   a. Agenda setting (Who): Actors or institutions that initiate or request topics for the advisory agenda.
   b. Agenda setting (How): Procedures or mechanisms through which topics are identified and formally placed on the advisory agenda.
   c. Agenda setting-criteria (Why): Criteria used to prioritize issues or determine which topics are addressed by the advisory body.
   d. Trigger mechanisms: Conditions or events that activate, escalate, scale down, or deactivate advisory mechanisms.
   e. Evidence inputs: Types of evidence used to inform advisory deliberations and recommendations.
   f. Evidence presentation: How evidence is brought to the advisory body for deliberation.
   g. Deliberation processes: Methods used to discuss evidence and reach conclusions or recommendations.
   h. Coordination mechanisms: Mechanisms used to coordinate scientific advice across multiple advisory bodies or expert panels in order to reduce fragmentation, avoid duplication, and ensure coherence in the advisory ecosystem.
   i. Interaction with decision-makers: Institutional relationships and engagement mechanisms through which advisory bodies interact with policymakers during the development, discussion, or use of scientific advice.
   j. Communication practices: Practices used to convey and explain scientific advice to decision-makers during advisory processes. Focuses on how advice is presented or discussed in policy settings rather than how outputs are disseminated publicly.
4. **Outputs and Products of Advisory Systems**: Captures what advisory bodies produce.
   a. Types of outputs: Types of knowledge products produced by science advisory bodies to support decision-making.
   b. Frequency: How often advisory products are generated.
   c. Target audiences: Intended recipients of advisory outputs.
   d. Dissemination methods: Mechanisms used to distribute or make advisory outputs available to intended audiences beyond advisory deliberations.
   e. Formalization of advice: Degree to which advisory outputs carry formal authority or influence policy decisions.
5. **Evaluation**: Focuses on how effectiveness is measured.
   a. Evaluation frameworks: Conceptual or methodological frameworks used to assess the performance or effectiveness of science advisory systems.
   b. Indicators used: Indicators used to measure the functioning or impact of science advisory systems.
   c. Evidence on validity and practicality of indicators: Evidence assessing the usefulness, feasibility, or validity of tools and indicators used to evaluate advisory systems.
6. **Impact:** Extent to which scientific advice influences policy decisions, trust, and institutional learning, as reported in the literature. This domain contributes to the assessment of SAB/EP effectiveness in real-world contexts.
   a. **Impact on decision-making:** Uptake and use of advisory outputs by decision-makers.
   b. **Policy influence:** Integration of recommendations into policy decisions or actions.
   c. **Trust and legitimacy:** Public or interest-holder trust in science advice.
   d. **System learning:** Institutional learning or adaptations following advisory processes.
7. **Cross-cutting Dimensions**: Captures overarching principles shaping how advisory systems operate across governance, membership, prioritization, and outputs.
   a. Equity: Equity, Diversity, and Inclusion (EDI) considerations in advisory processes
   b. Transparency: Arrangements that ensure openness about the membership, processes, and

advice produced by the advisory body.

c. Adaptability: The ability of advisory systems to respond to crises and incorporate innovations such as AI-enabled processes.
    i. Ability to respond to crises: How the governance, membership, and activation or prioritization mechanisms of science advisory systems vary across crisis and non-crisis contexts, including pandemic, interpandemic, and other emergency situations.
    ii. AI-enabled processes: How artificial intelligence or advanced digital tools are used to support evidence synthesis, agenda-setting, or advisory processes within science advisory systems.

# What we found

## Overview of Included Evidence

A total of 3,636 studies published from 2016 onwards were identified through searches conducted in PubMed, Embase, and Health Systems Evidence (HSE). After the removal of 43 duplicates, 3,593 records were screened by title and abstract. Of these, 669 studies were selected for full-text assessment. Following full-text review, 104 studies met the eligibility criteria and were included in the review. The complete study selection process, including reasons for exclusion at the full-text stage, is presented in **Figure 1** (PRISMA flow diagram) in **Appendix 2**. A detailed list of excluded full-text articles and their reasons for exclusion is provided in **Appendix 4**.

Among the included records, 54 were classified as primary studies and 6 as evidence syntheses. The remaining records consisted mainly of policy analyses, policy case studies, descriptive and narrative reports, expert opinion papers, methodological reports, conference or meeting reports, and other narrative or programmatic documents. Among the primary studies, qualitative designs were the most common, followed by cross-sectional studies. A smaller number of studies used mixed-methods, cohort, case report, or descriptive designs, including descriptive cross-sectional online surveys. Of the six evidence syntheses included, five were scoping reviews and one was a rapid evidence synthesis. Most studies had a descriptive policy analysis purpose, either alone or combined with evaluative or analytical/explanatory approaches.

The included studies were conducted across both high-income countries (HICs) and low-income countries (LMICS) from all six World Health Organization (WHO) regions. Frequently represented countries included the United States (US), the United Kingdom (UK), Canada, France, Australia, Germany, and the Netherlands. Several studies were also conducted in low- and middle-income countries across Africa, Asia, and Latin America, including Nigeria, South Africa, Uganda, Zambia, Benin, Pakistan, the Philippines, Chile, Mexico, Argentina and Brazil. Many of these countries are OECD members, or are key partners in the process of accession (such as Argentina, Brazil, Indonesia, Serbia, or Uruguay).

The included literature reflects different approaches to science advisory bodies (SABs). Some documents adopt a predominantly conceptual or normative approach, focusing on governance frameworks, methodological models, institutional principles, or reflections on how SABs should ideally be structured and operate (3–23). Other studies take a predominantly empirical or evaluative approach, examining the functioning, governance, implementation, performance, or impact of real-world advisory bodies, committees, or policymaking processes across specific institutional and national contexts (24–69). In addition, several documents combine empirical analyses of real-world cases with broader conceptual interpretations, governance reflections, institutional lessons, or recommendations for strengthening SAB systems, thus reflecting a mixed approach (70–

106). Together, these different approaches provide insight both into the normative ideals proposed for SABs and into the practical realities, adaptations, and challenges observed in their real-world operation.

In relation to study quality, all six evidence syntheses were rated as critically low quality according to AMSTAR II criteria, although most were scoping or rapid reviews addressing broad governance and policy questions. Primary and non-review studies appraised with JBI tools generally showed moderate-to-high methodological quality, although rigor varied across designs. Because much of the literature focused on governance dimensions, institutional design, and advisory processes rather than causal evaluation, some JBI appraisal criteria had limited applicability in certain studies.

It is important to highlight that National Immunization Technical Advisory Groups (NITAGs) were the most extensively studied type of science advice body identified in the review, representing 31 of the 104 included studies. This body of evidence was characterized by a strong predominance of multinational, regional, and global analyses, many of them linked to initiatives led by the WHO, the Global NITAG Network (GNN), and capacity-strengthening programs such as Supporting Independent Immunization and Vaccine Advisory Committees (SIVAC). The studies primarily focused on evaluating NITAG functionality, governance, independence, institutional maturity, and integration into immunization policymaking processes, as well as describing strategies for capacity building, inter-NITAG collaboration, and regional technical support (30,31,37,38,52,53,70,71,80,81,91,94,95). Another important group of studies examined vaccine decision-making processes, including the introduction of new vaccines, COVID-19 recommendations, influenza and polio vaccination policies, and the contextual adaptation of global recommendations to national settings (24,25,50,56,57,85,96). To a lesser extent, some studies explored the relationship between NITAGs and health system governance, their role in legitimacy and evidence-informed decision-making, as well as the incorporation of economic evidence and Health Technology Assessment (HTA) approaches into immunization recommendations (26,77,98). While NITAGs provide valuable insights into the governance and operation of mature advisory systems, their prominence in the evidence base may limit the generalizability of some findings to other types of SABs/EPs operating in different policy domains or institutional settings.

A substantial proportion of the literature addressed scientific advisory systems in crisis contexts, particularly during the COVID-19 pandemic. More than half of the included studies discussed pandemic-related advisory processes, and many publications emerged during or after COVID-19 within the 2016–2026 search period. The evidence included empirical studies, case analyses, governance evaluations, and conceptual reflections examining the functioning of SABs/EPs during public health emergencies and periods of uncertainty.

The characteristics of the included studies, as well as the relevant findings related to governance, design and architecture, operational processes, impact domains, and cross-cutting dimensions such as transparency, equity and adaptability are presented in **Appendix 3**.

## Coverage and gaps in existing evidence syntheses and domestic evidence

The evidence base on SABs/EPs was broad but uneven across advisory models, jurisdictions, and topics. Governance models and mandates were addressed across nearly all included studies, while adaptability during pandemic contexts—especially COVID-19—was discussed in more than half of the corpus. The NITAGs represented the most extensively studied advisory model, accounting for nearly one-third of the included studies, whereas other types of scientific advisory bodies, emergency advisory committees, and cross-sectoral advisory mechanisms received substantially less attention. This concentration of evidence may limit the transferability of findings across different advisory contexts and governance arrangements.

The literature was dominated by conceptual and descriptive publications, jurisdictional analyses, case studies, normative frameworks, organizational reports, and scoping reviews. At the same time, a considerable number of empirical studies evaluated governance arrangements, organizational functioning, institutional development, and policy processes, particularly in relation to NITAG maturity, alignment with WHO criteria, transparency practices, and advisory responses during COVID-19. However, most evaluations focused on procedural or organizational characteristics rather than downstream impacts such as policy implementation, public trust, long-term institutional effectiveness, or population-level outcomes. Similarly, while many studies described relationships between governance features and outcomes such as legitimacy, trust, policy influence, or engagement with decision-makers, these associations were generally reported descriptively and were rarely examined through comparative or evaluative study designs.

Important methodological limitations were also identified across the evidence base. Existing evidence syntheses were primarily scoping reviews and one rapid review addressing broad governance and policy questions, rather than intervention-focused systematic reviews. Consequently, all included evidence syntheses were rated as critically low quality according to AMSTAR II criteria. Primary and non-review studies generally showed moderate-to-high methodological quality, although important heterogeneity existed across designs and methods. Because much of the literature focused on governance dimensions, institutional arrangements, and advisory processes rather than causal evaluation, the evidence base provides stronger insights into how SABs/EPs are organized and operate than into the effects of specific governance arrangements on advisory performance, policy uptake, public trust, or other downstream outcomes. Overall, while the literature provides substantial insight into the organization and operation of SABs/EPs, important gaps remain regarding comparative effectiveness, implementation processes, equity impacts, AI-enabled advisory systems, and advisory mechanisms operating outside immunization or high-income settings.

## Key findings from included evidence documents

The findings are organized around the institutional and contextual characteristics of SABs/EPs, integrating the first two domains of the analytical framework: Context and System Characteristics and Institutional Design of Advisory Bodies. The sections on Governance Models and Institutional Positioning and Mandates, Advisory Scope and Roles synthesize evidence on the governance arrangements, institutional embedding, mandates, functions, policy contexts, and governance settings in which advisory bodies operate. The sections on Membership Composition and Multidisciplinary Expertise and Conflict-of-Interest Management and Safeguards examine key design features related to expertise, representation, appointment structures, and independence. Additional sections synthesize findings related to the framework's Impact domain (decision-making, policy influence, trust and legitimacy, and system learning) and Cross-cutting Dimensions (equity, transparency, adaptability, and emerging AI-enabled processes).

## Institutional and contextual characteristics of Scientific Advisory Bodies and Expert Panels

### Governance Models and Institutional Positioning

Articles were categorized into independent, embedded, or hybrid models of governance. For some articles, multiple models of governance were selected because multiple SABs/EPs were discussed in a single article. Independent models operate at arm's length from government decision-makers and maintain a high degree of institutional autonomy. Embedded models are formally located within, or administratively hosted by, government institutions and are integrated into governmental decision-making structures. Hybrid models

combine formal linkages to government with mechanisms intended to preserve scientific independence and autonomy.

Hybrid and embedded governance models were the two most prevalent, accounting for 36.5% and 28.8% of articles respectively — that is, 38 articles describing hybrid SABs/EPs (3,4,7,10,12,25,29–31,33,37–39,41–45,49,50,55,56,65,77,80,81,83,84,90,93,94,97,100,102,105) and 30 describing embedded ones (7,9,15,18,19,21,24,25,36,48,49,54,55,58–62,64,70,75,79,80,89,90,93,97,100,102,104). Independent models were identified less frequently, appearing in only 14 articles (6,12,14,22,23,28,37,47,52,63,69,86,92,105), and 10 describing both independent and embedded models in the same article (10,17,27,53,67,68,76,83,87,88). Finally, the least amount of articles were focused on the remaining combinations of governance models. Six described a combination of independent and embedded models (1,27,31,33,72,73); five described a combination of independent and hybrid models (16,20,41,77,96); and four articles described a combination of all three (65,71,74,99).

## Mandates, Advisory Scope and Roles

Mandates of the SABs/EPs were broadly categorized as 'strategic', 'technical,' or 'risk assessment,' or any combination of the three. While there was overlap between the three categories, strategic mandates typically focused on informing policy direction, governance, priority-setting, preparedness, and coordination across decision-making processes. Technical mandates generally focused on the appraisal, synthesis, interpretation, and translation of scientific evidence to support recommendations on specific interventions, technologies, or public health measures. Risk assessment mandates primarily involved the identification, characterization, monitoring, and communication of risks associated with public health threats, emerging hazards, or policy options. The categorization of these articles could refer to one SAB/EP having a multifaceted mandate, or that multiple SABs/EPs were described with differing mandates. The majority (65%, n=68) of articles feature SABs/EPs with mandates classified as both strategic and technical (2,5–7,12,14–16,19,20,22,23,25–29,31–37,39,40,42,43,45–48,50–52,55–57,64–66,70,74,76–82,84–89,92,94–99,101–103,105). The next most commonly found combination of mandates were a combination of all three, strategic, technical and risk assessment, represented by 13.4% (n=14) articles (3,4,8–10,13,68,71–73,75,90,100,104). SABs/EPs with only technical, or a combination of technical and risk assessment mandates were found in 15.4% of articles (n=16) (18,19,22,25,31,39,42,45,50,55,60,64,68,84,92,94). Finally, only 3.8% (n=4)of articles had SABs/EPs with a strictly strategic mandate, a strictly risk Assessment mandate or a combination of the two (54,61–63).

The majority of SABs/EPs had a themed role and mandate specific to an area of expertise. For example, there were many with mandates about vaccination (7–9,11,14,17,18,24–30,33,35,37,43,45–47,71,75,77,85,91,92,95,96,102,104). These SABs/EPs focusing on vaccination had a range of mandate themes, from strategic and technical, technical and risk assessment, only technical, and all three combined. Another common mandate theme was the conducting of health technology assessments (14,17,26,28,33,102). Most SAB/EPs described were permanent bodies, but there was some discussion of ad hoc bodies, usually ones created during the COVID-19 pandemic.

The stage of the policy cycle in which advisory was provided was widely described in 96.2% of the articles, meaning that only four studies (40,54,84,91) did not specify it. It is worth highlighting that the information found was highly diverse; in descending order of coverage, the stages identified were: policy formulation (n=99), implementation (n=42), evaluation (n=35), and lastly, agenda-setting (n=17).

Regarding the stages addressed, in five studies (4,17,70,76,85) SABs/EPs advisory took place across all stages of the policy cycle; that is, it spanned from the establishment of priorities on the agenda, the promotion

of evidence-based evaluations, and the formulation of strategies or programs, through to their evaluation. Seventeen studies addressed three of the four advisory stages: 12 articles covered formulation, implementation, and evaluation (5,16,29,33,37,46,52,74,75,77,93,97), while 5 studies covered agenda-setting, formulation, and implementation (12,45,63,69,99). Forty-four studies addressed two stages: 6 covered agenda-setting and formulation (36,42,61,72,79,105); 18 covered formulation and evaluation (6,7,14,18,21,23,28,31,34,35,38,58,60,68,73,92,98,102); and 20 covered formulation and implementation (3,8,11,15,25,41,44,49,51,55,56,62,66,67,87–89,100,101,104). Thirty-four studies addressed only one stage: Yuba et al. (59) focused exclusively on agenda-setting, while 33 studies concentrated solely on the formulation stage (9,10,13,19,20,22,24,26,27,30,32,39,43,47,48,50,53,57,64,65,71,78,80–83,86,90,94–96,103,106).

The reviewed studies described SABs/EPs as structures responsible for generating, reviewing, synthesizing, translating, making recommendations on, and communicating scientific evidence to support governmental decision-making and public health policy (50,95,98). Their roles commonly included providing technical and strategic recommendations, conducting evidence reviews, supporting risk assessment, facilitating policy dialogue, and advising ministries of health or regulatory authorities on vaccination, health technology assessment (HTA), non-pharmaceutical interventions, and broader public health measures (41,62,74,97,99,101).

NITAGs were among the most consistently described advisory structures. Across regions, they were typically composed of chairs, core voting members, secretariats, ex-officio government representatives, liaison members, observers, and invited external experts (25,30,31,38,42,46,53,77). Working groups and ad hoc experts, including invited technical experts and external advisors, frequently supported evidence gathering and technical analyses (11,80,81). Some NITAGs also incorporated non-voting observers, professional societies, civil society organizations, WHO/PAHO representatives, and vaccine manufacturers into advisory processes (25,31,75).

Several SABs operated through governance arrangements of networks involving government officials, academics, external consultants, professional associations, industry representatives, civil society actors, and affected communities (27,34,63,83). During the COVID-19 pandemic, advisory participation often expanded to include modelling groups, external scientific networks, consultancy firms, and ad hoc committees coordinating across agencies and jurisdictions (3,5,73,76). However, some studies reported restricted participation, political influence in member selection, and the use of handpicked experts aligned with governmental priorities (26,72,79).

HTA and regulatory advisory bodies frequently relied on structured technical and deliberative processes. HTA agencies and committees evaluated clinical, economic, and policy evidence to formulate recommendations regarding coverage, subsidies, or benefit package design (17,33,97). Similarly, FDA-related advisory committees integrated clinical experts, regulators, industry representatives, consumers, and patient organizations into evidence appraisal and recommendation processes regarding drug and vaccine safety, efficacy, and reimbursement decisions (9,14,28,64,68).

Several studies highlighted the central role of secretariats, chairs, and coordinating bodies in organizing meetings, preparing agendas and evidence summaries, managing conflicts of interest, facilitating communication across sectors, and ensuring continuity of advisory processes (24,44,58). Advisory participation also extended beyond technical experts in some contexts, incorporating patients, consumers, public representatives, teachers, students, community organizations, and development partners into deliberative or consultation processes (36,49,54,63,66).

## Membership Composition and Multidisciplinary Expertise

Sixty-five of the documents (62.5%) included reported that the composition and expertise of members were multidisciplinary. Most of these studies described the disciplines represented within the advisory body, while only ten did not. Additionally, 19 documents did not address the composition of members or their multidisciplinary expertise. Several studies described multidisciplinary composition as a way to broaden the range of expertise and perspectives considered during advisory deliberations, including biomedical, economic, ethical, social, behavioural, implementation, and policy considerations, particularly for complex public health decisions (4,25,34,53,70,77,87,98), The balance sought varied across advisory bodies and mandates, but commonly involved combining scientific and technical expertise with perspectives relevant to implementation, ethics, economics, governance, and affected populations.

Medical disciplines: These predominated in the composition of advisory body members. The following experts were mentioned: epidemiologists, virologists, pediatricians, infectious disease specialists, immunologists, gynecologists, neurologists, experts in hygiene, biology, internal medicine, preventive medicine, family medicine, pulmonologists, dermatologists, microbiologists, neonatologists, pharmacovigilance specialists, biostatistics experts, pharmacologists, oncologists, cardiologists, toxicologists, and addiction specialists (3,5–7,9–12,14,15,19,20,23,25–27,31,33–35,41–50,52–55,58,61,62,64,65,67,68,73,76,77,79,82,83,86–88,92–94,97,99–105).

Some documents simply referred to disciplines such as medicine and public health (72), medical and biomedical experts (74), experts in immunization, vaccines, and public health (98), basic science, clinical science, and epidemiology (70), technical experts and researchers in the field of global malaria control (90), and researchers and analysts in HTA (17).

Other disciplines**:** Statistics and economics predominated, the latter most often described as health economics(3,14,15,23,25,33–35,45–47,51,70,75,82,83,97). Health and mathematical modelers were also mentioned (3,5,6,10,27,41,51,78,87,88,100,104).

Some documents mentioned disciplines such as law, sociology, psychology, and behavioral sciences/scientists (3,6,10,12,27,34,41,83,87,99,100). SABs/EPs also included professionals in health systems administration (70), ethics specialists (25), and legal privacy experts (45), as well as experts in biotechnology, cybersecurity, privacy and surveillance, and informatics (12,27). Anthropology was also represented (3,6,65,99), along with natural, social, and environmental sciences (4,12,14,67,87,88,104), and health policy and political science (53,62,99).

Policymakers: Some documents mentioned policymakers from Ministries of Health and Finance (33,62,97,102,106), as well as government representatives and technical staff from Ministries of Health (36,49,51,54,78,82,83), public officials (45,61), and Ministry of Health staff serving in an ex officio capacity (50).

Other institutions: Liaison members from non-governmental organizations were identified (50), as well as international partners such as academic institutions (51), non-governmental organization (NGO) representatives (33,44), civil society representatives (9,36,49), industry representatives (9,23,64,68,83,102) patient and community representatives (64,68,97,102), consumer representatives (11,23,43,75), and representatives of students, parents, and teachers (63).

One advisory body included former COVID-19 patients in its composition (73); another included a member of the clergy (rabbi) (33). Fagan et al. (54) included representatives of the general public, as well as tobacco manufacturers, small businesses, and tobacco growers without voting rights. Finally, Weinkle et al. (101) included leaders of advocacy organizations, essential workers, and at-risk populations. NCDHHS teams incorporated community leaders.

Barriers identified in member composition and multidisciplinary expertise

Some documents highlighted the absence or limited representation of social and behavioral sciences (65,72–74,100). Health economists and experts in economic evaluation were also underrepresented or absent in some advisory bodies(19,19,53,77,79); Okeke et al. (98) specified that health economists are often absent in advisory bodies in LMICS. Surprisingly, some advisory bodies identified public health as a missing discipline in their composition (34,74,100). Other disciplines that were absent or underrepresented included ethics (74), experts in communication, finance, and program implementation to improve capacity (26), as well as fields such as sociology and education (79), and methodologists (19). Some studies also reported limited patient participation, insufficient inclusion of civil society perspectives, and underrepresentation of equity-deserving populations within advisory structures (32–34,67,106).

## Membership structure and appointment models

Regarding membership structure and appointment models, 26 documents were identified that reported permanent members within the advisory body, while 18 studies reported ad hoc or temporary members, and 12 studies described a mixed model. Eighteen studies did not provide information on the membership structure(6,8,10,18,28,29,39,40,43,47,57,59,60,86,88,90,95,96).

Permanent committees were identified, such as SAGE, NITAG, and Kenya National Immunization Technical Advisory Group (KENITAG), supported by specific subcommittees, working groups, or research teams focused on particular diseases (37,50,71,94,98,100). Some were selected based on their expertise as specialists in their respective fields (46); another had a main committee with specialized working groups and permanent subgroups such as SACN (84); and ACIP was supported by a steering committee, a leadership team, ex officio and liaison members, and specialized working groups for pre- and post-recommendation activities (9,11). As for NITAGs, Howard et al. (53) report that they are generally composed of between 10 and 15 core members (including a chair and a vice-chair), between one and five secretariat staff members, and several ex officio observers. All functional NITAGs had standard operating procedures (SOPs) and formal nomination processes to ensure an appropriate range of expertise. Next, Behavioural Science Units (BSUs) are described as permanent teams that manage critical capacity by hiring external consultants, incorporating academic researchers with specialized expertise, or funding fellowship programs to complement their staff (99).

Additional permanent committees include standing committees and HTA bodies. It is also mentioned that the Food and Drug Administration (FDA) in the US has several specialized standing committees (e.g., oncology, endocrinology, and metabolic drugs) that are convened for specific regulatory meetings (64,68). Within permanent committees in China and Hong Kong, the DAC was identified as a centralized and permanent decision-making body supported by a specialized technical assessment agency (ACE) (17,19). The Spanish Network for Health Technology Assessment of the National Health System (RedETS) is structured around a Plenary Board (composed of the heads of all health technology assessment agencies and the directorates of the Ministry of Health), a Standing Committee, a rotating Presidency (annual rotation among the heads of health technology assessment agencies), and a Technical Secretariat (21). HTA bodies are described as permanent advisory structures. The Australian Pharmaceutical Benefits Advisory Committee (PBAC): one -third of members are appointed by the Minister of Health, and the remainder by professional organizations. It meets three times a year with a 17-week evaluation cycle (23).

Regarding tenure in these types of committees, only six documents reported the duration of membership. For Israel's NITAG, Stein-Zamir and Rishpon (45) report that that membership lasts five years and

is renewable, while Asturias et al. (92) highlight that Global Advisory Committee on Vaccine Safety (GACVS) members serve for three years, with the possibility of reappointment for a second term . Similarly, Baba, 2025 describes permanent membership with a fixed three-year term, renewable twice in HAS (14). Members of National Advisory Committee for Vaccination and Vaccines of Benin (CNCV-Bénin) serve for a three-year period (13), as do members of the Health and Epidemiological Council (CSE) (93), and members of the NEMLC, who are also appointed every three years (58).

Only six studies address the selection process for permanent committees. GACVS members are selected through an open application process organized by the WHO secretariat (92). In contrast, CNCV-Bénin members are appointed by the Minister of Health based on their skills and specialties (13). One study reported that Advisory Committee on Immunization Practices (ACIP) members are selected through a comprehensive and rigorous standard selection process with defined terms; however, after June 2025, there was an abrupt replacement of the 22 current and incoming previously evaluated members, along with the simultaneous replacement of the Executive Secretariat and support staff under accelerated circumstances, without following standard selection procedures (7). One study reported a permanent committee (ACIP) with member rotation (7), while in other articles ACIP was described as a structured membership model with appointed voting members serving fixed terms (9,11). HAS members are selected through a public call, and half of the Board of Directors is renewed every three years (14).

Another recurring theme was SABs/EPs being created and members being appointed by Ministries of Health. The Vaccination Team (EV) is a group of experts created by decree of the Ministry of Health. The CSE was established by law and is composed of 15 members, a president, and secretaries (93). The NEMLC is appointed by the Minister of Health based on recommendations from the team. Its support structure includes four subcommittees, Health Transition Committees (PTC), and a Secretariat. Calls for applications are published by the National Department of Health and announced at provincial and departmental levels. The chair of the Economic Development Committee (EDP) and their team receive all applications and supporting documentation and carry out the selection according to the criteria established in the call (58). The Ministry of Health of Kazakhstan determined the composition of an advisory committee consisting of 15 permanent members representing various interes-holders, with the responsibility of developing recommendations on HTA and the design of benefit packages (102).

Ad hoc bodies were identified in multiple studies, often during the COVID-19 pandemic. In the study by Simangolwa et al. (106) it was identified that in 12 out of the 14 reviewed studies, new ad hoc advisory committees were established specifically to set priorities in sexual and reproductive health and rights, without public calls for committee positions or transparent recruitment procedures. During the COVID-19 pandemic, several ad hoc committees were created. In France, the president appointed ad hoc councils, and members of permanent bodies Santé Publique France (SPF), HAS, HCSP attended meetings of the scientific council as “permanent observers,” without participating in discussions or in drafting recommendations (72). Similarly, in Germany, the study by Sell et al. (34) identified 21 ad hoc expert committees. These committees were also reported in Spain (32) Nigeria (89), the UK (78,79,83), Puerto Rico (105), the US (101), Italy, the US, Poland, Uganda, Sweden (79), the Philippines (15), and Canada (82,83). A study on the development of COVID-19 vaccination policies across 44 countries suggests the presence of ad hoc or temporary advisory structures during the pandemic, although their exact structure was not clearly defined (56).

Some committees were adapted, created, and dissolved depending on different emergency contexts. One of the included studies refers to a committee adapted to crisis contexts: the UK’s SPI-M-O modelling subgroup, originally convened in 2009 for H1N1 influenza and in 2014 for Ebola. During COVID-19, its membership was expanded to around 50 modelers from various universities (5). Tuohy et al. (83) report the dissolution of the UK Vaccine Taskforce (VTF) following the COVID-19 emergency, whereas the Canadian VTF

continues to operate post-emergency with an expanded mandate. In Canada, ad hoc advisory bodies were created to provide advice and formulate general recommendations on structural challenges in the design of the healthcare system across the country, including financing, coverage, and service delivery; these bodies were dissolved after submitting their final reports (62). It is important to highlight that one document reports how governments frequently dissolved and reconstituted committees when they did not align with their political objectives (for example, Poland dissolved the Medical Council when it opposed the government's tolerance of anti-vaccine rhetoric) (79).

Additionally, the Political Advisory Committee (PAC), established in 2020, is described as a "temporary political advisory committee" composed of 10 experienced political members holding high-level positions (61). Finally, the FAO/WHO Joint Expert Meeting on Microbiological Risk Assessment (JEMRA) operates through ad hoc expert meetings, involving a dynamic group of specialists; participants are invited and appointed strictly in their personal capacity and do not represent their governments or employers (22).

Regarding membership in ad hoc committees, only one study reported voluntary affiliation subject to formal regulations, chaired by two senior academics (82). Some committees were structured with both permanent and ad hoc members. For example, the OMT included permanent members, such as the chair (director of RIVM-CIb) and the secretary (head of the National Coordination Centre for Communicable Disease Control), as well as ad hoc members (73). The IOM/NAM operates through multiple structures, including various ad hoc committees of 10 to 20 volunteer experts for "consensus studies," permanent "forums/roundtables" for ongoing stakeholder engagement, and one-off "workshops" (12). The TWGs consist of six permanent working groups and several temporary or ad hoc subgroups. Their composition is mainly determined by institutional roles and direct invitations from the Ministry of Health, which, according to the study, are sometimes influenced more by existing relationships than by technical expertise alone (49). In the Danish Health Authority's Expert Advisory Panel (DHA), permanent members are appointed by the DHA for renewable two-year terms, while ad hoc members are appointed on a case-by-case basis (55). The TWGs, National Advisory Committee, and UHC EPHS Steering Committee are composed of both permanent and ad hoc members. Four of the TWGs were pre-existing bodies that typically advise the Ministry of National Health Services, Regulations and Coordination (MNHSR&C) on their respective disease areas and were reassigned to evaluate evidence, analyze interventions across the three dimensions of Universal Health Coverage, and formulate prioritized recommendations for the inclusion of essential services in the National Universal Health Coverage Public Health System. The NAC was specifically created for this process and includes 15 formal members (103).

In the NITAGs of France and the Netherlands, permanent members have fixed voting rights and participate in drafting reports, whereas ad hoc members do not vote (25). Another study on NITAGs in Latin America and the Caribbean reported that these consist of a core group of permanent members and additional ad hoc participants. There are two selection processes for the chair: election among members of the core group or appointment by the Minister of Health. In some countries (Costa Rica, Mexico), membership is assigned to positions/institutions rather than individuals. Selection is carried out through nomination by scientific societies or invitation by the health authority, based on curriculum vitae and experience (31).

In Canada's response to the COVID-19 pandemic, an ecosystem emerged composed of permanent committees PHAC committees and newly created, time-limited ad hoc working groups (Incident Response Group, Pan-Canadian Health Data Strategy Expert Advisory Group, COVID-19 Clinical Pharmacology Ad Hoc Working Group, COVID-19 Therapeutics Working Group) (27). Federal departments participated in member selection, establishing terms of reference, and had the authority to terminate participation (27). In contrast, in the UK, the pandemic response relied on existing operational structures (permanent committees) adapted for the emergency, alongside ad hoc committees (e.g., Environmental Modelling Group (EMG)) created to address specific needs by SAGE (3). In a global qualitative study of policy advisors' perspectives on COVID-19, involving

participants from four WHO regions and 11 countries, interviewees reported participating in various advisory structures, including independent advisory groups, panels and roundtables created in response to the crisis, consultancy collaborations, university committees, and pre-existing governmental public health advisory structures (65). In France, he HCSP is organized into four specialized committees and two permanent working groups; however, during COVID-19, a specific ad hoc working group was convened to manage the crisis (67)

In China, advisory systems evolved from SARS to COVID-19. During the SARS period, membership was primarily temporary and ad hoc, organized through HA working groups that expanded progressively during the outbreak. In the interpandemic period, the system evolved into a more permanent and institutionalized structure through the Centre for Health Protection (CHP), although advisory committees still relied on designated experts and detailed rules for appointment or rotation were not described. Finally, during the COVID-19 period, the membership structure combined permanent governmental groups, temporary panels, and ad hoc experts. Some experts were directly appointed by the Chief Executive, while others could be invited as needed; appointment processes were described as relatively opaque (76).

Among the included documents, we identified 20 studies reporting that members of advisory bodies were selected directly by government entities or high-level political and/or executive authorities. In a scoping review of the literature on political advisory bodies during the COVID-19 crisis in Europe, it was found that members were frequently appointed directly by high-level political and executive authorities, raising significant concerns about politicization, transparency, and independence (74). Some countries primarily relied on pre-existing advisory bodies embedded in crisis preparedness systems, while others mainly depended on newly created bodies. A third group adopted a hybrid approach, combining existing advisory structures with newly established ones (74).

In the UK, the Government Chief Scientific Adviser (GCSA) appoints members of SAGE from existing lists in the Government Office for Science (GO-Science) (72,83). In Israel, the PNAC is composed of approximately 20 members appointed by the Ministry of Health and the Ministry of Finance (33). In the Brazilian AIDS program, members are appointed by the Ministry of Health, which reserves the right to replace them annually (36). Members of PBAC are appointed by the national government (69).

All NITAGs are formally established as advisory bodies through an order of the Ministry of Health. Additionally, all NITAGs have a designated chair, and their secretariats are managed by staff from the NPHI or NIP (24,38,46,80,81,93,93) . Similar membership and appointment structures, including designated chairs and secretariat support arrangements, were also reported for the Serbian committee (13), ITAGI in Indonesia, and UNITAG in Uganda (85). Musa et al. (48), addressing the committee of FBiH, reports that the term of members and the chair is four years, with unlimited re-election possible. Meanwhile, Dabanch et al. (42) reports that Chile's immunization committee is composed of full members, ex officio members, and liaison members; only full members are selected by the Ministry of Health, while ex officio and liaison members represent governmental institutions, professional associations, and technical partners. Members of Israel's committee are personally nominated by the Director of Public Health Services (45), and members of ZITAG are appointed by the Permanent Secretary of the Ministry of Health for renewable three-year terms; it includes full and alternate members (35). Additionally, a study on NITAGs in the Eastern Mediterranean region reports that these are established through official statutes and written terms of reference (ToR) detailing the scope of work; some use public calls for member recruitment and review their ToR every three years (30). An analysis across WHO Member States notes that NITAGs require a legislative or administrative basis and formal written terms of reference (ToR) (52).

Some included documents describe advisory body structures in general or non-specific terms, characterizing them as formally established bodies with core members and external experts invited for specific topics (77); or as multidisciplinary national experts providing independent, evidence-based recommendations to

national health authorities (26). In one study, most members worked exclusively in universities while some were based in public health or governmental research institutions, with participants recruited through the RECOVER project network, snowball sampling, and government websites (41). TPSAC consists of 12 members, including a chair; nine members have voting rights, while three (representing the tobacco industry) cannot vote (54). The TB Think Tank operates through an Executive Committee and three expert working groups, each chaired by two or more co-chairs (including a member of the NTP staff and national expert organizations) (51). KECIP, established by law, currently consists of 15 members with a two-year term (75). In Germany, advisory bodies operate under pre-existing legal frameworks (Infection Protection Act) (72) and are composed of representatives from the Ministry of Health, the EPI program, external organizations (funders/donors, academics, etc.), and internal bodies (government departments) (44).

Other documents provide more detailed descriptions of advisory body structures. The UK's SAGE included government officials, clinical experts, and academics from more than 80 institutions, operating with specialized subgroups (SPI-M, SPI-B, Ethnicity Subgroup, Social Care Working Group). U.S. advisory mechanisms included specialized advisors in specific areas (ACIP, VRBPAC) and senior federal officials. Denmark used a Chief Behavioral Science Advisor, an interministerial group, and the. NOST) . The Republic of Korea included experts in medicine and social sciences distributed across four subcommittees (87).

TWGs and NAC are characterized by a tiered and progressive advisory structure designed by the HCHI, including condition-specific working groups (WGs), disease-specific technical working groups (TWGs), the National Advisory Committee (NAC), and the HCHI. The composition of WGs may vary by condition, while some TWG members may participate in NAC meetings (97). The NAC-STBBI consists of 15 voting members. Working groups (WGs) are formed with NAC-STBBI experts and occasional external collaborators to address specific priority issues (20).

Finally, we identified some documents addressing how advisory bodies should be structured or function. Harmon et al. (70) propose that these advisory bodies should explicitly define the types of members included, how many of each type, who appoints them, their term length, reappointment processes, and grounds/processes for removal to ensure merit. Likewise, Hoffman et al. (4) highlight debates in the literature regarding committee design, size, objectives, and types of advice, and another study recommends establishing them as statutory or permanent bodies with a long-term mandate, with clearly defined terms of reference and governance (16).

## Conflict-of-Interest Management and Safeguards

Among the 104 included documents, 51 explicitly addressed some aspect of conflict of interest (COI) management within SABs. Across these studies, COI management was consistently framed as a core component of independence, transparency, legitimacy, and good governance. Multiple conceptual, evaluative, and operational documents identified mandatory disclosure of interests as a central criterion for functional advisory systems, particularly within WHO and WHO/UNICEF evaluation frameworks for NITAGs (8,29,37,39,52,71,80,81). Evans-Gilbert et al. (29) similarly identified COI disclosure as a sub-indicator within the NMAT independence domain and highlighted the need for written COI policies with explicit definitions and management procedures. Beyond formal functionality indicators, several studies emphasized the broader governance implications of COI management. Harmon et al. (70) argued that both actual and perceived conflicts may undermine the credibility of advisory bodies and erode public confidence in immunization programs, particularly in contexts shaped by vaccine hesitancy. The same study further emphasized that core members should sign COI declarations upon appointment, declare conflicts continuously as they arise, reaffirm the absence of COIs at each meeting, and refrain from participating in discussions or voting when conflicts exist (70). Hoffman et al. (4) identified conflict evaluation and transparency as key determinants of advisory committee

legitimacy, while STAGE (16) emphasized that intellectual independence and the absence of conflicts of interest are necessary conditions for effective national advisory structures.

Documents presenting conceptual frameworks, governance models, or normative guidance generally proposed formalized and structured approaches for managing COI within advisory bodies. Across these documents, common recommendations included mandatory declarations of interest at appointment and before meetings, written COI policies, predefined assessment criteria, recusal from discussions or voting, public disclosure mechanisms, and clear separation between advisory and decision-making functions (4,16,70,94). Harmon et al. (70) proposed that foundation instruments should explicitly define procedures for identifying, declaring, managing, and transparently reporting conflicts of interest, including ongoing disclosure obligations and exclusion from deliberations when conflicts arise. Similarly, STAGE (16) emphasized that national advisory group membership should ensure intellectual independence, absence of COI, and inclusion of diverse perspectives, while Perronne et al. (94) highlighted conflict declarations, codes of conduct, and transparency procedures as necessary conditions for collaboration and legitimacy across NITAG networks.

Several conceptual and evaluative documents linked COI management to broader dimensions of trust, legitimacy, transparency, and credibility in advisory processes. Harmon et al. (70) argued that transparent appointment procedures, ongoing disclosure requirements, and public reporting mechanisms are necessary to sustain public confidence and counter perceptions of undue influence from industry or government actors, particularly in contexts shaped by vaccine hesitancy. Hoffman et al. (77) similarly identified conflict evaluation and transparency as central determinants of advisory committee legitimacy, while Bell et al. (77) emphasized that independence from industry, transparent processes, and public communication contribute to the credibility and acceptance of NITAG recommendations. These studies consistently framed COI management not only as an administrative safeguard, but also as a governance mechanism intended to reinforce the perceived impartiality and trustworthiness of advisory bodies.

Case-based and empirical studies frequently linked transparency and COI management with the perceived legitimacy and credibility of advisory processes. In the US, Markowitz et al. (43) described the Vaccine Safety Technical (VaST) group as explicitly designed to enhance public confidence through the inclusion of independent experts and the public dissemination of assessments. Dzau et al.(12) attributed the legitimacy of the Institute of Medicine advisory processes to structural independence, rigorous peer review, and strong COI safeguards. Conversely, several studies examining COVID-19 advisory structures reported that opacity surrounding advisory processes, membership selection, unpublished minutes, or undisclosed interests undermined legitimacy and public confidence during the pandemic (27,74,83).

Across country experiences and institutional case descriptions, COI management procedures varied substantially in their degree of formalization and implementation. Several NITAGs and advisory committees reported mandatory declarations of interest prior to meetings, recusal from discussions or voting, confidentiality agreements, and written codes of conduct. Silva et al. (25) reported that France and the Netherlands required declarations before each meeting and excluded members with relevant conflicts from participation in specific topics. Dabanch et al. (42) described how Chile's CAVEI required declarations before each session and prohibited conflicted members from participating in related deliberations or votes. In Zambia, Simuyemba et al. (35) reported that ZITAG maintained a formal register of interests, required declarations at each meeting, and excluded conflicted members from voting or deliberation. Similar mechanisms were described in Israel (45), South Africa (58), Brazil (36), and JEMRA (22). More institutionalized systems such as ACIP and VaST additionally included annual screening processes, public disclosure procedures, open meetings, and publication of meeting materials (9,11,43).

Despite the existence of formal COI mechanisms in many advisory systems, multiple studies identified important limitations in their implementation, transparency, and enforcement. Several evaluations found that

advisory bodies lacked written COI policies or relied on verbal declarations without predefined management procedures (30,38,46). Although mandatory disclosure of interests is one of the six core WHO functionality indicators for NITAGs, studies reported that management of these conflicts remains a persistent challenge requiring continued institutional strengthening (8,52,80). Other reported limitations included inconsistent transparency practices, unclear consequences of declared interests, limited public disclosure, and concerns regarding political or commercial influence (101) (98). During the COVID-19 pandemic, several studies described opaque nomination processes, unpublished memberships or minutes, and unclear COI procedures, particularly in ad hoc advisory bodies (74,83,101). Additional concerns included selective enforcement of COI standards (7), difficulties excluding experts with industry ties due to limited national expertise (25), and institutional controversies linked to undisclosed conflicts (54).

Several studies also highlighted tensions between strict COI policies and the practical need to access highly specialized expertise. Silva et al. (101) noted that identifying influenza experts without ties to the pharmaceutical industry was nearly impossible due to limited public research funding. Bell et al. (77) similarly reported that some countries were reluctant to exclude members with industry links because of the scarcity of national expertise. Kang et al. (75) documented support for allowing conflicted experts to participate in discussions while excluding them from final decision-making. Other studies described broader tensions between transparency, confidentiality, speed, and political responsiveness during emergencies. Hilmer et al. (82) emphasized the need to balance academic openness with confidential communication requirements during crisis advising, while Weinkle (101) reported that some advisory processes intentionally limited openness to facilitate rapid and sensitive decision-making during vaccine prioritization discussions. Bouchat et al. (74) further documented that COVID-19 advisory systems frequently operated under conditions of limited transparency, overlapping mandates, and evolving institutional arrangements. Together, these studies suggest that COI management was often approached not as the elimination of all competing interests, but as a process of balancing independence, technical expertise, transparency, and operational feasibility within specific political and institutional contexts.

***Table 1. Key Messages on Institutional Design of Advisory Bodies***

| **Institutional design of advisory bodies** | |
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| **Mandate** | ● The majority of SABs/EPs had combined strategic and technical mandates (65% of articles), making this the most common mandate function.<br>● A smaller proportion of advisory bodies integrated all three functions simultaneously: strategic, technical, and risk assessment mandates.<br>● Purely technical mandates or combined technical and risk assessment roles were also reported.<br>● Most SABs/EPs operated with specialized thematic mandates, particularly in areas such as vaccination and HTA.<br>● Vaccination-focused advisory bodies demonstrated substantial variation in mandates, ranging from technical roles to broader strategic and risk assessment responsibilities. |
| **Governance model** | ● Hybrid governance models were the most frequently reported, representing 36.5% of articles.<br>● Embedded models, where advisory bodies operate within government structures, were the second most common, accounting for 28.8% of studies.<br>● Independent advisory bodies operating outside of government were identified less frequently.<br>● Several studies described multiple governance models within the same article, reflecting the coexistence of different advisory structures within countries or |

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| | health systems.<br>● Overall, findings suggest that advisory systems commonly rely on mixed or government-linked governance arrangements rather than fully independent structures. |
| **Advisory roles and participation** | ● SABs/EPs primarily supported governments through evidence synthesis, technical advice, risk assessment, policy translation, and public health recommendations.<br>● NITAGs were the most consistently described advisory structures, typically composed of chairs, core voting members, secretariats, ex-officio members, liaison members, observers, and external experts.<br>● The main functions of NITAGs included reviewing scientific and economic evidence, formulating immunization recommendations, and advising Ministries of Health and international organizations.<br>● Many advisory bodies operated through multidisciplinary and multi-stakeholder participation, involving government officials, academics, professional associations, civil society, industry representatives, and community actors.<br>● During COVID-19, advisory systems expanded to include ad hoc committees, modelling groups, expert networks, consultancy firms, and cross-agency coordination mechanisms.<br>● HTA and regulatory advisory bodies focused on evaluating clinical, economic, and policy evidence to support decisions on reimbursement, benefit packages, vaccines, and drug regulation.<br>● Secretariats and chairs played central coordinating roles, including organizing meetings, preparing evidence summaries, managing documentation, and facilitating intersectoral communication.<br>● Several advisory systems incorporated external experts and temporary working groups to provide specialized expertise for specific policy questions. |
| **Membership composition and expertise** | ● Most advisory bodies reported a multidisciplinary composition (62.5%), predominantly including experts from medical disciplines.<br>● Medical disciplines dominated membership structures, particularly epidemiology, infectious diseases, immunology, pediatrics, virology, and public health expertise.<br>● Advisory bodies also incorporated non-medical expertise, especially health economics, statistics, mathematical modeling, law, ethics, behavioral sciences, sociology, political science, and informatics.<br>● Several committees included stakeholder and community representation, such as NGOs, civil society, industry, patients, consumers, community leaders, and vulnerable populations.<br>● Despite multidisciplinary intentions, many studies identified underrepresentation or absence of social sciences, behavioral sciences, ethics, health economics, communication, and public health expertise. |
| **Membership structure and appointment model** | ● SABs/EPs adopted three main membership models: permanent committees, ad hoc/temporary committees, and mixed structures combining both approaches.<br>● Permanent advisory bodies such as SAGE, NITAGs, ACIP, and HTA committees commonly operated through structured systems with subcommittees, working groups, secretariats, and specialized expert teams.<br>● Some advisory systems relied on formal governance mechanisms, including standard operating procedures, fixed terms, public calls, and written terms of reference, particularly among NITAGs and HTA bodies.<br>● Membership terms in permanent committees were generally fixed and renewable, most commonly ranging from three to five years. Selection |

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| | processes varied considerably, including open public calls, ministerial nominations, and direct government appointments.<br>● Many SABs were established or formally regulated by Ministries of Health or national legislation, often with governments retaining authority over appointments and member replacement.<br>● During the COVID-19 pandemic, many countries created temporary ad hoc advisory committees, frequently with limited transparency in recruitment and appointment processes.<br>● Advisory systems evolved over time, with some temporary pandemic structures later dissolved, institutionalized, or expanded into permanent governance mechanisms.<br>● Multiple studies emphasized the need for clear governance frameworks, including transparent appointment procedures, defined mandates, fixed terms, multidisciplinary representation, and accountability mechanisms. |

## Impact of Scientific Advisory Bodies and Expert Panels

It is notable that about 85% (n=88) of SABs/EPs identified had a mandate that combined at least two of the three categories (strategic, technical, and risk assessment). This could indicate that SABs/EPs may have a stronger impact on decision-making, policy influence, system learning and trust and legitimacy if their mandates, and functions, are multifaceted. The diverse combinations of mandates may also reflect the multidisciplinary nature of the SAB/EP membership, as well as the multidisciplinary work required in health settings. Of the bodies with a strategic and technical mandate, 64 of the 66 were operating at a national level. Only one was strictly regional and one was strictly international. Sixteen of the strategic and technical mandated SABs/EPs had a mixed level of government operation, including national, regional and sometimes global, institutional, and local levels. The majority of bodies with a strategic and technical mandate were explicitly multidisciplinary in their membership (87%). The majority (~86%) of strategic and technical bodies included some kind of advisory committee.

Most documents in this review address institutional relationships and participation mechanisms between advisory bodies with policymakers with a primary focus on NITAGs at global, regional, and national levels, though other types of SABs are also discussed.

### Decision-making

The composition, structure, and institutional design of SABs/EPs directly influence the resulting impacts on policy and decision-making processes. According to Harmon et al. (71), the legal foundation and authority model of a NITAG shape its political influence and determine its capacity to affect decision-making, a finding also supported by MacDonald, et al. (81). In this regard, advisory NITAGs generally exert non-binding influence on policy decisions (93), whereas directive and hybrid models incorporate binding authority mechanisms that increase their decision-making power (71).

Several studies reported that mixed or institutionally integrated advisory structures tend to achieve stronger influence on governmental decisions. For example, in France and the Netherlands, NITAGs characterized by a mixed structure combining permanent and ad hoc membership were found to have high levels of governmental acceptance, as Ministries of Health usually adopted recommendations with only minor modifications (25). Similarly, in Zambia, the broad membership composition of Zambia Immunization Technical Advisory Group (ZITAG) facilitated resource mobilization, strategic planning, and policy decisions by enabling considerable influence over both governmental agencies and external partners (44).

The degree of integration of advisory bodies within national governance structures also appears to affect their influence on policy implementation. A comparative case study found that mature NITAGs were generally well integrated into national decision-making processes and highly valued by Ministries of Health. Although recommendations were commonly adopted, implementation frequently depended on the availability of financial resources (53). Comparable findings were reported in Israel, where the Ministry of Finance plays a decisive role in determining whether, when, and how NITAG recommendations are implemented through budget allocation decisions (45).

The use of structured decision-making frameworks and specialized expertise was also identified as an important facilitator of policy uptake. A study examining strategies to improve the use of economic evidence in vaccination policy in low- and middle-income countries found that independent advisory committees such as NITAGs, together with structured frameworks including HTA and Full Value of Vaccine Assessments (FVVA), significantly improved evidence uptake in policymaking. Facilitators included the incorporation of local health economists, the presentation of findings through user-friendly policy briefs, early collaboration with Ministries of Finance, and the establishment of national budget lines, whereas dependence on external consultants was identified as a major barrier (98).

Evidence regarding the actual influence on decision-making of some advisory committees remains limited. In Korea, most respondents in a study on the Korean Expert Committee on Immunization Practices (KECIP) believed that committee decisions should influence final governmental decisions, although the study did not report the committee's actual impact on policy (75). Multiple studies emphasized that advisory bodies embedded within governmental structures often have more direct influence on decision-making processes, although this integration may also increase political influence over advisory processes. In the Netherlands, the Outbreak Management Team (OMT), which was integrated within government structures, centralized scientific advice during the COVID-19 pandemic. During the initial pandemic phase, consensus was facilitated through a policy approach centered on individual responsibility; however, during the second wave, weakening consensus contributed to the adoption of more restrictive and centralized governmental measures (73). Similarly, in Israel, the integration of the Public National Advisory Committee (PNAC) within the national governmental system and the appointment of members by the Ministry of Health and Ministry of Finance linked advisory processes closely to political influence and decision-making (33). In Brazil, the National Committee for Health Technology Incorporation (CONITEC's) institutional embedding within the governmental HTA system allowed recommendation reports to directly influence Ministry of Health decisions (59).

Government-employed advisory figures may also exert substantial policy influence. In the UK, CMOs were described as occupying flexible institutional roles that enabled considerable influence on policy, legitimacy, and public trust. The study further reported that CMOs in Northern Ireland and Wales had more direct influence on public health policy than their counterparts in England and Scotland (40). Conversely, fragmented advisory structures and weak coordination mechanisms may reduce the effectiveness of advisory influence. Some ad hoc committees established during the COVID-19 pandemic, such as the Ministerial Expert Advisory Committee on COVID-19 (MEACOC), had limited impact on policy decisions and implementation because of poor coordination between advisory bodies and working groups (89).

Several studies also highlighted tensions between scientific advice and political decision-making during the COVID-19 pandemic. A comparative study across Italy, the UK, the US, Poland, Uganda, and Sweden found that scientific advice was frequently used to legitimize predetermined political decisions rather than to objectively guide policymaking (79). Likewise, a qualitative study comparing France, Germany, and the UK reported that policymakers often preferred private advice aligned with political priorities, particularly in France and the UK where governments directly appointed advisory committee members (72). In addition, a study conducted in Belgium, the Netherlands, the UK, Sweden, and Germany found that scientists perceived their advice as only

one among many competing governmental pressures and frequently ignored in final decisions, while also reporting uncertainty regarding their role and the boundaries of their participation because governments retained ultimate decision-making authority (41).

Hybrid advisory structures combining academic and governmental participation may strengthen policy integration. In Canada, the Modeling Consensus Table (MCT), composed of both permanent and ad hoc members, facilitated communication between academic modelers and policymakers during the COVID-19 pandemic, accelerating the incorporation of epidemiological and health system evidence into governmental policy discussions (82). Additional enabling factors identified in hybrid models that could be considered in Canadian contexts include user friendly briefs and deliberative dialogues (98), flexibility in the roles of members to account for emergencies (40), expansive membership (44), expedited data sharing, a focus on localized evidence (95), and shared systematic reviews and methods frameworks between members of the SAB/EP (94).

Independent advisory models were also associated with significant influence on policy processes. Reports produced by the independent Institute of Medicine/National Academy of Medicine (IOM/NAM) committee in the US have been widely used to inform the development of health policies across multiple sectors (12). In France, the independent Haute Autorité de Santé (HAS), composed of permanent members, directly informed reimbursement decisions by Union nationale des caisses d'assurance maladie(UNCAM) and price negotiations conducted by Comité Économique des Produits de Santé (CEPS), thereby establishing a coherent institutional connection between advisory recommendations and policy decisions (14). Similarly, in the US, the COVID-19 Vaccine Safety Technical (VaST) Work Group, operating within the Centers for Disease Control and Prevention (CDC) through a hybrid structure involving independent experts and federal agency representatives, enabled rapid and impartial evaluation of vaccine safety signals that informed national vaccination policy, although the specific magnitude of its impact was not described in detail (43).

Finally, broader theoretical analyses suggest that the ultimate measure of effectiveness for scientific advisory committees lies in their capacity to influence policymaker behavior and subsequent policy decisions. Accordingly, Hoffman et al. (4) proposed that the definitive indicator of an advisory committee's effectiveness is whether its recommendations successfully shape policymaker decisions and generate behavioral change among relevant decision-makers.

### Policy Influence

The composition, structure, integration, and governance arrangements of SABs/EPs substantially shaped their capacity to influence public policy during the COVID-19 pandemic and in broader immunization and public health contexts.

In the Netherlands, the OMT-led pandemic response relied on an expert-driven structure with limited space for broader deliberation (73). This led to questions on how scientific advice was integrated into policymaking and contributed to delays in translating recommendations into effective measures (73). More broadly across Europe, biomedical expert advice tended to exert greater influence on political decision-making than recommendations addressing socioeconomic or ethical considerations did. Although advisory recommendations were generally non-binding, policymakers frequently took them into account during decision-making processes (74).

The institutional design and legal status of advisory bodies were repeatedly identified as major determinants of policy influence. A global study of NITAGs reported that the large majority of evaluated NITAGs (86%) followed an "advisory" model, in which governments may implement recommendations but are not legally obligated to do so. Panero et al. (26) reported that some governments greatly valued their non-binding advice whereas others reported being constrained by the nonbinding status of their recommendations (31). Therefore, the effect of nonbinding advice on the effectiveness of embedded SABs may depend on the context. In contrast, "directive"

models legally require governments to implement recommendations, while “collaborative” models operate within fragmented political and legal environments where central governments cannot act unilaterally, as observed in Canada (71). In Latin America and the Caribbean, the formalization of advisory status and the active inclusion of NITAGs within official governance structures were identified as key mechanisms for improving policy impact and uptake (29). Another study explored successful policy uptake of NITAG recommendations from the perspective of income (39). In that study, 83% of NITAGs the high-income countries of the eastern Mediterranean region (EMR) functioned whereas in low-income countries in the region, only 20% functioned (39). This relates to MacDonald’s claim that one size fits all does not work in regards to the governance structure of NITAGs for successful policy influence, indicating that contextual factors must be taken into consideration (81).

The governance style of SABs/EPs also impacted policy influence. Hybrid models, the most commonly found governance style, were repeatedly associated with positive impact across policy influence. Several recurring themes emerged with potential relevance to the Canadian context. For example, two authors, one in an empirical case study and the other in a mixed methods study, noted that the hybrid governance model allows for easier integration of scientific recommendations into policy due to the proximity to decision-makers facilitating policy uptake (45,84). Additionally, empirical studies, descriptive studies, mixed methods studies, evaluative studies, and analytical studies showed the importance of a wide range of multidisciplinary evidence in the hybrid models. For example, targeted knowledge mobilization tools, multidisciplinary SAB functions, combining global strategies with local evidence, data review, and health economic evidence were noted as factors that led to positive policy impact (43,51,66,85,98). In the next most common governance model, embedded models, similar enablers of policy influence were identified. Some ways to enable strong, evidence-based policies within embedded governance models include: stronger coordination mechanisms, formally adopting standard operating policies and COI mechanisms, and being more transparent and independent (24,70,90). Additional recommendations for strengthening the policy impact of embedded SABs/EPs are to strengthen consensus-building, especially including diverse opinions and stakeholders as opposed to anonymous panels and closed meetings, which undermine trust and legitimacy (61,62,97).

Several studies illustrated how strong institutional integration enhanced advisory influence. In Morocco, the NITAG was recognized as an important partner of the Ministry of Health and a contributor to immunization policy through the issuance of robust recommendations across a broad range of topics (46). In Chile, the evidence-based recommendations of Chile's National Immunization Technical Advisory Group (CAVEI) were strongly integrated into immunization policymaking through formal recommendations and close relationships with the Ministry of Health (42). Similarly, in the UK, the integrated nature of the Advisory Committee on Nutrition (SACN) within government structures facilitated the incorporation of recommendations into policy processes (84). Internal integration also enabled CMOs to exercise “soft and discreet influence” within government structures to shape policy agendas and protect marginalized communities (40).

The structure and composition of advisory bodies also shaped the breadth and effectiveness of policy implementation. In Zambia, the broad membership structure of ZITAG facilitated national government commitment and external partner funding, contributing to sustained improvements in routine immunization coverage (DTP1 and DTP3). The inclusion of subcommittee representatives also influenced multiple vaccination program components, including cold chain expansion and data quality improvements (44). Another example of structure and hybrid proximity to government affecting policy influence was the Inter-Agency Coordinating Committee (ICC) (44). It is a multisectoral hybrid body chaired by the Ministry of Health in Zambia (44). The ICC’s successful coordination and support between a SAB/EP and government led to positive results in all four impact areas analyzed (44). Similar hybrid models between academic or research institutes and government successfully impacted trust by doing independent rigorous research, while successfully passing policy with their connections to government (5,11,40,43,66,82,84,103). A particularly unique element of a hybrid “model evidence center” in Wales was a member who was a “boundary spanning individual” who worked between the evidence

center and government to ensure strong communication and tracking across both organizations (66). This role was described as invaluable for the impact of the SAB/EP.

In contrast, the underrepresentation of women within advisory bodies was identified as limiting the inclusion of a necessary feminist perspective in policymaking, negatively affecting equity in crisis recovery and public health outcomes (32).

Transparency and institutional autonomy were also closely associated with policy effectiveness. A comparative study of advisory systems in France, Germany, and the UK concluded that transparent and functionally autonomous advisory systems, such as the German model, contribute more effectively to sound policymaking and implementation by facilitating intergovernmental coordination and strengthening democratic accountability (72). However, another study noted that the severe lack of transparency regarding the processes and outputs of German expert committees during the COVID-19 pandemic made it unclear whether and how these committees actually influenced policy decisions (34).

Political dynamics strongly affected the translation of scientific advice into policy. In Uganda, ad hoc advisory bodies created during the pandemic were used to generate scientific advice aligned with governmental political priorities and preferred policies (79). In Malawi, the incorporation of Technical Working Group (TWG) recommendations into public policy was frequently hindered by political interests, dependence on external donor funding, and departmental resistance to evidence contradicting existing practices (49). Similarly, in Poland, the non-binding nature of NITAG recommendations and the absence of mandatory consultation requirements for public health actors reduced the advisory body's influence, demotivated experts, and contributed to delayed adoption of new vaccines, with an average delay of more than six years before vaccine access (93).

Several studies highlighted the direct influence of scientific advice on pandemic policy responses. In the UK, scientific advice structured the national clinical research response by prioritizing the RECOVERY trial funded by the National Institute for Health and Care Research (NIHR) and directly influenced non-pharmaceutical interventions (3). During the early phases of COVID-19, alignment between political logic particularly the desire to avoid economic harm and scientific logic supporting a wait for empirical evidence contributed to the government's strong adherence to initial Scientific Advisory Group for Emergencies (SAGE) recommendations (10). In the Philippines, epidemiological modeling recommendations produced by the University of the Philippines COVID-19 task force directly influenced the President's decision to extend the Enhanced Community Quarantine (ECQ), while subsequent economic recommendations guided the transition toward General Community Quarantine (GCQ) (15).

Alternative and independent advisory initiatives also demonstrated substantial policy influence. The Independent SAGE group in the UK actively advised local authorities, mayors, trade unions, and civil society organizations regarding safety protocols. A sharp increase in web publications and social media activity in January 2021 contributed to governmental policy change and the implementation of a third lockdown following the relaxation of restrictions (86). Finally, successful integration of external scientific expertise into policymaking processes was documented in the US, where the North Carolina Department of Health and Human Services (NCDHHS) effectively channeled both formal and informal scientific advice to the governor, directly integrating epidemiological models and vaccination plans into state policy decisions (101).

Many SABs/EPs described in the included articles were operating at a national level to give policy advice, especially ones with strategic and technical mandates, including many NITAGs (25,28,29,35,38,39,46,47,51,53,55,57,60,77,89). While these national bodies often successfully impacted decision-making and policy by providing advice and recommendations for an entire country, there were repeated recommendations to work with more localized evidence in crisis settings (6,16,48,63,65,98), whereas some articles had localized strategies as part of their mandate (4,8,47,53,85,88). More localized data and community

engagement as part of advisory scope and function was associated with positive impact in not only policy influence but also system learning and trust and legitimacy (4,8,47,53,85,88).

## Trust and legitimacy

The COVID-19 pandemic highlighted that the legitimacy and public trustworthiness of scientific advisory systems are strongly influenced by their composition, transparency, independence, representativeness, and relationships with governments and external actors.

The interaction between scientific advisory structures and governments during the COVID-19 pandemic was characterized by politicization, limited transparency, and variable influence on policymaking. Sometimes this was related to governance structure, as the more politicized nature of the embedded bodies sometimes resulted in struggles to separate domestic politics from scientific advice (7,36,49,54,79). Additionally, the opacity of advisory processes, including member selection procedures, generated substantial public concern and undermined transparency, legitimacy, and independence (74). Similarly, a global analysis of NITAG functioning identified the need to require verifiable transparency in member appointments (70). In Germany, limited public access to information regarding committee appointments, working processes, and outputs during COVID-19 was also identified as a factor undermining the legitimacy of policy decisions (34). Likewise, anonymous panel members and closed-door meetings were identified as structural factors that undermine the credibility and accountability of the Drug Advisory Committee (DAC) (19).

Several studies emphasized that transparency and independence are central to maintaining public trust in scientific advisory systems. In the UK, the initial secrecy surrounding the composition of SAGE during COVID-19 fueled suspicions of political manipulation and contributed to the creation of "Independent SAGE". Recognizing that secrecy was damaging trust, SAGE adopted a transparency policy by publishing meeting minutes, demonstrating that scientific advice had not been deliberately ignored or manipulated by politicians (10). More broadly, independent advisory systems operating under scientific norms of transparency were identified as essential for maintaining public trust in science (87). These themes were echoed in hybrid governance model SABs/EPs. The transparency of hybrid models of governance was an enabling factor mentioned by seven articles (11,45,78,85,94,95,103). Another repeated theme was the importance of being or being seen as independent, despite the hybrid nature not allowing for a complete separation from government (8,40,42,43,85). Similarly, presentation of consensus (78), involving donors and implementation partners (44), use of local evidence (8), and involvement of community-level stakeholders (50) positively impacted trust and legitimacy of SAB/EPs.

Concerns regarding conflicts of interest and political interference were repeatedly identified as threats to legitimacy and credibility. The discrepancy between WHO/UNICEF reported compliance and actual operational deficiencies, particularly poor conflict of interest management, lack of independence, and limited non-governmental representation actively undermined the institutional legitimacy and credibility of NITAGs (31). Problematic transparency practices and the participation of industry representatives in vaccine and therapeutic advisory processes also raised concerns regarding conflicts of interest and the quality of scientific advice (27). In the US, analyses of Advisory Committee on Immunization Practices (ACIP) identified that unplanned voting procedures and ideological appointments compromised committee independence, resulting in votes conducted without adequate evidence review, such as recommendations concerning thimerosal-containing vaccines for pregnant women and children (7). The politicization of ACIP, ideological appointments, and movement away from transparent scientific evaluations were further described as severely eroding public trust and credibility, amplifying misinformation, and potentially reducing vaccine uptake, including by contributing to measles outbreaks (7).

Other studies emphasized how composition and representation shape institutional legitimacy. The structural invisibilization of women in scientific advisory roles was identified as limiting substantive representation, thereby negatively affecting equity and the overall legitimacy of pandemic management and recovery processes (32). In France, the Haut Conseil de la Santé Publique (HCSP) recognized that its working group was overly medically focused and adapted by integrating social scientists and psychologists, aiming to address broader social dimensions and strengthen the inclusiveness of public responses (67). Additionally, the active inclusion of community members and communication experts within NITAGs was considered important for increasing public trust and participation (26). Simangolwa et al. (106) also found that trust is negatively impacted when stakeholders have limited voice and decision-making power in SABs/EPs. Additionally, during COVID-19, some changes in hybrid governance-style SABs/EPs had negative impacts. Smith et al.(40) explained how, while the flexibility of Chief Medical Officers (CMO) in the UK was useful during the COVID-19 pandemic, the changing of their role to adapt to the pandemic moved them away from advocacy, which may have negatively impacted equity-deserving populations and their trust with institutions in the UK. The demanding environment of the pandemic also led to conflict with the typical traditional peer review literature and academic publication speed in some hybrid model SABs/EPs, which could have limited trust if the expedited processes were not transparently explained (5). Notably, two articles emphasized that the impact on policy influence and trust of the hybrid SABs were limited by the underrepresentation of women in their membership (32,34). Those SABs/EPs were ad hoc advisory bodies created during the COVID-19 pandemic (32,34). This point demonstrates that even in an emergency context when ad hoc advisory bodies are created, it is critical to have equitable gender representation.

Several studies highlighted how strong institutional design and formalized governance mechanisms contribute positively to trust and legitimacy. In Chile, the evidence-based recommendations of NITAG/CAVEI were reported to have strong integration into immunization policymaking through formal recommendations and close links with the Ministry of Health (42). NITAG/CAVEI was also considered credible because it included highly qualified experts, maintained clear COI rules, and promoted transparency through the publication of recommendations (42). Similarly, trust in the National Essential Medicines List Committee (NEMLC) was maintained through structured member nomination procedures, explicit selection criteria, rigorous conflict-of-interest management, and the formalization of advisory processes (58). The IOM was also described as widely trusted by diverse stakeholders, including both government agencies and pharmaceutical companies, due to its structural independence and rigorous peer-review processes, which supported the perception of impartial guidance (12). However, without strong institutional design and formalized governance mechanisms, trust and legitimacy is threatened. This is evident in examples of hybrid models with the repeated absence of monitoring and evaluation mechanisms. The absence of these mechanisms limits transparency; or in other words, a gap between self-reported compliance and actual operations limits trust and legitimacy (26,31,34,38,78).

The role of collaboration and interest-holder engagement in strengthening legitimacy was also emphasized. In Zambia, trust in the ZITAG was mixed, reflecting both a strong sense of country ownership and concerns regarding independence due to reliance on external funding (35). Nevertheless, the inclusion of external donors and implementing partners within ZITAG facilitated alignment of priorities and fostered mutual trust (44). Similarly, the co-production process implemented by the Wales COVID-19 Evidence Centre (WCEC) generated high levels of trust, with 90.9% of respondents strongly agreeing that they trusted the information contained in reports, largely because of their direct involvement in the process (66). The model of incorporating independent non-governmental experts to rapidly review data alongside federal partners was also explicitly designed to improve public trust and increase transparency (43). The relationship between scientific advisors and the public emerged as particularly important in contexts of low institutional trust. Following the 2019 anti-government protests in China public trust in government institutions was extremely low, undermining the

legitimacy of public health measures. In this context, scientific experts played a crucial role as trusted intermediaries and public communicators, helping mediate between the government and citizens on issues such as vaccine hesitancy and compliance with COVID-19 measures (76). Overall, presentation of consensus, involving donors and implementation partners, use of local evidence, and involvement of community-level stakeholders, positively impacted trust and legitimacy of SAB/EPs (8,44,50,78).

Finally, some studies highlighted the importance of balancing transparency with confidentiality. Within the MCT, separating confidential policy advice from public academic publications enabled policymakers to access information without external pressures while simultaneously preserving academic integrity and open scientific debate (82). Meanwhile, the Ministry of Health and the Public Health Institute of the Federation of Bosnia and Herzegovina committed to continuously increasing the visibility and public awareness of the expert body (NITAG) and its recommendations in order to strengthen legitimacy and trust (48).

## System learning

The COVID-19 pandemic exposed important lessons regarding the composition, structure, functioning, and adaptability of advisory bodies, highlighting the need for more resilient, transparent, multidisciplinary, and institutionalized systems of scientific advice.

The emergence of the Red Team in the Netherlands demonstrated that the traditional Dutch “polder” model, based on a single confidential and consensus-oriented expert body, was insufficient to manage a prolonged crisis involving complex social trade-offs (73). The system was forced to adapt to a more polarized and pluralistic scientific advisory environment. The pandemic revealed that effective responses require not only technical expertise, but also broader participation, reflection on social values, and more inclusive deliberative processes capable of addressing uncertainty and social pluralism (73).

Across Europe, countries adopted different institutional approaches to scientific advice during COVID-19. Some relied primarily on pre-existing SABs/EPs embedded within crisis preparedness systems, whereas others depended mainly on newly created structures. A third group adopted a hybrid approach that combined existing and newly established SABs/EPs (74). Similarly, formal and informal scientific advisory experiences in the UK suggested that adapting existing structures that already function effectively, such as standing committees, is considerably more effective during emergencies than creating entirely new structures from scratch (3).

Several studies highlighted processes of institutional learning and adaptation among NITAGs and related advisory systems. In LMIC countries, NITAGs were identified as urgently needing locally trained health economists and sustainable domestic funding to survive the transition away from Gavi donor support, which encouraged the adoption of maturity assessment tools such as the NITAG Maturity Assessment Tool (NMAT) (98). In Latin America and the Caribbean, the Mexican case where an ad hoc body was created alongside the existing NITAG and bypassed it during the pandemic was identified as a documented gap in system learning and institutional adaptation (31).

Institutional adaptation was also evident in South Korea, where the Korea Expert Committee on Immunization Practices (KECIP) demonstrated a proactive approach to institutional learning by identifying the need to establish permanent subcommittees, standard operating procedures for agenda submission, and crisis-dedicated working groups to improve committee functionality amid evolving vaccine science (75). Likewise, following the 2012 WHO/SIVAC external evaluations, the Israeli NITAG was reorganized to limit members’ term duration, formally divide members into core, ex officio, and observer categories, incorporate health economists, and update its terms of reference and conflict-of-interest guidelines (45).

Other studies emphasized how advisory systems adapted structurally and politically during the pandemic. In Uganda, the establishment of ad hoc Scientific Advisory Committees (SACs) during the COVID-19 crisis reflected institutional adaptation within advisory systems; however, this adaptation was strongly driven by political interests and characterized by limited transparency (79). In Brazil, the creation of CONITEC in 2011 was identified as an institutional adaptation toward a more formalized decision-making process that was less dominated by experts (36). Structural adaptation methods could be facilitated through consistent monitoring and evaluation of SAB/EP processes and outputs. This was found by a number of articles, specifically regarding the importance of evaluation tools in hybrid governance models to continually improve the SAB/EP (38,42,84,91).

The pandemic also revealed the importance of adjusting roles and strengthening operational capacity within advisory systems. Medical officers demonstrated substantial system learning and adaptability by modifying their functions, reducing advocacy and managerial responsibilities to increase their focus on scientific advice and public communication (40). In Canada, the fragmented and ad hoc approach to scientific advice across federal portfolios acted as a "stress test," exposing structural weaknesses within the system and underscoring the need for reform. The experience highlighted the urgent need to institutionalize a permanent and independent national authority dedicated to scientific advice to ensure rapid mobilization, coordination, and independence during future emergencies (27). At the operational level, routine advisory structures were shown to be incapable of managing emergency situations without extensive adaptation, requiring the PHAC to substantially expand its secretariat staff from 18 to 39 individuals and integrate former NITAG members to ensure sufficient technical capacity (104).

The literature also emphasized the importance of more integrated and multidisciplinary advisory approaches. The crisis demonstrated that maintaining policymakers strictly separate from experts to preserve scientific "purity" carries substantial costs; instead, systems should adapt toward integrated approaches characterized by sustained engagement and questioning between politicians and scientists during emergencies (10). Similarly, recognizing that its working group was excessively medically focused to adequately address social consequences, the HCSP structurally adapted by creating a new working group explicitly integrating social scientists and psychologists to develop a more holistic public approach (67). Additionally, the diversity of membership and collaboration between sectors was a key system learning impact, especially in hybrid governance model SABs/EPs. For example, Brooks-Pollock et al. (5) explained how collaborative data sharing agreements supported the hybrid work model during the pandemic; Dabanch et al.(42) recommends including social scientists into SABs to diversify membership; Steffen et al. (8) explored informal networks of NITAGs for peer-to-peer learning; and Baltussen et al.(103) explained the need to proactively invite members to SABs/EPs that are beyond the national level, like regional representatives and patient representatives. Due to Canada's large geographical size and population diversity, they could benefit from integrating some of these aspects into their SAB/EPs.

Additional lessons concerned advisory body design, communication mechanisms, and expert participation. Experts strongly recommended establishing a single, formally empowered, adequately resourced, and independent NITAG directly integrated into national decision-making processes (93). To improve the impact of future SABs/EPs, systems should adapt by prioritizing coalition-building, integrating explicit implementation plans including timelines and responsible actors directly into policy recommendations, and requiring formal evaluations of advisory reports and processes (62). The presence of liaison individuals between evidence centers and governments was also identified as an invaluable adaptation to facilitate communication and monitor policy impact (66).

*Table 2. Key Messages on Impacts of Institutional Design*

| Impacts of Institutional Design | |
|---|---|
| **Impact on decision-making** | ● Most mandates and governance structures operated at a national level; therefore they impacted national decision-making, however there were repeated calls to utilize more localized evidence and adapt national decisions for local and regional levels.<br>● Although NITAGs generally exert a nonbinding impact on decision-making, their recommendations are regularly taken up by decision-makers.<br>● Advisory bodies embedded in government often have more direct impact on decision-making, while also being more prone to political influence.<br>● Government appointment of advisory committee members may encourage alignment between scientific advice and political priorities.<br>● Fragmented advisory systems and weak coordination between committees and working groups can reduce the effectiveness of policy influence and implementation. |
| **Policy influence** | ● The composition, structure, integration, and governance arrangements of SABs/EPs strongly influenced their ability to shape public policy during COVID-19 and in broader immunization and public health contexts.<br>● Hybrid governance models were consistently associated with stronger policy influence due to their proximity to policymakers and ability to integrate scientific evidence into decision-making processes.<br>● Embedded governance models benefit from stronger coordination mechanisms, standardized operating procedures, conflict-of-interest policies, transparency, and institutional independence.<br>● Broad and multidisciplinary membership structures enhance resource mobilization, external funding, program coordination, and implementation effectiveness.<br>● Biomedical expert advice often shaped political influence more than recommendations addressing socioeconomic or ethical considerations did in Europe during the COVID-19 pandemic.<br>● Transparency and functional autonomy are associated with more effective policymaking, stronger intergovernmental coordination, and greater democratic accountability. |
| **Trust and legitimacy** | ● Transparent structures and mechanisms (including conflict-of-interest processes, clear member selection processes, publishing meeting minutes) were repeatedly listed as critical for fostering trust with the general public.<br>● An important enabling factor for trust and legitimacy for SABs/EPs is being seen as independent or being able to analyze evidence and make recommendations independently from political influence.<br>● Being perceived as independent, even within hybrid governance systems closely linked to government, positively influenced trust and legitimacy.<br>● Designing membership and governance structures that include women, equity-deserving groups, and social scientists in SABs/EPs helps strengthen institutional legitimacy and increase public trust and participation.<br>● Both independent, structured, and rigorous peer-review processes as well as direct stakeholder collaboration and engagement can support trustability of a SAB/EP.<br>● Inclusion of social scientists, psychologists, communication experts, and community representatives improved the inclusiveness and societal |

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|---|---|
| | relevance of advisory processes.<br>● Collaboration with donors, implementation partners, and external stakeholders can strengthen alignment, coordination, and mutual trust.<br>● Industry participation in advisory processes raised concerns regarding conflicts of interest and the quality and impartiality of scientific recommendations. |
| **System learning** | ● Having a diverse group of members was an important institutional lesson learned in many SABs/EPs, including a range of professions beyond the typically dominant medical fields, gender representation, people from equity-deserving backgrounds, and patient and community members.<br>● The use of monitoring and evaluation tools in SABs/EPs are noted as an important way for them to continuously improve their processes and outputs.<br>● While many ad hoc bodies were created during COVID-19, not all had diverse member representation, and some studies found that adapting already existing structures is more effective in such an emergency situation.<br>● Proactive adaptation and strengthening operational capacity of SABs/EPs is important during both pandemic and interpandemic periods.<br>● Multidisciplinary and integrated approaches are important for SABs/EPs are important to sustain engagement between policymakers and scientists in emergencies.<br>● Low- and middle-income countries require stronger domestic funding mechanisms and locally trained health economists to ensure the long-term sustainability of advisory systems. |

# Cross-cutting Dimensions

## Equity, Diversity, Inclusion and Ethics-Informed Advisory Processes

Of the 104 included documents, 55 addressed some aspect of ethics, equity, diversity, inclusion, or representation in the composition, procedures, or advisory functions of scientific advisory bodies, beyond the mere inclusion of different medical specialties.

## Equity, diversity, inclusion, and ethics in SAB composition and governance

Across the included literature, equity, diversity, inclusion, and ethics were framed not only as normative values, but also as conditions that shape the legitimacy, relevance, contextual appropriateness, acceptability, and societal trustworthiness of science advice. However, these dimensions were not consistently operationalized across studies. While some documents described specific mechanisms or reported impacts, many studies discussed equity-, diversity-, inclusion-, and ethics-related considerations as governance principles or desirable characteristics of advisory systems, with comparatively less attention to their empirical assessment or measurement. Conceptual and normative documents emphasized that SABs/EPs should incorporate multidisciplinary expertise and diverse perspectives, including public health, economics, ethics, behavioral and social sciences, local knowledge, and patient or community perspectives (4,11,12,16). Other conceptual or descriptive institutional documents specified more concrete equity-oriented design features, such as geographic representation, gender diversity, minority representation, consumer representation, or patient and user participation (9,14,20–22).

Documents combining conceptual reflections with analyses of real-world experiences similarly described multidisciplinary and inclusive composition as important for effective advisory systems, although often

with different emphases. In NITAG-related documents, diversity was commonly linked to representation of multiple areas of expertise, while global or cross-national experiences highlighted inclusion of experts from LMICs, fairer distribution of technical work, and support for under-resourced advisory bodies (70,71,92,94,95) However, empirical studies showed that these principles were unevenly implemented. Some evaluations reported gender imbalance, dominance of biomedical expertise, weak social science representation, limited patient participation, and insufficient inclusion of civil society or equity-deserving populations (32–34,67,106).

### Mechanisms to incorporate perspectives from equity-deserving and vulnerable populations into advisory processes

The literature identified several mechanisms for incorporating perspectives from vulnerable or equity-deserving populations into advisory processes. Conceptual and methodological documents emphasized that inclusion should go beyond representation in membership and should be embedded in deliberation, priority-setting, evidence appraisal, and recommendation development. Examples included public consultations, patient and consumer representation, community and civil society participation, use of evidence-to-decision frameworks that consider equity, values and preferences, and formal patient participation frameworks across the HTA process (4,11,16,21).

Several mixed or applied documents described more operational mechanisms. These included patient involvement task forces and patient representatives in deliberative bodies, equity as an explicit decision criterion, financial risk protection as a priority-setting criterion, health equity tools for vaccine prioritization, multilingual and accessible communication strategies, and targeted engagement with marginalized communities or affected groups (91,97,101–104). During the COVID-19 pandemic, some advisory experiences incorporated mechanisms such as ethnicity subgroups, social care working groups, community-level vaccination initiatives, and protocols tailored to vulnerable or high-risk populations (87,105).

Nevertheless, the evidence also shows important limitations. In several cases, equity was mentioned as a criterion or principle but the way it was assessed or used in deliberation was unclear, qualitative, or dependent on expert judgement rather than systematic evidence (28,77,103). Other studies found that patients, the public, payers, or vulnerable populations were absent from advisory processes, or that the inclusion of affected populations was minimal and not clearly linked to decision-making influence (33,63,106).

### Reported impacts of equity-, diversity-, inclusion-, and ethics-info*rmed advisory processes*

Reported impacts were most commonly linked to legitimacy, trust, contextual relevance, policy acceptability, and learning within advisory systems. Inclusive and multidisciplinary composition was described as improving the quality and relevance of deliberation by broadening the types of knowledge considered, including social, ethical, implementation, economic, and experiential perspectives (4,11,77). Some studies suggested that equity-oriented mechanisms contributed directly to policy influence, such as vaccine prioritization for key populations, incorporation of equity criteria in benefit package design, targeted vaccine rollout strategies, or protocols for vulnerable groups (101–105).

Trust and legitimacy were especially prominent. Advisory processes that included diverse perspectives, public or patient involvement, open communication, and transparent reasoning were described as more credible and socially acceptable, particularly in crisis contexts marked by uncertainty and contested values (6,86,97). Conversely, limited inclusion, opaque deliberation, dominance of narrow technical expertise, or failure to address

social inequalities were reported as factors that could weaken legitimacy, reduce acceptability, and limit the relevance of recommendations for affected populations (34,67,106).

***Table 3. Key Messages on Equity, Diversity, Inclusion, and Ethics in SABs/EPs***

| **Equity, Diversity, Inclusion (EDI), and Ethics in SABs/EPs** | | |
|---|---|---|
| **EDI in SAB composition and governance** | Desired characteristics | ● EDI was framed as a contributor to legitimacy, relevance, contextual appropriateness, and trustworthiness.<br>● SABs should include multidisciplinary expertise and diverse perspectives, including public health, economics, ethics, social and behavioural sciences, local knowledge, patient and community perspectives.<br>● Gender, geographic, minority, consumer, and patient representation were also frequently recommended. |
| | Implementation experiences and challenges | ● Diversity principles were unevenly implemented across advisory systems. Common challenges included underrepresentation of women, limited inclusion of LMIC experts, insufficient patient participation, and narrow disciplinary composition. |
| | Implications for advisory systems | ● Diverse membership was described as broadening the range of evidence, knowledge, and perspectives considered during deliberation.<br>● Multidisciplinary composition was frequently presented as a factor that may enhance the legitimacy and contextual relevance of scientific advice.<br>● More inclusive advisory bodies were often viewed as more trustworthy, credible, and socially acceptable. |
| **EDI in advisory processes and deliberation** | Desired characteristics | ● Equity should be integrated throughout priority-setting, evidence appraisal, deliberation, and recommendation development.<br>● Patient, public, and community engagement were frequently described as essential components of advisory processes.<br>● Evidence-to-decision frameworks should explicitly consider equity, values, and preferences. |
| | Implementation experiences and challenges | ● Reported mechanisms included patient representatives, patient involvement task forces, public consultations, community engagement, and equity-sensitive decision frameworks.<br>● Some advisory systems used targeted engagement with marginalized groups and equity-focused prioritization tools.<br>● Equity was often described as a principle but operationalized inconsistently.<br>● Influence of affected populations on final decisions was frequently unclear or limited. |
| | Implications for advisory systems | ● Equity-oriented processes may strengthen legitimacy and public trust.<br>● Inclusion of affected populations may enhance contextual |

| | | |
|---|---|---|
| | | relevance and policy acceptability.<br>● Equity-informed deliberation may support more responsive recommendations for vulnerable populations.<br>● Limited inclusion may undermine the perceived legitimacy and relevance of advisory outputs. |

## Transparency and Openness in Advisory Systems

Transparency was consistently framed across the literature as a foundational condition for the legitimacy, credibility, and societal trustworthiness of SABs/EPs, particularly in contexts characterized by uncertainty, political pressure, or public controversy. Across conceptual, evaluative, and empirical studies, transparency was described not only as a procedural value, but also as a mechanism to protect scientific independence, reduce perceptions of politicization, and strengthen public trust in evidence-informed decision-making (3,4,6–8,12,70,77,87). Conversely, opaque deliberations, unclear advisory roles, selective use of evidence, and political interference were repeatedly identified as threats to institutional legitimacy and democratic accountability (19,34,65,72–74,79,83). Several studies examining COVID-19 advisory systems further highlighted how secrecy surrounding advisory membership, unclear boundaries between experts and governments, and politicized uses of expertise generated criticism and undermined public trust, particularly in Europe and the UK (10,41,72–74,83,87,100).

The literature described transparency as operationalized through concrete governance and communication mechanisms, including publicly accessible agendas and meeting minutes, disclosure of committee membership and conflicts of interest, open meetings, publication of recommendations and evidence-to-decision frameworks, formal peer-review procedures, and explicit communication of uncertainty (7,9,11,12,14,20,42,43,75,81). Several authors also emphasized the importance of open science practices, transparent modelling assumptions, auditable evidence processes, and public dissemination of evidence during rapidly evolving emergencies (3,5,6,15,41,78,83). Reviews of NITAGs, HTA systems, and deliberative priority-setting processes similarly highlighted formal mandates, standardized evidence appraisal methods, publication of recommendations, and explicit decision rationales as important mechanisms to support institutional credibility and trust (11,14,19,23,70,71,94,97,102,103).

Despite this broad recognition of transparency as a core principle, many studies documented important implementation gaps in real-world advisory systems. Common concerns included closed-door deliberations, limited public access to recommendations or meeting records, inconsistent conflict-of-interest management, opaque appointment processes, and insufficient inclusion of broader societal or disciplinary perspectives (19,25,29,31,34,38,74,77,83,93,101). Several empirical studies additionally reported that advisory recommendations were more likely to be adopted and integrated into policy when advisory systems were perceived as independent, technically credible, and procedurally transparent (11,12,26,42,52,56,77).

The literature also highlighted how crises such as COVID-19 acted as catalysts for institutional adaptation aimed at strengthening legitimacy and transparency. Several advisory systems introduced stricter conflict-of-interest rules, expanded disciplinary representation, created new communication practices, or formalized operating procedures in response to public criticism and governance challenges (10,24,76,90,104).

***Table 4. Key Messages on Transparency in Scientific Advisory Systems***

| Transparency in Scientific Advisory Systems |
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| | |
|---|---|
| Conceptualization in the literature | ● Transparency was framed as a foundation of legitimacy, credibility, accountability, and public trust.<br>● It was described as a mechanism to protect scientific independence and reduce perceptions of politicization.<br>● Opaque processes, political interference, and selective use of evidence were commonly viewed as threats to legitimacy. |
| Transparency mechanisms and practices | ● Common mechanisms included disclosure of membership and conflicts of interest, publication of recommendations, open meetings, meeting records, evidence-to-decision frameworks, peer review, and communication of uncertainty.<br>● Open science practices, transparent modelling assumptions, and auditable evidence processes were frequently encouraged. |
| Implementation gaps and challenges | ● Common concerns included closed-door deliberations, limited public access to records, inconsistent conflict-of-interest management, opaque appointment processes, and insufficient disciplinary diversity.<br>● COVID-19 exposed weaknesses related to secrecy, unclear expert-government boundaries, and politicized uses of expertise.<br>● Transparency practices varied substantially across advisory systems. |
| Potential contributions | ● Transparency may strengthen legitimacy, credibility, accountability, and public trust.<br>● Transparent and independent advisory processes may facilitate policy uptake and acceptance of recommendations.<br>● Transparent procedures may support institutional learning, adaptation, and responsiveness during crises. |

## Adaptability of Advisory Systems

### Adaptability of Advisory Systems During Crises

Adaptability refers to the ability of scientific advisory systems to respond effectively to crises (specifically, how governance structures, membership, and activation or prioritization mechanisms vary across crisis and non-crisis contexts, including pandemic, interpandemic, and other emergency situations). A total of 57 documents informed this section. The information comes from 2 scoping reviews (74,89) and one rapid evidence synthesis (73). Among primary studies, 17 were qualitative (25,40,41,44,48–50,53,63,71,72,77,79,83,86,88,101), 6 were cross-sectional (29,29,52,57,67,75), 5 were descriptive (39,55,56,59,69), one used mixed methods(35), and one was a case report (70). The remaining 24 documents comprised policy analyses, institutional and descriptive reports, expert opinion pieces, narrative reviews, and related non-primary source types (3,5,17,22,24,27,42,43,45,76,81,82,84,85,97,103,104).

Adaptability: Science Advice Bodies ability to respond effectively to crises (e.g., pandemics, epidemics, and humanitarian emergencies).

Across the included literature, crisis-driven adaptability was most commonly manifested through four interrelated mechanisms: the activation or creation of new advisory structures (3,27,31,56,63,72,74,79,83,86,101) the expansion or modification of membership (5,24,48,73,74,79,101,104), the acceleration of deliberative

(41,43,67,74,82,101,104), and the adjustment of coordination arrangements (5,27,43,57,72,83,89,91,101,104). These mechanisms were documented predominantly in pandemic contexts, with COVID-19 serving as the primary empirical reference across the majority of the included studies.

A recurring pattern in the evidence was the rapid establishment of ad hoc or time-limited advisory bodies in response to emergencies. Several studies documented how governments created new task forces, expert panels, or working groups when standing advisory mechanisms were deemed insufficient or unavailable (27,72,79,88). In Canada, the COVID-19 pandemic prompted a proliferation of time-limited bodies within both the Health and Science Portfolios, operating alongside existing structures (27). In France, Germany, and the UK, governments activated or created emergency advisory structures (including SAGE, an ad hoc Scientific Council, and an inter-ministerial crisis team) each reflecting distinct national governance models (72). A comparative analysis across six countries found that in most cases governments created ad hoc scientific advisory committees rather than relying on standing agencies, as this afforded greater control over membership, mandate, and the content of advice (79). The creation of shadow or informal advisory bodies was also documented: in the Netherlands, the emergence of the Red Team alongside the formal OMT illustrated how perceived gaps in official advisory processes can drive the formation of parallel advisory structures (73). In contrast, Whitty et al. (3) argued from the UK experience that adapting existing advisory structures is substantially more effective than creating new ones during emergencies, given the time and institutional trust required to establish credible new bodies.

Membership changes during crises were also reported. Several NITAGs expanded their composition in response to pandemic demands, incorporating new areas of expertise unavailable or underrepresented in their standing configuration. In Serbia, the expert committee grew from seven to eleven members during the COVID-19 pandemic, adding members with immunology and pharmacology expertise (24). In Bosnia and Herzegovina, membership was formally expanded by decree from 10 to 12 members (48). In Canada, the National Advisory Committee on Immunization (NACI) secretariat more than doubled its staff during the pandemic, and a pre-existing working group was expanded and subsequently complemented by a dedicated COVID-19 working group (104). Several studies noted that SABs/EPs also modified their meeting frequency substantially during crises, shifting from quarterly or biannual schedules to weekly or even daily meetings (24,48,67). Ontario's Modelling Consensus Table illustrated how a purpose-built advisory structure, drawing on volunteer academic experts, could meet weekly and deliver consensus epidemiological estimates within days of establishment (82). Where reported, these adaptations often involved incorporating expertise that was unavailable or underrepresented in standing structures, including immunology, pharmacology, modelling, behavioural sciences, economics, anthropology, and engineering (3,7,65,72). However, reporting on the composition of ad hoc committees was limited and inconsistent, preventing broader conclusions about which expertise should routinely be included in standing advisory structures.

Evidence inputs and deliberative processes were also adapted during crises. Several bodies relied on preprints, press releases, and real-time surveillance data in the absence of peer-reviewed evidence, and worked in parallel with regulatory processes to issue guidance on the day of vaccine authorizations (5,104). The VaST work group within the US ACIP structure demonstrated how meeting cadence could be calibrated to emergency phases (weekly or biweekly during peak activity and transitioning to monthly as the program matured) with ad hoc meetings convened for urgent safety signals (43). In France, the HCSP produced 102 guidelines in approximately nine months, with a median expected response time of four days, a pace that required suspension of standard participatory and consultative procedures (67).

Coordination across advisory bodies was another dimension of crisis response documented in the literature. In jurisdictions with multiple advisory bodies, the pandemic exposed fragmentation and coordination failures. In Nigeria, expert and advisory committees at national and subnational levels functioned independently,

without formal lines of communication or shared operating procedures (89). In Zambia, mandate broadening of the ICC inadvertently disrupted the advisory ecosystem and weakened its capacity to respond coherently (35). By contrast, the UK SAGE structure coordinated inputs from specialized subgroups into a single advisory output for government decision-makers, while Canada's NACI maintained close links with provincial health authorities, academic groups, and international NITAGs to facilitate real-time data sharing (83,104).

*Impact*

The positive impacts of crisis adaptability were primarily reported in terms of policy influence, timeliness of advice, and system-level learning. Adaptive bodies that mobilized quickly, incorporated relevant expertise, and maintained coordination with decision-makers were described as more capable of influencing pandemic policy decisions(27,43,83,104). NITAGs that participated actively in COVID-19 vaccine policy (including those that expanded membership and increased meeting frequency) were reported to have contributed meaningfully to national vaccination programs (31,39,56,57). The rapid adaptation of evidence inputs, including reliance on real-world data and parallel regulatory review, was credited with enabling timely vaccine recommendations in Canada (104).

Negative impacts and limitations were, however, equally prominent in the evidence. The rapid creation of ad hoc bodies often came at the cost of transparency, accountability, and independence. Several studies reported that governments used the design of new advisory bodies (including the selection of members and the specification of mandates) to retain control over the content of advice, shape narratives, and reduce the likelihood of unwelcome recommendations (72,79). In France, the urgency of the crisis led to suspension of standard participatory procedures and to a heavily medicalized advisory response that largely failed to address social inequalities and mental health consequences (67). In the Netherlands, the formalized advisory structure struggled to adapt as expert opinions diverged during the second pandemic wave, resulting in a more polarized rather than adaptive advisory environment (73). Several NITAGs in Latin America and the Caribbean were sidelined, disbanded, or overwhelmed during COVID-19, revealing significant pre-existing adaptability gaps (29). In Nigeria, the lack of standard operating procedures, data infrastructure, and inter-level coordination severely constrained adaptive capacity during the pandemic (89).

*Barriers*

The evidence identified several conditions that constrained crisis adaptability. Weak or informal legal foundations limited the speed and legitimacy of institutional responses: NITAGs without a formal statutory basis reported greater difficulty mobilizing rapidly and maintaining recognition from decision-makers (29,31). Lack of independent secretariat support and sustainable funding consistently undermined the capacity of advisory bodies to respond proactively rather than reactively (35,77). Narrow disciplinary composition (particularly the dominance of biomedical expertise and exclusion of social sciences) was identified as a barrier to advisory systems' ability to address the full complexity of public health emergencies (41,67,73). The institutional location of advisory bodies within government also shaped their adaptive responses: bodies embedded within cabinet machinery tended to inherit governmental norms of confidentiality and risk aversion, limiting their capacity for independent adaptive action (83).

*Facilitators*

Several factors were identified as enabling crisis adaptability. The existence of pre-established relationships, networks, and institutional structures (what multiple studies described as the interpandemic "playbook") was a consistent facilitator of rapid mobilization across diverse settings, including Canada, Nigeria, Singapore, South Africa, Bangladesh, Jordan, and the UK (27,88,104). Bodies with established subgroup structures, working groups, and expert networks were able to expand their capacity and pivot their focus more quickly than those without such arrangements. Formal trigger mechanisms and clear escalation procedures also supported timely activation, as illustrated by SAGE in the UK, which began meeting in January 2020 before the virus had been detected on British soil (83). Flexible membership models (including standing cores supplemented by ad hoc experts) allowed bodies such as NACI and the VaST work group to adapt their expertise to emerging needs without requiring full institutional restructuring. Regional and international coordination networks, including the WHO Regional Office for Europe's webinar-based support to NITAGs during COVID-19, facilitated real-time knowledge sharing and helped smaller or less-resourced bodies navigate advisory demands they could not have met independently (56,91).

Adaptability: Science advisory bodies contribute to improving system functioning during non-crisis periods.

The evidence on how SABs/EPs contribute to adaptive system functioning during interpandemic or non-crisis periods is less extensive than the crisis literature, and is drawn primarily from studies of NITAGs, HTA committees, and other standing advisory bodies operating in routine contexts.

A central theme is institutional learning following crises. Several studies documented how past emergencies (particularly SARS and the 2009 influenza pandemic) shaped subsequent institutional design, resulting in more permanent, coordinated, and better-resourced advisory structures during interpandemic periods. In Hong Kong, the SARS experience directly led to the establishment of the Centre for Health Protection and a structured network of scientific advisory committees, which functioned continuously in the interpandemic period and proved foundational for the COVID-19 response (76). In France and the Netherlands, the 2009 pandemic served as a catalyst for governance reforms, including stricter conflict-of-interest rules and membership restructuring, which persisted in interpandemic operations (25).

Several studies described how advisory bodies adapt their scope and functioning over time in response to evolving institutional demands, even outside crisis periods. Zambia's ICC progressively expanded its mandate from polio eradication to broader immunization programming and maternal and child health (44). The Danish Expert Advisory Panel demonstrated structural adaptability over more than two decades, expanding its membership, adjusting its mandate scope through executive order, and triggering the creation of geographically distributed experimental units in response to identified clinical needs (55). In the context of global food safety, JEMRA continuously adapted its methodologies in response to evolving scientific standards and emerging hazards (22).

Capacity-building programs and inter-NITAG networks were also identified as mechanisms through which advisory systems strengthen their interpandemic functioning and thereby their preparedness for future crises. The progressive design of inter-NITAG collaboration (beginning with sharing of completed products, then moving to joint development of systematic reviews and evidence syntheses) was described as a deliberate strategy for building adaptive capacity across national advisory systems while respecting each body's autonomy (94). NITAGs that developed annual work plans, maintained functional secretariats, and participated in regional networks were reported to be better positioned to respond to emerging advisory demands, including those generated by new vaccine introductions and pandemic preparedness requirements (53,53).

*Impact*

Institutional learning from past crises was credited with measurable improvements in advisory system capacity. Countries that established or strengthened permanent advisory structures following SARS or the 2009 pandemic demonstrated faster activation and more coherent responses during COVID-19 (76,104). Global growth in NITAG functionality (from 33% meeting all WHO process indicators in 2012 to 77% in 2023) was interpreted in part as reflecting accumulated institutional learning and sustained interpandemic investment in advisory systems (52). Advisory bodies that maintained interpandemic engagement with decision-makers, updated their procedures, and built inter-institutional coordination mechanisms were reported to exercise greater policy influence and generate more relevant recommendations when crises occurred (53,77).

*Barriers*

Resource dependency and funding instability were the most consistently cited barriers to interpandemic adaptive functioning. Many NITAGs lacked dedicated budgets, depended on external donors for operational support, and had insufficient secretariat capacity to maintain proactive interpandemic activities (29,35,77). Political instability and lack of formal legal recognition also constrained the ability of some advisory bodies to function consistently and adapt to new demands over time (31,52).

*Facilitators*

A well-defined institutional foundation (including statutory establishment, defined terms of reference, and clear mandates) emerged as a consistent enabler of interpandemic adaptive functioning. Bodies with these features were better able to maintain continuity of operations, engage with decision-makers proactively, and adapt their scope and processes in response to changing contexts (52,70,71). Inter-institutional coordination mechanisms, including regional NITAG networks, WHO capacity-building programs, and inter-agency coordinating committees, were described as enabling advisory bodies to build the knowledge, relationships, and processes necessary to respond effectively to future challenges (44,56,81,94).

***Table 5. Key Messages on Adaptability of Advisory Systems During Crisis***

| **Adaptability of Advisory Systems During Crises** | | |
|---|---|---|
| **Science Advisory Bodies' ability to respond effectively to crises** | **Crisis response mechanisms** | ● Four main mechanisms documented: (1) activation or creation of new advisory structures; (2) expansion or modification of membership; (3) acceleration of deliberative processes; and (4) adjustment of coordination arrangements.<br>● Governments frequently created ad hoc advisory committees during emergencies rather than using standing agencies, affording greater control over membership, mandate, and advisory content.<br>● Adapting existing advisory structures was consistently more effective than creating new ones during emergencies.<br>● Meeting frequency shifted substantially during crises: from quarterly or biannual to weekly or daily schedules. |

| | | |
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| | **Impact** | • Positive: Adaptive bodies that mobilized quickly and maintained coordination with decision-makers more effectively influenced pandemic policy decisions and national vaccination programs.<br>• Negative: Ad hoc bodies were often created at the cost of transparency, accountability, and independence. |
| | **Barriers** | • Weak or absent legal foundations limiting speed and legitimacy of institutional responses.<br>• Lack of independent secretariat support and sustainable funding.<br>• Narrow disciplinary composition and exclusion of social sciences.<br>• Institutional embeddedness within government machinery, limiting independent adaptive action. |
| | **Facilitators** | • Pre-established institutional structures, relationships, and operating procedures ('interpandemic playbook').<br>• Formal trigger mechanisms and clear escalation procedures enabling timely activation.<br>• Flexible membership models combining standing cores with working groups and ad hoc experts. |
| **Science Advisory Bodies' contribution to system functioning during non-crisis periods** | **Institutional learning and scope evolution** | • Past crises (SARS, H1N1) shaped subsequent institutional design, resulting in more permanent, coordinated, and better-resourced advisory structures during interpandemic periods.<br>• Advisory bodies adapted their scope and functioning over time in response to evolving institutional demands, even outside crisis periods.<br>• Capacity-building programs and inter-NITAG networks strengthened interpandemic functioning and preparedness for future crises.<br>• NITAGs that developed annual work plans, maintained functional secretariats, and participated in regional networks were better positioned to respond to emerging advisory demands. |
| | **Impact** | • Countries that established or strengthened permanent advisory structures following SARS or the 2009 pandemic demonstrated faster activation and more coherent responses during COVID-19.<br>• Advisory bodies that maintained interpandemic engagement with decision-makers exercised greater policy influence and generated more relevant recommendations when crises occurred |
| | **Barriers** | • Resource dependency and funding instability: many NITAGs lacked dedicated budgets and depended on external donors.<br>• insufficient secretariat capacity to maintain proactive interpandemic activities.<br>• Political instability and lack of formal legal recognition |

| | | |
|---|---|---|
| | | constrained consistent functioning over time. |
| | **Facilitators** | • Well-defined institutional foundation (statutory establishment, formal terms of reference, and clear mandates) enabling continuity of operations and proactive engagement.<br>• Bodies receiving structured external support reached full functionality in an average of 2.00 years vs. 2.82 years without support. |

### Emerging AI-enabled Advisory Processes

AI-enabled advisory processes refer to how artificial intelligence or advanced digital tools are used to support evidence synthesis, agenda-setting, or advisory processes within science advisory systems. Despite this dimension being explicitly included as a cross-cutting domain of the analytical framework, no study in the 104-document corpus reported on AI tools or mechanisms designed to inform, assess, or enhance the capacity of scientific advisory bodies to generate or deliver advice. Just one study reported the need for future research on the integration of technological solutions (including decision support systems, data analytics, artificial intelligence, and modelling techniques) into advisory decision-making systems (88).

## Next steps based on the identified evidence

### Overcoming identified barriers

A first priority is the formalization and consolidation of the institutional foundations of SABs/EPs. Across multiple settings, advisory bodies lacked formal mandates, clearly specified terms of reference, or statutory legal basis, resulting in limited recognition by decision-makers, vulnerability to political interference, and constrained operational capacity (29,70,71,77,93). Addressing this gap requires not only formal establishment through legal instruments, but also the development of comprehensive foundational documents that specify governance arrangements, membership criteria, decision-making rules, and performance review mechanisms (elements that were absent or underdeveloped in the majority of instruments analyzed across jurisdictions) (4,70). The absence of functional, independent secretariats was among the most consistently reported operational constraints and must be addressed as a priority: without dedicated technical and administrative support, advisory bodies cannot conduct systematic evidence synthesis, maintain continuity between meetings, or respond proactively to emerging demands (8,38,49,53,77). Funding instability (particularly prevalent in LMIC settings) must likewise be resolved through the establishment of domestic budget lines and reduced dependence on external donors, which currently compromises institutional sustainability and autonomy (35,53,77).

Conflict-of-interest management remained inadequate or absent in a significant proportion of the bodies studied (8,26,29,33,77,81,95,97). Despite COI disclosure being a core WHO process indicator for NITAGs, its implementation was inconsistent, often limited to verbal declarations without written policy, systematic enforcement, or public disclosure (31,35,38,46,70). The design of ad hoc emergency bodies during crises frequently circumvented standard COI safeguards, with governments retaining direct control over member selection and mandate specification to shape advisory outputs in politically convenient directions (27,72,79).

Compositional narrowness constituted a further systemic barrier: across pandemic and interpandemic contexts alike, advisory bodies were repeatedly dominated by biomedical expertise, with insufficient integration of social sciences, behavioral sciences, economics, ethics, and implementation perspectives, a limitation directly associated with advice that inadequately addressed health inequalities, behavioral dimensions, and social determinants of health (34,41,67,73,74,79).

### Strengthening identified facilitators

The evidence also identifies a set of enabling conditions that should be deliberately scaled, systematized, and protected. Pre-established institutional structures, networks, and operating procedures proved critical to rapid and effective advisory mobilization during crises, and their consolidation during interpandemic periods must be treated as a preparedness investment rather than a secondary priority (3,27,41,76,88,104). Structured capacity-building support significantly accelerated the time to NITAG functionality (bodies receiving dedicated external support achieved functionality in an average of 2.00 years compared to 2.82 years without such support) underscoring the value of sustained, evidence-based investment in advisory system development (37). Inter-NITAG networks and regional collaboration mechanisms, including the Global NITAG Network, WHO regional support programs, and twinning arrangements, should be further developed and adequately resourced to enable knowledge sharing, reduce duplication of evidence synthesis efforts, and support less-resourced bodies in meeting increasing advisory demands (8,56,81,91,94). The use of structured deliberative frameworks (including GRADE and Evidence-to-Decision tools) should be systematically promoted and operationalized within advisory bodies, as these tools were consistently associated with higher quality, more transparent, and more credible advisory outputs (9,13,20,42,92). Finally, flexible membership models (including standing cores supplemented by working groups and ad hoc experts) should be formalized as an institutional design principle to allow advisory bodies to adapt their expertise to emerging challenges without requiring full structural reform (5,43,104).

### Improving implementation processes

Even where advisory bodies produced evidence-informed recommendations, their translation into policy was not automatic, and significant implementation gaps were documented across multiple settings. Addressing these gaps requires action at several levels. First, formal integration of advisory bodies into policy cycles (through defined reporting channels, mandatory consultation requirements, and structured feedback mechanisms) is needed to increase the binding force and visibility of advisory outputs(9,24,38,42,93). Second, jurisdictional fragmentation and inter-governmental conflict were identified as critical barriers to implementation in federal systems, requiring the development of agreed coordination mechanisms and shared accountability frameworks between levels of government (49,62). Third, knowledge mobilization strategies (including targeted policy briefs, accessible summaries, and boundary-spanning roles between advisory bodies and government counterparts) need to be developed as a systematic function of advisory systems rather than an afterthought (16,16,66,90,98,99). Fourth, advisory bodies need the technical capacity to integrate economic evidence into deliberations: in LMIC settings, economic evidence-informed decisions in only a minority of documented processes, representing a significant gap in the quality and completeness of advisory outputs(77,93,98). Finally, the development and validation of comprehensive evaluation frameworks (capable of assessing not only structural functionality but also deliberative quality, equity integration, independence in practice, and actual policy

impact) remains an unmet need that limits the ability of advisory systems to learn from experience and demonstrate their value (4,42,65,77,81).

### Areas where evidence remains limited

Two evidence gaps warrant particular attention in future research and policy agendas. The first concerns SAB/EP functioning during interpandemic or non-crisis periods. The majority of included studies focused on pandemic contexts (particularly COVID-19) and the evidence on how advisory systems maintain effectiveness, build capacity, and sustain institutional learning during periods of stability was comparatively sparse (52,53,77,94). A deeper understanding of how governance structures, membership models, and coordination mechanisms evolve in non-emergency contexts represents one of the most significant evidence gaps identified by this synthesis. The second gap concerns the role of AI-enabled tools and advanced digital technologies in supporting advisory processes. Although this dimension was explicitly included as a cross-cutting domain of the analytical framework, no study in the 104-document corpus reported substantive evidence on the use of AI, decision support systems, or automated evidence synthesis tools within SABs/EPs. One study noted the need for future research on the integration of such technologies into advisory decision-making systems, including attention to their ethical and practical implications (88). Given the growing relevance of AI-enabled evidence synthesis in public health contexts (and its potential to support advisory bodies under the time pressures documented across the included literature) this represents a priority area for both research and policy attention in the coming years.

Additionally, the included literature focused almost exclusively on national-level advisory bodies, with very limited attention to subnational or regional SABs/EPs. Only three studies touched tangentially on this level (16,27,74). How advisory mechanisms function, coordinate, and contribute to policy at subnational levels (particularly in federal or decentralized systems) remains largely unexplored, despite its relevance for implementation and equity.

### The political stakes of addressing these gaps

The evidence reviewed makes clear that deficiencies in advisory body design, composition, and adaptability carry significant political consequences that extend beyond technical policy quality. Governments that created ad hoc emergency bodies without adequate independence mechanisms or transparent processes were reported to have used those bodies instrumentally, shaping membership and mandates to legitimize pre-determined political choices, narrow the range of admissible advice, and deflect accountability for unpopular decisions (72,74,79). This dynamic eroded public trust in science advice precisely when it was most needed, contributing to polarization of expert opinion, reduced legitimacy of advisory outputs, and in some cases outright public rejection of recommended measures (41,73,87,100). Conversely, advisory bodies that maintained genuine independence, transparent deliberation, and broad disciplinary composition were consistently associated with stronger public confidence, greater policy influence, and more durable institutional learning (6,8,26,72,83).

The political stakes are equally significant at the interpandemic level. The case of ACIP in the US illustrates how the rapid dismantling of well-established governance safeguards (including the replacement of vetted expert members, the abandonment of structured evidence frameworks, and the disruption of established coordination networks) can rapidly undermine an advisory body's credibility as both a domestic and international

model, with downstream consequences for vaccine confidence, policy coherence, and the broader architecture of evidence-informed public health governance (7). These experiences underscore that strengthening SABs/EPs is not merely a technical or institutional priority: it is a governance imperative with direct implications for the resilience and democratic accountability of public health systems in both crisis and non-crisis contexts. As Weinkle et al. (101) noted in the context of pandemic preparedness, the establishment of standing, independent, and transparent science advisory mechanisms is not simply good institutional practice, it is a prerequisite for states to achieve their obligations to protect population health under conditions of uncertainty and political pressure.

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# Appendix 1: Methodological details

**Background to the rapid evidence synthesis**

This rapid synthesis mobilizes both global and local research evidence in response to a question submitted to the Unit of Evidence and Deliberation for Decision Making (UNED), Faculty of Medicine, University of Antioquia. Whenever possible, the synthesis summarizes evidence drawn from existing evidence syntheses and, when necessary, from individual research studies in areas not covered by existing syntheses or where the evidence is rapidly evolving. A systematic review is a summary of studies addressing a clearly formulated question using systematic and explicit methods to identify, select, critically appraise, and synthesize the available evidence. This rapid synthesis does not provide recommendations, as doing so would require judgments based on the authors' values and preferences.

The UNED produces timely, demand-driven, and context-sensitive evidence syntheses to support evidence-informed decision-making in health and social systems. These products include rapid syntheses, scoping reviews, systematic reviews, living evidence syntheses, evidence briefs for policy, evidence and gap maps, and other knowledge translation products tailored to the needs and timelines of policymakers, health system interest-holders, and other decision-makers.

This rapid synthesis was prepared over a 30-business-day timeframe and involved six steps:

1) submission of a question from policymakers and interest-holders from the Public Health Agency of Canada (PHAC);
2) framing the research question(s), refining a proposed analytical framework, and scoping the approach in collaboration with the requesting team and experts from McMaster University, informed by ongoing and previous work on related topics;
3) identifying, selecting, appraising, and synthesizing relevant research evidence;
4) drafting the rapid synthesis to present the evidence concisely and in accessible language;
5) revising the synthesis based on feedback from the requesting team and collaborators; and
6) finalizing the report following input from at least two merit reviewers.

**Identification, selection, quality appraisal and synthesis of evidence**

For this rapid review, we searched PubMed, Embase, and Health Systems Evidence to identify documents examining Scientific Advisory Bodies and Expert Panels (SABs/EPs) involved in public health and policy decision-making. Eligible documents included primary studies, evidence syntheses, and research-based reports addressing the design, governance, operation, and evaluation of scientific advisory systems in Canada and other OECD jurisdictions.

The search strategy was developed by an experienced librarian and iteratively refined with input from the methodological team, content experts, and the project requester. Searches were conducted between April 6 and April 8, 2026. The search strategy is provided in **Appendix 2**.

Study selection was conducted in two stages: title and abstract screening, followed by full-text screening. During title and abstract screening, one reviewer screened all records, and a second reviewer independently verified excluded citations. All records included by at least one reviewer were assessed in full text. Full-text screening

was conducted independently by two reviewers. Discrepancies were resolved through discussion, and when needed, consultation with a third reviewer.

Documents were eligible if they examined SABs/EPs from a policy analysis perspective, including advisory committees, scientific advisory councils, expert panels, and related advisory mechanisms operating in public health or health policy contexts. We included documents published between January 2016 and March 2026. Documents focused exclusively on clinical decision-making bodies without a policy or governance component were excluded. The PRISMA flow diagram is provided in **Appendix 2**.

Data extraction was conducted by one reviewer using a standardized and piloted extraction form and independently verified by a second reviewer for accuracy and completeness. Disagreements were resolved through discussion. Extracted data included characteristics of advisory systems, governance arrangements, membership composition, conflict-of-interest management, deliberative processes, transparency mechanisms, equity considerations, and reported impacts on decision-making, policy influence, trust, and institutional learning

Risk of bias assessments for primary studies were conducted using the Joanna Briggs Institute (JBI) critical appraisal tools according to study design, while methodological quality appraisal of included systematic reviews was performed using the AMSTAR II tool. In both cases, assessments were conducted by one reviewer and verified by a second reviewer, with disagreements resolved through discussion.

Equity considerations were examined using the PROGRESS-Plus framework when reported in included studies. Particular attention was given to mechanisms supporting equity, diversity, inclusion, multidisciplinary representation, and incorporation of perspectives from equity-deserving or at-risk populations within advisory processes.

Findings were synthesized narratively and organized according to the analytical framework developed for the review, which included domains related to context and system characteristics, institutional design, advisory processes and operations, outputs and products, evaluation approaches, impact, and cross-cutting dimensions such as transparency, equity, and adaptability.

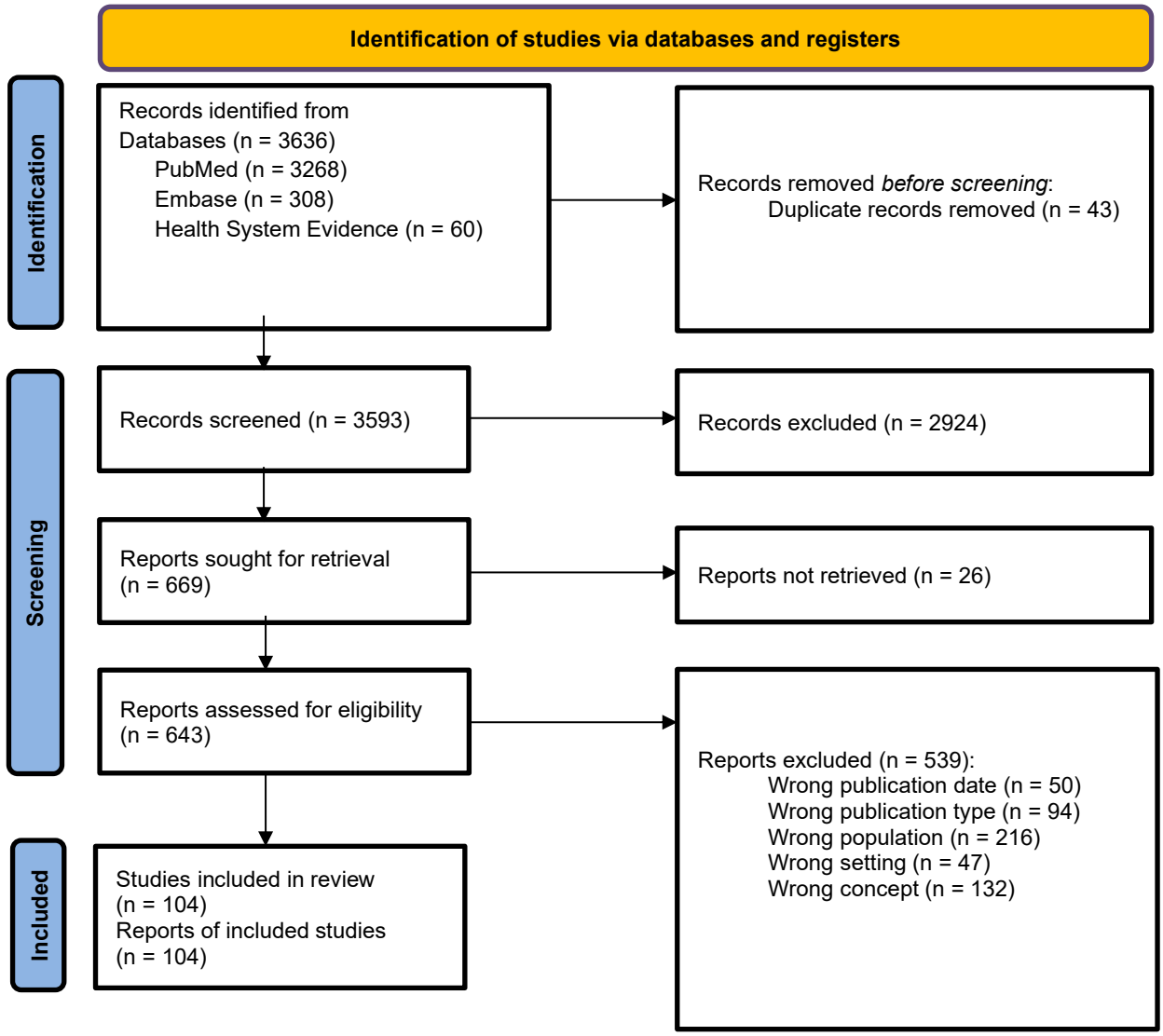
The protocol for this rapid review was developed prospectively and published in the Open Science Framework (OSF) (DOI: 10.17605/OSF.IO/37VGH).

# Appendix 2. Search strategies and PRISMA flow diagram

## Table 1. Search strategies

| Date | Medline/PubMed | HITS |
|---|---|---|
| **06 Apr 2026** | (("advisory committees"[MeSH Terms] OR "advisory commit*"[Title/Abstract] OR "advisory board"[Title/Abstract] OR "advisory council"[Title/Abstract] OR "scientific advi*"[Title/Abstract] OR "scientific council"[Title/Abstract] OR "scientific commit*"[Title/Abstract] OR "scientific expert*"[Title/Abstract] OR "scientific consultat*"[Title/Abstract] OR "scientific panel"[Title/Abstract] OR "science advi*"[Title/Abstract] OR "science panel*"[Title/Abstract] OR "science council"[Title/Abstract] OR "science commit*"[Title/Abstract] OR "science expert*"[Title/Abstract] OR "science panel*"[Title/Abstract] OR "expert advi*"[Title/Abstract] OR "technical advi*"[Title/Abstract] OR "expert panel"[Title/Abstract]) AND ("public policy*"[Title/Abstract] OR "health polic*"[Title/Abstract] OR "policymak*"[Title/Abstract] OR "policy mak*"[Title/Abstract] OR "govern*"[Title/Abstract] OR "decision-making"[Title/Abstract] OR "evidence-policy"[Title/Abstract] OR "evidence-informed"[Title/Abstract])) AND (**2016:2026**[pdat]) | **3,268** |
| **Date** | **Embase** | **HITS** |
| **08 Apr 2026** | 'advisory committee'/exp OR 'advisory committee' OR 'scientific advi*':ab,ti OR 'scientific panel':ab,ti OR 'scientific council':ab,ti OR 'science committee':ab,ti OR 'science panel':ab,ti OR 'science council':ab,ti OR 'expert advi*':ab,ti OR 'scientific expert':ab,ti OR 'technical advi*':ab,ti AND 'health care policy'/exp OR 'health care policy':ab,ti OR 'health policy':ab,ti OR 'public policy'/exp OR 'public policy':ab,ti<br>AND [embase]/lim NOT ([embase]/lim AND [medline]/lim) | **308** |
| **Date** | **Health Systems Evidence** | **HITS** |
| **08 Apr 2026** | https://www.healthsystemsevidence.org/search?q=advisory%20committees&best=false | **7** |
| **08 Apr 2026** | https://www.healthsystemsevidence.org/search?best=false&p=0&q=scientific%20council | **7** |
| **08 Apr 2026** | https://www.healthsystemsevidence.org/search?best=false&p=0&q=scientific%20panel | **4** |
| **08 Apr 2026** | https://www.healthsystemsevidence.org/search?best=false&p=0&q=scientific%20committee | **3** |
| **08 Apr 2026** | https://www.healthsystemsevidence.org/search?best=false&p=0&q=scientific%20expert | **18** |
| **08 Apr 2026** | https://www.healthsystemsevidence.org/search?best=false&p=0&q=science%20panel | **4** |
| **08 Apr 2026** | https://www.healthsystemsevidence.org/search?best=false&p=0&q=science%20council%20 | **9** |
| **08 Apr 2026** | https://www.healthsystemsevidence.org/search?best=false&p=0&q=science%20committee | **8** |

## Figure 1. PRISMA flow diagram




Source: Page MJ, et al. BMJ 2021;372:n71. doi: 10.1136/bmj.n71.

# Appendix 3: Details of each included study

## Criteria used to determine "Relative Relevance"

1. Applicability: The extent to which findings can inform or be directly used by decision-makers.
    - High applicability – actionable: Provides clear frameworks, models, tools, or operational strategies that can be directly adopted or adapted in policy or advisory contexts.
    - Moderate applicability – informative: Describes structures, processes, or experiences that provide useful insights but are not directly transferable or lack sufficient operational detail.
    - Low applicability: Provides minimal or no actionable insight for the design, operation, or evaluation of advisory systems.
2. Methodological credibility: Rigour and reliability of the study design and analysis.
    - High credibility: Uses rigorous and appropriate methods (e.g., systematic reviews, well-designed empirical studies, validated program evaluations) with clear alignment between objectives, methods, and conclusions.
    - Moderate credibility: Includes descriptive studies, case studies, or reviews with some methodological limitations (e.g., lack of formal quality appraisal, reliance on self-reported data).
    - Low credibility: Opinion pieces, editorials, or studies with unclear or non-reproducible methods.
3. Decision-usefulness: The extent to which the study directly addresses a policy-relevant question.
    - High usefulness: Directly answers a specific decision-making question (e.g., how to design governance structures, how to prioritize topics, how to evaluate impact).
    - Moderate usefulness: Partially informs decision-making but does not provide a complete or direct answer.
    - Low usefulness: Does not meaningfully contribute to answering decision-oriented questions

## Table 1. Relative relevance of the studies for each phase of the synthesis

| Paper | Phase One | Phase Two | Phase Three | High-level description |
|---|---|---|---|---|
| Aarts, 2022 (73) | High | Moderate | Moderate | Analysis focusing on system learning, transparency, and the institutional adaptation of (in)formal science advisory bodies during crises |
| Assor, 2025 (33) | High | Low | Moderate | Reflexive study exploring profound structural and ethical barriers in HTA, providing insights into epistemic practices and equity considerations |
| Asthana, 2025 (88) | High | High | High | Multi-national study detailing how advisory mechanisms adapt to different forms of epistemic, strategic, and institutional uncertainty |

| Paper | Phase One | Phase Two | Phase Three | High-level description |
|---|---|---|---|---|
| Asturias, 2016 | Moderate | Moderate | Moderate | Narrative detailing the history, operations, and global policy impact of the WHO's Global Advisory Committee on Vaccine Safety |
| Asturias, 2026 | Low | Low | Low | Evaluates how the abrupt restructuring of a national advisory body and the abandonment of established methodological frameworks (GRADE/EtR) erode public trust and policy rigor |
| Baba, 2025 | Moderate | Moderate | Moderate | Firsthand narrative providing insights into internal HTA procedures, formal COI management, scientific rigor, and operational independence |
| Bacigalupe, 2022 | High | | | Study providing empirical data on gender inequity and the lack of institutional transparency within scientific advisory committees in Spain |
| Baker, 2022 | High | | High | Analysis of transparency, membership patterns, and linguistic practices used by advisory bodies for managing consensus and uncertainty |
| Baltussen, 2023 | Moderate | High | High | Report providing insights into operationalizing evidence-informed deliberative processes (EDP) to improve legitimacy in priority setting |
| BaNguz, 2017 | Moderate | | Moderate | Firsthand narrative from NITAG members detailing the operational structure, policy implementation, and the role of these advisory bodies in integrating global mandates with local evidence |
| BaNguz, 2019 | Moderate | Moderate | Moderate | Evaluative analysis describing capacity-building strategies, evidence-based review training, and operational challenges for NITAGs in LMICs |
| Bell, 2019 | High | High | High | Comparative study exploring the value, governance vulnerabilities, and policy impacts of NITAGs in LMICs based on extensive global interviews |
| Bergstedt, 2024 | High | High | High | Study exploring how a political advisory body serves as a mediating institution to navigate values, trade-offs, and transparency in healthcare priority-setting |
| Betancourt, 2024 | High | | High | Empirical evaluation of the governance, structural organization, conflict of interest (COI) management, and policy impact of NITAGs across Latin America and the Caribbean |
| Bhatia, 2023 (27) | Moderate | | Moderate | Analyzes the mandate, membership, and outputs of national science advisory panels and task forces mobilized during the COVID-19 pandemic in Canada, highlighting fragmentation and transparency issues |
| Bouchat, 2025 (74) | Moderate | | Moderate | Broad scoping review of advisory bodies, highlighting variable policy influence, government cherry-picking, and gaps in advisory transparency |

| Paper | Phase One | Phase Two | Phase Three | High-level description |
|---|---|---|---|---|
| Boujaoude, 2025 | | Low | High | Document analysis evaluating how health equity dimensions are synthesized, deliberated, and communicated in national vaccine recommendations |
| Brooks-Pollock, 2021 | Low | Low | Low | Explores epidemiological modelling insights, academic publishing bottlenecks, and secretariat coordination during rapid emergency policymaking |
| Bruat, 2022 | Moderate | Low | High | Descriptive analysis offering data regarding operational pressures, regulatory impact, and equity gaps in advisory bodies |
| Colman, 2021 | High | Low | Moderate | Empirical insight into the political and communicative challenges of advisors and the tensions of interdisciplinary collaboration during crises |
| Cruz, 2020 | Moderate | Low | Moderate | Describes the structural setup and predictive modelling inputs of an independent task force |
| Czech, 2024 | Moderate | Low | High | Evaluates vaccine assessment pathways, providing evidence on operational deficiencies, transparency gaps, and decision-making consistency |
| D'Souza, 2018 | High | High | High | Empirical demonstration that scientific credibility requires throughput legitimacy, transparent conflict-of-interest (COI) management, and agenda salience to ensure actual policy uptake |
| Dabanch, 2019 | Moderate | Moderate | Moderate | Provides observations on the structural agility, strict COI management, and formal evaluation frameworks of a successfully integrated advisory body |
| Daval, 2023 | High | | High | Empirical data on voting mechanics, advisory concordance rates, and how government agencies weigh advisory consensus versus institutional risk over time |
| Duke, 2022 | Low | Low | Low | Conceptual blueprint for knowledge translation and structural implementation of a global advisory group |
| Dzau, 2015 | Moderate | Moderate | Low | Conceptual benchmark detailing structural design, COI management, and operational independence |
| Epling, 2020 | Moderate | | Moderate | Overview of equity requirements, public transparency, and formal deliberation frameworks (e.g., GRADE/EtR) |
| Etapelong, 2024 | High | | High | Quantitative evidence on the implementation of WHO evaluation indicators, COI management, and the policy impact of scientific advisory bodies across varying socio-economic contexts |
| Evans-Gilbert, 2024 | High | Low | Moderate | Empirical data mapping real-world operational challenges, governance gaps, and self-reported policy impacts to standardized maturity indicators (NMAT) in Latin America |
| Evans, 2022 | High | | High | Theorized insights into how the political framing of "following the science" can paralyze advisory bodies by demanding unattainable epistemic certainty during fast-moving crises |

| Paper | Phase One | Phase Two | Phase Three | High-level description |
|---|---|---|---|---|
| Ezenwaka, 2025 | Moderate | | Moderate | Highlights the systemic hazards of operating fragmented, unlinked advisory task forces across multiple levels of government and how data scarcity undermines equitable policy formulation |
| Fagan, 2020 | High | High | High | Provides insights into how advisory bodies can be undermined by shifting COI definitions and how scientific advice is interpreted and navigated under conditions of uncertainty |
| Fourn, 2020 | Moderate | Low | High | Details methodologies (like the GRAI model and PICO framework) for evidence deliberation and reaching internal consensus in resource-limited settings |
| Freedman, 2020 | Low | | Low | Theoretical analysis on the structural limits of consensus-based deliberation and the necessity of intense, critical interaction between advisors and decision-makers |
| Gal, 2024 | High | High | High | Practical guide demonstrating how to structure rapid evidence reviews, utilize boundary spanners, and co-produce policy directly with decision-makers during emergencies |
| Greene, 2020 | High | | High | Empirical data on the systemic silos, compensation disparities, and coordination gaps that exist between parallel national scientific advisory bodies operating within the same jurisdictions |
| Harmon, 2019 | High | | High | Qualitative analysis mapping the foundational legal architecture, instruments, and authority models of global NITAGs |
| Harmon, 2021 | High | | High | Qualitative policy analysis mapping the legal architecture and diverse authority models (directive, advisory, hybrid) of global NITAGs |
| Henaff, 2025 | High | Low | High | Comprehensive global analysis providing empirical data on institutional design, functionality, and policy influence over a 12-year period |
| Hillmer, 2021 | Low | | | Briefly discusses the administrative and operational pressures on expert consensus tables and scholars' intrinsic motivations during rapid pandemic responses |
| Hoffman, 2018 | Low | Low | Low | Proposes a six-stage theoretical blueprint outlining how various institutional design choices conceptually drive the quality, relevance, and legitimacy of scientific advice, despite an absence of primary empirical testing |
| Howard, 2018 | High | Moderate | High | Comparative study providing data on governance vulnerabilities and policy impacts in LMICs |
| Jarman, 2025 | High | | High | Qualitative policy analysis proving that transparent and functionally autonomous advice systems significantly contribute to better policymaking |
| Jroundi, 2021 | High | Moderate | High | Cross-sectional evaluation assessing the functionality, work processes, and policy integration of the Moroccan NITAG using standardized WHO assessment tools |

| Paper | Phase One | Phase Two | Phase Three | High-level description |
|---|---|---|---|---|
| Jung, 2023 | Moderate | | Moderate | Examines the intersection of scientific advice and politics during the relaxation of nonpharmaceutical interventions in the Republic of Korea |
| Kahn, 2023 | High | | High | Survey assessing how NITAGs utilized WHO SAGE guidance to navigate supply constraints, population prioritization, and complex delivery logistics during a pandemic |
| Kang, 2024 | High | Moderate | High | Primary survey providing granular data on desired structural design, COI protocols, and deliberation practices |
| Kim, 2021 | Moderate | | Moderate | Descriptive report providing insights into the structured deliberation cycles, economic evidence inputs, and cross-committee coordination mechanisms utilized by Australian health technology assessment advisory bodies |
| Koppl, 2025 | High | Moderate | Low | Comparative case study exploring how governments use ad hoc advisory bodies to retain policy discretion and adapt to crises |
| Külper-Schiek, 2025 | High | Moderate | High | Evaluative study providing direct empirical data on NITAG governance, operational bottlenecks, and evaluation frameworks |
| Ladekarl, 2025 | Moderate | Moderate | Moderate | Longitudinal programmatic report evaluating the structure, clinical review workflows, and long-term systemic impact of an expert advisory panel in Denmark over 21 years |
| Lago, 2017 | Moderate | Moderate | Moderate | Documental analysis tracking committee composition and recommendations |
| Lecouturier, 2023 | High | High | High | Explores critical factors (e.g., funding, transparent knowledge exchange) for producing policy-relevant research via the STEPS framework |
| LeJeune, 2021 | Moderate | Moderate | Moderate | Report on how an international scientific body synthesizes evidence, manages experts, and dictates global policy |
| MacDonald, 2017 | Low | | Low | Narrative reporting on how advisory groups use external evaluation tools to identify gaps and reform their processes |
| Markovic, 2022 | Moderate | | Moderate | Describes the operational challenges of an expert committee developing evidence-based recommendations virtually during the COVID-19 pandemic in Serbia |
| Markowitz, 2024 | Moderate | | Moderate | Narrative detailing the membership, rigorous independent safety reviews, and policy impact of the ACIP VaST technical work group |
| Marres, 2025 | High | High | High | Qualitative situational analysis offering insights into how independent shadow advisory bodies engage the public to adapt to systemic crises |
| Martinelli, 2023 | Moderate | | Moderate | Cross-sectional survey identifying the main criteria and planned introductions used by European NITAGs for new vaccine recommendations |

| Paper | Phase One | Phase Two | Phase Three | High-level description |
|---|---|---|---|---|
| Matus, 2023 | Moderate | | | Outlines the broader imperative for robust science advisory structures and knowledgeable experts to manage health crises and foster public policy acceptance |
| McCormick, 2018 | Moderate | | High | Retrospective review on how national HTA bodies handle clinical uncertainty and integrate economic constraints into conditional advice |
| McKee, 2022 | Moderate | Moderate | Moderate | Firsthand narrative offering insights into public engagement and transparent communication by an independent advisory body |
| Mosina, 2020 | Moderate | Low | Moderate | Evaluates a targeted capacity-building strategy to align LMIC NITAG operations with WHO functional indicators, demonstrating the need for sustained technical support |
| Mosina, 2021 | Moderate | | Moderate | Details the use of online communication platforms and collaborative networks to support NITAGs in the WHO European Region during the pandemic |
| Musa, 2023 | Moderate | Moderate | Moderate | Primary study detailing the operational realities, voting structures, and capacity deficits of an embedded NITAG in a limited-resource setting during an emergency |
| Noharet, 2023 | | High | High | Comparative analysis of how national advisory and health technology assessment (HTA) bodies utilize specific epidemiological (e.g., disease burden) and economic criteria (e.g., cost-effectiveness) to prioritize target populations, evaluate evidence, and formulate final vaccine policy recommendations |
| Nouhi, 2022 | High | High | High | Narrative report detailing the operationalization of evidence-informed deliberative processes (EDPs) for health benefit package design |
| Okeke, 2025 | Moderate | Moderate | Moderate | Scoping review mapping strategies for economic evidence uptake |
| Oortwijn, 2022 | Moderate | High | High | Descriptive report on structuring membership and using MCDA tools to formalize evidence-based deliberations |
| Otieno, 2021 | High | High | High | Qualitative study evaluating the decision-making process, systemic gaps, and external barriers (like decentralization and rumours) in maternal vaccine policy |
| Panero, 2020 | High | | High | Retrospective case study utilizing the TAPIC framework to expose governance vulnerabilities and the impact of public transparency on advisory body effectiveness in middle-income countries |
| Pearce, 2019 | Moderate | | Moderate | Details how independent HTA advisory bodies create rigorous, evidence-based systems that highly influence policy |
| Perronne, 2016 | Low | | Low | Summarizes discussions on committee collaboration and evidence-sharing methodologies |
| Perumal, 2017 | High | High | High | Qualitative study providing insights into conflict-of-interest management, evidence-to-decision processes, and long-term committee maturation |

| Paper | Phase One | Phase Two | Phase Three | High-level description |
|---|---|---|---|---|
| Pickerin, 2020 | Moderate | | High | Outlines how an advisory body utilizes structured frameworks (like GRADE) to produce transparent, objective recommendations |
| Quinn, 2025 | High | | High | Study using reflexive thematic analysis to assess the barriers, facilitators, and actual policy implementation outcomes of federal health advisory bodies |
| Sakala, 2023 | High | Moderate | High | Empirical insights into the functionality and decision-making processes of technical working groups, yielding data for operational improvement |
| Sakas, 2024 | High | | High | Offers empirical findings comparing mandates and memberships of ICCs and NITAGs, demonstrating how institutional coordination supports evidence-based programming |
| Sell, 2021 | Moderate | | Moderate | Evaluates expert committees during COVID-19, highlighting crucial issues of biomedical dominance, lack of transparency, and discipline/gender equity |
| Serrano-Aguilar, 2019 | Moderate | High | Moderate | Descriptive report detailing the agenda-setting protocols (e.g., PRITEC tool), patient inclusion, and formal methodologies of a national HTA network |
| Shanmugasegaram, 2020 | Moderate | | Moderate | Outlines methodological practices for guideline development, highlighting the importance of transparent conflict-of-interest disclosures and equity-focused systematic reviews |
| Silva, 2016 | High | High | High | Highlights differences in transparency, voting rights, and the subjective influence of dominant personalities across different countries |
| Simangolwa, 2024 | Moderate | Moderate | Moderate | Demonstrates limited efforts to operationalize decision criteria in Sub-Saharan Africa, showing gaps between desired frameworks (like EDP) and actual implementation in priority-setting |
| Simuyemba, 2022 | High | | High | Examines the functionality of parallel advisory organs, yielding findings on how institutional linkages and coordination affect country ownership and accountability |
| Singh, 2025 | Moderate | | High | Demonstrates how standardized evidence evaluation frameworks (like GRADE and AMSTAR 2) actively promote transparency and rigor in advisory bodies |
| Smith, 2025 | High | | High | Empirical study exploring the political and institutional dynamics of maintaining "independence" for chief medical officers embedded within government |
| Steffen, 2021 | Low | | Low | Expert perspective detailing the global growth of NITAGs and evaluating their future needs for capacity building |
| SteinZamir, 2021 | Moderate | Moderate | Moderate | Narrative providing observational data on membership design, conflict-of-interest management, extreme communication transparency, and policy impact of an embedded advisory group |

| Paper | Phase One | Phase Two | Phase Three | High-level description |
|---|---|---|---|---|
| Sume, 2024 | High | | High | Empirically grounded evaluation using the NMAT tool to assess the institutional governance, COI management, and operations of advisory bodies |
| Tjeuw, 2022 | Low | | Low | Quantifies the volume and therapeutic focus of public feedback on HTA submissions in Australia (PBAC), suggesting process improvements for better civic engagement |
| Tunis, 2023 | | Moderate | Moderate | Conceptual and descriptive piece exploring the relationship between epidemiological uncertainty, evidence availability, and advisory body engagement timelines during a pandemic |
| Tuohy, 2023 | High | | High | Comparative institutional analysis explaining the critical trade-offs between established and purpose-built advisory structures during emergencies |
| Vallejo, 2020 | Low | | Low | Descriptive policy analysis reviewing pandemic responses and proposing the formalization of government science advice |
| vanZandvoort, 2019 | High | | High | Quantitative evaluation demonstrating how external support significantly accelerates the functional adaptation and operational capacity of advisory bodies globally |
| Vickery, 2022 | High | | High | Qualitative study capturing the lived experiences of advisors, highlighting structural transparency gaps and profound "evidence inequities" between high- and low-income countries |
| Wabnitz, 2023 | High | | High | Qualitative study showing that formal consensus guidelines had mixed or moderate policy uptake due to the trade-off between timeliness and rigour |
| Wallace, 2023 | Moderate | High | High | Methodological narrative detailing the data inputs and assumptions for benefit-risk assessments by an advisory body |
| Weinkle, 2022 | High | High | High | Qualitative case study providing insights into how state-level science advice was mobilized, assimilated, and limited by the surrounding political context during an emergency |
| White, 2018 | High | High | High | Qualitative program evaluation showing how an embedded TB advisory body evolved its deliberation processes and agenda-setting to secure major policy and financial impacts |
| Whitty, 2021 | Low | | Low | Expert opinion from the architect of a national science advisory system, offering insights into structural design, coordination, and operational tensions during a fast-moving crisisED |
| Wong, 2018 | Moderate | Moderate | Moderate | Policy analysis providing robust evidence on how deficits in transparency and membership expertise directly undermine public trust |
| Yuba, 2018 | High | High | High | Descriptive document analysis showing how evidence requirements and advisory decision-making diverge based on whether policy demands are internal or external |
| Zhang, 2019 | High | | High | Quantitative regression of regulatory discordance |

## Table 2. Details about each identified evidence synthesis

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| The Dutch see Red: (in)formal science advisory bodies during the COVID-19 pandemic | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Scientific Advisory Body (SAB). Features a formal body (Outbreak Management Team —OMT) and an informal shadow advisory body (Red Team).<br>● Mandate<br>○ Strategic, Technical, Risk Assessment.<br>○ OMT was mandated to provide the "best possible professional advice" to decision-makers.<br>○ The Red Team provided unofficial, unsolicited advice.<br>● Governance model<br>○ OMT: Embedded. It is an independent expert body funded by and linked to the government via the National Institute for Public Health.<br>○ Red Team: Independent. It is an informal shadow advisory body.<br>● Advisory roles and participation<br>○ OMT: Chairs, core members, coordination across agencies, expert networks, external consultants, cross-country coordination.<br>○ The Red team: Unsolicited advice given by external consultants / Observers<br>● Membership composition and expertise<br>○ OMT was grounded in science, medicine, and public health (e.g., virologists, epidemiologists, pediatricians, National Consultation on Infectious Disease Control). Ad hoc members may participate depending on the issue. Notably lacked social and behavioural scientists.<br>○ The Red Team included experts in the field, such as the former chief inspector at the Health and Youth Care Inspectorate, a health economist, and a field epidemiologist, medical specialists to data experts and ex-COVID-19 patients. | **Key findings**<br>● The pandemic revealed structural limitations and a weakened central coordination associated with the decentralized Dutch system.<br>● Early advice was highly centralized, expert-driven, and channelled strictly through the OMT.<br>● The second wave exposed the fragility of this consensus model as expert opinions diverged and public dissatisfaction rose.<br>● The OMT increasingly displayed elements of issue advocacy, prompting the Red Team to emerge and challenge official advice.<br>● Calls for a strict separation between science and policymaking risk overlooking the complexity of crisis governance, which requires broader expertise, reflection on values, and inclusive participation<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: Decentralization weakened central coordination among health institutions at the national and regional levels, leading to the development of different policies and implementation strategies despite the existence of strong interregional networks. Pandemic science advice was largely centralized and channeled through the OMT. During the early phase of the pandemic, this structure was combined with a policy approach that emphasized individual responsibility rather than coercive measures, which initially helped sustain consensus. However, the second wave of COVID-19 exposed the fragility of this governance arrangement, and maintaining | **Equity**<br>● The Red Team functioned as a shadow body whose creation reflected the need to incorporate a broader range of societal perspectives.<br>**Transparency**<br>● The legitimacy of the OMT was questioned due to limited transparency and closed-door discussions. The Red Team utilized public forums and social media, which contributed to greater public visibility. This dual-messaging ultimately caused public confusion.<br>**Adaptability**<br>● The advisory and policy process faced challenges in adapting measures between the first and second waves of the COVID-19 pandemic. In particular, it proved difficult to synchronise appropriate responses across national, regional, and local levels of governance, reflecting coordination challenges within the decentralised health system. |
| **Publication date** | December, 2022 | | | |
| **Jurisdictions studied** | The Netherlands | | | |
| **Author/Organization** | Aarts et al. | | | |
| **Relevance rating** | High | | | |
| **Living status** | No | | | |
| **Quality (AMSTAR)** | Critically low | | | |
| **Last year literature searched** | 2020 | | | |
| **Availability of GRADE profile** | No | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| | | ● Membership structure and appointment model<br>○ The OMT included permanent members, such as the chair (RIVM-CIb director) and the secretary (Head of the National Coordination Center for Communicable Disease Control). Its membership also included representatives from several professional and scientific organizations, as well as ad hoc members who participated in a personal capacity depending on the issue under discussion.<br>○ The Red Team was initially composed of five members, later expanded by adding eight new experts, and was supported by a broader community of more than 200 participants with diverse experience and expertise.<br>● Equity considerations<br>○ The Red Team was specifically formed as a response to the perceived need for greater inclusion of diverse societal perspectives in pandemic management. In the OMT was notable the lack of participation from experts in the social and behavioral sciences, limiting the diversity of perspectives represented in the advisory process. | consensus became increasingly difficult, leading the government to adopt more restrictive and centralized measures (e.g., curfews, mask mandates, lockdowns).<br>● Policy influence<br>○ Integration into policies: Pandemic science advice was largely centralized and channeled through the OMT (national pandemic playbook). However, decentralization weakened coordination among health institutions at the national and regional levels, affecting the consistency of policy implementation despite strong interregional networks. As scientific knowledge about the virus and the effects of control measures evolved across multiple disciplines, expert opinions increasingly diverged and public dissatisfaction with pandemic governance grew, making consensus more difficult to sustain. Although Dutch governance traditions support consensus-based decision-making and trust in expertise, the pandemic response relied on a corporatist and expert-driven structure with limited space for broader deliberation. As a result, the integration of scientific advice into policy became increasingly contested as the pandemic progressed and expert recommendations did not immediately translate into effective control measures.<br>● Trust and legitimacy<br>○ Public or stakeholder trust: TThe legitimacy of the OMT was questioned because many discussions took place behind closed doors, raising concerns about transparency and how evidence was considered in decision-making. In contrast, the Red Team conducted discussions publicly through forums and social | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| | | | media, which increased its visibility and credibility among some audiences. As the pandemic progressed and expert advice did not immediately translate into effective control, the legitimacy and roles of scientific advisors became increasingly contested. Established institutions, such as the OMT, began to display elements of issue advocacy, while new actors, such as the Red Team, emerged to challenge official advice.<br>● System learning<br>○ Institutional learning or adaptation: The emergence of the Red Team demonstrated that the traditional Dutch "polder" model, which relied on a single, confidential, and consensus-oriented expert body, was insufficient for managing a prolonged crisis involving complex societal trade-offs. The system was forced to adapt to a more polarized and pluralistic science-advice environment. While Dutch governance traditions at the macro level suggest strong potential for consensus-based decision-making and trust in expertise, at the meso level the pandemic response reflected a corporatist and expert-driven structure with limited space for broader deliberation. At the micro level, the deliberative style associated with the polder model weakened as expert views became increasingly polarized. The pandemic highlighted that effective responses require not only specialized expertise, but also broader participation, reflection on societal values, and more inclusive deliberative processes capable of addressing uncertainty and societal pluralism. | |
| Policy advisory bodies during crises: a scoping review of the COVID-19 literature in | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body | **Key findings**<br>● Biomedical dominance shaped early advisory | **Equity**<br>● Highlights the importance of |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| Europe | | ○ SAB, Expert Panel, Advisory committee, National academies, learned societies and networks, Chief scientific advisors, Advisory councils, Science Advisory Office / Agency, as well as other structures such as permanent analytical units and ad hoc task forces or commissions.<br>● Mandate<br>○ Strategic, Technical, Risk Assessment. Mandates varied considerably across countries, reflecting different levels of institutional maturity. Some countries relied on pre-existing advisory bodies embedded in crisis preparedness systems, others created new structures specifically for the pandemic, and some combined both approaches. Over time, the initially unified expert consensus evolved into visible public disagreement.<br>● Governance model<br>○ Independent, Embedded, Hybrid. The degree of autonomy varied significantly across contexts; some operated independently while others were closely tied to government authorities.<br>● Advisory roles and participation<br>○ Bodies were often chaired by senior government representatives with medical expertise (e.g., Ministers of Health, Chief Scientific Advisers) and acted as boundary organizations linking science and government. Other advisory roles include core members, independent experts, observers, coordination across agencies, and expert networks.<br>● Membership composition and expertise<br>○ Dominated by medical and biomedical experts during the early stages of the pandemic. Social sciences, ethics, and public health expertise were initially underrepresented, although their participation increased later in the pandemic.<br>● Membership structure and appointment model<br>○ In many countries, members were frequently appointed directly by senior political and executive authorities, raising widespread concerns regarding politicization, transparency, and independence. Some countries relied primarily on pre-existing advisory bodies embedded within crisis | bodies, with social/ethical sciences marginalized until later in the crisis.<br>● Diverse institutional models (pre-existing, newly created, and hybrid) and advisory bodies were used. Scientific advice was often produced in response to requests from policymakers, although in some contexts advisory bodies also generated unsolicited advice.<br>● Government influence was high due to direct political appointments of experts and the degree of autonomy of advisory bodies varied across contexts.<br>● Selection of members and deliberation processes were largely opaque, taking place behind closed doors and raising concerns about transparency.<br>● There were inherent tensions between scientific rigor and urgent policy needs.<br>● Outputs were not consistently transparent, and advice was sometimes selectively politicized to justify government decisions.<br>● Despite being non-binding, advice had substantial influence, though this influence was heavily skewed toward biomedical recommendations over socioeconomic ones.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: Although advisory recommendations were typically non-binding, they often had a relatively strong impact on policy decisions, though there were instances where governments ignored them or selectively "cherry-picked" evidence to legitimize political decisions.<br>● Policy influence<br>○ Integration into policies: Advisory bodies held a more influential position during the early stages of the pandemic, when uncertainty was high. Advice from biomedical experts tended to exert greater influence on policy decisions than | transparent nomination processes, member impartiality, managing conflicts of interest, and addressing gender imbalances.<br>**Transparency**<br>● Limited. Internal deliberations frequently occurred behind closed doors. Evidence, analyses, and meeting minutes were not consistently shared with the public; in some cases, documents became available only after public criticism or were heavily redacted. Initial secrecy regarding the identities of advisers was also highly criticized.<br>**Adaptability**<br>● Advisory systems evolved rapidly to adapt to changing policy needs. As government responses expanded, some advisory bodies became ill-suited and were dissolved or replaced by new entities, while others had their mandates broadened to accommodate the diversification of policies**.** Governments relied heavily on scientific advisory bodies to manage the high levels of uncertainty and the need for immediate action during the COVID-19 pandemic, utilizing both standing preparedness systems and rapidly deploying ad hoc structures. |
| **Publication date** | September, 2024 | | | |
| **Jurisdictions studied** | Multiple European countries (Switzerland, Serbia, Bosnia Herzegovina, Czechia, Slovakia, Spain, Norway, Sweden, Denmark, Finland, Greece, Netherlands, Austria, France, Belgium, Germany, Italy, UK) | | | |
| **Author/Organization** | Bouchat et al. | | | |
| **Relevance rating** | Moderate | | | |
| **Living status** | No | | | |
| **Quality (AMSTAR)** | Critically low | | | |
| **Last year literature searched** | 2023 | | | |
| **Availability of GRADE profile** | No | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| | | preparedness systems, whereas others depended mainly on newly created bodies. A third group adopted a hybrid approach, combining existing and newly established advisory structures.<br>● Conflict-of-interest management<br>○ Depends largely on transparent member selection and the assurance of impartiality.<br>● Equity considerations<br>○ Issues of inclusiveness were rarely examined in the literature, though a few publications identified significant gender imbalances (particularly in the Italian case). | recommendations addressing socioeconomic or ethical considerations. Although advisory recommendations were typically non-binding, they were usually taken into consideration by policymakers.<br>● Trust and legitimacy<br>○ Public or stakeholder trust: The interaction between science advisory structures and governments during the COVID-19 pandemic was characterized by politicization, limited transparency, and variable influence on policymaking. The opaque nature of advisory processes, including closed-door deliberations, membership selection procedures, redacted documents, and the politicization of scientific advice, raised widespread public concerns and undermined transparency, legitimacy, and independence.<br>● System learning<br>○ Institutional learning or adaptation: The review highlights substantial differences in institutional maturity across countries. Some relied primarily on pre-existing advisory bodies embedded within crisis preparedness systems, whereas others depended mainly on newly created structures. A third group adopted a hybrid approach, combining existing and newly established advisory bodies. Over time, the artificial consensus expected during the early stages of the pandemic gave way to visible public disagreement among experts. | |
| A scoping review of the roles of stakeholders and coordination mechanisms for enhanced multi-sectoral and multi-level interventions in COVID-19 response in Nigeria | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee: Ministerial Expert Advisory Committee on COVID-19 (MEACOC)<br>● Mandate | **Key findings**<br>● The MEACOC was established at national level to provide technical advice to the Minister of Health, and ad hoc expert Medical Advisory Committees were set up at sub-national level; both operated | **Equity**<br>● Lack of socioeconomic data: The absence of a comprehensive, socioeconomic status-disaggregated database of urban |
| **Publication date** | 2025 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| **Jurisdictions studied** | Nigeria | ○ Technical, Strategic. To provide technical advice, overall policy direction, guidance, and to coordinate/oversee the multi-sectoral and inter-governmental response to COVID-19 across national and state levels.<br>● Governance model<br>○ Embedded: MEACOC embedded within the Federal Ministry of Health; sub-national advisory committees embedded within state governments.<br>● Advisory roles and participation<br>○ MEACOC provided technical advice to the Minister of Health. Ad hoc expert Medical Advisory Committees at the state level provided technical advice on de-escalation measures. Both operated alongside broader multi-sectoral coordination structures without formal lines of communication across levels.<br>● Membership composition and expertise<br>○ Highly multidisciplinary. Involved actors from health ministries, education, finance, security, and information sectors. Notably included non-state actors such as the organized private sector (e.g., CACOVID), UN agencies, civil society organizations, and local community leaders.<br>● Membership structure and appointment model<br>○ Ad hoc at the sub-national level. | without formal lines of communication between them or with other advisory/coordination bodies<br>● Expert and advisory committees at national and sub-national levels apparently functioned independently, without mechanisms for information sharing or cross-level learning<br>● Weak or absent linkages between advisory bodies and task forces fostered working in silos, duplication of efforts, and inefficiency in resource utilization<br>● No standard operating procedures or systematic coordination framework guided the activities of advisory committees within the broader multi-sectoral response<br>● Barriers to effective coordination included poor communication of policies between state governments, lack of data for evidence-informed planning, poor contextualization of response strategies, and corruption and lack of accountability<br>**Impact**<br>● Impact on decision-making<br>○ Independent functioning without communication lines: Impact: Constrained advisory influence on policy decisions and implementation, resulting in fragmented advice, duplication of efforts, and inequitable resource allocation. The absence of coordination mechanisms between advisory bodies and task forces resulted in fragmented advice, duplication of efforts, and inequitable resource allocation. The weak linkages identified are presented as a systemic barrier to advisory impact, with the implication that stronger coordination frameworks would improve the translation of technical advice into policy action. | dwellers severely hampered the equitable distribution of palliatives and cash transfers to vulnerable households.<br>**Transparency**<br>● Fragmented coordination, the non-transparent distribution of palliatives based on faulty data, and reported corruption were significant challenges that undermined the response.<br>**Adaptability**<br>● Ability to respond to crises<br>○ The advisory and coordination system demonstrated limited adaptability during the pandemic, constrained by poor planning, lack of data infrastructure, and the absence of standard operating procedures that could guide rapid multi-stakeholder mobilization. |
| **Author/Organization** | Ezenwaka et al. | | | |
| **Relevance rating** | Moderate | | | |
| **Living status** | No | | | |
| **Quality (AMSTAR)** | Critically low | | | |
| **Last year literature searched** | 2022 | | | |
| **Availability of GRADE profile** | | | | |
| Evolution of Pneumococcal Vaccine Recommendations and Criteria for Decision | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body | **Key findings**<br>● The study evaluated decision-making criteria utilized | NR |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| Making in 5 Western European Countries and the United States | | ○ Advisory committee / SAB (NITAGs) and Science Advisory Agency (HTA bodies)<br>● Mandate<br>○ Technical, Strategic. To provide independent, evidence-based recommendations on vaccines to guide national stakeholders in their public health decisions, and to issue specific assessments during the pricing and reimbursement process.<br>● Governance model<br>○ Hybrid / Independent.<br>○ Independent advisory: NITAGs provide independent evidence-based recommendations on vaccines to guide national stakeholders in their decision.<br>○ Embedded within government: Health Technology Assessment (HTA) agencies and National Immunization Technical Advisory Groups (NITAGs) such as the UK's JCVI and the US's ACIP | by NITAGs and HTA bodies regarding pneumococcal vaccines across 5 European countries and the US. While disease burden and vaccine efficacy were systematically assessed, economic evaluations varied and critically influenced adult recommendations. All six nations adopted higher-valent vaccines (PCV10/13) for children due to broader serotype coverage. However, unlike the US, European countries rejected PCV13 for routine use in the elderly because existing childhood vaccination programs had already created substantial herd immunity, making adult PCV13 vaccination not cost-effective.<br>**Impact**<br>● Policy influence<br>○ Negative cost-effectiveness results: Impact - Explicitly acted as a barrier that led European nations to reject the routine use of PCV13 in the elderly.<br>○ Broader serotype coverage / Serotype replacement: Impact - Drove the transition to higher-valent vaccines (PCV10/13) in routine childhood vaccination programs across all six countries. | |
| **Publication date** | April, 2023 | | | |
| **Jurisdictions studied** | France, Germany, Spain, the Netherlands, the United Kingdom, and the United States | | | |
| **Author/Organization** | Noharet-Koenig et al. | | | |
| **Relevance rating** | | | | |
| **Living status** | No | | | |
| **Quality (AMSTAR)** | Critically Low | | | |
| **Last year literature searched** | 2022 | | | |
| **Availability of GRADE profile** | | | | |
| Enhancing the use of economic evidence in vaccination policy and decision making in low- and middle- income countries: a scoping review of existing strategies | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, Expert Panel (e.g., NITAGs, WHO SAGE)<br>● Mandate<br>○ Strategic, Technical<br>● Governance model<br>○ Hybrid (Operates nationally or globally to provide independent recommendations, though funding and secretariats are often government- or donor-embedded)<br>● Advisory roles and participation<br>○ Comprises renowned immunization, vaccine, and public | **Key findings**<br>● Economic evidence systematically influenced vaccine decisions in only 8 of 32 LMIC settings, driving <20% of new vaccine introductions since 2015. Decisions are predominantly driven by disease burden, political priorities, or donors. However, establishing independent advisory committees (NITAGs) and using structured frameworks (HTA, FVVA) significantly enhances evidence uptake. Key facilitators include recruiting local health economists, presenting data in user-friendly policy briefs, early engagement with Ministries of Finance, and securing | **Transparency**<br>● Cited as a major barrier; the lack of transparency in evidence presentation and study findings limits trust between researchers and policymakers.<br>**Adaptability**<br>● Essential for institutional survival. Advisory systems use tools like NMAT to diagnose gaps and adapt global HTA frameworks to simplified, context-specific LMIC |
| **Publication date** | December, 2025 | | | |
| **Jurisdictions studied** | Nigeria, Zambia, Indonesia, Morocco, South Africa, Thailand, Cote d'Ivoire, Viet Nam. (Low- and | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| | Middle-Income Countries across Africa, Asia, and global models) | health experts who synthesize economic evidence and advise Ministries of Health or the WHO.<br>● Membership composition and expertise<br>○ Multidisciplinary. Includes renowned immunization, vaccine, and public health experts. However, a severe deficit is identified: health economists are frequently missing from LMIC advisory bodies, critically limiting their capacity to process economic evidence.<br>● Membership structure and appointment model<br>○ Standing committees (e.g., SAGE and NITAGs) supported by specific subcommittees, disease-specific task forces, or working groups.<br>● Conflict-of-interest management<br>○ Political interference, lack of autonomy of NITAG members, and conflicts of interest were identified as significant constraints that hinder the objective translation of economic evidence into policy. | domestic budget lines. Major barriers include a lack of local data, high reliance on external consultants, and donor funding withdrawal.<br><br>**Impact**<br>● Impact on decision-making<br>○ User-friendly policy briefs and deliberative dialogues: Impact - Increased the influence of cost-effectiveness and budget-impact findings on NITAG recommendations and parliamentary budget approvals.<br>● Policy influence<br>○ Economic evidence recommendations: Impact - Demonstrably influenced vaccine introduction in 8 out of 32 LMIC settings, leading to National Immunization Bills and the rollout of new vaccines (e.g., rotavirus, pneumococcal conjugate).<br>● Trust and legitimacy<br>○ Transparency in evidence presentation: Impact - A lack of transparency in evidence presentation and study findings limits trust between researchers and policymakers.<br>● System learning<br>○ Gavi donor transition: Impact - Identified that LMIC advisory bodies desperately need locally trained health economists and sustainable domestic funding to survive the transition away from Gavi donor support, prompting the adoption of maturity assessment tools like NMAT. | realities. |
| **Author/Organization** | Okeke et al. | | | |
| **Relevance rating** | Moderate | | | |
| **Living status** | No | | | |
| **Quality (AMSTAR)** | Critically Low | | | |
| **Last year literature searched** | 2024 | | | |
| **Availability of GRADE profile** | | | | |
| **Health technology assessment for sexual reproductive health and rights benefits package design in sub-Saharan Africa: A scoping review of evidence-informed deliberative processes** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee<br>● Mandate<br>○ Strategic, Technical. To select, assess, and appraise Sexual Reproductive Health and Rights (SRHR) | **Key findings**<br>● In 12 of the 14 included studies, new advisory committees were established specifically for each HTA process for SRHR priority-setting and benefits package design, with no public advertisement for committee roles and no transparent recruitment | **Equity**<br>● Systematic exclusion of stakeholders: Patients, the general public, and vulnerable or marginalized populations were systematically excluded from |
| **Publication date** | June, 2024 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| **Jurisdictions studied** | Sub-Saharan Africa (Zambia, Malawi, Tanzania, Ethiopia, Ghana, Uganda, South Sudan, Kenya, Botswana, and South Africa) | interventions to formulate recommendations for their inclusion in publicly funded national health benefits packages<br>● Governance model<br>○ Hybrid: Formally initiated by Ministries of Health, but structurally and financially driven by external development assistance partners.<br>● Advisory roles and participation<br>○ Roles and responsibilities were oriented toward implementing final decisions rather than ensuring process legitimacy; veto powers were undefined, and participation status (formal vs. informal) was not documented.<br>● Membership composition and expertise<br>○ Multidisciplinary but exclusive. Included policymakers (e.g., Ministries of Health, Finance), principal investigators/researchers, and development assistance partners. Crucially, patients, the general public, health technology producers, purchasers, and payers were frequently excluded<br>● Membership structure and appointment model<br>○ Ad-hoc. In 12 of the 14 reviewed studies, new, ad-hoc advisory committees were set up specifically for SRHR priority-setting with no public advertisement for committee roles and no transparent recruitment procedures.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: Strongly lacking. Only one study suggested that certain stakeholders were included because they represented distinct social values. The structural exclusion of vulnerable populations, patients, and the public from the advisory bodies fundamentally undermined equitable representation. | procedures reported in any of the 14 processes.<br>● Advisory committee membership systematically excluded patients (in all 14 processes), the general public (included in only 4 processes), payers (included in only 2 processes), and health technology manufacturers (excluded in all 14 processes), with membership predominantly comprising researchers and policymakers.<br>● The roles and responsibilities of advisory committee members were oriented toward implementing final decisions rather than ensuring process legitimacy; veto powers were undefined, participation status (formal vs. informal) was not documented in any included study, and in 11 of 14 processes stakeholders were dissatisfied with the recommendations produced by the advisory committee appraisal stage.<br>● Across all 14 included studies, advisory committee recommendations were implemented almost immediately with no appeal provisions, eliminating stakeholder opportunities to challenge decisions and further undermining the accountability and legitimacy of advisory outputs.<br>● None of the 14 included studies reported the existence of a formal decision-making body, an explicit national policy statement supporting HTA use, or a dedicated yearly public budget for HTA processes; all reported SRHR priority-setting processes were primarily funded by development assistance partners, who tended to exert disproportionate control over resource allocation decisions and agenda-setting.<br>**Impact**<br>● Impact on decision-making<br>○ Advisory committee roles: Impact - Roles and responsibilities were associated with implementing final decisions rather than ensuring the legitimacy of the decision-making | advisory processes across all 14 included studies. This exclusion fundamentally undermined the equitable representation of social values.<br>**Transparency**<br>● Identified as a key deficit across all included processes. There was no public advertisement for committee roles, no defined veto powers, no formal documentation of stakeholder roles, no available appeal mechanisms, and immediate implementation of recommendations without public justification. |
| **Author/Organization** | Simangolwa et al. | | | |
| **Relevance rating** | Moderate | | | |
| **Living status** | No | | | |
| **Quality (AMSTAR)** | Critically Low | | | |
| **Last year literature searched** | 2022 | | | |
| **Availability of GRADE profile** | | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| | | | process.<br>● Policy influence<br>○ Recommendation implementation: Impact - Recommendations from advisory committee appraisal processes were implemented almost immediately with no explicit appeal provisions, eliminating stakeholder opportunities to challenge decisions.<br>● Trust and legitimacy<br>○ Exclusionary and opaque procedures: Impact - In 11 of 14 processes, stakeholders were dissatisfied with the health policy recommendations produced by the appraisal process due to a lack of transparency, mismatched evidence, and the absence of appeal mechanisms. | |

## Table 3: Details about each identified single study

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| National Immunization Technical Advisory Groups (NITAGs): A schema for evaluating and comparing foundation instruments and NITAG operations | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ National Immunization Technical Advisory Groups (NITAGs) / Advisory committee.<br>● Mandate<br>○ To provide evidence-based evaluations and recommendations to governmental decision-makers about specific vaccines, vaccine-dosing, vaccine program development, and immunization policy and practice more generally.<br>● Governance model<br>○ Hybrid. NITAGs are typically embedded within the national immunization framework (e.g., advising national health authorities and Ministers of Health), but they maintain technical independence. | **Key findings**<br>● Analysis of 18 NITAG foundational instruments shows low alignment with good governance criteria (averaging 3.4 of 7).<br>● Only two countries (Argentina and Chile) had relatively comprehensive instruments addressing all seven criteria.<br>● Instruments prioritize composition and member integrity but lack provisions for performance review, evidence-related powers, and organizational independence.<br>● The findings highlight the potential value of greater harmonization of foundational legal instruments across jurisdictions.<br>**Impact** | **Transparency**<br>● Heavily emphasized as a core element of "good governance." The schema promotes verifiable transparency in member appointments, COI disclosures, and publicly available reports recommendations to strengthen accountability and help address vaccine hesitancy and distrust. |
| **Publication date** | January, 2020 | | | |
| **Author/ Organization** | Harmon et al. | | | |
| **Jurisdictions studied** | Multiple (Global/National level). Analyzes the 18 foundational instruments of 28 respondent countries from the Global NITAG Network (GNN), | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | with a specific applied case study on Côte d'Ivoire | ● Advisory roles and participation<br>○ The schema specifies core members, non-core members, and Liaison Members. In the Côte d'Ivoire case study, Core Members provide recommendations to the Minister, while Liaison Members represent governmental and international bodies.<br>● Membership composition and expertise<br>○ Multidisciplinary. The schema advocates for diverse fields of basic science, clinical science, epidemiology, healthcare systems administration, economics, and statistics. In the Côte d'Ivoire case study, 11 specialties in immunization and vaccines are represented.<br>● Membership structure and appointment model<br>○ The proposed assessment schema states that foundational instruments should explicitly define what types of members are included, how many of each type, who appoints them, their tenure, re-appointment processes, and grounds/processes for dismissal to ensure merit.<br>● Conflict-of-interest management<br>○ The schema requires formal mechanisms to avoid and handle perceived or actual conflicts of interest (COIs). Core members should sign COI statements at the time of appointment and commit to declaring any potential COIs on an ongoing basis and refrain from participating in discussions or votes involving the conflict. It advocates for verifiable transparency, including clear definitions of conflicts, processes for raising/handling allegations, and transparently reporting findings. | ● Trust and legitimacy<br>○ Public or stakeholder trust: Mandating verifiable transparency in member appointments, conflict-of-interest management, and making reports publicly available is necessary to combat the anti-vaccination movement and build public trust<br>● System learning<br>○ Institutional adaptation: The evaluation of 18 foundational instruments showed a generally low engagement with good governance criteria, averaging only 3.4 out of 7 criteria met across countries.<br>○ None of the 18 evaluated foundational instruments included provisions for Performance Review (Criterion 7).<br>○ The authors conclude that adopting their comprehensive 7-criteria assessment schema (Remit and values, Composition, Member integrity, Organization independence, Practice procedures, Powers re evidence, and Performance review) will improve institutional harmonization, good governance, and advisory effectiveness. | |
| **Methods used** | Qualitative policy document analysis. The researchers collected foundational instruments via an online survey portal, applied standard approaches to statutory interpretation, and constructed a 7-criteria assessment schema based on administrative law and "good governance" principles to systematically evaluate and compare the documents | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/7 (Policy level) | | | |
| **Influenza vaccination policy-making processes in France and The Netherlands: Framework and determinants** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (National Immunization Technical Advisory Groups - NITAGs)<br>● Mandate<br>○ Technical. To develop national influenza vaccination recommendations based on scientific evidence, including | **Key findings**<br>● Compares influenza policy-making in France and the Netherlands.<br>● NITAGs are central but lack systematic evidence evaluation procedures.<br>● The Netherlands exhibited greater transparency. France had opaque COI management rules, | **Transparency**<br>● Identified as a central concern. Key gaps included a lack of systematic evidence evaluation standards, non-systematic voting practices, variable and non-objective COI management in France, and limited public availability of |
| **Publication date** | January, 2016 | | | |
| **Author/ Organization** | Silva et al. | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Jurisdictions studied** | France and The Netherlands | defining target groups for free influenza vaccines, types of vaccines, and administration methods<br>● Governance model<br>○ Embedded. Advisory boards formally process requests from the Health Directorate/Ministry of Health and submit finalized reports back to them for ultimate decision-making. In France, the HCSP/CTV is linked to the Ministry of Health. In the Netherlands, the Health Council is linked to the Ministry of Health, Welfare and Sport<br>● Advisory roles and participation<br>○ Chairman (and vice-chairman in France) appointed by the Health Council; permanent members with full voting rights; invited (temporary) external experts who contribute to discussions but do not participate in writing final recommendations and do not vote; secretaries; observers; and external information providers (non-voting) such as vaccine manufacturers, scientific associations, and national research institutes<br>● Membership composition and expertise<br>○ Multidisciplinary composition including epidemiologists, immunologists, virologists, clinicians, health economists, and ethicists. There are around 19 members in France and 20 in the Netherlands<br>● Membership structure and appointment model<br>○ Mixed standing/ad hoc model. Permanent members have fixed voting rights and participate in report writing. Temporary/invited experts are recruited on an ad hoc basis when specific expertise is missing. The chairman is nominated by the Health Council, and other members are nominated by the chairman<br>● Conflict-of-interest management<br>○ Declaration of interests is mandatory before each decision meeting in both countries. Experts with a COI related to a specific topic are excluded from participation for that topic (recusal from discussions in NL; prevention from permanent membership in France). Only permanent members free of COI have the right to vote. In France, the | though post-2009 reforms led to stricter COI rules in both nations.<br>● Post-2009 pandemic reforms led to stricter COI rules and membership restructuring in both countries<br>● Process duration significantly longer in France (6–12 months) vs. Netherlands (2–6 months)<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: NITAG advice is generally adopted by the Ministry of Health with minor modifications, indicating high uptake<br>● Policy influence<br>○ Integration into policies: NITAGs are the central actors in developing influenza vaccination recommendations, leading to high policy influence. However, the absence of systematic evidence grading was identified as a gap affecting the quality of policy influence<br>● Trust and legitimacy<br>○ Public or stakeholder trust: Deliberation quality (consensus-seeking, voting practices, and COI management) directly affects the trust and legitimacy of recommendations among stakeholders<br>● System learning<br>○ Institutional learning or adaptation: Post-2009 pandemic reforms in both countries led to stricter COI rules, membership restructuring, and increased process complexity (especially in France), representing documented institutional learning and adaptation. | reports in France. The Netherlands demonstrated higher transparency by publishing reports publicly in both Dutch and English, and utilizing fixed secretariats. Post-2009 reforms aimed to improve transparency through stricter COI declarations<br>**Adaptability**<br>● Ability to respond to crises<br>○ The 2009 pandemic served as a catalyst for institutional reform in both countries, leading to stricter COI rules, membership changes, and increased process complexity in France. |
| **Methods used** | Qualitative study combining documentary analysis (official reports, ministerial decrees, scientific publications, grey literature) and 33 semi-structured interviews. Data was transcribed and analyzed using thematic content analysis with NVivo10 software | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | determination of COI levels was based on no objective criteria, representing a transparency gap. Both countries struggle to find experts without links to the pharmaceutical industry due to insufficient public research funding. | | |
| Strengthening vaccination frameworks: Findings of a study on the legal foundations of National Immunization Technical Advisory Groups (NITAGs) | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee / National Immunization Technical Advisory Groups (NITAGs)<br>● Mandate<br>○ Strategic, Technical. To improve immunization architecture and better harmonize that architecture and related practices across jurisdictions, thereby improving the conditions for achieving the vision of the Decade of Vaccines. Envisioned as expert committees that provide independent, evidence-based, scientific and/or technical advice to governments and health authorities on vaccination, new vaccines, and immunization policy<br>● Governance model<br>○ Hybrid / Embedded / Independent. Authority models vary and are categorized into four types: Advisory (86%), Directive, Hybrid, and Collaborative.<br>● Membership composition and expertise<br>○ Multidisciplinary. The WHO's six process indicators require representation of at least five areas of expertise, meaning the committees are designed to be multidisciplinary expert groups<br>● Membership structure and appointment model<br>○ Standing committees whose establishment is based on various legal foundations (Formal, Informal, or Evolutionary). Formal statutory bodies often require democratic or participative action at commencement and are characterized by formal authorization, a stated remit, and metrics for measuring compliance/oversight<br>● Conflict-of-interest management<br>○ The implementation and existence of a formal conflict of interest (COI) policy is required as one of the WHO's six | **Key findings**<br>● Evaluated legal foundations of 28 NITAGs.<br>● 74% have informal foundations (executive decrees), offering flexibility but reducing stability and independence. Only 18.5% are formally grounded in statute.<br>● A discrepancy between de facto and de jure authority exists, risking institutional trust.<br>**Impact**<br>● Impact on decision-making Legal foundation and authority model: Uptake of advice: The legal foundation and authority model of a NITAG directly shape its policy influence and impact on decision-making. Advisory NITAGs carry non-binding influence, whereas directive and hybrid models embed binding authority<br>● Trust and legitimacy<br>○ Discrepancy between de facto and de jure authority: Public or stakeholder trust: A discrepancy was identified where some respondents believed their advisory NITAG was binding when legally it was not. The study warns that this lack of clarity could undermine institutional trust and legitimacy if future governments disregard recommendations<br>● Policy influence<br>○ Authority Models: Integration into policies: The nature of the advisory body's authority model directly dictates its policy integration. The vast majority of evaluated NITAGs (86%) follow an "advisory" model | **Transparency**<br>● Transparency is identified as a central cross-cutting theme. Formal legal foundations act as key enablers of transparency: explicitly stated remits, publicly recorded authority, and formal terms of reference contribute to openness about the NITAG mandate and processes. The discrepancy found between de facto and de jure authority is flagged as a transparency risk. COI policy is also identified as a core transparency mechanism under WHO indicators<br>**Adaptability**<br>● Ability to respond to crises<br>○ Informal foundations (executive decrees) offer greater flexibility and ease of reform in response to changing needs, but at the cost of institutional stability. Formal statutory foundations provide stronger protection from political interference but are harder to amend. The collaborative model (Canada) is identified as being structurally constrained in its ability to respond rapidly or adapt to crises requiring unified national action. |
| **Publication date** | October, 2019 | | | |
| **Author/ Organization** | Harmon et al. | | | |
| **Jurisdictions studied** | Multiple / Global. Analyzes 28 member countries of the Global NITAG Network (GNN) representing all six WHO regions | | | |
| **Methods used** | Qualitative study (Legal Document Analysis and Survey). Data collection included a secure online survey of GNN member representatives, textual analysis of primary legal and policy governance instruments, and secondary desktop research of government webpages, legal repositories, and academic literature | | | |
| **Relevance rating** | High | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Quality (JBI)** | 6/10 (Qualitative study) | core process indicators for NITAG functionality. As of 2017, 82 of 124 countries self-reported compliance with all six indicators (including COI policy), though the specific management procedures at the individual country level were not detailed in the extraction<br>● Equity considerations<br>○ Requires multidisciplinary expert groups with representation of at least five areas of expertise to ensure diverse perspectives. | where the government may implement recommendations but is not legally bound to do so. In contrast, "directive" models bind the government to implement recommendations, and "collaborative" models operate under fragmented political/legal environments where the central government cannot act unilaterally (e.g., Canada)<br>● System learning<br>○ Legal formalization: Institutional adaptation: The study concludes that governments should prioritize formalizing NITAG authority into legislation, as many currently rely on precarious, informal executive policies which reduce organizational stability. Identifying and sharing these legal architectures empowers decision-makers to structurally improve their immunization systems. | |
| **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)** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee / National Immunization Technical Advisory Groups (NITAGs)<br>● Mandate<br>○ Strategic, Technical. To provide independent, evidence-informed advice to policymakers and program managers on issues related to immunization, vaccines, and technologies<br>● Governance model<br>○ Hybrid. Formally established by the Ministry of Health (MoH), but functioned autonomously and independently from the government without established internal or external monitoring/supervision<br>● Advisory roles and participation<br>○ Participation was heavily restricted to members. | **Key findings**<br>● Evaluated NITAGs in Argentina, Jordan, and South Africa using the TAPIC framework.<br>● NITAGs are highly trusted, autonomous bodies promoting evidence-informed policies.<br>● Critical governance weaknesses included closed-door meetings lacking transparency and the absence of monitoring for COI compliance.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: Governments considered the non-binding recommendations made by NITAGs and stood by them even when they were contrary to internal or external groups' guidance or pressure, indicating that | **Equity**<br>● Inclusion of community and religious leaders: Considered adding community leaders to improve participation and address vaccine hesitancy.<br>● To increase participation, policy capacity, and transparency, countries considered adding experts in communications, advocacy, and economics. AR and SA contemplated including community members.<br>**Transparency**<br>● Evaluated as severely lacking or variable. Meetings were conducted behind closed doors with participation restricted to members. Only Argentina |
| **Publication date** | October, 2020 | | | |
| **Author/Organization** | Panero et al. | | | |
| **Jurisdictions studied** | Argentina, Jordan, and South Africa | | | |
| **Methods used** | Qualitative retrospective case study. Data was collected through a desk review of relevant | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | documents (charters, ToRs, SOPs, agendas, meeting minutes) and 53 face-to-face key informant interviews (KIIs), applying the TAPIC governance framework (Transparency, Accountability, Participation, Integrity, and Policy capacity) using line-by-line qualitative analysis | Deliberations were conducted behind closed doors and attended solely by NITAG members, with no robust external systems for monitoring<br>● Membership composition and expertise<br>○ Multidisciplinary. Members were highly trained national experts mostly with medical and public health expertise. The study strongly recommended broadening membership to include experts in communication, finance, economics, and program implementation to improve capacity<br>● Membership structure and appointment model<br>○ Multidisciplinary national experts who provide independent, evidence-informed recommendations to national health authorities. In Argentina, regional National Immunization Program (NIP) managers also serve as non-core members<br>● Conflict-of-interest management<br>○ All three countries had guidelines, procedures, and rules in place to address conflict of interest (COI). Policies applied to NITAG members and working groups, requiring individuals to sign written declarations of intellectual and financial CoI. Responsibility to ensure compliance lay on the NITAG Secretariat (Jordan, Argentina) or the NITAG Chair (South Africa). However, significant issues were identified regarding MoH support and oversight of CoI declaration and documentation | authorities entrusted and highly valued their advice<br>● Policy influence<br>○ Integration into policies: NITAGs played a pivotal role as advisors promoting a culture of evidence-informed policies and actively strengthened health system governance across the three countries<br>● Trust and legitimacy<br>○ Public or stakeholder trust: The lack of transparency (closed-door meetings and absence of comprehensive public documentation) poses risks to the perceived transparency of the decision-making process. Including community members and communication experts was actively contemplated to increase public trust and participation<br>● System learning<br>○ Institutional adaptation: An evaluation using the TAPIC framework revealed critical governance weaknesses, leading to the conclusion that NITAGs must systematically adapt by establishing formal monitoring and evaluation (M&E) mechanisms, increasing transparency, and broadening their membership to improve policy implementation. | made agendas and recommendations public. The absence of comprehensive public documentation (work plans, policy briefs, or annual summaries) was flagged as a significant risk to the perceived transparency and integrity of the decision-making process |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 7/10 (Qualitative study) | | | |
| What Role Does Equity Play in Australia's Health Technology Assessment Processes? A Review of the Pharmaceutical Benefits Advisory Committee Recommendations Regarding Vaccines | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee / Pharmaceutical Benefits Advisory Committee (PBAC) and Australian Technical Advisory Group on Immunisation (ATAGI)<br>● Mandate<br>○ Technical, Strategic. PBAC makes recommendations to | **Key findings**<br>● Evaluates how equity is incorporated into Australia's PBAC vaccine recommendations.<br>● Subgroup-specific recommendations based on equity increased from 0% in 2006 to 40% in 2021-2024.<br>● While mentions of equity increased, the use of | **Equity**<br>● Geographic location: Considered in health technology assessments. Addressed in 6% of recommendations.<br>● Aboriginal and Torres Strait Islander peoples: Considered in 47% of recommendations. |
| **Publication date** | December, 2025 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Author/Organization** | Boujaoude et al. | the government on the listing of vaccines on the National Immunisation Program. This health technology assessment body considers evidence on comparative effectiveness, safety, cost-effectiveness, financial implications, and other factors such as equity. ATAGI contributes by providing evidence-based advice on the effectiveness and use of vaccines<br>● Governance model<br>○ Independent. Independent statutory committee providing advice to the Australian Government (Minister for Health)<br>● Advisory roles and participation<br>○ PBAC makes recommendations to the government, utilizing evidence-based clinical advice provided by ATAGI. The process includes input from government evaluators, industry sponsors (who submit applications), and consumers (who can comment on submissions)<br>● Equity considerations<br>○ It examines how these bodies incorporate equity dimensions (Equity, Diversity, and Inclusion) into their evidence synthesis, deliberative processes, and recommendations.<br>○ Advisory processes (PBAC and ATAGI) include dedicated mechanisms for input from consumers who can directly comment on submissions. Also within health technology assessments. Methodological guidelines are available that indicate the importance of incorporating these considerations into the analysis, however, their application is not mandatory. | formal equity-informative economic evaluation methods remains limited to basic subgroup analysis.<br>**Impact**<br>● Policy influence<br>○ Vaccine recommendations: Highly influential. Recommendations dictate whether vaccines are fully subsidized and listed on the National Immunisation Program (NIP).<br>○ Inclusion of equity dimensions: Subgroup-specific recommendations based on equity (e.g., for Aboriginal and Torres Strait Islander peoples) increased significantly from 0% in 2006 to 40% in 2021-2024. | ● Gender, pregnancy: Included in 14 and 6% of evaluations, respectively.<br>● Culturally and linguistically diverse groups: Mentioned in 1% of submissions.<br>● Socioeconomic status: Addressed in 3% of recommendations.<br>● Presence of special healthcare needs, past health loss, parental status, sexual orientation, refugee status: Evaluated as specific equity dimensions.<br>**Transparency**<br>● A critical lack of transparency in how advisory bodies weigh equity is flagged. Although PBAC publishes Public Summary Documents (PSDs) and holds meetings with stakeholders in an effort to promote transparency, it remains unclear how much of the internal deliberative process is captured in these documents. This limits the transparency of PBAC outcomes, as the documents often lack detailed documentation of the committee deliberations and the specific rationale explaining how equity considerations influenced the final funding recommendations |
| **Jurisdictions studied** | Australia | | | |
| **Methods used** | Cross-sectional document analysis (Review of 78 public summary documents [PSDs] published by PBAC from 2005 to 2024). An equity-focused, Excel-based data extraction tool was developed to review explicit and implicit mentions of equity dimensions, the quantitative inclusion of equity in economic analysis, and inclusion in final recommendations. Descriptive statistics and time-trends were analyzed | | | |
| **Relevance rating** | Low | | | |
| **Quality (JBI)** | 6/6 (Cross/sectional) | | | |
| **From evidence to advice in France, Germany, and the UK: transparency, accountability, and participation in pandemic science advice** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, Chief scientific advisors<br>● Mandate<br>○ Strategic, Technical, Risk assessment. To provide formal scientific advice to the government, advise national and regional health agencies on how to address emerging health threats, and alert and assist the government | **Key findings**<br>● Compares COVID-19 advice systems in the UK, France, and Germany.<br>● Transparent, functionally autonomous advice systems (Germany) contribute more to good policymaking and democratic accountability.<br>● Executives relying on opaque, handpicked, or private advisory channels (UK, France) | **Transparency**<br>● The core focus of the paper. Evaluates the openness of advisory processes, membership disclosure, and the public release of advice. Greater transparency showed the extent to which the government preferred to seek advice from less formal groups that were more |
| **Publication date** | March, 2025 | | | |
| **Author/Organization** | Jarman et al. | | | |
| **Jurisdictions** | France, Germany, United | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **studied** | Kingdom | regarding health risks.<br>● Governance model<br>○ Embedded (UK: Embedded in central government, highly accountable to the executive; France: Shifted to ad hoc executive bodies)<br>○ Independent. Germany: Functionally autonomous and accountable by law to legislatures.<br>● Advisory roles and participation<br>○ Governments utilized formal advisors, civil servants (Chief Medical Officers), and specialist public health agencies. In the UK and France, political leaders frequently sidelined formal agencies in favor of private ad hoc consultants (e.g., McKinsey, Deloitte) and special advisors to secure advice tailored to their immediate political needs.<br>● Membership composition and expertise<br>○ UK: SAGE and related subgroups; interdisciplinary membership for SAGE with more specialists in particular groups such as NERVTAG.<br>○ France: HCSP, Santé Publique France; medicine and health fields including public health, with very limited behavioral science.<br>○ Germany: RKI; public health and medicine<br>● Membership structure and appointment model.<br>○ UK: The Government Chief Scientific Adviser (GCSA) appoints SAGE members from existing lists in the Government Office for Science (GO-Science).<br>○ France: Ad hoc councils were appointed by the President. Members of standing agencies (SPF, HAS, HCSP) attended the scientific council's meeting as "permanent observers" without participating in the debates and drafting the recommendations.<br>○ Germany: Dictated by pre-existing legal frameworks (Protection Against Infection Act)<br>● Conflict-of-interest management<br>○ Handled via the "Integrity" dimension of the TAPIC framework. The study notes that all three countries have high institutional integrity (e.g., civil service structures), | undermined advice credibility and masked political biases.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: Politicians have strong incentives to prefer private advice tailored to their political needs<br>● Policy influence<br>○ Integration into policies: Transparent and functionally autonomous advice systems (like Germany's) contribute more to good policymaking and implementation. They ease intergovernmental coordination and enhance democratic accountability<br>● Trust and legitimacy<br>○ Public or stakeholder trust: When executives rely on opaque, handpicked, or private advisory channels (as seen in the UK and France), it undermines the credibility of the advice and masks political biases. | accountable to the government, such as private sector consultants<br>**Adaptability**<br>● Ability to respond to crises<br>○ Highlights how governments shifted from standing agencies to ad hoc bodies during the crisis |
| **Methods used** | Qualitative study. Utilized a comparative process-tracing approach using detailed retellings of events to identify the operation of institutions. Data collection included document analysis using publicly available information, historical data, government/legislative inquiries, and media reports | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | and accusations of lack of integrity or conflicts of interest were primarily directed at elected officials and their private consultants, rather than the formal scientific advisors. | | |
| Establishing priorities to strengthen National Immunization Technical Advisory Groups in Latin America and the Caribbean | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee<br>● Mandate<br>○ Strategic, Technical. To provide independent, evidence-informed recommendations on vaccines and immunization to national health authorities. Mandate includes guiding national immunization program (NIP) design and delivery, formulating evidence-based policy guidelines, and advising on vaccine-preventable diseases. Newly established NITAGs reported an absence of formal legal frameworks defining their mandate, resulting in limited recognition and functionality.<br>● Governance model<br>○ Independent, Embedded. Predominantly advisory and embedded within government health structures, but with significant variability: Most NITAGs are legally established and have been active for over a decade, while some lack a formal legal framework. Independence from the government was identified as a challenge by 25% of NITAGs. During the COVID-19 pandemic, one NITAG was disbanded and replaced by an independent committee without NITAG input.<br>● Advisory roles and participation<br>○ A chair or representative per NITAG presented findings at the Regional NITAG Network of the Americas (RNA) meeting. Core members are responsible for formulating recommendations. External experts are invited when specific expertise is lacking. The Caribbean Immunization Technical Advisory Group (CITAG) operates as a collective sub-regional body with experts drawn from 22 countries/territories.<br>● Conflict-of-interest management<br>○ COI disclosure is identified as a sub-indicator under the | **Key findings**<br>● Survey of 21 LAC NITAGs. Major challenges include establishment/composition, integration into policymaking, and stakeholder recognition.<br>● COVID-19 magnified weaknesses; some NITAGs were ignored or disbanded.<br>● Priorities include formalizing establishment, broadening composition, and strengthening independence from political/commercial influence.<br>**Impact**<br>● Impact on decision-making<br>○ Integration into policymaking: Poor integration into policymaking (62%) and lack of stakeholder recognition (48%) are the primary barriers to NITAG impact on decision-making across LAC.<br>● Policy influence<br>○ Integration into policymaking: Poor integration into policymaking (62%) and lack of stakeholder recognition (48%) are the primary barriers to NITAG impact on decision-making across LAC.<br>○ Formalization of advisory status: The formalization of advisory status and the active inclusion of NITAGs in official governance structures are identified as key levers for improving policy impact and uptake<br>● Trust and legitimacy<br>○ Governance instability: The disbanding of NITAGs and instances of political interference directly undermine institutional legitimacy and trust. | **Transparency**<br>● COI management, the transparency of recommendations, and communication with health authorities and the public were identified as areas requiring improvement. Independence from political and commercial influence was flagged as a transparency challenge by 14-25% of NITAGs. The RNA platform was specifically designed to increase the openness and visibility of NITAG processes and outputs<br><br>**Adaptability**<br>● Ability to respond to crises<br>○ The COVID-19 pandemic exposed significant adaptability gaps: NITAGs were either not consulted, disbanded, or completely overwhelmed during the emergency. Opportunities were identified to enhance adaptive capacity for future crises, including solidifying legal/administrative bases, engaging in twinning programs, and utilizing social media engagement<br>○ The pandemic magnified pre-existing weaknesses, proving that NITAGs must be better equipped (more adaptable) with formalized standard operating procedures to successfully operate in times of |
| **Publication date** | March, 2024 | | | |
| **Author/Organization** | Evans-Gilbert et al. | | | |
| **Jurisdictions studied** | Latin America and the Caribbean (LAC) – covering 40 countries represented by 21 NITAGs | | | |
| **Methods used** | Cross-sectional (Exploratory Survey). An exploratory survey utilizing open-ended questions distributed via PowerPoint in four languages to NITAG chairs and representatives | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/8 (Cross-sectional) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | NMAT Independence domain. While 0% of NITAGs reported COI disclosure/process as a challenge under the formal sub-indicator, broader independence from political, personal, or commercial bias was flagged as a substantial issue (25% of NITAGs). A written COI policy with definitions and management processes is identified as a priority action needed to ensure recommendations are free from bias and COI.<br>● Equity considerations<br>○ Identified the need to integrate experts from different government sectors, scientific societies, and community perspectives to ensure diversity. | ○ Stakeholder recognition: A lack of public and stakeholder recognition (cited by 48% of NITAGs) requires the development of better communication strategies and digital spaces to combat misinformation and rebuild public trust.<br>● System learning<br>○ Institutional learning or adaptation: The COVID-19 pandemic served as a major system learning event, exposing structural weaknesses and fragile administrative practices. This generated institutional momentum for region-wide reform and prioritization through the RNA network and the NITAG Maturity Assessment Tool (NMAT). | crisis. |
| Region-wide assessment of National Immunization Technical Advisory Groups (NITAGs) using the NITAG Maturity Assessment Tool (NMAT) – Experience from the Eastern Mediterranean Region of the World Health Organization, 2023 | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel / National Immunization Technical Advisory Groups (NITAGs).<br>● Mandate<br>○ Strategic, Technical. To provide technical advice to the Ministry of Health (MoH) on immunization policies.<br>● Governance model<br>○ Hybrid. NITAGs are independent bodies structurally linked to advising the Ministry of Health (MoH).<br>● Advisory roles and participation<br>○ Core members, chairs, secretariat, and external experts. NITAGs from all countries accepted inputs from external experts and had a designated secretariat. Membership composition and expertise<br>○ Multidisciplinary groups of national experts, evaluated based on the diversity of expertise.<br>● Membership structure and appointment model<br>○ Established by official statutes and written Terms of Reference (ToR) detailing the scope of work (n=19); some | **Key findings**<br>● Assessed 20 EMR NITAGs using the NMAT tool.<br>● 55% reached intermediate maturity for establishment/composition and policy integration.<br>● "Independence and non-bias" was the weakest domain (only 5% intermediate maturity), largely due to the absence of formal conflict of interest (COI) policies.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: National Immunization Technical Advisory Groups (NITAGs) act as independent bodies that help improve national immunization programmes in decision-making on immunization policy.<br>● Policy influence<br>○ Integration into policy making process: Evaluated via MoH adoption of advice. | **Transparency**<br>● Specifically evaluated under Indicator 2 (Independence and non-bias), which measures the public availability of meeting agendas, summaries, and conflict of interest disclosures. Transparency in public media was also noted as a metric, with the NITAG chair allowed to be interviewed in public media in 14 countries. |
| **Publication date** | February, 2024 | | | |
| **Author/Organization** | Sume et al. | | | |
| **Jurisdictions studied** | Eastern Mediterranean Region (EMR), representing 20 countries. | | | |
| **Methods used** | Cross-sectional study. Data was collected through self-assessment surveys using the NITAG | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | Maturity Assessment Tool (NMAT), conducted by NITAGs and their secretariats during and after virtual capacity-building workshops. | utilize open competition for membership (n=4) and review their ToR every 3 years (n=5).<br>● Conflict-of-interest management<br>○ Evaluated as the weakest domain in the region. Only 35% of the NITAGs had a conflict of interest (COI) policy describing the process of assessing and managing COI. Some NITAGs function based on trust or verbal agreements without a specific written policy. Improvement plans formulated during the assessment focused heavily on implementing mandatory Declarations of Interest (DOI) for core members. | Over half (55%) of the NITAGs reached intermediate or higher maturity for integration into policy, with a defined process for the MoH to officially request recommendations in 80% of the assessed countries.<br>● Trust and legitimacy<br>○ Stakeholder recognition: Measured via the NMAT "Stakeholder recognition" indicator, evaluating public recognition and relationships with stakeholders.<br>● System learning<br>○ Institutional learning or adaptation: NITAGs successfully analyzed their weaknesses and formulated targeted institutional improvement work plans to address gaps (e.g., updating organizational documents, developing formal COI policies, and advocating for more funds from the MoH). | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/8 (Cross-sectional) | | | |
| **Status of the national immunization technical advisory groups in the Americas: recommendations for improvement** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee / National Immunization Technical Advisory Groups (NITAGs).<br>● Mandate<br>○ Technical. To contribute to immunization policymaking and implementation. All nine active NITAGs have an exclusively technical advisory role and do not participate in regulatory, operational, or political decisions. NITAGs are asked by health ministries to analyze specific issues and make recommendations on vaccination policy (which are non-binding in all cases).<br>● Governance model<br>○ Hybrid. Advisory — embedded within government health structures with variable degrees of independence. Some have presidents independent of the Ministry of Health, | **Key findings**<br>● Evaluated 12 LAC countries. All 9 active NITAGs follow WHO/PAHO guidelines but exhibit significant operational variations.<br>● Key gaps included missing COI policies, limited non-government sector representation, and over-representation of government officials.<br>● COVID-19 highlighted integration limits when authorities bypassed NITAG advice.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: NITAGs have successfully supported vaccine policy-making through evidence-based recommendations, but with significant variability in actual uptake across the | **Transparency**<br>● Central concern throughout the study. Key transparency gaps identified include: the absence of explicit COI policies in some countries (Bolivia, Mexico), government officials occupying most committee seats, limited representation of non-government sectors, and self-reported compliance with WHO indicators that does not reflect actual operational transparency. Strengthening operating procedures and transparency was identified as a priority recommendation.<br><br>**Adaptability** |
| **Publication date** | July, 2024 | | | |
| **Author/Organization** | Betancourt-Cravioto et al. | | | |
| **Jurisdictions studied** | 12 countries in Latin America and the Caribbean (LAC). | | | |
| **Methods used** | Cross-sectional study. Data was collected through a web-based questionnaire (key informant survey of | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | current and former NITAG members) and complemented with document analysis of publicly available online documents (NITAG charters, terms of reference, and standard operating procedures). | while others have the Minister of Health as the NITAG president (indicating limited independence).<br>● Advisory roles and participation<br>○ Consists of a core group, a secretariat (in most cases formed by health authorities), and ad hoc additional participants (invited experts, scientific society representatives, PAHO representatives). Non-voting observers include PAHO representatives, national regulatory agencies, and EPI representatives.<br>● Membership composition and expertise<br>○ Multidisciplinary. Most include representatives of the five WHO-recommended medical specialties: pediatrics, infection, immunology, public health, and epidemiology. Additional members vary heavily by country (e.g., gynecologists, neurologists, primary care physicians, and representatives from international civil society and private organizations).<br>● Membership structure and appointment model<br>○ Structured according to WHO/PAHO recommendations. They consist of a core group with permanent members plus ad hoc additional participants. There are two selection processes for president: elected from core group members or the Minister of Health acts as president. Membership is assigned to positions/institutions rather than individuals in some countries (Costa Rica, Mexico). Selection is conducted by scientific society nomination or by health authority invitation based on CV and experience. Core group member rotation procedures vary.<br>● Conflict-of-interest management<br>○ 7 of 9 NITAGs have an explicit COI policy (Bolivia and Mexico do not). COI declarations are required for members in most countries. For example, in Peru, voting members are required to declare potential COIs before each session. Major shortcomings identified include: government officials and program directors occupying most committee seats in some countries, and limited representation of non-government sectors. | region.<br>● Policy influence<br>○ Integration into policies: Non-binding status and limited independence (such as having ministerial presidents in some countries) directly constrain policy influence. COVID-19 revealed both the potential and the limits of NITAG impact: 8 of 9 participated actively, but several were not adequately considered by authorities.<br>● Trust and legitimacy<br>○ Public or stakeholder trust: The discrepancy between self-reported WHO/UNICEF compliance and actual operational gaps (specifically poor COI management, lack of independence, and limited non-government representation) actively undermines institutional legitimacy and credibility.<br>● System learning<br>○ Institutional learning or adaptation: The Mexican case (where an ad hoc body was created alongside and bypassed the existing NITAG during the pandemic) represents a documented system learning gap. | ● Ability to respond to crises<br>○ The COVID-19 pandemic acted as a test case for NITAG adaptability. Most NITAGs responded (8 out of 9), but several were inadequately integrated into government decision-making. Mexico's creation of a parallel advisory body bypassing the existing NITAG represents a significant adaptability gap. Strong legal frameworks were identified as key enablers of adaptive capacity.<br>○ 8 of the 9 active NITAGs actively participated in providing COVID-19 immunization policy support during the emergency (Peru did not). |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Cross-sectional) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | • Equity considerations<br>  ○ Most include 5 recommended medical specialties. Some include gynecologists, primary care, scientific societies, and international civil society. | | |
| Politikberatung durch Expert*innenräte in der SARS-CoV-2-Pandemie in Deutschland: Eine Dokumentenanalyse aus Public-Health-Perspektive (Expert committees in German public health policymaking during the SARS-CoV-2 pandemic: a document analysis) | | **Institutional Design of Advisory Bodies:**<br>• Type of advisory body<br>  ○ Advisory committee, Expert Panel (referred to as "Expert*innenräte"), Advisory councils. 21 expert committees across 10 federal states and 4 federal ministries in Germany.<br>• Mandate<br>  ○ Strategic, Technical. To help convey and contextualize scientific evidence for public health policymaking, evaluate the crisis, and provide recommendations on pandemic management, school operations, and economic impacts.<br>• Governance model<br>  ○ Hybrid. Largely ad hoc expert committees consisting of external experts but convened directly by political leaders and ministries.<br>• Advisory roles and participation<br>  ○ Included scientific experts, practitioners, and representatives from affected populations or civil society (e.g., student representatives, business actors).<br>• Membership composition and expertise<br>  ○ Heavily dominated by biomedical disciplines such as virology, hygiene, medicine, and biology. Other disciplines (economics, law, sociology) and non-scientific experts were represented in seven federal states. Public Health was notably absent as an independent scientific discipline.<br>  ○ The study identified 21 ad hoc expert committees. In 11 committees, the members were known by name; in the remaining 10, the members were unnamed and tended to represent specific thematic areas (e.g., school and day-care, medicine and care, economic topics).<br>• Equity considerations<br>  ○ Gender underrepresentation: only 26% of the members on the 11 named committees were women. The authors | **Key findings**<br>• Analyzed 21 ad hoc expert committees in Germany during COVID-19.<br>• Committees were insufficiently representative, with public health notably absent as an independent discipline.<br>• Women were significantly underrepresented (26%).<br>• A severe lack of transparency makes it unclear how these committees influenced political decision-making.<br>**Impact**<br>• Policy influence<br>  ○ Lack of transparency: Impact: Due to a severe lack of transparency regarding the committees' work processes and results, it remains entirely unclear whether and how these expert committees actually influenced political decision-making.<br>• Trust and legitimacy<br>  ○ Information accessibility: Impact: Information on committee appointments, work processes, and accessible results was severely limited, which the authors argue undermines the legitimacy of political decisions. | **Equity**<br>• Evaluated poorly due to the significant gender gap (26% women) and the lack of broad interdisciplinary/societal representation in many committees.<br>**Transparency**<br>• Evaluated as highly deficient. Information on committee appointments, work processes, and accessible results was severely limited, which undermines the legitimacy of political decisions. Furthermore, dissemination to the public was extremely limited, as only two of the identified councils published their results or statements publicly. |
| **Publication date** | August, 2021 | | | |
| **Author/Organization** | Sell et al. | | | |
| **Jurisdictions studied** | Germany (National level and across 16 federal states/Länder) | | | |
| **Methods used** | Qualitative study (Multi-stage document analysis utilizing freedom-of-information [FOI] requests, pandemic preparedness plans, official press releases, and minor parliamentary interpellations). | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 7/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | highlight this underrepresentation as problematic for gender equality and for ensuring pluralistic perspectives. | | |
| Expert Consensus on the Structure, Role, and Procedures of the Korea Expert Committee on Immunization Practices | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee / Korea Expert Committee on Immunization Practices (KECIP).<br>● Mandate<br>○ Strategic, Technical. To develop guidelines and provide technical advisory activities on immunization policies in Korea, including designating and revoking infectious diseases requiring vaccination, establishing vaccination criteria, methods, policies, and eradication plans<br>● Governance model<br>○ Embedded. The KECIP operates under the Infectious Disease Control Committee within the Korea Disease Control and Prevention Agency (KDCA)<br>● Advisory roles and participation<br>○ Expert committee members provide scientific and technical advice on vaccination implementation, should advise on KDCA laws and regulations, and present fair/objective opinions. The chairperson prepares meetings, presides, decides on privacy, and ensures fair proceedings. Vaccine manufacturers, citizens, and patients can participate at meetings<br>● Membership composition and expertise<br>○ Multidisciplinary. Profiles include internal medicine (infectious diseases), pediatrics (infectious diseases and other), preventive medicine, family medicine, public health epidemiology, statistics, microbiology, immunology, and a consumer group.<br>● Membership structure and appointment model<br>○ Established by law. Currently consists of 15 members with a 2-year term. There is a strong consensus on maintaining the 15-member size, but divided opinions on the 2-year term. Participants strongly supported the use of permanent subcommittees and the establishment of a dedicated crisis response working group | **Key findings**<br>● Surveyed Korea Expert Committee on Immunization Practices members.<br>● Consensus supports maintaining a 15-member size, establishing subcommittees, and dedicated crisis response groups.<br>● Members strongly endorse strict COI management, transparent public disclosure of meetings, and ensuring KECIP decisions directly shape policies.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: Most respondents believed that committee decisions should influence final decisions by the health authority<br>● Policy influence<br>○ Integration into policies: 84.2% of respondents believed that KECIP's decisions should directly influence the KDCA's final decision-making stage, highlighting its vital advisory role in shaping national immunization policies<br>● Trust and legitimacy<br>○ Public or stakeholder trust: A preference for transparent disclosure mechanisms (such as holding meetings open to the public in principle) while maintaining confidentiality for specific sensitive components was highlighted as necessary for accountability and maintaining objectivity<br>● System learning<br>○ Institutional learning or adaptation: The study demonstrates a proactive approach | **Transparency**<br>● Transparency/Dissemination methods: 78.9% advocated for expert committee meetings to be open to the public in principle, while keeping specific sensitive data presentations and core deliberations private. Transparency/Advisory roles and Membership: There is strong consensus on the need to transparently check for COIs, disclose interests, and exclude conflicted members from decision-making<br>**Adaptability**<br>● Ability to respond to crises<br>○ Emphasized the necessity of forming a dedicated crisis response working group (89.5% agreement) to rapidly adapt to public health crises or the spread of specific infectious diseases<br>○ A dedicated crisis response working group is deemed highly necessary by experts to handle emerging public health crises effectively |
| **Publication date** | May, 2024 | | | |
| **Author/Organization** | Kang et al. | | | |
| **Jurisdictions studied** | South Korea | | | |
| **Methods used** | Descriptive cross-sectional online survey of expert panel members | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 4/4 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | • Conflict-of-interest management<br>  ○ Strict COI management is strongly endorsed. 89.5% emphasized checking for conflicts of interest prior to selection, 94.7% agreed members must disclose interests, and 78.9% advocated excluding members with pharmaceutical ties. Members with relevant expertise but conflicts should be permitted to attend meetings but must be excluded from decision-making (84.2% agreement)<br>• Equity considerations<br>  ○ Proposes the inclusion of consumer groups, citizens, and patients to reflect diverse, non-technical perspectives. | to institutional learning, identifying the need to establish permanent subcommittees, standard operating procedures for agenda submission, and dedicated crisis working groups to enhance the committee's functionality amidst evolving vaccine science | |
| **Why are states worse than being dead overlooked in healthcare policymaking? An ethnographic examination** | | **Institutional Design of Advisory Bodies:**<br>• Type of advisory body<br>  ○ Advisory committee (The Israeli Public National Advisory Committee - PNAC) andNational academies, learned societies and networks (Health economists developing QALYs)<br>• Mandate<br>  ○ Strategic, Technical. PNAC: To decide which new medical technologies will become covered under Israel's public, universal healthcare system. University research centre: To research and develop a cost-effectiveness health economics tool called QALY (Quality Adjusted Life Years)<br>• Governance model<br>  ○ Embedded, Independent. The PNAC is embedded within the Israeli government. The university research centre in the United States is independent of government<br>• Advisory roles and participation<br>  ○ PNAC members make decisions based on Health Technology Assessment (HTA) evidence prepared by the Ministry of Health (usually pharmacists and biologists)<br>• Membership composition and expertise<br>  ○ Multidisciplinary. In PNAC, approximately half are physicians, including the Chair, alongside a bioethics scholar, a member of the clergy (rabbi), NGO representatives, and Health and Finance Ministry | **Key findings**<br>• Investigates why "states worse than being dead" (SWD) are overlooked in health frameworks (Israel, USA).<br>• Barriers include decision-makers' fear of death, ethical/religious imperatives, lack of pharmaceutical funding, and a bureaucratic need for "simplicity."<br>• This omission misdirects resources and prolongs patient suffering.<br>**Impact**<br>• Impact on decision-making<br>  ○ Embedded governance: Impact: For PNAC, most processes and operations are clearly related to policy influence and decision-making due to its embedded nature in the Israeli national government and formalized, annual processes<br>• Policy influence<br>  ○ Omission of states worse than dead (SWD): Impact: The omission of SWD from resource allocation frameworks in both case studies risks misdirecting limited healthcare resources towards life-prolonging interventions that inadvertently | **Equity**<br>• People with disabilities (ableism): The QALY methodology discriminates against people with disabilities by filtering out complex suffering.<br>• Rabbi inclusion: Religious representation influences committee decision-making and limits equity concerns.<br>**Transparency**<br>• A core finding is that the "epistemic virtue of simplicity" acts as a structural barrier. HTA documents and economic models actively filter out complex, nuanced suffering (like SWD) because accounting for it mathematically or procedurally violates the bureaucratic need for simple, legible data.<br>• Most formal processes in PNAC are transparent as they are embedded in the public governance structure, but without proper conflict of interest management, they are currently informally influenced by pharmaceutical companies |
| **Publication date** | September, 2025 | | | |
| **Author/Organization** | Assor et al. | | | |
| **Jurisdictions studied** | Israel, United States | | | |
| **Methods used** | Qualitative study. Participant observation and semi-structured interviews. The study analyzed two case studies utilizing 42 interviews with former and acting committee members and staff of PNAC, and 21 interviews with health economists | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 8/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | representatives. The US research committee is comprised of health economists and researchers. Notably, there is no patient representation in PNAC.<br>● Membership structure and appointment model<br>○ PNAC consists of ~20 committee members appointed by the Ministry of Health and the Ministry of Treasury<br>● Conflict-of-interest management<br>○ There is a lack of conflict of interest management with the pharmaceutical industry; research priorities, and as a result, agenda priorities are currently informally influenced by pharmaceutical companies<br>● Equity considerations<br>○ PNAC explicitly lacks patient representation. The inclusion of a rabbi heavily influences ethical constraints and limits broader equity concerns. Cultural/religious understandings of death also influence PNAC's decisionmaking. | increase or prolong severe patient suffering. | |
| Invisibilidad de género en la gestión de la COVID-19: ¿quién toma las decisiones políticas durante la pandemia? (Gender invisibility in the COVID-19 management: who are the policy decision-makers during the pandemic? | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, Expert Panel (referred to generically as "comités de personas expertas")<br>● Mandate<br>○ Strategic, Technical. To support the epidemiological management of the pandemic, direct de-escalation processes, and provide advice on socioeconomic, ecological, and care impacts<br>● Governance model<br>○ Hybrid. Ad hoc advisory bodies created directly by the state and regional executive branches<br>● Membership structure and appointment model<br>○ Temporary / Ad hoc crisis committees<br>● Equity considerations<br>○ This is the primary focus of the paper. Evaluated strictly via gender representation to determine the inclusivity of feminist and diverse demographic perspectives. | **Key findings**<br>● Analyzed Spanish COVID-19 expert committees.<br>● Women were severely underrepresented, averaging 39.2% regionally and 42.9% nationally.<br>● 75% of committees failed to reach gender parity. Institutional transparency regarding membership was exceptionally low, structurally invisibilizing the feminist perspective.<br>**Impact**<br>● Policy influence<br>○ Underrepresentation of women: Impact: Limits the inclusion of a necessary feminist perspective in policy-making, negatively impacting the equity of the crisis recovery and public health outcomes<br>● Trust and legitimacy<br>○ Underrepresentation of women: Impact: The structural invisibilization of women in | **Equity**<br>● Women representation:<br>The core finding is the structural invisibilization of women in science advisory and decision-making roles. 75% of expert committees fell below gender parity, structurally invisibilizing the feminist perspective and negatively impacting the equity of crisis recovery.<br>**Transparency**<br>● Evaluated as very deficient ("muy deficiente"). The authors found that 45.5% of epidemiological committees and 69.2% of socioeconomic committees did not make their membership composition publicly available on official websites, requiring direct Freedom of Information-style email inquiries to uncover who was on the boards |
| **Publication date** | February, 2021 | | | |
| **Author/Organization** | Bacigalupe et al. | | | |
| **Jurisdictions studied** | Spain (National State level and across 11 Autonomous Communities) | | | |
| **Methods used** | Cross-sectional study (Document/Policy analysis). Document review of official regional/state websites, | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | press releases, and direct email inquiries to all Public Health offices within the Regional Health Departments and the Ministry of Health | | science advisory roles limits substantive representation, negatively affecting the equity and overall legitimacy of pandemic management and recovery | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Cross-sectional) | | | |
| **Expert communities and interest-formation in the Brazilian AIDS program** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee / Technical Advisory Committee.<br>● Mandate<br>○ Strategic, Technical. To study and propose technical-scientific solutions to comply with the federal law establishing universal and free access to HIV/AIDS drugs, specifically contributing to the establishment of recommendations for the use of antiretrovirals.<br>● Governance model<br>○ Embedded. Embedded within the Ministry of Health (established by Ministerial Ordinance).<br>● Advisory roles and participation<br>○ External experts, government technicians, and civil society representatives met for 1 or 2 days to evaluate scientific evidence and propose recommendations.<br>● Membership composition and expertise<br>○ Multidisciplinary composition including: external experts (primarily infectologists, with some pulmonologists and dermatologists) from academic institutions and specialized clinical services; government representatives (Ministry of Health technicians and regulatory agents from ANVISA); and civil society representatives.<br>● Membership structure and appointment model<br>○ Formed by a core group of assiduous external experts alongside government appointees. The Ministry of Health | **Key findings**<br>● Examined the Brazilian AIDS program Technical Advisory Committee.<br>● Decision-making was expert-driven and highly responsive to pharmaceutical innovations.<br>● To manage the financial implications of ARV adoption, the government progressively increased its representation and implemented formal COI declarations in 2008.<br>**Impact**<br>● Impact on decision-making<br>○ Pharmaceutical market innovations: Impact: Decision-making was highly incremental and highly responsive to pharmaceutical market innovations.<br>● Policy influence<br>○ Technical recommendations: Impact: The committee's technical recommendations had high policy influence and directly drove public expenditures, as the Brazilian government acts as the exclusive buyer (monopsony) of ARVs.<br>○ Innovation adoption: Impact: The Unified Health System (SUS) was highly permeable to the committee's advice, rapidly incorporating most new ARVs within two years of their FDA approval. | **Transparency**<br>● The 2008 implementation of a formal conflict of interest policy was the primary transparency mechanism utilized to manage pharmaceutical influence.<br><br>**Adaptability**<br>● Ability to respond to crises<br>○ The committee demonstrated a rapid incorporation of antiretroviral drugs (ARVs), continuously expanding and updating treatment recommendations to include new ARV classes to adapt to innovation. |
| **Publication date** | May, 2017 | | | |
| **Author/Organization** | do Lago et al. | | | |
| **Jurisdictions studied** | Brazil | | | |
| **Methods used** | Qualitative study. Documental analysis (tracking 13 official technical recommendation documents from 1996–2008) triangulated with 60-minute semi-structured key informant interviews with government managers and participating professionals. | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 8/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | appointed the members and maintained the right to replace them annually. Over the 14-year period, the proportion of government representatives increased (reaching 40% by 2007/2008), while external expert participation slightly declined.<br>● Conflict-of-interest management<br>○ Initially lacked a defined policy, but a formal conflict of interest (COI) policy was implemented in 2008. It established explicit exclusion criteria (e.g., no employment, advisory roles, board memberships, or shares with pharmaceutical laboratories). A statement of COI was required to be signed by each member. While 3 of 6 members withdrew in 2008 due to conflicts, the study notes that indirect industry influence (such as travel funding) persisted due to its systemic prevalence in the medical field.<br>● Equity considerations<br>○ Limited participation of civil society (never exceeding 6%). Predominantly composed of external infectologists. | ● Trust and legitimacy<br>○ Financial sustainability: Impact: Tensions emerged between expert autonomy and government oversight in later years due to the immense financial implications of the committee's recommendations.<br>● System learning<br>○ Financial implications: Impact: To manage the growing financial implications of the advice, the system adapted by progressively increasing government representation on the committee to ensure stronger institutional control and enforcing formal COI declarations.<br>■ Expert autonomy: Impact: The eventual creation of CONITEC in 2011 was identified as an institutional adaptation toward a more formalized, less expert-dominated decision-making process. | |
| Value and effectiveness of National Immunization Technical Advisory Groups in low- and middle-income countries: a qualitative study of global and national perspectives | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee / National Immunization Technical Advisory Groups (NITAGs)<br>● Mandate<br>○ Strategic, Technical. To provide impartial, evidence-based recommendations to guide vaccination decision-making by policymakers and programme managers. The primary role involves reviewing evidence on vaccines, assessing local data, and adapting global/regional recommendations to national contexts. Extended roles reported include investigation of vaccination-related adverse events, disease surveillance, bio-safety, human resources, broader immunization programme oversight, and public confidence building | **Key findings**<br>● Explored LMIC NITAG effectiveness.<br>● NITAGs are highly valued for fostering evidence-based decision-making and country ownership.<br>● Key challenges include unreliable funding, insufficient diversity of expertise, inadequate COI management, lack of transparency, and limited capacity to synthesize evidence.<br>**Impact**<br>● Impact on decision-making<br>○ Recommendations: Impact: Policy influence is evidenced by MoH adoption of recommendations (e.g., vaccine schedule adaptations, cholera vaccination in | **Equity**<br>● Socio-economic, cultural, and equity data: Mentioned as occasional data inputs for NITAG decision-making, though incorporation methodologies were unclear.<br>**Transparency**<br>● Evaluated as fundamentally lacking. Very few NITAGs held open meetings, and public access to minutes or recommendations was rare (open-access documents frequently unavailable in practice), which interviewees noted could foster public suspicion. Transparency was identified |
| **Publication date** | May, 2019 | | | |
| **Author/Organization** | Bell et al. | | | |
| **Jurisdictions studied** | Global / Low- and middle-income countries (LMICs) - Covering 38 countries across 5 WHO regions | | | |
| **Methods used** | Qualitative multi-methods study. Data collection | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | included semi-structured interviews (134 total: 53 global/regional, 81 national) and a narrative literature review (82 sources from 38 countries) | ● Governance model<br>○ Independent, Hybrid. Models range from fully embedded within government to having no formal government relationship. Most NITAGs had Ministry of Health (MoH) representatives as members, though a tension was identified between independence (needed for credibility) and integration (needed for policy relevance).<br>● Advisory roles and participation<br>○ Includes core members (voting), a secretariat (with variable capacity), ex-officio members (MoH representatives, WHO/UNICEF country office representatives), and external experts invited when specific expertise is missing. Non-members were permitted to observe meetings upon request or by invitation in most NITAGs.<br>● Membership composition and expertise<br>○ Multidisciplinary. Ideally encompasses paediatrics, public health, infectious diseases, epidemiology, and immunology. A major gap identified was a lack of diversity in expertise, specifically citing a widespread lack of health economists on the committees.<br>● Membership structure and appointment model<br>○ Formally established bodies with core members plus invited external experts for specific topics.<br>● Conflict-of-interest management<br>○ Evaluated as a significant challenge. While most had some form of conflict of interest (COI) policy, implementation was inconsistent. Processes varied from temporary suspension and prohibition from voting for members with a COI, to recusal from specific topic discussions. Some misunderstood the purpose of COI reporting, viewing it merely as a public transparency exercise rather than a safeguard for independent decision-making<br>● Equity considerations<br>○ Required to be multidisciplinary, though health economists are frequently missing. Geographic diversity within | Mozambique)<br>● Policy influence<br>○ Recommendations: Impact: MoH adoption of recommendations (e.g., vaccine schedule adaptations, cholera vaccination in Mozambique) demonstrates policy integration and uptake<br>● Trust and legitimacy<br>○ Independence, transparency, and public communications: Impact: Trust and legitimacy are built through independence from industry and government, transparent processes, and public communications addressing vaccine hesitancy<br>○ NITAG existence: Impact: NITAGs were valued for increasing public and professional confidence in vaccination programs and directly addressing anti-vaccine activism/vaccine hesitancy<br>● System learning<br>○ Evidence-based decision-making model: Impact: Supported and enhanced country ownership of immunization programs | as essential for building public and professional trust<br>**Adaptability**<br>● Ability to respond to crises<br>○ NITAGs' scopes were evolving over time from a narrow new vaccine introduction focus to broader programme oversight and public confidence roles. Extended roles in response to outbreaks (e.g., Mozambique/cholera) were documented. Regional NITAG sharing was proposed as an adaptive strategy for small countries. |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 9/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | countries is considered<br>○ Social and equity considerations mentioned as occasional data inputs for NITAG decision-making, though how these were incorporated was unclear | | |
| Strengthening national vaccine decision-making: Assessing the impact of SIVAC Initiative support on national immunisation technical advisory group (NITAG) functionality in 77 low and middle-income countries | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee / National Immunisation Technical Advisory Groups (NITAGs)<br>● Mandate<br>○ Strategic, Technical. To provide policy-makers with independent, evidence-based advice on vaccination, appraising immunological, epidemiological, economic, logistic, and sociological considerations regarding multiple vaccine antigens, formulations, strategies, and financing mechanisms<br>● Governance model<br>○ Hybrid. Independent advisory embedded within national health systems<br>● Membership composition and expertise<br>○ Multidisciplinary. According to the indicator criteria for functionality in the WHO/UNICEF Joint Reporting Form (JRF), a NITAG must include members from at least five of the following areas of expertise: pediatricians, public health experts, infectious disease specialists, epidemiologists, immunologists, and other relevant experts<br>● Membership structure and appointment model<br>○ Permanent. They have an annual meeting and need to send a report<br>● Conflict-of-interest management<br>○ According to the indicator criteria for functionality in the WHO/UNICEF JRF, members of the advisory group are required to disclose conflicts of interest. | **Key findings**<br>● Quantitatively assessed the SIVAC Initiative's impact on NITAG functionality across 77 LMICs.<br>● Of 77 countries analyzed, 31 received SIVAC support, and between 42 (global definition) and 50 (restricted definition) achieved NITAG functionality between 2010–2016.<br>● Countries receiving SIVAC support achieved functionality 2.5 to 3.5 times faster than unsupported countries.<br>● Institutional capacity-building support significantly accelerates the establishment of functional science advisory systems.<br>**Impact**<br>● Impact on decision-making<br>○ Functional NITAGs: Impact: Provide independent, evidence-based decision-making for national immunization programs<br>● System learning<br>○ SIVAC Initiative support: Impact: Significantly accelerates the time required to establish functional scientific advisory systems (NITAGs) in low- and middle-income countries (LMICs). | **Transparency**<br>● The requirement for members to disclose conflicts of interest is one of the six core criteria used to measure a NITAG's functionality and transparency |
| **Publication date** | December, 2018 | | | |
| **Author/Organization** | van Zandvoort et al. | | | |
| **Jurisdictions studied** | Multiple: 77 low- and lower-middle-income countries (specifically those eligible for Gavi support in 2008) | | | |
| **Methods used** | Retrospective cohort analysis utilizing Cox proportional hazards models and extended Kaplan-Meier plots to compare the time to NITAG functionality between supported and unsupported countries. SIVAC support was modeled as a time-dependent variable to prevent immortal time bias | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 10/11 (Cohort study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **COVID-19 and science advice on the 'Grand Stage': the metadata and linguistic choices in a scientific advisory groups' meeting minutes** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee / Scientific Advisory Group for Emergencies (SAGE).<br>● Mandate<br>○ Strategic, Technical. To ensure that coordinated and timely scientific and/or technical advice is made available to decision-makers to support UK cross-government decisions during emergencies.<br>● Governance model<br>○ Hybrid. Operates as an independent ad hoc body but is activated by and provides direct advice to the government's Civil Contingencies Committee (COBR).<br>● Advisory roles and participation<br>○ Attendees' roles included scientific experts, observers, and the secretariat. The roles of some attendees switched from experts to observers and vice versa during the process.<br>○ The participation of experts changes for each meeting, depending on the experience necessary to address the crisis facing the country.<br>● Membership composition and expertise<br>○ Multidisciplinary, but largely dominated by academic and medical scientists/modellers. Universities and academics clearly have a prominent role, alongside representatives from a range of Government bodies and institutions.<br>● Membership structure and appointment model<br>○ Formally, SAGE has no permanent membership; it is an ad hoc group where participant invitations change depending on the emergency. However, the study confirmed the functional existence of a "core group"—only 32 of the 142 listed experts attended more than 50% of the meetings, and only nine were constantly in the core group. | **Key findings**<br>● SAGE's approach towards transparency. The Government's public release of SAGE's experts' names and their meeting minutes increased SAGE's transparency.<br>● 'Core group' and plurality of voices in SAGE's meetings.The analysis found that only 32 of the 142 people we classified as experts attended more than 50% of the meetings . Of these 32, only nine were constantly in the core group.<br>● The meeting minutes explicitly describe SAGE's role as a scientific advisor and the responsibility of government departments and ministers as policymakers.<br>● Increased use of hedges over time indicated a learning curve in communicating scientific uncertainty.<br>● Changes in the communication of uncertainty and the portrayal of SAGE's role.The analysis demonstrates how the meeting minutes depict changes in SAGE's approach to transparency, stance, and uncertainty.<br>**Impact**<br>● Impact on decision-making<br>○ Advice provision: Impact: The meeting minutes explicitly construct SAGE's role as a scientific advisor, while maintaining that the responsibility for finalizing policy choices and decision-making rests with government departments and ministers.<br>● Trust and legitimacy<br>○ There is no clarity on what the deliberative processes were like, coordination mechanisms were not identified (or they were not reported), communication practices were not clear nor were the dissemination methods. | **Transparency**<br>● Evaluated as a high focus. The study quantitatively tracked transparency improvements, noting that the average delay in publishing meeting minutes decreased from 99.8 days early in the pandemic to 17.1 days later on (well within the 30-day target). The government's public release of the experts' names and the meeting minutes increased transparency. However, researchers argue transparency could be further improved by clarifying the specific expertise feeding into discussions rather than conflating "core" members with one-time attendees. |
| **Publication date** | December, 2022 | | | |
| **Author/Organization** | Baker et al. | | | |
| **Jurisdictions studied** | United Kingdom. | | | |
| **Methods used** | Mixed methods approach based on publicly available minutes from SAGE meetings between January 2020 and May 2021. First, the metadata of the minutes were analyzed to examine changes in transparency and expert plurality over time. Second, a qualitative linguistic analysis explored how SAGE constructed its role and communicated consensus and uncertainty, using Hyland's (2005) framework on linguistic markers. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | NA | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | ○ The authors frame the release of the minutes through the "Science on Stage" metaphor, arguing that transparency, the presentation of consensus, and the communication of uncertainty are critical components of maintaining public trust and managing SAGE's authority. | |
| Evaluating the functionality and effectiveness of ZITAG and related expanded programme on immunisation technical committees in Zambia | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, Expert Panel (Specifically evaluating the Zambia Immunisation Technical Advisory Group [ZITAG], the EPI Technical Working Group [EPI-TWG], and the Interagency Coordinating Committee [ICC]).<br>● Mandate<br>○ Strategic, Technical. To provide independent and evidence-based advice to the Ministry of Health (MoH) by offering a credible, transparent, and independent decision-making process regarding vaccination, and to propose recommendations in order to strengthen the national immunisation programme.<br>● Governance model<br>○ Independent, Embedded. Advisory bodies are embedded within the MoH governance structure. ZITAG was designed to be independent e.g., chair appointed by the Permanent Secretary of MoH, meetings held at a neutral venue), but full independence is compromised because operations are funded by cooperating partners. The ICC is chaired by the MoH Permanent Secretary.<br>● Advisory roles and participation<br>○ ZITAG members serve in a personal capacity. There is significant overlapping membership, with 9 individuals serving on all three committees. External experts are co-opted into working groups as needed.<br>● Membership composition and expertise<br>○ Multidisciplinary. A broad mix of skills including public health (66.0%), child health (51.2%), health systems and | **Key findings**<br>● Evaluated functionality of Zambia's EPI committees.<br>● ZITAG has good multidisciplinary expertise and leadership but lacks an independent secretariat and dedicated funding.<br>● ZITAG's policy impact is currently blocked because the ICC broadened its mandate, sidelined immunization, and stalled recommendations for nearly two years.<br>**Impact**<br>● Impact on decision-making<br>○ ZITAG improved the use of evidence and transparency in decision-making processes.<br>● Policy influence<br>○ Policy influence was limited, as key recommendations remained pending without endorsement or implementation.<br>● Trust and legitimacy<br>○ Trust was mixed, with strong country ownership but concerns about independence due to reliance on external funding.<br>● System learning<br>○ Governance changes weakened coordination, reflecting challenges in institutional learning and system effectiveness. | **Transparency**<br>● Mixed. While ZITAG formally enforces COI procedures, the public disclosure of its deliberations is not practiced, which was identified as a major transparency gap. The decision-analysis framework was rated positively for transparency. Furthermore, documentation gaps exist across committees, and the perception of the ICC as a "rubber stamp" undermines the transparency of the policy endorsement process.<br>**Adaptability**<br>○ ZITAG's proactive adaptability is constrained because its agenda is heavily driven by Gavi requirements (making it reactive rather than anticipatory). Furthermore, the lack of an independent secretariat and adequate funding limits its capacity to adapt and respond independently. ICC governance changes also inadvertently weakened the advisory ecosystem's adaptability to immunization needs.<br>● Ability to respond to crises<br>○ The COVID-19 vaccine introduction was managed |
| **Publication date** | July, 2022 | | | |
| **Author/Organization** | Simuyemba et al. | | | |
| **Jurisdictions studied** | Zambia | | | |
| **Methods used** | Mixed methods study. Data collection included an online stakeholder survey of committee members (SurveyMonkey), 8 key informant interviews, and a document review (meeting minutes, TORs, recommendation notes, Gavi FCE reports). | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | delivery (46.8%), research (36.2%), and vaccinology (38%). Economic evaluation expertise was also represented by 2 members.<br>● Membership structure and appointment model<br>○ ZITAG: Composed of core members (appointed by the Permanent Secretary of MoH for renewable 3-year terms) and non-core members. Membership can be terminated for failure to attend two consecutive meetings.<br>○ EPI-TWG and ICC: Indefinite membership, with 6–10 years being the most common duration.<br>● Conflict-of-interest management<br>○ ZITAG has a formal conflict of interest (COI) policy in place that is actively followed. Members are required to declare COIs prior to appointment, sign confidentiality agreements, and sign COI declarations at each deliberation. Members with a COI on a specific matter must leave the room and cannot vote.<br>○ Conversely, the ICC and EPI-TWG have no formal COI procedures in place.<br>● Equity considerations<br>○ ZITAG features a broad, multidisciplinary membership to capture different technical and programmatic angles. | | through the existing ZITAG structure. |
| Evaluation of National Immunization Technical Advisory Groups (NITAGs) of middle-income countries in the WHO European Region; a synopsis | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee (National Immunization Technical Advisory Groups–NITAGs)<br>● Mandate<br>○ Strategic, Technical. To provide scientific evidence and support to Ministries of Health (MoH) and governments in making evidence-informed decisions related to national immunization policies and practices<br>● Governance model<br>○ Hybrid. Intended to provide independent scientific guidance, but functionally relied on the MoH/NPHI (National Public Health Institute) for secretariat support, and in three evaluated NITAGs, core members actively | **Key findings**<br>● All NITAGs were formally established, and their recommendations were generally accepted and implemented by MoH and NIP. These recommendations contributed to the introduction of new vaccines, such as the HPV vaccine, and to national COVID-19 vaccination strategies, helping reduce immunization inequities.<br>● The main operational limitation was the lack of dedicated and well-staffed secretariats to support Evidence-to-Recommendation (EtR) processes. Although most NITAGs had predefined recommendation- development processes, none fully implemented all EtR | **Equity**<br>● Strengthening NITAG capacity leads to better evidence-based decisions, which helps reduce immunization inequities and promotes equal access to life-saving vaccines.<br>**Transparency**<br>● Identified as a major gap regarding poor COI management protocols and the lack of publicly available recommendations. |
| **Publication date** | February, 2025 | | | |
| **Author/Organization** | Külper-Schiek et al. | | | |
| **Jurisdictions studied** | WHO European Region (9 evaluated Middle-Income Countries: Albania, Armenia, Belarus, Bosnia and Herzegovina, | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | Kazakhstan, Kyrgyzstan, Republic of Moldova, Serbia, Uzbekistan) | worked for the MoH/NIP (National Immunization Programmes), compromising strict independence<br>● Advisory roles and participation<br>○ All NITAGs have core members representing experts from various disciplines to decide on final NITAG recommendations, an appointed Chair, a Secretariat (often NPHI or NIP staff), and sometimes working groups (WGs) or external experts for specific consultations<br>● Membership composition and expertise<br>○ Multidisciplinary. They should include representation of experts covering pediatrics, public health, infectious diseases, epidemiology, and immunology. Three NITAGs include core members who work for the MoH or NIPs and are therefore not independent experts<br>● Membership structure and appointment model<br>○ Formally established as advisory bodies through an MoH order. Seven have a formal document that describes their functioning. All NITAGs have an appointed Chair. Secretariats are provided by NPHI or NIP staff but none are considered "fully functional". For most NITAGs, NPHI officers or NIP staff conduct Secretariat work in addition to their routine responsibilities.<br>● Conflict-of-interest management<br>○ Evaluated as a widespread weakness. Only 1 NITAG requests written declarations of interest with external assessment and a predefined process for managing existing or perceived COI. Six have weak policies based on oral declarations or self-assessments, or do not pre-define how to manage identified conflicts. Two have no COI policy.<br>● Equity considerations<br>○ NITAG recommendations have led to the introduction of new lifesaving vaccines and the reduction of immunization inequities in the Region. | components, particularly structured policy questions, evidence quality assessment, and systematic evidence synthesis, mainly due to limited time, human resources, and awareness.<br>● Other weaknesses included poor COI management, lack of sustainable funding, and reliance on non-independent core members (MoH staff)<br>● Transparency and public dissemination were limited. Recommendations were usually communicated through meeting minutes, and public access was available in only three countries.<br>● The project developed the “Evaluation Tool for NITAGs,” a customized assessment tool based on the WHO Simplified Evaluation Tool and the SIVAC Comprehensive Tool. The evaluation results supported improvement plans, including revised Terms of Reference (ToRs), standard operating procedures, and adapted EtR guidance for low-resource settings.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: The major strength identified was that MoHs accepted and implemented most of the recommendations developed by all evaluated NITAGs.<br>● Policy influence<br>○ Integration into policies: High policy impact; the MoH accepted and implemented most recommendations developed by all evaluated NITAGs. NITAG recommendations have led to the introduction of new lifesaving vaccines and the reduction of immunization inequities in the Region. | |
| **Methods used** | Cross-sectional study. A four-phase evaluation methodology involving questionnaires (Evaluation Tool for NITAGs) filled via self-evaluation or with external support, and document review (meeting minutes, ToR, SOPs, recent recommendations) | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Cross-sectional) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | ● Trust and legitimacy<br>○ Public or stakeholder trust: Good stakeholder recognition, though some NITAGs lack public visibility<br>● System learning<br>○ Institutional learning or adaptation: NITAGs used the evaluations to create targeted improvement plans, revising their ToRs, standard operating procedures, and adapted EtR framework for low-resource settings. | |
| **Bespoke science: the use of ad hoc scientific advisory committees in the Covid-19 pandemic** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee, It specifically focus on ad hoc / temporary scientific advisory committees<br>● Mandate<br>○ Strategic, Technical. To evaluate the crisis caused by the COVID-19 pandemic and recommend policies to control and mitigate its effects. However, these advisory bodies were also used to provide “bespoke science” aligned with the political needs and preferred policies of the governments that created them<br>● Governance model<br>○ Embedded (Ad hoc). Ad hoc bodies are structurally easier to control than standing agencies because policymakers have greater liberty to choose members, specify mandates, and disband/reconstitute them. They are created by, and highly embedded within, the executive branches of government (e.g., Prime Minister, President).<br>● Advisory roles and participation<br>○ The advisory groups had experts in different fields and many formal members were often handpicked to ensure compliance or political alignment. For instance, the UK SAGE included political "attendees" from No. 10; Uganda's SAC consisted of "friends" of the President; the | **Key findings**<br>● Comparative case study of 6 countries during COVID-19.<br>● In high-uncertainty crises, governments tend to create ad hoc SACs instead of relying on standing agencies to maintain policy discretion and control over the scientific narrative.<br>● Governments preserve this control by limiting committee membership through disciplinary or political alignment and/or by restricting the committee’s mandate.<br>● Sweden represented a deviant case, as political constraints linked to the January Agreement reduced government policy discretion and led to reliance on standing public health agencies rather than ad hoc advisory bodies.<br>● Conflicts of interest were addressed mainly from a political rather than a financial perspective, with political alignment identified as the principal source of conflict.<br>● Transparency and diversity of viewpoints were often intentionally limited.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: Strongly shaped by | **Transparency**<br>● Viewpoint diversity and transparency are actively avoided because they expose political tradeoffs and undercut the pretense that policy is based strictly on neutral science.<br>**Adaptability**<br>● Ad hoc SACs provide maximum adaptability for policymakers, allowing them to retain "policy discretion" to change course rapidly, punish non-reciprocating counterparties, and tailor science to shifting political realities<br>● Ability to respond to crises: In high-uncertainty crises, governments create ad hoc SACs instead of using standing agencies specifically to maintain policy discretion and control the scientific narrative. |
| **Publication date** | June, 2025 | | | |
| **Author/Organization** | Koppl et al. | | | |
| **Jurisdictions studied** | Italy, United Kingdom, United States, Poland, Uganda, Sweden | | | |
| **Methods used** | Qualitative study. Exploratory comparative case studies of 6 countries during COVID-19, utilizing Mill's "method of agreement" (the most-different method). Document analysis using publicly available primary sources (government reports, executive orders) and secondary sources (news, published case studies | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Relevance rating** | High | US Task Force consisted entirely of government employees to circumvent federal advisory regulations.<br>● Membership composition and expertise<br>○ The most important COVID-19 ad hoc advisory committees consisted primarily of epidemiologists, infectious disease experts, and related health specialists.<br>○ There was a notable lack of both stakeholders and experts in diverse fields such as sociology, education, and economics.<br>○ Membership was characterized by narrow disciplinary representation or strict political alignment (e.g., US bodies were politically aligned; UK SAGE was largely medical disciplines).<br>● Membership structure and appointment model<br>○ Ad hoc and temporary. Governments frequently disbanded and reconstituted committees when they failed to align with political goals (e.g., Poland disbanding the Medical Council). Control generally requires either a narrow membership or a narrow mandate. Sweden relied on existing public health institutions and a decentralized governance structure and the response emphasized voluntary measures rather than strict restrictions, influenced by institutional arrangements, high public trust, and political constraints limiting government discretion.<br>● Conflict-of-interest management<br>○ The issue was addressed primarily from a political rather than a financial perspective. Using a "public choice" lens, the analysis identified political alignment as the main source of conflict in the studied countries, with Sweden representing a deviant case. | political alignment and the production of "bespoke science" with high policy impact. Committee advice was often used to legitimize pre-determined political decisions rather than to objectively inform policymaking.<br>● Policy influence<br>○ Integration into policies: High, but heavily politicized. Advisory bodies were used to generate scientific advice aligned with the political priorities and preferred policies of governments.<br>● Trust and legitimacy<br>○ Public or stakeholder trust: Advisory structures were frequently used for blame-shifting and blame-avoidance, allowing political leaders to present decisions under a technocratic façade by "hugging the experts."<br>● System learning<br>○ Institutional learning or adaptation: The creation of ad hoc SACs during the COVID-19 crisis reflected an institutional adaptation of advisory systems; however, this adaptation was strongly driven by political interests and characterized by limited transparency. | |
| **National immunization technical advisory groups (NITAGs) in the WHO Eastern Mediterranean Region (EMR): A decade of shaping immunization policies, 2010–2021** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee / National Immunization Technical Advisory Groups (NITAGs).<br>● Mandate | **Key findings**<br>● Retrospective review of 22 WHO EMR NITAGs (2010-2021).<br>● Twenty countries reported having a NITAG in 2010 and 2011. This increased to 21 in 2012, | **Adaptability**<br>● Ability to respond to crises<br>○ Evaluated favorably. The advisory systems demonstrated an unprecedented ability to respond |
| **Publication date** | December, 2023 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Author/Organization** | Etapelong et al. | ○ Technical. NITAGs are multidisciplinary groups of national experts who provide technical advice to the Ministry of Health (MoH) on immunization policies. They make recommendations to governments based on evidence.<br>● Governance model<br>○ Hybrid. They are independent technical review bodies that are embedded or formally linked to the Ministry of Health (MoH).<br>● Membership composition and expertise<br>○ Multidisciplinary. One of the core WHO indicators for functionality is that the advisory body must have at least five main expertise areas represented in its core membership (though specific disciplines are not detailed).<br>● Conflict-of-interest management<br>○ The use of a mandatory disclosure of interests by members is explicitly required and tracked as one of the six core indicators of NITAG functionality. However, the exact management procedures for these conflicts are not mentioned. | peaked at 22 countries in 2013, and decreased to a minimum of 19 (86 %) in 2017 and 2020.<br>● Functionality varied significantly by income (83% of HICs functional vs 20% of LICs in 2021).<br>● Despite gaps in formal processes like COI management, NITAGs actively shaped policy, resulting in 162 implemented immunization policy decisions.<br>**Impact**<br>● Policy influence<br>○ Integration into policies: Impact: The study documented a total of 162 implemented immunization policy decisions resulting from advisory recommendations from 2010 to 2021 in the EMR. Of these, 103 (64%) were new vaccine introductions, 31 (19%) were vaccine switches, and 28 (17%) were national immunization schedule changes. | during the COVID-19 pandemic. The highest number of implemented immunization policy decisions was 28 in 2021 across 19 countries. Five countries introduced the COVID-19 vaccine in 2020, with another 17 (77%) in 2021, a wave of rapid introduction that contrasts sharply with the speed of introduction for other priority vaccines (which traditionally took over a decade). |
| **Jurisdictions studied** | WHO Eastern Mediterranean Region (EMR), covering 22 countries/territories | | | |
| **Methods used** | Retrospective descriptive review / Cross-sectional trend analysis. The study analyzed data transmitted from 2010 to 2021, extracting information from the WHO/UNICEF Joint Reporting Form (JRF) and the WHO Immunisation Data Porta | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 9/9 (Descriptive study) | | | |
| **Chief medical officers in the United Kingdom: maintaining 'independence' inside government** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Chief Medical Officer.<br>● Mandate<br>○ Strategic, Technical. To provide independent authority to issue reports to Parliament; offer government advice by bringing a scientific and professional perspective; lead public communication; conduct public health advocacy; and manage other civil servants. During emergencies (like COVID-19), the mandate focused more heavily on government advice and public communication over advocacy and management.<br>● Governance model<br>○ Hybrid. CMOs in the UK are technically senior civil servants (government employees) employed as the "most | **Key findings**<br>● CMOs are embedded senior civil servants in the UK expected to provide "independent" advice, creating tension because they are still employed by the government.<br>● Four main functions of CMOs identified include scientific advice, public health communication, public health advocacy, and management of other civil servants.<br>● The role is highly adaptable; during COVID-19, CMOs expanded scientific advisory functions while reducing management and advocacy.<br>● The perception of independence is critical for CMO credibility.<br>**Impact** | **Equity**<br>● One CMO per nation: Ensures geographic and jurisdictional representation across the four devolved UK nations.<br>● While there is geographic/residence representation from each nation, their equal representation does not equate to equal power/influence. For example, only England's CMO has membership at the World Health Assembly and they have a larger role in health research funding.<br>● While the CMO's flexibilty was useful in some ways, the advocacy role was |
| **Publication date** | October, 2024 | | | |
| **Author/Organization** | Smith et al. | | | |
| **Jurisdictions studied** | United Kingdom (Focuses on all four devolved nations: England, Scotland, Wales, and Northern Ireland). | | | |
| **Methods used** | Qualitative study. Data was collected via 10 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | semi-structured interviews (conducted online) with current and former CMOs and Deputy CMOs in the UK, alongside an analysis of 28 relevant documentary and legislative sources. Analysis was conducted in NVivo with deductive and inductive coding. | senior government adviser on health matters," but they are often perceived as and expected to provide 'independent' scientific advice to Parliament and the public.<br>● Membership composition and expertise<br>○ There is one Chief Medical Officer per UK nation (England, Scotland, Wales, Northern Ireland). Their roles differ slightly depending on the nation they represent.<br>● Equity considerations<br>○ One Chief Medical Officer (CMO) per UK nation ensures regional representation across the decentralized jurisdictions. | ● Impact on decision-making<br>○ Flexible nature of role: Impact: The flexible nature of the CMO position allows them to significantly influence policy, trust, and legitimacy across the UK.<br>○ Jurisdictional differences: Impact: CMOs in Northern Ireland and Wales have more direct influence on their countries' public health policies than those in England and Scotland, though all provide advice that influences policy.<br>○ All CMOs in the UK had an advisory function in the COVID-19 pandemic for decisionmaking.<br>● Policy influence<br>○ Internal embedding: Impact: Because they operate inside the government, CMOs can exert "soft and quiet influence" internally to shape policy agendas and protect marginalized communities.<br>● Trust and legitimacy<br>○ Perceived independence: Impact: Maintaining "credibility" and perceived "independence" from political interference is essential to the CMOs' authority and public trust.<br>● System learning<br>○ Role adjustment: Impact: CMOs demonstrated high system learning and adaptability during the COVID-19 pandemic by adjusting their roles to take on less advocacy and managerial work in order to increase focus on scientific advisory and public communication. | demoted during the pandemic, and the study indicates that this demotion had negative implications for equity/inequality.<br>**Transparency**<br>● Transparency is evident in the target audiences of CMOs, how they interact with decision-makers, how they coordinate with others, and in their specific advisory roles.<br>**Adaptability**<br>● The role is highly flexible due to loosely defined legislation. During emergencies, CMOs rapidly adapt by drastically expanding their scientific advisory and public communication functions, while delegating or reducing their line-management and advocacy responsibilities.<br>● During the COVID-19 pandemic, CMOs provided more frequent and visible support, media appearances and scientific advice. |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/10 (Qualitative study) | | | |
| Following the science? Views from scientists on government advisory boards during the COVID-19 pandemic: a qualitative interview | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee, National | **Key findings**<br>● Interdisciplinary collaboration was challenging; social scientists struggled to gain recognition. | **Equity**<br>● Women representation: Wider systemic under-representation of women (only 5 |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| study in five European countries | | academies, learned societies and networks<br>● Mandate<br>○ Strategic, Technical. To provide evidence and recommendations to policymakers, to facilitate knowledge transfer, and to communicate current scientific understanding to the public during the COVID-19 pandemic.<br>● Governance model<br>○ Independent university academics.<br>○ Hybrid. Scientists from public health research institutions working within government structures while providing independent advice.<br>● Advisory roles and participation<br>○ Generating and presenting evidence, translating knowledge for ministers, and serving as public communicators. Advisory boards operated in different ways, which shaped the roles of scientists.<br>● Membership composition and expertise<br>○ Multidisciplinary. Initially dominated by biomedical sciences (e.g., virology, immunology, microbiology, modelling, statistics, epidemiology, global health, and public health). Five participants were social scientists representing the fields of psychology, sociology, and behavioural science.<br>● Membership structure and appointment model<br>○ The majority were employed solely at a university, while two participants worked at a public health institution, and two combined an academic position with a position at a governmental institution. Participants were recruited through the RECOVER project network, snowballing, and government websites.<br>● Equity considerations<br>○ Social scientists and women were systemically underrepresented. | ● The composition of scientific advisory boards strongly influenced how evidence was interpreted and incorporated into decisions.<br>● Role boundaries were blurred, leading politicians to use scientists to justify political choices.<br>● Pre-existing collaborations helped facilitate effective working relationships within the advisory boards.<br>● Scientists taking on public communication roles faced immense media pressure and hostility.<br>● Preparedness requires defined boundaries and robust communication training.<br>● Wider systemic under-representation of women on scientific advisory boards<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: High compared to pre-pandemic times, but scientists noted their advice was just one of many pressures on governments and was frequently ignored. Scientific advisors reported uncertainty about their role and the boundaries of their involvement, as final decisions rested with governments. Scientific advisors reported uncertainty about their role and the boundaries of their involvement in policymaking.<br>● Policy influence<br>○ Integration into policies: High compared to pre-pandemic times. While most saw their primary responsibility as providing evidence and recommendations, they recognized that final decisions rested with governments. Politicians sometimes inappropriately framed political choices as direct scientific instructions (hiding behind the advice) to justify political choices. | of 21 interviewed scientists were female), and non-biomedical disciplines on scientific advisory boards.<br>**Transparency**<br>● Identified as critically needed. The authors recommend transparency in how boards operate, publishing meeting minutes, and explicitly communicating scientific uncertainties to maintain public trust<br>**Adaptability**<br>● Scientists had to adapt extremely quickly, working under intense time constraints to produce recommendations based on limited or inconclusive evidence, which challenged the traditional, slower processes of academic peer review. |
| **Publication date** | September, 2021 | | | |
| **Author/Organization** | Colman et al. | | | |
| **Jurisdictions studied** | Belgium, the Netherlands, UK, Sweden, and Germany | | | |
| **Methods used** | Qualitative study. Semi-structured video or telephone interviews with 21 scientists serving on European COVID-19 advisory boards. Interviews were transcribed verbatim and analyzed using a combination of inductive and deductive thematic analysis. Participant recruitment was conducted through purposive and snowball sampling methods. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 10/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | ● Trust and legitimacy<br>○ Public or stakeholder: The phrase "following the science" was often politically manipulated, while media narratives frequently portrayed scientists as the actual decision-makers, generating public confusion and hostility. Many advisors avoided publicly challenging government decisions in order to preserve constructive relationships with policymakers, and maintain public trust. In some cases, politicians explicitly asked advisors not to comment publicly on policy decisions. However, scientists considered public communication an important part of their role, particularly for explaining scientific evidence, supporting understanding of COVID-19 control measures, and countering misinformation. Some advisors chose to communicate through the media, usually in a personal capacity, when they believed their recommendations were being ignored or when communication with the government was ineffective.<br>● System learning<br>○ Institutional learning or adaptation: The study highlights that future pandemic preparedness requires clearly defined role boundaries between science and politics, better integration of social sciences, and robust training for scientists in public communication. | |
| Institutional boundaries and the challenges of aligning science advice and policy dynamics: the UK and Canada in the time of COVID-19 | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee, Chief scientific advisors | **Key findings**<br>● Compared COVID-19 advisory bodies in the UK and Canada.<br>● Established bodies (UK SAGE) mobilized faster | **Transparency**<br>● The contrast between SAGE and OSAT is the sharpest finding. SAGE operated under Cabinet confidentiality norms |
| **Publication date** | August, 2023 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Author/Organization** | Tuohy et al. | ● Mandate<br>○ Strategic, Technical. To generate "serviceable truths", a state of knowledge that satisfies scientific acceptability while supporting reasoned decision-making under conditions of "radical uncertainty".<br>○ Specifically: SAGE advises on emergencies; UK Vaccine Taskforce (VTF) on procuring vaccines; Ontario Science Advisory Table (OSAT) provides broader evidence synthesis and public guidance; Canadian VTF advises on vaccine acquisition strategy<br>● Governance model<br>○ Embedded, Hybrid. Provides a direct comparison between tightly embedded models like the UK's SAGE (Cabinet Office) and UK VTF (BEIS), versus hybrid/purpose-built academic models like Ontario's OSAT (effectively external to government, anchored at the Dalla Lana School) and the Canadian VTF (hybrid, more integrated into government)<br>● Advisory roles and participation<br>○ SAGE: Internal civil servant scientists and external academics recruited through existing networks<br>○ OSAT: Multidisciplinary academic membership co-chaired by an academic and a senior PHO official<br>○ UK VTF: 11 members from government, biotech industry, DHSC, and legal sector, with an External Advisory Board of experts<br>○ Canadian VTF: Mix of academic and industrial members, co-chaired by an academic and a pharmaceutical industry veteran, alongside ex officio deputy ministers<br>● Membership composition and expertise<br>○ Multidisciplinary. SAGE included epidemiologists, economists, behavioural scientists, and civil servant scientists<br>○ OSAT consisted of academic mathematicians, epidemiologists, health services researchers, statisticians, and public health analysts<br>○ The VTFs heavily integrated biotech industry executives, | but suffered from "groupthink" and political subordination.<br>● Purpose-built bodies outside government (Ontario OSAT) offered superior independence and transparency, allowing public critique, but struggled with long-term sustainability.<br>**Impact**<br>● Impact on decision-making<br>○ Institutional variation: Impact: Variable uptake across bodies. SAGE advice on lockdowns was severely delayed in uptake despite modeling indicating exponential spread<br>○ OSAT advice was taken up more directly, with the government reversing policy shortly after OSAT issued a public critique<br>○ Both vaccine taskforces' recommendations were acted upon efficiently through advance purchase agreements<br>● Policy influence<br>○ Institutional variation: Impact: SAGE's influence on non-pharmaceutical interventions (NPIs) was partial and uneven, with government decision-making vacillating.<br>○ OSAT's influence was more traceable, with evidence synopses directly informing the Health Coordinating Table.<br>○ Both vaccine taskforces successfully shaped national procurement policy.<br>● Trust and legitimacy<br>○ Secrecy vs. transparency: Impact: SAGE's initial secrecy (undisclosed membership and unpublished minutes) fueled the perception that scientists were being muzzled, undermining public trust and | (membership and minutes initially undisclosed, publication timing at governmental discretion), which undermined scientific accountability and public trust.<br>● OSAT's terms of reference mandated rapid public release of evidence synopses, operating under scientific norms of open debate and transparency.<br>**Adaptability**<br>● Ability to respond to crises<br>○ The study directly addresses how advisory systems vary across crisis contexts. Established bodies (SAGE) offered faster activation but reduced flexibility and higher path-dependence risk<br>○ Purpose-built bodies (OSAT, vaccine taskforces) offered greater adaptability to the specific crisis profile but required time to establish and lacked permanence.<br>○ The Canadian VTF's evolution from emergency vaccine acquisition to longer-term domestic production capacity building illustrates post-crisis institutional adaptation. |
| **Jurisdictions studied** | Canada (Ontario and Federal) and United Kingdom (England). | | | |
| **Methods used** | Qualitative study. Comparative institutional analysis using the concept of "boundary work" to examine how advisory bodies manage tensions between scientific and governmental logics of accountability. Data was collected via document analysis of published governmental and parliamentary documents, audit reports, academic literature, and publicly available advisory body terms of reference and minutes. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 7/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | government procurement experts, and cross-ministerial representatives<br>● Membership structure and appointment model<br>○ SAGE: Standing list maintained by Cabinet Office, with members newly assembled per emergency (mostly volunteers).<br>○ OSAT: Purpose-built, all members volunteers without a formal permanent mandate.<br>○ UK VTF: Purpose-built, dissolved after the emergency.<br>○ Canadian VTF: Purpose-built, but continued functioning post-emergency with an extended mandate.<br>● Conflict-of-interest management<br>○ Highlights transparency over strict COI forms. OSAT members were independent volunteers subject to the University of Toronto's overarching ethics review framework. In contrast, SAGE initially operated in secrecy (unpublished minutes/membership) to protect government accountability. | scientific accountability.<br>○ Conversely, OSAT's mandatory rapid publication and public press conferences sustained scientific credibility and public visibility. | |
| **The role of Zambia's expansive Inter-agency Coordinating Committee (ICC) in supporting evidence-based vaccine and health sector programming** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee / Inter-agency Coordinating Committee (ICC) and Zambia Immunization Technical Advisory Group (ZITAG)<br>● Mandate<br>○ Strategic, Technical. The ICC fosters collaboration between entities, supports EPI resource mobilization and advocacy efforts, acts as a decision-making forum, and lobbies for funding. ZITAG collects and analyses data to provide the MoH and ICC with evidence-based advice, develops and supports grant proposals, and supports contextualization<br>● Governance model<br>○ Hybrid. The ICC is chaired by the MoH but includes a broad multi-sectoral membership Hybrid. The ICC is chaired by the MoH but includes broad multi-sectoral membership Key Donors, Technical Advisory Groups, | **Key findings**<br>● The ICC demonstrated the following improvements: 1) expanded membership to include diverse representation; 2) expanded scope and mandate to include maternal and child health in decision-making; and 3) distinct roles for collaboration with the Zambia Immunization Technical Advisory Group (ZITAG).<br>● The diverse and expansive membership of the Zambian ICC, along with its ability to foster government commitment and lobby for additional resources, supported improvements in immunization programming.<br>**Impact**<br>● Impact on decision-making<br>○ Expansive membership: Impact: Facilitates the procurement of funding, | **Adaptability**<br>● The forum successfully adapted from a Polio Eradication committee in 1999 to a broader Gavi-funded immunization group in 2006, and eventually into a holistic maternal/child health policy group by 2017. |
| **Publication date** | April, 2024 | | | |
| **Author/Organization** | Sakas et al. | | | |
| **Jurisdictions studied** | Zambia | | | |
| **Methods used** | Qualitative case study. Data collection included Key Informant Interviews (KIIs) and documentary review of Gavi annual joint appraisals. Thematic analysis was used with a | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | deductive approach, applying constructs from existing implementation science frameworks (CFIR and CICI) | Private Sector, among others.<br>● Advisory roles and participation<br>○ The MoH holds a leadership position and is considered a "driving force" of the forum's success.<br>○ EPI technical working group (EPI-TWG) subcommittees are highly active and substantially contribute to the success of the Zambian ICC by providing reports and evidence to both the ICC and ZITAG.<br>○ The ICC provides a forum for coordination of immunization investments, bolsters management of key action points, and administers technical working groups.<br>● Membership composition and expertise<br>○ Highly diverse and expansive. Membership includes the MoH, EPI managers and district representatives, financial planners (UNICEF, WHO, Gavi), key donors (USAID, World Bank, DFID), implementing partners (CHAZ, PATH, Catholic Relief Services), and academic/technical experts (CIDRZ, Zambia School of Nursing).<br>○ ZITAG includes several technical stakeholders, such as academics, epidemiologists, health care professionals, scientific societies, and technical experts from NGOs.<br>● Membership structure and appointment model<br>○ MOH: Permanent Secretary (chair)<br>○ EPI program: EPI manager, Sub-committee representatives<br>○ External organizations: Funders/donors, Technical experts, Implementing partners (e.g., NGOs), Academics, TWGs<br>○ Internal agencies: Government Departments ( Planning, Finance, Health promotion, Statistics, EPI).. | policy decisions, and strategic planning by holding considerable influence over government agencies and external partners.<br>● Policy influence<br>○ Expansive membership: Impact: Successfully lobbied for national government commitment and external partner funding, leading to sustained improvements in routine immunization coverage (DTP1 and DTP3).<br>○ The expansive membership of the ICC affected various components of vaccination programming, including cold chain expansion and data quality, through the inclusion of representatives from sub-committees.<br>● Trust and legitimacy<br>○ Inclusion of external donors and implementing partners: Impact: Aligns priorities and fosters mutual trust.<br>● System learning<br>○ Expanded scope and mandate: Impact: The ICC actively adapted its mandate in 2017 to broaden its scope beyond just vaccines to include Reproductive, Maternal, Neonatal, Child, and Adolescent Health, and Nutrition (RMNCAH-N) to decrease system siloing. | |
| | **Relevance rating** | High | | | |
| | **Quality (JBI)** | 8/10 (Qualitative study) | | | |
| [Moroccan National Immunization Technical Advisory Group: a valuable asset for the national immunization program and the immunization agenda in the EMRO region] | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee<br>● Mandate<br>○ Strategic, Technical. To strengthen the National | **Key findings**<br>● Evaluated the Moroccan NITAG. It fully meets WHO criteria and is highly recognized by the MoH with strong policy impact.<br>● The NITAG operates primarily in response to | **Transparency**<br>● Identified as an area needing improvement.<br>● The study recommended developing formal SOPs and making all meeting |
| **Publication date** | February, 2021 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Author/ Organization** | Jroundi et al. | Immunization Program by providing impartial, evidence-based scientific and technical advice to the Minister of Health regarding vaccines, immunization schedules, and public advocacy campaigns.<br>● Governance model<br>○ Hybrid. SAB embedded within government: It is formally established within the Ministry of Health, but its core members are independent from the ministry<br>● Advisory roles and participation<br>○ Secretariat, experts, ex-officio members from the ministry of health or relevant government institutions, and liaison members representing professional associations and civil society organizations.<br>○ The secretariat organizes meetings and develops background documents, while written minutes are developed and validated orally with present members.<br>● Membership composition and expertise<br>○ Multidisciplinary. Composed of 36 experts from the public or private sector representing pediatrics, infectious diseases, microbiology, public health, neonatology, epidemiology, immunology, clinical research, adult medicine, and health economics. Among the interviewed members, the average professional experience was 17 years (range 5–30 years). Approximately 48% of members were affiliated with research institutions and 40% were practicing clinicians,<br>● Membership structure and appointment model<br>○ Permanent. All NITAG members were appointed by the minister of health and chosen in their quality of experts in their field.Four members had served since the committee's creation, while four were in their first term.<br>● Conflict-of-interest management<br>○ The declaration of interests was done verbally at the start of each session.<br>○ The NITAG had not yet adopted a written policy for the management of conflicts of interest.<br>○ Developing Standard Operating Procedures (SOPs) to | requests from the Ministry of Health rather than through an independent proactive agenda-setting process.<br>● The secretariat plays a key operational role through organizing meetings and preparing background documents and meeting minutes.<br>● Key strengths are multidisciplinary composition and national representativeness.<br>● Critical weaknesses include no dedicated funding, lack of standard operating procedures, and no written COI policy.<br>**Impact**<br>● Policy influence<br>○ Integration into policies: Impact: 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.<br>○ 100% of participants indicated a positive impact on immunization policies. | materials and recommendations publicly available to health professionals to improve transparency. |
| **Jurisdictions studied** | Morocco | | | |
| **Methods used** | Cross-sectional study / Survey. Face-to-face, semi-structured interviews via a standardized questionnaire (US-CDC/WHO simplified assessment tool for NITAGs), alongside a review of legal/ministerial decree documents | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 4/7 (Cross-sectional) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | implement a clear written policy was recommended.<br>● Equity considerations<br>○ Highly multidisciplinary (36 members across 10 disciplines). National representativeness is cited as a key design strength. | | |
| **The role of National Immunization Technical Advisory Groups in advising COVID-19 immunization policy during the pandemic: lessons from the Federation of Bosnia and Herzegovin** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee.<br>● Mandate<br>○ Strategic, Technical. To provide evidence-based recommendations on immunizations to policy-makers (Federal MoH) and immunization program managers.<br>● Governance model<br>○ Embedded. Established by the Federal Ministry of Health (MoH), the Secretariat is provided by a member of the Epidemiology Department of the Institute of Public Health of FBiH.<br>● Advisory roles and participation<br>○ The MoH appoints national experts to serve as members of the expert body.<br>○ A member of the Secretariat also serves as a voting member.<br>○ The expert body invites ex-officio or liaison members to meetings as needed based on topics to be discussed.<br>● Membership composition and expertise<br>○ Multidisciplinary. The disciplines represented in the expert body include pediatrics, public health, infectious disease, epidemiology, immunology, and pharmacology.<br>● Membership structure and appointment model<br>○ The MoH appoints national experts to serve as members.<br>○ The term for members and the Chair is 4 years but re-elections are possible with no limit to the number of re-elections.<br>○ The composition of the expert body was amended by a decree in November 2021, during the COVID-19 pandemic, to expand the number of members from 10 to 12. | **Key findings**<br>● Reviewed the FBiH expert body during COVID-19.<br>● Generated 23 accepted recommendations.<br>● Due to a single-person Secretariat lacking capacity for literature reviews, the committee relied heavily on external NITAGs (ACIP, JCVI).<br>● COVID-19 vaccine uptake increased slowly in FBiH during the first 3 months of the roll-out mainly due to constrained vaccine supply.<br>● Vaccine uptake increased in mid-2021, once vaccine supplies increased and additional groups became eligible for COVID-19 vaccination and peaked in early September 2021.<br>● Identifies an urgent need for capacity-building, formal SOPs, and increased resources.<br>**Impact**<br>● Policy influence<br>○ Recommendations on COVID-19 vaccination: Impact: High. Developed 23 specific recommendations on COVID-19 vaccination by the end of 2022, all of which were accepted by the MoH.<br>● Trust and legitimacy<br>○ Visibility and public awareness: Impact: The MoH and the Institute for Public Health of FBiH will work continuously to increase the visibility and public awareness of the expert body and its recommendations. | **Adaptability**<br>● Ability to respond to crises<br>○ The composition of the expert body was amended by a decree in November 2021, during the COVID-19 pandemic, to expand the number of members from 10 to 12.<br>○ The expert body relied mainly on the recommendations of other NITAGs (like JCVI, ACIP), WHO SAGE, and EMA evaluations, as well as local disease surveillance data, to develop recommendations using limited information on the new COVID-19 vaccines during the crisis. |
| **Publication date** | June, 2023 | | | |
| **Author/Organization** | Musa et al. | | | |
| **Jurisdictions studied** | Federation of Bosnia and Herzegovina (FBiH) | | | |
| **Methods used** | Qualitative retrospective review..<br>Data were collected through a desk review (rules of procedure, meeting minutes, WHO evaluation findings) and interviews with 3 key informants (2 expert body members and 1 MoH staff member). | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 5/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ The expert body currently includes 12 experts with voting rights, including one Chair.<br>. | ● System learning<br>○ Evaluation and improvement plan: Impact: High. Based on a 2022 formal evaluation, the MoH and Institute of Public Health are developing an improvement plan.<br>○ This includes creating formal standard operating procedures (SOPs), advocating for additional financial and human resources to support the work of the Secretariat, and adapting the WHO's Evidence to Recommendation Process for their local context. | |
| **Strengthening National Immunization Technical Advisory Groups in resource-limited settings: current and potential linkages with polio national certification committees** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee.<br>● Mandate<br>○ Strategic, Technical. NITAGs systematically evaluate vaccine introduction, priorities, schedules, target groups, immunization strategies, and safety issues to guide national policies and strategies based on local epidemiology and cost-effectiveness. NCCs are responsible for providing statements summarizing evidence on the country's polio-free status and making recommendations to the national polio programme about risk mitigation and corrective actions.<br>● Governance model<br>○ Hybrid. NITAGs are comprised of national experts who are independent of the government. NCCs similarly operate as independent technical bodies under WHO regional oversight.<br>● Advisory roles and participation<br>○ NITAG chairs or members and NCC counterparts.<br>● Membership composition and expertise<br>○ Multidisciplinary. Both bodies heavily represented public health, epidemiology, and paediatrics (reported by over two-thirds of respondents). NITAGs additionally had high | **Key findings**<br>● Surveyed NITAGs and Polio NCCs in WHO AFR and EMR.<br>● Both bodies operate largely in silos with rare joint meetings, despite substantial overlap in expertise.<br>● Over 85% of respondents felt strengthening ties would be useful.<br>● Recommends integrating NCC members' programmatic experience into newer NITAGs.<br>**Impact**<br>● Impact on decision-making<br>○ Linkages with other technical bodies: Impact: Strong links between advisory bodies may enhance the extent to which a NITAG becomes embedded in the flow of evidence into policy, as the reputation, capacity, and quality of work facilitate the uptake of health policies by decision-makers. However, the study notes it remains unclear to what extent NITAG recommendations directly lead to the implementation of immunization policy.<br>● System learning | NR |
| **Publication date** | September, 2020 | | | |
| **Author/Organization** | Greene et al. | | | |
| **Jurisdictions studied** | Multiple countries (40 countries across the WHO Regions for Africa [AFR] and the Eastern Mediterranean [EMR]). | | | |
| **Methods used** | Cross-sectional descriptive study / Survey. Data collected via a self-administered 15-question survey (multiple choice and short answer) administered to NITAG chairs/members and NCC counterparts. | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Relevance rating** | High | representation in vaccinology (>50%), health economics (>50%), health systems, and immunization programme delivery. NCCs had lower representation in vaccinology and health economics but a stronger emphasis on clinical medicine and virology.<br>● Membership structure and appointment model<br>○ NCCs demonstrated long-standing standing membership (median service of 10 years in AFR and 8 years in EMR; range 1–20 years). NITAGs had a shorter median service (2.8 years in AFR and 7.5 years in EMR). Duration of term appointments and appointment procedures were not reported. | ○ Integration of existing assets: Impact: The polio transition context represents a clear opportunity for institutional learning; integrating the decade-long programmatic review experience of NCC members into newer NITAGs serves as a mechanism for NITAGs to gain critical expertise in subnational surveillance and coverage data review. | |
| **Quality (JBI)** | 4/4 (Cross-sectional) | | | |
| **Mobilization of science advice by the Canadian federal government to support the COVID-19 pandemic response** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Chief scientific advisors (Chief Public Health Officer [CPHO] and Chief Science Advisor), Advisory committees (permanent National Advisory Committee on Immunization (NACI),the FPT SAC on COVID-19), Expert panels, and Task forces (e.g., COVID-19 Vaccine Task Force, COVID-19 Testing and Screening Expert Advisory Panel).<br>● Mandate<br>○ Strategic, Technical. To procure expertise and evidence to inform government decision-making, evaluate mathematical models of disease spread, prioritize vaccine and therapeutic development and procurement, and advise on COVID-19 testing, screening, and health data strategies.<br>● Governance model<br>○ Embedded (e.g., CPHO and standing committees) and Hybrid (new time-limited task forces convened by and reporting directly to federal ministers or deputy ministers).<br>● Advisory roles and participation<br>○ Includes the Chief Science Advisor, Departmental Science Advisors (DSAs), external academics, industry representatives, and ex-officio federal deputy ministers.<br>● Membership composition and expertise | **Key findings**<br>● Canada's COVID-19 response relied on an ad-hoc, fragmented approach to science advice across federal portfolios, forming temporary bodies with unclear coordination.<br>● Transparency and conflict-of-interest management were problematic, particularly regarding industry representatives on vaccine task forces.<br>● The COVID-19 experience in Canada supports the need to institutionalize science advisory bodies for public health to improve pandemic preparedness and ensure rapid mobilization of well-coordinated and independent advice in future emergencies.<br>● This review also identified pressing areas for further inquiry to strengthen science advice for public health in Canada, including to assess the independence of science advisory actors and the interaction between federal and subnational authorities.<br>**Impact**<br>● Policy influence<br>○ Recommendations from the Vaccine Task Force: Impact: Directly led the | **Transparency**<br>● Evaluated as significantly lacking in some key areas. The outputs of several major groups—such as the COVID-19 Therapeutics Task Force and the COVID-19 Vaccine Task Force—were never made public. The details of task force meetings and the extent of commercial COIs remained opaque.<br>**Adaptability**<br>● The COVID-19 pandemic fueled a rapid proliferation of time-limited science advisory bodies within both the Health and Science Portfolios to adapt to the crisis<br>● Ability to respond to crises<br>○ The ad-hoc creation of uncoordinated, time-limited advisory groups highlighted structural weaknesses in emergency preparedness, demonstrating that a permanent institutionalized system is needed to properly respond to health emergencies |
| **Publication date** | January, 2023 | | | |
| **Author/Organization** | Bhatia et al. | | | |
| **Jurisdictions studied** | Canada (Federal level). | | | |
| **Methods used** | Descriptive jurisdictional case study / Narrative review based on publicly accessible primary (Government of Canada documents/reports) and secondary (peer-reviewed literature) documents | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ Multidisciplinary. Depending on the specific group, members included academics, behavioral scientists, modelers, virologists, epidemiologists, pediatricians, health system experts, legal privacy experts, and importantly, representatives from biotechnology, cybersecurity, privacy and surveillance, computer science.<br>● Membership structure and appointment model<br>○ An ecosystem comprised of both permanent standing committees (Public Health Agency of Canada (PHAC)) and new time-limited, ad-hoc task forces (Incident Response Group, The Pan-Canadian Health Data Strategy Expert Advisory Group, The Ad-hoc COVID-19 Clinical Pharmacology Task Group, The COVID-19 Therapeutics Task Force).<br>○ Federal departments were involved in member selection, establishing terms of reference, and possessing the power to terminate participation.<br>● Conflict-of-interest management<br>○ Transparency and conflict of interest (COI) management were highly problematic.The nature and severity of these COIs was not publicized and could not be inferred, as the content of Task Force meetings is not publicly available and the primary interest served by the Task Forces is not clearly identified in their mandates.<br>○ The extent of commercial COIs was opaque, particularly regarding the considerable engagement of industry representatives in vaccine and therapeutics advisory bodies. | Government of Canada to secure early contracts with Pfizer and Moderna.<br>○ Modeling groups: Impact: Directly informed federal, provincial, and territorial (FPT) public health measures.<br>● Trust and legitimacy<br>○ Industry involvement and lack of transparency: Impact: Problematic transparency and the engagement of industry representatives in vaccine and therapeutics advice raised concerns regarding conflicts of interest and the quality of science advice.<br>● System learning<br>○ Fragmented, ad-hoc approach: Impact: The pandemic acted as a "stress test" revealing that the ad-hoc, uncoordinated approach to science advice across different federal portfolios highlights structural weaknesses and must be reformed.<br>○ Institutionalization: Impact: The experience underscored a strong need to institutionalize a standing, independent national authority dedicated to science advice to ensure rapid mobilization, coordination, and independence in future emergencies. | |
| **Formal and informal science advice in emergencies: COVID-19 in the UK** | | Institutional Design of Advisory Bodies:<br>● Type of advisory body<br>○ Expert Panel, Advisory committee, network of laboratories employed by government, Chief scientific advisors (Specifically discusses the Scientific Advisory Group for Emergencies [SAGE], NERVTAG, SPI-M, JCVI, ACDP, and ad hoc committees like the Environmental Modelling Group [EMG]). | **Key findings**<br>● Adapting functioning, existing advisory structures (standing committees like NERVTAG and SPI-M under SAGE) is vastly more effective in an emergency than creating new ones from scratch.<br>● A centralized mechanism is required to forge consensus from multiple disciplines to prevent | **Equity**<br>● Ethnicity impacts: Rapid observational studies (like CO-CIN) provided early data on ethnicity impacts to inform advice.<br>● Comorbidity impacts: Rapid observational studies provided early data on comorbidity impacts. |
| **Publication date** | September, 2021 | | | |
| **Author/Organization** | Whitty and Collet-Fenson | | | |
| **Jurisdictions studied** | United Kingdom (UK) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Methods used** | Descriptive policy analysis / Narrative expert opinion | ● Mandate<br>○ Strategic, Technical. To ensure the government can integrate science from multiple groups and disciplines into a single, usable version of science for policymakers, and to provide clinical assumptions, modeling, and behavioural advice<br>● Governance model<br>○ Embedded and Independent. Some scientific bodies described were embedded and some independent. Features a central Government Office for Science and departmental Chief Scientific Advisers, supported by independent expert committees of academics.<br>● Advisory roles and participation<br>○ Features interaction between formal expert committees (SAGE, NERVTAG, SPI-M, ACDP), embedded government scientists, and informal networks.<br>● Membership composition and expertise<br>○ Multidisciplinary, integrating science from multiple groups and disciplines beyond clinical medicine and epidemiology (including modeling, engineering, behavioural psychology, anthropology, economics, and virology expertise).<br>● Membership structure and appointment model<br>○ Utilizes existing functioning structures (standing committees) that are adapted for the emergency, alongside ad hoc committees (e.g., EMG) created due to specific needs by SAGE. | government chaos.<br>● Informal networks and the rapid use of preprints were critical for timely scientific communication during the crisis.<br>**Impact**<br>● Policy influence<br>○ Advice structure: Impact: Highly impactful. The advice structured the national clinical research response (prioritizing the RECOVERY trial, NIHR funding) and directly informed non-pharmaceutical interventions.<br>● Trust and legitimacy<br>○ Media debates and transparent uncertainty: Impact: Widespread media debates using fringe scientific voices provided challenge but sometimes caused public confusion.<br>○ Trust requires transparently explaining the uncertainty inherent in the data.<br>● System learning<br>○ Adapting existing structures: Impact: The primary takeaway is that adapting functioning existing structures (standing committees) is much more effective in an emergency than trying to set up new ones from scratch. | **Transparency**<br>● Many pre-established formal scientific advisory groups supported the transparency of the COVID-19 response in the UK.<br>**Adaptability**<br>● The core theme of the paper. The UK's ability to adapt its existing interpandemic advisory structures to the speed and scale of COVID-19 was critical to its response<br>● Ability to respond to crises<br>○ Trigger mechanisms are utilized where SAGE is set up/activated for any emergency that requires significant scientific advice on a cross-government basis.<br>○ The use of preprints and informal international scientific networks allowed for fast adaptation in an emergency pandemic context. |
| **Relevance rating** | Low | | | |
| **Quality (JBI)** | 5/5 (Expert opinion level) | | | |
| From SARS to COVID-19: the role of experience and experts in Hong Kong's initial policy response to an emerging pandemic | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Expert Advisory Group (EAG) and Centre for Health Protection (CHP) Scientific Committees.<br>● Mandate<br>○ SARS period: Technical, Risk assessment. To support SARS outbreak control through clinical management, infection control, and scientific advice.<br>Interpandemic period: Strategic, Technical, Risk | **Key findings**<br>● Hong Kong's science advisory system evolved from a reactive, hospital-centered, and ad hoc structure during SARS to a more institutionalized system in the post-SARS period, and later to a complex, centralized, and hybrid advisory model during COVID-19, supported by stronger coordination mechanisms and permanent public health structures. | **Transparency**<br>● Transparency remained limited, particularly regarding decision-making processes, expert appointment procedures, and internal deliberations. The study describes policy-making during COVID-19 as increasingly opaque and sometimes unpredictable, contributing to public trust challenges. |
| **Publication date** | January, 2023 | | | |
| **Author/Organization** | Matus et al. | | | |
| **Jurisdictions studied** | Hong Kong, China | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Methods used** | Qualitative study (Historical/Comparative case study). Based on a review of publicly available archival documents, government websites, and press releases. | assessment. To strengthen disease surveillance, preparedness, and communicable disease prevention through the CHP and scientific committees.<br>○ COVID-19 period: Strategic, Technical, Risk assessment. To coordinate a rapid COVID-19 response through expert advice, strategic planning, and intersectoral coordination.<br>● Governance model<br>○ SARS period: Embedded. Advisory activities were led mainly by the Hospital Authority (HA) and Department of Health (DH).<br>○ Interpandemic period: Embedded. The advisory system operated under the Department of Health through the CHP and the Board of Scientific Advisors (BOSA).<br>○ COVID-19 period: Hybrid. The system combined strong government leadership through the Steering Committee and Command Centre with external expert involvement from academia and international organizations.<br>● Advisory roles and participation<br>○ SARS period: Public health response and advisory roles were mainly carried out by the Department of Health (DH) and Hospital Authority (HA), focusing on outbreak management and implementation.<br>○ Interpandemic period: The CHP and BOSA coordinated advisory activities through specialized scientific committees and expert collaboration at multiple levels.<br>○ COVID-19 period: A central Steering Committee and multiple workgroups coordinated the response, while external experts from academia, healthcare, and international organizations provided specialized advice and public communication support.<br>● Membership composition and expertise<br>○ Multidisciplinary. Experts in medicine, microbiology, and public health from universities and research institutions<br>● Membership structure and appointment model<br>○ SARS period: Membership was mainly temporary and ad hoc, organized through HA task forces that expanded progressively during the outbreak. | ● Across periods, advisory processes became increasingly rapid, evidence-informed, coordinated, and anticipatory, particularly during COVID-19, reflecting significant institutional learning from SARS and greater integration of surveillance, expert networks, and intersectoral governance.<br>● Despite these advances, persistent challenges remained, including limited transparency, low public trust, and a concentration of expertise in health-related disciplines, with relatively limited inclusion of broader social and economic perspectives.<br>**Impact**<br>● Trust and legitimacy<br>○ "Political new normal" / low public trust: Following the 2019 anti-government protests, trust in government was extremely low, affecting the legitimacy of public health measures.<br>○ Scientific experts played an important role as trusted intermediaries and public communicators, helping mediate between government and the public during issues such as vaccine hesitancy and compliance with COVID-19 measures.<br>● System learning<br>○ Post-SARS institutional learning: Lessons from SARS contributed to the creation of the Centre for Health Protection (CHP), infectious disease preparedness mechanisms, and cross-border coordination agreements.<br>○ During COVID-19, these structures supported a faster and more adaptive response, particularly in surveillance, coordination, and management of | **Adaptability**<br>● The system demonstrated strong adaptability and institutional learning, evolving from a hospital-centered SARS response to broader COVID-19 mechanisms that included community testing, digital tools, vaccine advisory panels, and intersectoral coordination.<br>● Ability to respond to crises<br>○ During COVID-19, a Steering Committee and Command Centre led by the Chief Executive was rapidly activated to coordinate strategies and response measures through four specialized workgroups. |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ Interpandemic period: The system evolved toward a more permanent and institutionalized structure through the CHP, although advisory committees still relied on appointed experts and no detailed appointment or rotation rules were described.<br>○ COVID-19 period: The membership structure combined standing government groups, temporary panels, and ad hoc experts. Some experts were directly appointed by the Chief Executive, while others could be invited as needed; appointment processes were described as relatively opaque.<br>● Conflict-of-interest management<br>○ Not explicitly described. The study highlights opaque expert appointment processes and close long-standing relationships between experts and government actors, but no formal conflict-of-interest procedures are reported. | asymptomatic transmission. | |
| [Towards a Systematic Understanding of How to Institutionally Design Scientific Advisory Committees: A Conceptual Framework and Introduction to a Special Journal Issue] | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee (Uses "Scientific Advisory Committees" or SACs as an umbrella term).<br>● Mandate<br>○ Strategic, Technical, Risk assessment. To provide advice to decision-makers predominantly based on research evidence from the natural or social sciences to inform policy choices, including factual assessments, forecasts, and state-of-knowledge statements.<br>● Governance model<br>○ Hybrid (The conceptual framework acknowledges multiple dimensions of variation, ranging from fully independent to embedded bodies).<br>● Advisory roles and participation<br>○ SACs operate across a 6-stage lifecycle, working in concert with external organizations to alert policymakers to pressing issues, and involving public consultation to advise policymakers, practitioners, and the public. When establishing scientific advisory systems, it is important to define the form of participation of their members. | **Key findings**<br>● The effectiveness of Scientific Advisory Committees (SACs) depends on the quality, relevance, and legitimacy of their advice.<br>● There is a notable lack of rigorous empirical studies on SAC design.<br>● Good evidence alone is insufficient; SACs must balance scientific integrity with political involvement, manage conflicts of interest transparently, and tailor their institutional designs to specific policy contexts to achieve policy impact.<br>**Impact**<br>● Impact on decision-making<br>○ Advice implementation: Impact: The ultimate indicator of a committee's effectiveness is whether its advice successfully informed subsequent policymakers' decisions, resulting in behavior change among relevant decision-makers. | **Equity**<br>● Regional representation: Highlighted as a key consideration for committee composition.<br>● Local knowledge / Non-scientific expertise: Non-scientific or local expertise should neither be rendered invisible nor excluded.<br>● Gender diversity: Mentioned as a mechanism to ensure representation of diverse perspectives.<br>● Age diversity: Mentioned as a mechanism to ensure representation of diverse perspectives.<br>**Transparency**<br>● Identified as a critical cross-cutting determinant that matters at every stage of the advisory lifecycle (member selection, holding meetings, product release, drawing conclusions, and disseminating advice). |
| **Publication date** | September, 2018 | | | |
| **Author/Organization** | Hoffman et al. | | | |
| **Jurisdictions studied** | Global / International (The framework applies broadly across national and global jurisdictions, citing examples like WHO, EU, and IPCC). | | | |
| **Methods used** | Conceptual framework / Expert opinion / Narrative review. | | | |
| **Relevance rating** | Low | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Quality (JBI)** | 6/6 (Expert opinion level) | ● Membership composition and expertise<br>○ Multidisciplinary. Involves individuals with relevant expertise from the natural and social sciences, incorporating ethics, equity, and local knowledge. Highlights the necessity of balancing diverse technical expertise, experience, demographics, and views.<br>● Membership structure and appointment model<br>○ Highlights debates in the literature regarding committee size, whether a designated leader improves operation or interferes with independence, and the importance of regional representation. Also, the design of Strategic Advisory Committees (SAC) can vary according to the type of advice (they may focus on a specific topic or sector), objective (action-oriented or evaluation-oriented), structure (classified by degree of formalization, statutory or informal), and duration (permanent or temporary).<br>● Conflict-of-interest management<br>○ Identifies conflicts of interest and transparency as major themes in the literature that must be rigorously addressed to ensure the legitimacy of the committee<br>● Equity considerations<br>○ Committees should reflect perspectives on ethics and equity gathered from public consultations. Regional representation is highlighted as a key consideration, and non-scientific or local expertise should neither be rendered invisible nor excluded. | ● Policy influence<br>○ Institutional tailoring and contextual awareness: Impact: Good evidence alone is insufficient for good policymaking; SACs must balance scientific integrity with political involvement and tailor their institutional designs to specific policy contexts to maximize policy impact.<br>● Trust and legitimacy<br>○ Divergent values and bias management: Impact: A committee's legitimacy depends heavily on addressing conflicts of interest, being respectful of stakeholders' divergent values, remaining unbiased, and being fair in its treatment of opposing views.<br>● System learning<br>○ Monitoring and evaluation: Impact: Evaluating a SAC's performance and gathering feedback is a critical stage that feeds directly into institutional design and reform efforts. | |
| [Modelling that shaped the early COVID-19 pandemic response in the UK] | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee, Chief scientific advisors, Science Advisory Office.<br>● Mandate<br>○ Strategic, Technical, Risk assessment. To shape and support public health interventions by providing epidemiological and health system modeling (estimating cases, hospitalizations, deaths). And provide infectious disease modelling expertise, estimate key epidemiological | **Key findings**<br>● The UK's SPI-M-O modelling subgroup rapidly shaped the early COVID-19 response due to pre-existing collaborative academic relationships and a civil service secretariat bridging the gap to policymakers.<br>● The crisis revealed that traditional academic publishing paradigms (prioritizing novelty and lengthy peer review) are incompatible with the speed required for emergency policymaking. | **Transparency**<br>● The authors strongly emphasize the need for transparency and auditable advice, advocating for public code-sharing and open data to ensure scientific reproducibility during emergencies.<br>**Adaptability**<br>● Due to extreme time pressures, the advisory system had to adapt rapidly. |
| **Publication date** | April, 2021 | | | |
| **Author/Organization** | Brooks-Pollock et al. | | | |
| **Jurisdictions studied** | United Kingdom (UK) | | | |
| **Methods used** | Narrative / Expert opinion | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | parameters (e.g., growth rate, reproduction number), produce short/medium-term projections, and evaluate scenarios prior to policy changes.<br>● Governance model<br>○ Hybrid. Independent academic modellers supported by a civil service secretariat, feeding into the central Government Office for Science.<br>● Advisory roles and participation<br>○ The network includes independent university academics, Public Health England (PHE) scientists, SPI-M-O chairs, and a dedicated secretariat of civil servants.<br>● Membership composition and expertise<br>○ Multidisciplinary infectious disease modellers, including epidemiologists, mathematicians, and theoretical biologists.<br>● Membership structure and appointment model<br>○ Originally convened in 2009 for H1N1 and 2014 for Ebola. For COVID-19, membership expanded to around 50 modellers from multiple universities. Functionality relied heavily on pre-existing collaborative academic relationships and a shared theoretical language. | ● Reproducibility during crises necessitates rapid preprints, open code, and data-sharing agreements.<br>**Impact**<br>● Policy influence<br>○ Modelling evidence: Impact: Directly shaped the early UK pandemic response, including interventions like social distancing, shielding, and lockdown timing.<br>● System learning<br>○ Academic publishing paradigms: Impact: Exposed the incompatibility of traditional academic publishing paradigms (which prioritize novelty and lengthy peer review) with the rapid needs of emergency policymaking (which require speed, replication, and consensus).<br>○ Data-sharing agreements: Impact: Forced the rapid establishment of necessary data-sharing agreements between universities and Public Health England (PHE). | Many models were not built from scratch but were instead repurposed from existing spatial influenza frameworks to provide advice within days.<br>● Ability to respond to crises: SAGE is activated for emergencies requiring cross-government scientific advice. The SPI-M-O was specifically convened for the COVID-19 crisis on January 27, 2020. |
| **Relevance rating** | Low | | | |
| **Quality (JBI)** | 6/6 (Expert opinion level) | | | |
| **Building immunization decision-making capacity within the World Health Organization European Region** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, / National Immunization Technical Advisory Group (NITAG)<br>● Mandate<br>○ Strategic, Technical, To provide evidence-based recommendations to policy-makers and immunization programme managers, assisting them in making sound immunization policy and programme decisions.<br>● Governance model<br>Embedded or linked to the Ministry of Health (MoH). A National Immunization Technical Advisory Group (NITAG) is a multi-disciplinary body of national experts that | **Key findings**<br>● A WHO/CDC capacity-building training program forNational Immunization Technical Advisory Groups (NITAGs) successfully improved participants' ability to use PICO questions and Evidence to Decision (EtD) frameworks.<br>● Follow-up technical support was critical, leading directly to institutional adaptations (e.g., revised charters, formation of working groups) that enabled countries like Kyrgyzstan and Tajikistan to produce their first fully evidence-based vaccine recommendations.<br>**Impact** | NR |
| **Publication date** | July, 2020 | | | |
| **Author/Organization** | Mosina et al. | | | |
| **Jurisdictions studied** | WHO European Region (Focus on low- and middle-income countries [LMICs], with specific data from a workshop in Montenegro) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Methods used** | Descriptive Programmatic Report / Narrative case study of capacity-building | provides evidence-based recommendations to policy-makers, assisting them in making sound immunization policy and programme decisions.<br>● Advisory roles and participation<br>○ NITAGs typically consist of a chair, core members, and a supporting Secretariat, and they heavily utilize ad-hoc workgroups to collect and evaluate evidence.<br>● Membership composition and expertise<br>○ Multidisciplinary. A functional NITAG requires representation from at least five disciplines, including paediatrics, public health, infectious diseases, epidemiology, immunology, or other health-care professionals<br>● Membership structure and appointment model<br>○ Guided by formal legislative frameworks and written terms of reference (Charters).<br>○ The training workshops mention presidents, members, and secretariats of NITAG.<br>● Conflict-of-interest management<br>○ The collection of declarations of interest by NITAG members is one of the six WHO process indicators for proper functioning. The study highlights that many NITAGs in the European Region failed to meet full functionality criteria specifically because of challenges in introducing these declarations of interest. | ● Policy influence<br>○ Capacity building: Impact: The ultimate goal of the capacity building is to add credibility to the policy-making process and ensure the successful implementation of national immunization programmes<br>● System learning<br>○ Training and technical support: Impact: Following the training and technical support from the WHO Regional Office represented a , countries successfully adapted their institutions. For example, Kyrgyzstan revised its NITAG Charter to meet WHO indicators and established working groups<br>○ Systematic framework utilization: Impact: NITAG working groups in Kyrgyzstan and Tajikistan successfully collected evidence and utilized the systematic framework to produce their first fully evidence-based recommendations on pneumococcal and HPV vaccines | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 5/6 (Narrative level) | | | |
| Supporting National Immunization Technical Advisory Groups in the WHO European Region in developing national COVID-19 vaccination recommendations through online communication platform | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, National academies, learned societies and networks (NITAGs, World Health Organization Regional Office)<br>● Mandate<br>○ Strategic, Technical, Risk Assessment.<br>○ The NITAGs' objectives are to provide scientific advice to policymakers to make evidence-informed policy decisions about vaccination, which also increases the credibility of ministries of health and governments. | **Key findings**<br>● NITAGs in Europe struggled to provide the best possible recommendations to national governments and health ministries during the COVID-19 pandemic because of the unprecedented nature of the emergency.<br>● However, the virtual connection and support of the WHO Regional Office via webinars, resource sharing, and e-communication effectively supported NITAGs to have up-to-date epidemiological | **Equity**<br>● Regional Office designed their evidence-sharing webinars to have equity between member states in mind, for example in the registration process, languages used, and facilitation of participation, especially for LMIC in the WHO European region.<br>**Adaptability**<br>● Most processes were associated with Adaptability because the operations |
| **Publication date** | September, 2021 | | | |
| **Author/Organization** | Mosina et al. | | | |
| **Jurisdictions studied** | European Region of the World Health | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | Organization | ○ Regional Office: During COVID-19, the Regional Office provides support to NITAGs and other stakeholders and facilitates their collaboration between other European technical advisory groups.<br>● Governance model<br>○ Hybrid (Regional Office and NITAGs)<br>○ NITAGs: NITAG's objective is to provide scientific advice to policymakers to make evidence-informed policy decisions about vaccination, which also increases the credibility of ministries of health and governments.<br>○ Regional Office: During COVID-19, the Regional Office provides support to NITAGs and other stakeholders and facilitates their collaboration between other European technical advisory groups.<br>● Advisory roles and participation<br>○ Regional Office: 50 of 53 member states of the WHO European Region participated in at least one COVID-19 webinar from the Regional Office as observers. Most observers were NITAG members or ministry of health officials from member states.<br>● Membership composition and expertise<br>○ Regional Office: Observers of Regional Office COVID-19 webinars included NITAG chairs, members, secretariats; Ministry of health officials; COVID-19 task force members and secretariats; National Immunization Program managers; national public health agency representatives, WHO representatives, national and international partners.<br>● Membership structure and appointment model<br>○ Regional Office: Members of Regional Office are members based on European geographical region, as defined by the World Health Organization.<br>● Equity<br>○ Regional Office: Language: Conducted webinars in two languages with simultaneous interpretation and slides from webinars were sent in an editable format so they could be translated into local languages; Answers to common questions translated to three languages and | and regional evidence to base their recommendations off of.<br>● Regular and timely two-way communication between Regional Offices and NITAGs is key to support vaccination response in pandemics.<br>● Virtual webinars and meetings provide new opportunities for more frequent communication between health experts, especially in emergencies.<br>**Impact**<br>● Impact on decision-making<br>○ Most of the study focused on the Uptake of Advice happening between the WHO Regional Office and different NITAGs. NITAGs then advised national governments and health ministries.<br>○ Most advice given by the Regional Offices was taken up by NITAGs and related stakeholders, as shown by the evaluation polls of the webinars.<br>● System learning<br>○ Most processes from the Regional Office represented Institutional Learning and Adaptation because the webinars they provided to NITAGs and stakeholders happened as a result of the uncertainty of the COVID-19 pandemic. | considered were all adapted significantly during the COVID-19 pandemic. |
| **Methods used** | Policy case study | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/7 (Policy level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | published on a WHO website<br>○ Regional Office: Social capital: Participation of webinar members encouraged, questions responded to in detail, No pre-registration required for webinar participation<br>○ Regional Office: Place of residence: Members in countries with slow internet connection were invited to the WHO country offices to view webinars | | |
| Moving forward on strengthening and sustaining National Immunization Technical Advisory Groups (NITAGs) globally: Recommendations from the 2nd global NITAG network meeting | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, / National Immunization Technical Advisory Group (NITAG)<br>● Mandate<br>○ Strategic, Technical, To provide evidence-based recommendations to policy-makers and immunization programme managers, assisting them in making sound immunization policy and programme decisions.<br>● Governance model<br>Hybrid. Embedded or linked to the Ministry of Health (MoH). A National Immunization Technical Advisory Group (NITAG) is a multi-disciplinary body of national experts that provides evidence-based recommendations to policy-makers, assisting them in making sound immunization policy and programme decisions.<br>● Advisory roles and participation<br>○ NITAGs typically consist of a chair, core members, and a supporting Secretariat, and they heavily utilize ad-hoc workgroups to collect and evaluate evidence.<br>● Membership composition and expertise<br>○ Multidisciplinary. A functional NITAG requires representation from at least five disciplines, including paediatrics, public health, infectious diseases, epidemiology, immunology, or other health-care professionals<br>● Membership structure and appointment model<br>○ Guided by formal legislative frameworks and written terms of reference (Charters).<br>○ The training workshops mention presidents, members, | **Key findings**<br>● A Global NITAG Network (GNN) meeting evaluated the functionality and integration of national advisory bodies, confirming that "one size does not fit all" regarding governance.<br>● Global collaboration and platforms like the NITAG Resource Centre are crucial to help resource-limited countries overcome structural challenges.<br>● Inter-country coordination helps standardize evaluation methodologies and manage complex issues like conflict-of-interest and off-label recommendations.<br>**Impact**<br>● Impact on decision-making<br>○ Governance model directly shapes how NITAG recommendations feed into decision-making processes.<br>● Policy influence:<br>○ Germany is the most explicit case: once a recommendation is in the schedule, social insurance companies have three months to decide on coverage and must provide good reasons to reject it (representing documented policy influence).<br>○ Costa Rica presents recommendations to MoH and then to the social security system for funding decisions<br>● System learning<br>○ External NITAG Evaluation tool: Impact: | **Transparency**<br>● Varies widely across nations. The UK, Australia, and Germany publish meeting minutes publicly, whereas Mozambique's meetings and minutes are closed. Canada's meetings are not open to the public but COIs are publicly disclosed |
| **Publication date** | November, 2017 | | | |
| **Author/Organization** | MacDonald et al. | | | |
| **Jurisdictions studied** | Global / Multiple national jurisdictions (e.g., Belgium, Costa Rica, Nepal, Canada, Mozambique, Australia, Germany, UK) | | | |
| **Methods used** | Conference report / Descriptive narrative | | | |
| **Relevance rating** | Low | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | and secretariats of NITAG.<br>● Conflict-of-interest management<br>○ The collection of declarations of interest by NITAG members is one of the six WHO process indicators for proper functioning. The study highlights that many NITAGs in the European Region failed to meet full functionality criteria specifically because of challenges in introducing these declarations of interest. | Countries like Mozambique and Cote d'Ivoire utilized the external NITAG Evaluation tool to successfully identify gaps and reform their processes (e.g., Mozambique establishing working groups of graduate students to conduct systematic reviews) | |
| Chile's National Advisory Committee on Immunization (CAVEI): Evidence-based recommendations for public policy decision-making on vaccines and immunization | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee (National Immunization Technical Advisory Group – NITAG / CAVEI).<br>● Mandate<br>○ Technical. To provide independent, evidence-based advice to the Ministry of Health on immunization programmes, strategies, and policy formulation.<br>● Governance model<br>○ Hybrid. Embedded within the Ministry of Health but composed of independent experts providing evidence-based advice.<br>● Advisory roles and participation<br>○ Core and non-core members. Core members are independent experts who deliberate and vote on recommendations, while non-core members include ex-officio government representatives and liaison members from professional societies and technical organizations who participate as intermediaries and support coordination.<br>● Membership composition and expertise<br>○ Multidisciplinary membership including independent experts, government representatives, consumer participation, and subject matter experts with expertise in vaccine safety, surveillance, epidemiology, infectious diseases, pharmacovigilance, and public health. Additional experts were invited for specific topics.<br>● Membership structure and appointment model<br>○ Composed of core, ex-officio, and liaison members. Core | **Key findings**<br>● Chile's National Immunization Technical Advisory Group (CAVEI) was identified as a well-established and functional advisory body that meets international NITAG criteria and whose recommendations are highly integrated into Ministry of Health decision-making, with an 88% acceptance rate.<br>● Its functioning is supported by multidisciplinary expertise, formal procedures, conflict-of-interest management, transparency, and organizational flexibility that enables timely responses to emergencies and government requests.<br>● The study also identified areas for improvement, including greater inclusion of social scientists, civil society perspectives, and broader public visibility.<br>**Impact**<br>● Impact on decision-making<br>○ Evidence-based recommendations: High uptake of recommendations, evidenced by an 88% acceptance rate by the Ministry of Health.<br>● Policy influence<br>○ Evidence-based recommendations: Strong integration into immunization policymaking through formal recommendations and close links with the Ministry of Health. | **Transparency**<br>● The MoH Immunization Department maintains transparency by publishing CAVEI's accepted and declined recommendations, position papers, and meeting minutes on its public website<br>**Adaptability**<br>● High organizational plasticity (via a petit comité) allows the advisory body to respond rapidly to government needs and emergencies<br>● Ability to respond to crises<br>○ The committee is triggered to provide emergency consultations during crises like natural disasters or disease outbreaks, utilizing its administrative and work plasticity to respond in a timely manner. |
| **Publication date** | June, 2019 | | | |
| **Author/Organization** | Dabanch et al. | | | |
| **Jurisdictions studied** | Chile | | | |
| **Methods used** | Descriptive Narrative / Institutional Case Report. (Evaluative policy analysis describing the structure and assessing functionality, quality, and integration using WHO/GNN assessment tools) | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | members are independent experts selected by the Ministry of Health, while ex-officio and liaison members represent government institutions, professional societies, and technical partners. Members serve fixed terms with renewal rules.<br>● Conflict-of-interest management<br>○ Strict COI management is enforced, including the mandatory disclosure of any conflicts of interest. | ● Trust and legitimacy:<br>○ Public or stakeholder trust: CAVEI is seen as credible because it includes highly qualified experts, has clear conflict-of-interest rules, and promotes transparency by publishing its recommendations.<br>● System learning<br>○ WHO/GNN assessment tools: Proved highly useful in identifying areas for institutional growth, directly leading to recommendations to diversify membership by including social scientists. | |
| Ontario's COVID-19 Modelling Consensus Table: mobilizing scientific expertise to support pandemic response | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, Expert Panel (Modelling Consensus Table - MCT).<br>● Mandate<br>○ Strategic, Technical. To offer the best possible guidance to decision-makers regarding the dynamic state of COVID-19, including consensus estimates of incidence, prevalence, spread, and health system impacts (e.g., hospital bed and ventilator use), while rapidly responding to prioritized research questions.<br>● Governance model<br>○ Hybrid.Operates as a formal partnership between the Ontario government/Ministry of Health and universities/academic research institutes; advice is communicated rapidly to decision-makers, but the MCT itself is strictly excluded from the actual decision-making, thereby maintaining a separation between advising and policymaking.<br>● Membership composition and expertise<br>○ Multidisciplinary. Composed of mathematicians, epidemiologists, health services researchers, statisticians, and senior decision-makers.<br>● Membership structure and appointment model<br>○ Voluntary membership bound by a formal Terms of | **Key findings**<br>● Ontario's COVID-19 Modelling Consensus Table successfully mobilized scientific expertise by establishing a formal partnership between academic modelers and government decision-makers.<br>● By resolving structural bottlenecks—implementing rapid data-sharing agreements, securing expedited ethics approvals, and balancing academic freedom to publish with government confidentiality—the table accelerated the knowledge translation cycle from months to days, directly informing public health interventions.<br>**Impact**<br>● Impact on decision-making<br>○ Expedited data-sharing agreements: Impact: Solved structural bottlenecks, accelerating the knowledge translation cycle from months down to days.<br>○ Partnership model: Impact: Successfully bridged the gap between academic modellers and government policy-makers, accelerating the delivery of epidemiological and health system | **Transparency**<br>• The data access agreements and academic publishing permissions fostered increased transparency in how COVID-19 data was publicly reported.<br>**Adaptability**<br>• Evaluated as High. The structure allowed for immense nimbleness, instantly incorporating new experts and adapting to new questions without the delays associated with traditional grant funding. |
| **Publication date** | August, 2021 | | | |
| **Author/Organization** | Hillmer et al. | | | |
| **Jurisdictions studied** | Canada (Ontario) | | | |
| **Methods used** | Descriptive and Analytical/explanatory policy analysis / Narrative Case Report.<br>This report describes an alternative approach to mobilizing scientific expertise. | | | |
| **Relevance rating** | Low | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | Reference, chaired by two senior academics. Members were added dynamically over time to address emerging needs.<br>○ Members were added dynamically over time to address emerging needs.<br>● Conflict-of-interest management<br>○ A critical operational feature was balancing government confidentiality with academic freedom. Formal terms of reference guaranteed that academics could publish their individual models and findings (often via preprints) Standard principles of authorship are followed for individual works and each publication includes a reference to the COVID-19 MCT.<br>○ While official consensus estimates remained strictly confidential for government use. Meetings were held under the Chatham House Rule to protect open debate. | findings directly into government policy discourse.<br>● Policy influence<br>○ Consensus estimates: Impact: Credible models successfully informed health system preparedness, capacity planning, and guided government communication with the public.<br>● Trust and legitimacy<br>○ Academic freedom and confidentiality: Impact: Separating confidential policy advice from public academic publishing allowed policymakers to view information without outside second-guessing, while preserving academic integrity and open debate.<br>● System learning<br>○ Umbrella expedited ethics review: Impact: Arranging umbrella expedited review from the University of Toronto's Research Ethics Board greatly reduced the time required to begin research and disseminate findings. | |
| **COVID-19 Vaccine Safety Technical (VaST) Work Group: Enhancing vaccine safety monitoring during the pandemic** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (an Advisory Committee on Immunization Practices [ACIP] work group convened by the CDC).<br>● Mandate<br>○ Technical, Strategic. To review post-authorization safety data to inform ACIP vaccination policy and guidance, and advise federal agencies on public communication of safety information.<br>● Governance model<br>○ Hybrid. An ACIP work group consisting of independent vaccine safety experts collaborating directly with federal | **Key findings**<br>● The COVID-19 Vaccine Safety Technical (VaST) Work Group operated as a purpose-built advisory hub embedded within the CDC, combining independent experts with federal agency representatives.<br>● By separating broad data presentation from independent expert assessment and rigorously managing conflicts of interest, VaST provided timely, unbiased evaluations of critical safety signals (e.g., TTS, myocarditis) that directly guided national vaccination policy.<br>**Impact** | **Equity**<br>● Consumer representation: An ACIP consumer representative was included in the work group.<br>● Pregnancy-related expertise: Additional obstetrics and gynecology subject matter experts were invited for pregnancy-related meetings.<br>**Transparency**<br>● High focus. The model was explicitly designed to increase transparency. VaST separated broad data presentations from independent expert |
| **Publication date** | September, 2024 | | | |
| **Author/Organization** | Markowitz et al. | | | |
| **Jurisdictions studied** | United States | | | |
| **Methods used** | Descriptive policy analysis / Narrative historical account | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Relevance rating** | Moderate | agency representatives.<br>● Advisory roles and participation<br>○ Independent experts, an ACIP consumer representative, ex officio and liaison members from multiple federal agencies, and invited subject matter experts.<br>● Membership composition and expertise<br>○ Nine independent consultants with expertise in vaccine safety, surveillance, and methods. Also included ex officio and liaison members from multiple federal agencies (NIH, FDA, CMS, IHS, OIDP, HRSA, VA, DoD), an ACIP consumer representative, and additional obstetrics and gynecology subject matter experts for specific meetings.<br>● Membership structure and appointment model<br>○ An ACIP technical work group.<br>● Conflict-of-interest management<br>○ Screening for potential conflicts of interest was rigorously conducted upon the establishment of VaST and subsequently at each VaST meeting. Annual conflict of interest statements were also collected from members to ensure no financial or other conflicts were present.<br>● Equity considerations<br>○ Consumer representation was included. Additional obstetrics and gynecology subject matter experts were invited for pregnancy-related meetings. | ● Impact on decision-making<br>○ Post-authorization data review: Impact: Allowed for unbiased, rapid evaluation of critical safety signals like anaphylaxis, myocarditis, and TTS, ultimately guiding national vaccination policy<br>● Policy influence<br>○ VaST safety assessments: Impact: The VaST assessments and data reviews were utilized by the ACIP COVID-19 Vaccines Work Group for benefit-risk assessments, directly informing ACIP vaccination policy and FDA actions<br>● Trust and legitimacy<br>○ Independent expert incorporation: Impact: The model of incorporating independent, non-government experts to promptly review data alongside federal partners was designed explicitly to enhance public confidence and increase transparency<br>● System learning<br>○ Future emergency applicability: Impact: The VaST model could be utilized in the event of a future pandemic or biological public health emergency to help strengthen public health monitoring, confidence, and transparency | assessment sessions to allow for unbiased evaluation<br>**Adaptability**<br>● Ability to respond to crises<br>○ Activated specifically for the COVID-19 pandemic. From November 2020 through April 2023, VaST held 73 meetings and evaluated safety data for over 670 million COVID-19 vaccinations to continuously monitor the crisis |
| **Quality (JBI)** | 5/6 (Expert opinion level) | | | |
| **Open science communication: The first year of the UK's Independent Scientific Advisory Group for Emergencies** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Independent Scientific Advisory Group / Expert Panel (Unofficial "shadow" advisory body)<br>● Mandate<br>○ Strategic, Technical. To act as a transparent source of scientific advice, ask policy-relevant questions, review evolving evidence, make evidence-based recommendations, and engage actively with the public, | **Key findings**<br>● Independent SAGE was formed as a transparent, multidisciplinary alternative to the UK's initially secretive official advisory structures during COVID-19.<br>● By adopting a proactive public health advocacy approach, broadcasting deliberations openly, consulting local stakeholders, and explicitly considering equity and social impacts, the group | **Equity**<br>● Ethnic minority communities: Documented the disproportionate impact of COVID-19 on ethnic minority communities and heavily advocated for targeted support.<br>● Gender diversity: Prioritized gender diversity in its membership and the focus of its work. |
| **Publication date** | January, 2022 | | | |
| **Author/Organization** | McKee et al. | | | |
| **Jurisdictions studied** | United Kingdom | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Methods used** | Narrative review / Case report of an advisory group's first year (Descriptive and Evaluative policy analysis) | press, and policymakers<br>● Governance model<br>○ Independent. Formed completely outside of government (with the assistance of a non-profit investigative journalism organization, "The Citizens") esto se borra<br>● Membership composition and expertise<br>○ Multidisciplinary. A stable group of 12–14 UK expert scientists and professionals, plus a sub-group of eight behavioural scientists and anthropologists. Expertise spanned a wide range of disciplines including virology, modelling, behavioural science, and public health, explicitly adopting a multidisciplinary, holistic framework. International collaborators are members actively involved in international collaborations on COVID-19. Ad hoc experts are also involved. The group is not closed; experts are invited to participate in sessions depending on the specific topic being addressed, such as vaccine safety, mental health, or virus variants.<br>● Equity considerations<br>○ The group placed a high priority on diversity, seeking to incorporate diversity not only in expertise but also in ethnicity and gender within its membership and the focus of its work. | successfully built public trust and provided evidence-based guidance utilized by local authorities.<br>**Impact**<br>● Policy influence<br>○ Local/sectoral influence: Impact: High at the local/sectoral level. Scientifically-backed reports on school safety were widely utilized by teaching staff, parent bodies, and local authorities to delay unsafe school reopenings, even when the central government ignored the advice<br>● Trust and legitimacy<br>○ Deliberative communication and transparency: Impact: Built high trust by addressing "post-normal science" uncertainty with absolute transparency, engaging the public in deliberative communication, and treating citizens as respected partners rather than as problems | **Transparency**<br>● The core foundational dimension of the group, functioning as the open, public alternative to the initially secretive official government advisory structures |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |
| **The National Immunization Technical Advisory Group in Israel** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (National Immunization Technical Advisory Group - NITAG)<br>● Mandate<br>○ Technical. To provide independent, evidence-informed advice and guidance to policymakers and national program managers on policy issues and questions related to vaccines and immunization and to advocate for public health programs to increase safety and equity of vaccine use.<br>● Governance model<br>○ Hybrid. The committee is nominated by the Director of | **Key findings**<br>● The Israeli NITAG, an embedded but independent advisory body shapes vaccination-related policy through rigorous evidence-based processes, adherence to WHO guidelines, and high transparency (publishing full, attributed meeting minutes).<br>● While the Ministry of Health adopts nearly all its technical recommendations, the primary ongoing challenge is securing funding for these vaccines through the competitive national health basket.<br>**Impact** | **Equity**<br>● Equality, equity, and solidarity values: Plus - Public health values regarding equality, equity, and solidarity are explicitly incorporated as a formal step in the committee's deliberation and decision-making process.<br>**Transparency**<br>● Evaluated as very high. Full meeting protocols, including the named citations of each speaker in the discussions, have been publicly accessible on the NITAG website since 2007 |
| **Publication date** | January, 2021 | | | |
| **Author/Organization** | Stein-Zamir and Rishpon | | | |
| **Jurisdictions studied** | Israel | | | |
| **Methods used** | Descriptive/analytical policy analysis / Descriptive Narrative of an institutional body | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Relevance rating** | Moderate | Public Health Services and operates close to the government/Ministry of Health, but aims to function independently based on evidence-based methodologies<br>● Advisory roles and participation<br>○ Members are formally divided into core members, ex-officio members, and observers. Data is presented to the committee by the Ministry of Health epidemiology division and invited subject matter experts. All members, including ex-officio, have voting rights<br>● Membership composition and expertise<br>○ Multidisciplinary. Members include public health physicians (usually the head), epidemiologists, internal and family medicine specialists, pediatricians, infectious diseases specialists, microbiologists, military medical officials, public servants, and public health nurses. Legal counseling and health economists are also available<br>○ Ex-officio members represent the Ministry of Health<br>● Membership structure and appointment model<br>○ Nominated personally by the Director of Public Health Services. Following a 2012 reorganization, membership terms are for five years, but could be extended.<br>○ All members are volunteers but get travel reimbursement. Observers could become members in the future.<br>● Conflict-of-interest management<br>○ COI disclosure is mandatory for NITAG members in Israel. Members who manage vaccine clinical trials cannot vote or discuss matters related to the vaccine they worked on.<br>○ Vaccine manufacturers may attend or present at meetings but are not members. | ● Impact on decision-making<br>○ Allocated budgeting: Impact: The allocation of budgets by the Ministry of Finance is highly influential regarding if, when, and how NITAG recommendations are adopted and implemented<br>● Policy influence<br>○ Impact: The NITAG has a successful track record in disease control and routine scheduling, though it faces ongoing challenges related to budget allocations for implementing some of its recommendations<br>○ Close connection to government ministers impacts the NITAG's agenda and the successful impact on policy<br>● Trust and legitimacy<br>○ Public transparency initiative: Impact: The publication of full meeting protocols, including named citations, has caused no reported concerns over the years and maintains trust in the advisory process<br>● System learning<br>○ WHO/SIVAC evaluations: Impact: Following external evaluations in 2012, the Israeli NITAG reorganized to limit membership terms, formally divide members into core/ex-officio/observers, incorporate health economists, and update its terms of reference and COI guidelines | **Adaptability**<br>● Ability to respond to crises<br>○ The NITAG responds directly to emergencies, successfully issuing guidance during the COVID-19 pandemic, wild poliovirus shedding, and a national measles outbreak |
| **Quality (JBI)** | 2/6 (Policy level) | | | |
| The Erosion of a Pillar of Public Health: ACIP's Role and the Future of US Vaccine Policy Post-June 2025 (7) | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee / SAB (Advisory Committee on Immunization Practices - ACIP) | **Key findings**<br>● The abrupt June 2025 restructuring of the US ACIP—which replaced vetted experts with anti-vaccine advocates and bypassed standard | **Transparency**<br>● Strongly emphasized. The abrupt agenda changes (removing topics 1 day prior), the exclusion of a CDC-authored |
| **Publication date** | January, 2026 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Author/Organization** | Asturias et al. | ● Mandate<br>○ Technical, Strategic. To recommend vaccines authorized or licensed by the FDA, periodically revise immunization schedules, advise decisions on comparative vaccines, and update recommendations based on systematic assessments of safety, efficacy, and feasibility<br>● Governance model<br>○ Embedded. SAB embedded within government: It is formally established within the Ministry of Health<br>● Advisory roles and participation<br>○ Includes ACIP voting members (chair), CDC subject matter experts, scientific experts, CDC immunization safety representatives, consumer representatives, professional organizations, and ACIP ex-officio members.<br>● Membership composition and expertise<br>○ Historically included diverse technical expertise, but the June 2025 overhaul resulted in a reduction in diversity of technical expertise—particularly in fields such as pediatric infectious diseases, epidemiology, and immunology, alongside isolation from professional organizations and community representatives.<br>● Membership structure and appointment model<br>○ Standing committee with rotating membership; members selected through a comprehensive and rigorous standard selection process; terms defined. Post-June 2025: abrupt replacement of all 22 vetted current and incoming members and concurrent substitution of Executive Secretary and support staff under expedited circumstances, without following standard selection procedures.<br>● Conflict-of-interest management<br>○ The ACIP has historically had longstanding adherence to some of the most stringent federal policies. However, the June 2025 overhaul involved terminating members for "alleged conflicts of interest", while subsequently appointing individuals who have profited from lawsuits targeting vaccine developers. The authors note that | conflict-of-interest vetting—severely eroded the institution's independence and credibility.<br>● By abandoning established GRADE and EtR frameworks and dismissing observational safety evidence, these actions threaten to undermine public trust, decrease national immunization coverage, and disrupt global vaccine policy standards.<br>**Impact**<br>● Impact on decision-making<br>○ Deviation from methodological standards: Impact: The abrupt restructuring and abandonment of established evidence-based frameworks (GRADE/EtR) threaten to disrupt US vaccine research capacity, lower national immunization coverage, and damage global immunization standards.<br>● Policy influence<br>○ Unscheduled votes and ideological appointments: Impact: Compromised the committee's independence, resulting in unscheduled votes (such as removing recommendations for thimerosal-containing vaccines for pregnant women and children) without proper evidence reviews.<br>● Trust and legitimacy<br>○ Politicization and ideological appointments: Impact: The politicization of the committee, ideological appointments, and departure from transparent scientific evaluations severely erode public trust and credibility, amplifying misinformation and potentially reducing vaccine uptake (e.g., leading to measles outbreaks).<br>● System learning | safety synthesis on thimerosal at the request of DHHS, and the dismissal of professional liaisons severely damaged the transparency and collaborative integrity of the policymaking process |
| **Jurisdictions studied** | United States | | | |
| **Methods used** | Viewpoints / Expert Opinion (Analytical/explanatory and Evaluative policy analysis) | | | |
| **Relevance rating** | Low | | | |
| **Quality (JBI)** | 5/6 (Expert opinion level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ensuring balanced guidance requires transparency in financial disclosures and safeguarding scientific objectivity from all forms of undue influence (financial, political, ideological). | ○ Legislative and structural reforms: Impact: Urgent legislative and structural reforms are needed to safeguard ACIP's independence, reconstitute its expertise, and mandate the use of evidence-based frameworks to prevent future ideological interference. | |
| **Contributions and challenges for worldwide vaccine safety: The Global Advisory Committee on Vaccine Safety at 15 years** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee.<br>● Mandate<br>○ Technical, Risk assessment. Provide independent scientific advice on vaccine safety, risk assessment, and strengthening global vaccine safety systems.<br>● Governance model<br>○ Independent.<br>● Advisory roles and participation<br>○ Members meet twice yearly and work in subgroups, while experts may advise; final recommendations are consensus-based and made only by committee members.<br>● Membership composition and expertise<br>○ Experts from around the world in the fields of vaccine safety, allied sciences such as epidemiology, biostatistics, pharmacovigilance, biologic product regulation and clinical medical sciences.<br>● Membership structure and appointment model<br>○ The committee's ~15 members are selected by an open application process organized by the WHO secretariat.<br>○ Members serve on the Committee for three years with possible renewal for a second term.<br>● Equity<br>○ Increasing inclusion of experts from Low- and middle-income countries (LMIC) to incorporate a diversity perspective to its deliberations. | **Key findings**<br>● GACVS provides an independent assessment of vaccine safety commonly used by SAGE in their vaccine policy deliberations and position statements.<br>GACVS is valued for providing timely, independent evidence-based reviews, especially for LMICs with limited pharmacovigilance capacity.<br>Global vaccine safety is complex: GACVS relies on limited evidence, faces pressure to use GRADE, works within countries with limited assessment capacity, and must balance transparency with confidentiality.<br>**Impact**<br>● Policy influence<br>○ GACVS has had an impact on some vaccine safety topics within WHO member countries and continues to contribute to vaccine recommendations developed by SAGE.<br>● System learning<br>○ Assessing evidence quality via systematic reviews is resource-intensive and requires adapting methods for post-licensure observational studies, but GACVS's efforts to standardize and anticipate data needs can strengthen its use of GRADE. | **Transparency**<br>○ Deliberation processes. GACVS must balance transparency with confidentiality, as it sometimes relies on proprietary data while ensuring trust through clear and open processes. |
| **Publication date** | June, 2016 | | | |
| **Author/Organization** | Asturias et al. | | | |
| **Jurisdictions studied** | International (WHO member states) | | | |
| **Methods used** | Evaluative Narrative Review .Review of GACVS structure, activities, impact, and policy influence through reports, surveys, and citation analysis | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | | |
| Updating the Scientific Advisory Committee on Nutrition's Framework for the evaluation of evidence. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee and subgroup (Scientific Advisory Committee on Nutrition - SACN).<br>● Mandate<br>○ Technical, Risk Assessment. To provide independent advice on nutrition and related health matters to UK government organizations, and to ensure a consistent approach in all its evidence evaluations.<br>● Governance model<br>○ Hybrid. Operates as an independent scientific committee but is embedded within the Department of Health and Social Care / Office for Health Improvement and Disparities (OHID).<br>● Membership structure and appointment model<br>○ Operates through a main committee with specialized working groups and standing subgroups. Notably, it utilizes a dedicated "SACN subgroup on the framework and methods for the evaluation of evidence" to provide ongoing methodological support to the wider committee.<br>● Conflict-of-interest management<br>○ Details of declarations of interest for all SACN members are made publicly available via a register of interests on the GOV.UK website. | **Key findings**<br>● The UK's Scientific Advisory Committee on Nutrition (SACN) updated its 20-year-old evidence evaluation framework by establishing a dedicated methodological subgroup.<br>● To improve rigor and transparency, the committee adopted modern evidence-based medicine tools, specifically selecting AMSTAR 2 to assess the quality of systematic reviews and GRADE to assess the certainty of nutritional evidence, treating the framework as an adaptable "living" document.<br>**Impact**<br>● Policy influence<br>○ Embedded nature of SACN with government allows for integration of recommendations into policy<br>● System learning<br>○ Integration of modern evidence tools: Impact: High. The committee successfully updated its 20-year-old framework to integrate modern evidence-based medicine tools, transitioning from basic p-value reliance to confidence intervals/effect sizes, adopting AMSTAR 2 for assessing systematic review quality, and implementing GRADE for assessing the certainty of nutritional evidence.<br>○ "Living" document framework: Impact: High. Treating the framework as a "living" document subject to continuous review promotes ongoing system learning and institutional adaptation. | **Transparency**<br>● Fundamental to SACN's operations. Meetings are held in open sessions where possible, and draft conclusions and recommendations are available for public consultation before final publication. Using a predetermined Framework guards against ad-hoc standards, and the decision to adopt GRADE and AMSTAR 2 tools was heavily influenced by the transparency they offer in documenting the rationale for downgrading/upgrading evidence certainty and quality.<br>**Adaptability:**<br>● This article focused on how SACN was adapting to new evidence evaluation processes through the SACN Framework subgroup's recommendations, demonstrating how many SACN processes were adaptable. |
| **Publication date** | July, 2025 | | | |
| **Author/Organization** | Singh et al. | | | |
| **Jurisdictions studied** | United Kingdom | | | |
| **Methods used** | Descriptive policy analysis / Narrative Methodology Report | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 4/7 (Policy level) | | | |
| Developing COVID-19 vaccine recommendations during the pandemic: The experience of Serbia's Expert Committee on | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee / Serbian Expert Committee on | **Key findings**<br>● Serbia's Expert Committee on Immunization successfully guided the national COVID-19 | **Transparency**<br>● The committee's transparent and evidence-based process in developing |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| Immunization | | Immunization (National Immunization Technical Advisory Group - NITAG).<br>● Mandate<br>○ Strategic, Technical. To rapidly develop evidence-based COVID-19 vaccine recommendations during the pandemic, including national vaccination policies, prioritization strategies, and implementation protocols.<br>● Governance model<br>○ Embedded. Established by the Ministry of Health (MoH), with the Serbian National Institute of Public Health serving as its Secretariat.<br>● Advisory roles and participation<br>○ The Secretariat organized meetings and developed the agendas. Because the Secretariat lacked staff for literature reviews, the committee members conducted the literature reviews themselves. They engaged in joint coordination with external specialty medical commissions.<br>● Membership composition and expertise<br>○ Multidisciplinary. Expertise in immunology and pharmacology. It also utilizes liaison members from medical societies (pediatrics, gynecology, obstetrics).<br>● Membership structure and appointment model<br>○ Established by the Ministry of Health.Members do not have term limits and do not receive payments or per diem for their work.<br>○ The Serbian National Institute of Public Health serves as the Secretariat for the committee.<br>○ The expert committee's terms of reference do not restrict the number of core members and there are currently 11 members, plus one chair.<br>● Conflict-of-interest management<br>○ The paper notes as a lesson learned that moving forward, the committee plans to "begin collecting declarations of interest from core members, in line with WHO recommendations," indicating this was not a formalized operational standard previously. | response, rapidly producing over 40 accepted recommendations on vaccine prioritization and safety.<br>● Serbia's Expert Committee on Immunization facilitating early vaccine procurement, successful vaccination rollout, guidance for vaccinating those at highest risk, and high COVID-19 vaccination coverage in the country.<br>● Despite lacking compensation and facing severe resource constraints (e.g., relying on members for literature reviews), the committee maintained public trust.<br>● The experience highlighted the need to formalize conflict-of-interest disclosures and standard operating procedures for future system learning.<br>**Impact**<br>● Impact on decision-making<br>○ Recommendations on COVID-19 vaccination: Impact: Over 40 recommendations regarding priority groups, pediatric use, booster doses, and allergy protocols were rapidly produced, and all but one were officially accepted and implemented by the MoH.<br>● Policy influence<br>○ Recommendations on COVID-19 vaccination: Impact: High policy influence, as all but one of their 40+ recommendations were officially adopted by the Ministry of Health<br>● Trust and legitimacy<br>○ Allergy risk-stratification protocols: Impact: Developing specific allergy risk-stratification protocols before vaccination resulted in zero confirmed cases of anaphylaxis, which significantly increased public confidence in the vaccines | recommendations improved public trust in COVID-19 vaccines. Future system learning priorities include formalizing COI disclosures to improve transparency.<br>**Adaptability**<br>The committee navigated intense epistemic uncertainty by leaning on international guidelines, extensive voluntary work by members, and joint coordination with external specialty medical commissions. Due to the ban on group gatherings during certain stages of the pandemic, the committee quickly adapted to hold most meetings virtually.<br>● Ability to respond to crises<br>○ Members engaged in other full-time positions (including in COVID-19 hospitals) successfully responded to the crisis by devoting many hours after working hours to reviewing evidence on SARS-CoV-2 and rapidly developing recommendations.<br>○ Before the COVID pandemic, the committee had seven members and in November 2020, new members with expertise in immunology and pharmacology. |
| **Publication date** | November, 2022 | | | |
| **Author/Organization** | Markovic-Denic et al. | | | |
| **Jurisdictions studied** | Serbia | | | |
| **Methods used** | Narrative / Perspective (Descriptive case report of an advisory committee).<br>The article examines the challenges and successes faced by the committee. | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | ● System learning<br>○ Standard operating procedures and COI: Impact: The committee recognized the need to formally develop standard operating procedures (SOPs) for evidence evaluation and to officially implement conflict-of-interest (COI) declarations in future interpandemic operations. | |
| **Evidence-informed vaccination decision-making in countries: Progress, challenges and opportunities** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee (National Immunization Technical Advisory Groups - NITAGs)<br>● Mandate<br>○ Strategic, Technical. To ensure that vaccination decision-making is transparent, country-owned, and informed by sound scientific evidence, taking into account local epidemiological and social contexts<br>○ To advise national health authorities on defining and implementing immunization policies, introducing new vaccines across all age groups, monitoring disease epidemiology, assessing evidence gaps, responding to outbreaks, and serving as a trusted public-facing voice for vaccine safety.<br>● Governance model<br>○ Hybrid. NITAGs should maintain a close dialogue with national health authorities to respond to national needs, while maintaining a position of independence to ensure impartial advice. This enables them to respond to national needs and also pro-actively offer advice when appropriate<br>● Advisory roles and participation<br>○ Ministry of health staff can attend NITAG meetings as ex officio members, but they should not vote on recommendations, ensuring a clear separation between advisory and implementing bodies<br>● Membership composition and expertise<br>○ Multidisciplinary. Core membership must cover at least five areas of expertise. Authors suggest that as NITAGs | **Impact**<br>**Key findings**<br>● The number of fully functional National Immunization Technical Advisory Groups (NITAGs) globally nearly tripled between 2010 and 2019.<br>● Advancing into the next decade requires addressing persistent challenges: sustainable domestic funding, dedicated secretariat support, robust conflict-of-interest management, deep capacity building, financial sustainability, and better integration of these independent bodies into government decision-making to handle increasingly complex vaccine landscapes (like COVID-19).<br>● Emphasizes leveraging global and regional coordination networks (like the GNN) to pool resources and standardize evidence syntheses for complex vaccine landscapes.<br>**Impact**<br>● Trust and legitimacy<br>○ Transparent, independent, and evidence-based decision-making: Impact: Recognized explicitly as vital for maintaining public trust and confidence in vaccination programs, particularly in the context of COVID-19.<br>● System learning<br>○ Strategic push to establish NITAGs: | **Equity**<br>● Underserved populations: Plus - Emphasizes the need to incorporate an ethical dimension, balancing cost-effectiveness with equity goals when reaching underserved populations.<br>● Population benefit and equity of coverage: Plus - Identifies NITAGs as national assets for increasing equity of coverage and ensuring health expenditure provides the greatest population benefit.<br>**Transparency**<br>● A core indicator of functionality is having a declaration of interests policy. The transparency of the decision-making process, based on evidence and involving independent experts, is highlighted as essential to maintaining public trust<br>● Key challenges included shortage of funding, availability of expertise, management of conflicts of interest, transparency, expertise in evidence syntheses, and integration with national health authorities.<br>**Adaptability**<br>● Ability to respond to crises<br>○ During the COVID-19 pandemic, |
| **Publication date** | March, 2021 | | | |
| **Author/Organization** | Steffen et al. | | | |
| **Jurisdictions studied** | Global (Focused particularly on low- and middle-income countries) | | | |
| **Methods used** | Descriptive and Evaluative policy analysis (Expert Opinion / Narrative policy perspective) | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 5/5 (Expert opinion level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | mature, they need to widen their expertise to encompass ethical issues and community engagement<br>● Membership structure and appointment model<br>○ Governed by process indicators mapping their administrative foundation, which require formal written terms of reference, a legislative or administrative basis, and holding meetings at least once a year<br>● Conflict-of-interest management<br>○ The existence of a formal declaration of interests policy is a core required indicator of functionality. However, the management of conflicts of interest remains a widely reported challenge requiring continuous capacity building and process refinement<br>● Equity considerations<br>○ As NITAGs mature, they are explicitly encouraged to widen their expertise to encompass ethical issues and community engagement to address underserved populations. | Impact: Highly successful over the past decade; the number of countries served by a fully functional NITAG (meeting all 6 process criteria) rose from 41 in 2010 to 120 in 2019.<br>○ More localized informal networks have been set up to promote peer-to-peer learning and coordinated capacity development, while twinning enables newly established NITAGs to learn from those with greater experience. Productive collaborations have been established between, among others, Mozambique and Angola, Sweden and Norway, and Timor Leste and Australia. | NITAGs demonstrated their value by providing advice on minimizing impacts on routine immunization programs, and addressing complex decisions regarding vaccine introductions, target populations, and choice of products while considering local contexts |
| **The Role of National Immunization Technical Advisory Groups (NITAGs) in the Introduction of Inactivated Polio Vaccine: Experience of the Indonesia and Uganda NITAGs** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee (National Immunization Technical Advisory Groups - NITAGs).<br>● Mandate<br>○ Strategic, Technical.<br>○ ITAGI (Indonesia): To monitor and assess vaccine knowledge, monitor immunization program results to formulate recommendations, establish communication/coordination, consult experts, and report periodically to the Ministry of Health.<br>○ UNITAG (Uganda): To conduct policy analyses, determine optimal immunization policies, guide the formulation of strategies, advise on monitoring and data collection, identify needs for further data, and guide policies for R&D.<br>● Governance model<br>○ Hybrid. They are independent groups of national experts established by ministerial decrees/statements to provide | **Key findings**<br>● National Immunization Technical Advisory Groups (NITAGs) are essential for bridging global public health strategies (like the WHO Polio Endgame) with local contexts to ensure national ownership and acceptability.<br>● Early involvement, as seen in Indonesia's pilot studies, generates crucial local evidence for successful vaccine rollouts, whereas late establishment limits advisory impact primarily to the implementation and monitoring phases.<br>**Impact**<br>● Impact on decision-making<br>○ Early involvement: Impact: Generates crucial local evidence and helps navigate complex logistical contexts, allowing countries to confidently recommend national rollouts (e.g., through task forces | **Transparency**<br>● The study notes that a transparent and credible process of recommendation generation increases credibility, public trust, and NITAG integration into the decision-making process.<br>**Adaptability**<br>● NITAGs are essential for tailoring global immunization targets to the realities of national contexts, adapting external strategies to reinforce national immunization programs. Adequate time and supporting resources must be provided to ensure optimal performance of the NITAG. |
| **Publication date** | 2017 | | | |
| **Author/Organization** | Ba-Nguz et al. | | | |
| **Jurisdictions studied** | Indonesia and Uganda | | | |
| **Methods used** | Descriptive and Evaluative policy analysis (Narrative reflection based on experience / Commentary). | | | |
| **Relevance rating** | Moderate | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Quality (JBI)** | 6/6 (Narrative level) | unbiased, evidence-based advice to their national governments.<br>● Advisory roles and participation<br>○ UNITAG chair: The chairperson served as a member of the National Switch Validation Committee for the polio Endgame activities in the country.<br>○ Secretariat: The needs to have a strong secretariat that coordinates all the preparatory work.<br>○ Members: The need to have strong technical experts in the NITAG.<br>● Membership composition and expertise<br>○ Independent national experts and<br>○ Supported by strong technical experts.<br>These SABs interact with international organizations such as WHO regional.<br>● Membership structure and appointment model<br>○ Established by national authorities; ITAGI was created under a Republic of Indonesia Ministry of Health Decree, and UNITAG was created by a Ministerial Statement in Uganda. | and pilot studies in Indonesia).<br>● Policy influence<br>○ Independent technical advice: Impact: Adds value by bridging global public health strategies (like the WHO Polio Endgame) with localized, evidence-informed policy implementation to ensure national ownership and acceptability.<br>● Trust and legitimacy<br>○ Transparent and credible processes: Impact: A transparent and credible process of recommendation generation increases credibility, public trust, and NITAG integration in the decision-making process.<br>● System learning<br>○ Timing of establishment/involvement: Impact: Early engagement allows for pilot studies and local evidence generation (e.g., Indonesia), whereas late establishment means missing the formulation stage, though the body can still validate its role through monitoring implementation (e.g., Uganda). | |
| **Vaccine Policy in the United State** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (Advisory Committee on Immunization Practices - ACIP)<br>● Mandate<br>○ Strategic, Technical, Risk assessment, Advisory role including policy recommendations.<br>○ ACIP: Advises CDC/HHS on vaccine use and develops vaccine coverage recommendations. (Technical; policy recommendations).<br>○ NVAC: Advises and prioritizes efforts of the National Vaccine Program. (Strategic; policy recommendations).<br>○ FDA Vaccines and Related Biological Products Advisory | **Key findings**<br>● The U.S. vaccine policy system is highly coordinated across agencies, with ACIP playing a central advisory role.<br>● ACIP uses structured, evidence-informed deliberation processes, including GRADE and Evidence-to-Recommendations frameworks.<br>● Transparency mechanisms include open meetings, public reports, conflict-of-interest policies, and public comment.<br>● Coordination with agencies and clinical societies supports harmonized national immunization schedules. | **Equity**<br>● Minority membership requirement: ACIP is structurally mandated to include at least 20% minority membership (Black or African American, Hispanic, American Indian/Alaska Native, or Asian).<br>● Lay member inclusion: The membership includes one lay member representing consumer perspectives.<br>● Vaccines for Children Program (socioeconomic status): ACIP recommendations inform vaccine |
| **Publication date** | 2020 | | | |
| **Author/Organization** | Epling | | | |
| **Jurisdictions studied** | United States | | | |
| **Methods used** | Descriptive policy analysis / Narrative / Descriptive Review | | | |
| **Relevance rating** | Moderate | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Quality (JBI)** | 6/6 (Narrative level) | Committee: Advises FDA on vaccine safety and effectiveness. (Technical; risk assessment).<br>● Governance model<br>○ ACIP: Embedded within government as a federal advisory committee operating under the CDC/HHS, with CDC administrative support and public accountability mechanisms.<br>○ NVAC: Embedded within government through the National Vaccine Program (NVP), housed in the Department of Health and Human Services (HHS).<br>○ FDA Vaccines and Related Biological Products Advisory Committee: Embedded advisory committee providing external expert advice to the FDA on vaccine safety and effectiveness.<br>● Advisory roles and participation<br>○ ACIP: Includes voting, ex officio, and liaison members from stakeholder organizations, with participation from CDC staff, FDA liaisons, clinical societies, consultants, and limited industry representatives in workgroups and deliberations.<br>○ NVAC: Includes researchers, manufacturers, physicians, parent organizations, and public health representatives participating in vaccine advisory processes.<br>○ FDA Vaccines and Related Biological Products Advisory Committee: Includes external clinical and research experts advising the FDA on vaccine-related decisions.<br>● Membership composition and expertise<br>○ ACIP: Membership is based on expertise in vaccines and immunization, and includes lay representation, clinical society liaisons, consultants, and limited industry participation.<br>○ NVAC: Membership includes vaccine researchers, manufacturers, physicians, parent organizations, and representatives from public health agencies and organizations.<br>○ FDA Vaccines and Related Biological Products Advisory Committee: Membership consists of external clinical and | ● ACIP recommendations are formalized through publication in the Morbidity and Mortality Weekly Report and integrated into vaccination schedules.<br>● The advisory process includes participation from stakeholders, professional societies, and lay representatives.<br>● The system incorporates some equity-related design features, including minority representation requirements.<br>**Impact**<br>● Impact on decision-making<br>○ Structured evidence-to-recommendation processes (GRADE/EtR) support formal vaccine recommendations intended to guide clinical practice and vaccine coverage decisions.<br>● Policy influence<br>○ Coordination with clinical societies supports harmonized national immunization schedules and integration of ACIP recommendations into vaccine policy and coverage programs.<br>● Trust and legitimacy<br>○ Transparency measures, structured deliberation processes (GRADE/EtR), and conflict-of-interest policies may support the legitimacy and credibility of ACIP recommendations.<br>● System learning<br>○ Usability testing: Impact: The ACIP adapted its communication outputs based on 2 years of usability testing and human factors engineering, redesigning the graphical immunization schedules in 2019 to improve readability and clinical utility for front-line providers. | coverage decisions within the VFC program, which is described as helping reduce racial and ethnic disparities in vaccination access.<br>**Transparency**<br>● Strongly emphasized through public meetings, public transcripts, and the explicit publication of the EtR framework detailing how decisions were reached. |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | research experts advising the FDA.<br>● Membership structure and appointment model<br>○ ACIP: Structured membership model with appointed voting members serving fixed terms, supported by a steering committee, chair leadership, ex officio and liaison members, and specialized workgroups for preparatory and post-recommendation activities.<br>● Conflict-of-interest management<br>○ ACIP:The ACIP is organized under the statute governing federal advisory committees; there is a robust conflict of interest policy.<br>● Equity considerations<br>○ The ACIP is structurally mandated to include at least 20% minority membership (Black or African American, Hispanic, American Indian/Alaska Native, or Asian). It also includes one lay/consumer member.<br>○ Vaccines and Related Biological Products Advisory Committee (FDA): including a consumer representative. | | |
| **Scientific Advice at a Time of Emergency. SAGE and Covid-19** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, Science Advisory Office / Agency<br>● Mandate<br>○ Strategic, Technical, Risk assessment. To provide a "consensus view" to filter advice so that senior policymakers receive authoritative guidance without having to choose between conflicting expert views.<br>● Governance model<br>○ Embedded / Hybrid. Deeply embedded in the government's crisis response and chaired by government officials, but heavily incorporates external independent academics and sub-committees.<br>● Advisory roles and participation<br>○ Chaired by government science officials. Includes key experts in government (Chief Scientific Advisor, Chief Medical Officer, NHS, Public Health England) as well as independent academic voices. | **Key findings**<br>● During the early COVID-19 crisis, the UK government deferred heavily to SAGE's consensus-based advice, which favored a delayed lockdown.<br>● Because this aligned with political desires to avoid economic damage, the government failed to actively interrogate the science.<br>● The traditional model of "pure" arms-length scientific advice is flawed during extreme crises; governments must intensely engage with and question experts rather than uncritically accepting consensus.<br>**Impact**<br>● Impact on decision-making<br>○ Political interrogation of advice: Impact: The lack of active political interrogation of the consensus-based advice resulted in the uncritical acceptance of a graduated, | **Transparency**<br>● Highlighted as a crucial protective mechanism. The essay notes that transparency prevents the politicization of advice and protects both the experts and the public by ensuring that the government's adherence to (or deviation from) the evidence is visible.<br>● It is vital that experts maintain their independence and continue to offer conclusions, however awkward, based on their expertise.<br>**Adaptability**<br>The government failed to rapidly adapt to shifting public moods because they deferred heavily to initial SAGE advice without actively interrogating it.<br>● Ability to respond to crises<br>○ The traditional model of a |
| **Publication date** | July–September, 2020 | | | |
| **Author/Organization** | Freedman | | | |
| **Jurisdictions studied** | United Kingdom | | | |
| **Methods used** | Analytical/explanatory policy analysis / Expert Opinion / Analytical Policy Essay. | | | |
| **Relevance rating** | Low | | | |
| **Quality (JBI)** | 6/6 (Expert opinion level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ● Membership composition and expertise<br>○ Multidisciplinary. Expertise spanned medicine, epidemiology, modelling, and behavioural science.<br>● Membership structure and appointment model<br>○ Member: Participants in SAGE include those in key expert positions in government and independent voice.<br>○ Roles:<br>■ Government: The government's Chief Scientific Advisor who acts as chair. In the Covid-19 case the Chief Medical Officer acted as co-chair. Other members are key figures from the NHS and Public Health England.<br>■ Independent voices: including leading academics, some of whom had participated in SAGE's work on previous epidemics.<br>■ In COVID, feeding into SAGE's work were sub-committees, including NERVTAG, and SPI-M (the modellers) and SPI-B (the behavioural scientists). These were much more weighted towards academic specialists. | delayed approach to lockdown, demonstrating that "following the science" without intense political scrutiny leads to complacency during a fast-moving crisis.<br>● Policy influence<br>○ Consensus-based advice: Impact: Highly influential. Because the political logic (avoiding economic damage) coincided with the scientific logic (waiting for empirical data), the government deferred heavily to SAGE's initial advice.<br>○ The government explicitly claimed to be "following the science" and adopted SAGE's initial graduated approach to interventions, ultimately shifting to a full lockdown only when SAGE's modelling indicated it was urgently necessary.<br>● Trust and legitimacy<br>○ The initial secrecy surrounding SAGE's membership and deliberations fueled suspicions of political manipulation, leading to the creation of a shadow group called "Independent SAGE." Recognizing that secrecy was damaging trust, SAGE shifted to a policy of transparency by releasing its minutes, which helped demonstrate that the advice had not been wilfully disregarded or "sexed up" by politicians.<br>● System learning<br>○ Arms-length vs. integrated approaches: Impact: The crisis revealed that keeping policymakers strictly separate from experts to protect scientific "purity" carries heavy costs; instead, the system must adapt to an integrated approach with intense, persistent engagement and | specialist committee handing down "pure," consensus-based scientific advice to passive politicians is flawed during extreme crises. The document draws comparative lessons from the 2003 Iraq War to show that emergency response requires intense political engagement with advisory bodies. |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | questioning between politicians and scientists during emergencies. | |
| Principles of Vaccine Licensure, Approval, and Recommendations for Use | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee (Advisory Committee on Immunization Practices - ACIP)<br>● Mandate<br>○ Strategic, Technical, Risk assessment. To provide expert external advice and guidance to the director of the CDC on the use of vaccines and related agents for the control of vaccine-preventable diseases. The committee also holds the regulatory responsibility for approving vaccines to be covered under the federally funded Vaccines for Children (VFC) program<br>● Governance model<br>○ Hybrid. It operates as an external advisory committee to | **Key findings**<br>● The US advisory system relies on the Advisory Committee on Immunization Practices (ACIP) to translate FDA-licensed vaccines into actionable public health policy. By utilizing independent experts free of conflicts of interest, conducting deliberations in open public forums, and applying rigorous methodological frameworks like GRADE and the Evidence to Recommendations (EtR) framework, the ACIP generates highly influential recommendations. These standardized processes harmonize national medical practices, enhance transparency, and secure essential funding for | **Equity**<br>● Vaccines for Children (VFC) Equity in deliberation process: The EtR framework requires assessing the "equity, values, and preferences of people affected," and the ACIP holds the authority for the VFC program which ensures vaccine access for uninsured and Medicaid-eligible children.<br>**Transparency**<br>● Strongly emphasized and institutionalized through open public voting forums, live webcasts, published meeting minutes and transcripts, and |
| **Publication date** | March, 2020 | | | |
| **Author/Organization** | Pickering et al. | | | |
| **Jurisdictions studied** | United States | | | |
| **Methods used** | Descriptive policy analysis / Thematic Review | | | |
| **Relevance rating** | Moderate | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Quality (JBI)** | 6/6 (Narrative level) | the CDC whose voting members cannot be government employees, but its recommendations must be approved by the CDC director to become official policy<br>● Advisory roles and participation<br>○ Chair, members of the committee and the ACIP forms subgroups of committee members known as work groups (WGs).<br>○ Work group (WGs) activities ensure ACIP voting members make informed decisions on the basis of the best and most current information.<br>○ Each WG must include at least 2 voting members of the ACIP, one of whom functions as WG Chair. A CDC subject matter expert serves as WG Lead. Other WG members may include ACIP ex officio members, ACIP liaison representatives, and invited consultants.<br>● Membership composition and expertise<br>○ Multidisciplinary. Include liaison representatives from professional medical societies, and invited consumer representatives.<br>● Membership structure and appointment model<br>○ ACIP consists of 15 voting members who meet three times a year in an open public forum. The committee forms subgroups known as Work Groups (WGs), which can be either permanent or task-oriented, to collect and analyze data and present recommendation options to the voting members<br>● Conflict-of-interest management<br>○ Strict. All ACIP members are screened for real or perceived conflicts of interest in accordance with the strict guidelines outlined in the ACIP Policy and Procedures Manual. Conflicts of interest are likewise rigorously reviewed for all Work Group members<br>● Equity considerations<br>○ Work groups are explicitly encouraged to invite a consumer representative to join as a consultant to ensure public/consumer perspectives are integrated into the technical design and deliberation process | vulnerable populations through the Vaccines for Children (VFC) program<br>**Impact**<br>● Impact on decision-making<br>○ ACIP recommendations: Impact: Dictates national public and private sector immunization practices and guarantees that recommended vaccines are provided free of charge to eligible populations through the VFC program<br>● Policy influence<br>○ ACIP recommendations: Impact: Highly influential in creating a unified national immunization schedule and securing funding for vulnerable populations via the VFC program<br>● Trust and legitimacy<br>○ GRADE and EtR frameworks: Impact: The explicit use of these structured frameworks provides transparency to users regarding how potential disagreements were resolved and how specific factors impacted deliberations, directly enhancing communication and public trust | the transparent EtR framework. Strict conflict-of-interest screening also enhances transparency. |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| A Case Study on the Decision-making of Non-pharmaceutical Interventions (비약물적 중재 정책결정 사례 연구) | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, Expert Panel, Science Advisory Office / Agency<br>● Mandate<br>○ Strategic, Technical. To rapidly and systematically collect existing evidence, provide objective assessments, conduct policy impact assessments, and offer prompt advice to policymakers regarding public health responses. To issue vaccination recommendations (e.g., US ACIP), or to balance infection control, the economy, well-being, and democratic rights (e.g., Denmark's SAM)<br>● Governance model<br>○ Hybrid, Embedded Varies heavily by country: Embedded (US CDC/FDA committees, Denmark AC group, ROK bodies), Hybrid/Independent (UK SAGE, linked to the Cabinet Office but designed with sufficient independence to provide objective advice), and civic networks (Taiwan's civic tech platforms).<br>● Advisory roles and participation<br>○ Included government officials, clinical experts, and academics.<br>● Membership composition and expertise<br>○ Multidisciplinary. UK SAGE included clinical experts, academics, modelers, and behavioral scientists. Denmark explicitly included behavioral and social scientists alongside public health experts. ROK nominally included medical and social science expertise, but social science input was not adequately utilized in practice.<br>● Membership structure and appointment model<br>○ UK SAGE utilized government officials, clinical experts, and academics from over 80 institutions, operating with specialized subgroups (SPI-M, SPI-B, Ethnicity Subgroup, Social Care Working Group). US advisory mechanisms included field-specific advisors (ACIP, VRBPAC) and top-level federal officials. Denmark utilized a Chief Behavioral Science Advisor, an inter-ministerial group, and the NOST system. ROK utilized medical and social science experts | **Key findings**<br>● The US lacked a separate top-level science advisory body, experiencing transparency and political interference issues in NPI decisions. The UK's SAGE demonstrated that advisory independence, transparency, and broad disciplinary scope (including behavioral sciences) are essential for effective pandemic science advice. Denmark's SAM successfully integrated behavioral and social science to balance infection control, the economy, well-being, and democratic rights. Taiwan's collaborative governance utilizing ICT enabled broad public engagement. Conversely, ROK's advisory bodies failed to fully implement their mandates or adequately utilize social science expertise.<br>**Impact**<br>● Impact on decision-making<br>● Policy influence<br>○ Reformed advisory model: Impact: SAGE's reformed advisory model (post-March 2020) contributed to more evidence-informed UK NPI decisions.<br>○ Community-level equity initiatives: Impact: US community-level vaccination initiatives (e.g., utilizing Black barbershops) were adopted by the federal government, demonstrating bottom-up policy influence.<br>○ Explicit balancing of factors: Impact: Denmark's explicit balancing of four factors (infection control, economy, well-being, democratic rights) in advisory recommendations directly shaped NPI policy design.<br>● Trust and legitimacy<br>○ Advisory independence and transparency: Impact: Independent advisory systems | **Equity**<br>● Dedicated subgroups: Addressed through the creation of a dedicated Ethnicity Subgroup within the UK SAGE to evaluate demographic impacts<br>● Community-level vaccination campaigns: In the US, bottom-up campaigns successfully targeted the African American population by utilizing Black healthcare professionals and community hubs (like barbershops) to increase vaccine equity<br>● Dedicated subgroups: The UK SAGE established a Social Care Working Group to address the impacts on vulnerable social care populations.<br>**Transparency**<br>● SAGE's initial opacity (undisclosed membership, unpublished minutes) is presented as a contributing factor to delayed lockdown decisions and a trigger for public distrust, whereas the reform from March 2020 (public membership lists, published minutes) restored advisory legitimacy. The US system's lack of transparency in key decisions raised suspicions of political manipulation. Taiwan's open science model and citizen participation platforms represent the strongest transparency case among the countries studied. |
| **Publication date** | July, 2023 | | | |
| **Author/Organization** | Jung et al. | | | |
| **Jurisdictions studied** | South Korea, United States, United Kingdom, Denmark and Taiwan | | | |
| **Methods used** | Comparative case analysis / Narrative policy review | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | across four sub-committees.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: The UK SAGE established a dedicated Ethnicity Subgroup and a Social Care Working Group to address demographic impacts within its advisory structure. | operating under scientific norms of transparency maintain public trust in science<br>○ Opacity and political interference: Impact: SAGE's initial lack of transparency fueled distrust and prompted the formation of Indie-SAGE, while the US advisory system's lack of transparency in key decisions raised political interference concerns.<br>○ Explicit communication of behavioral/social factors: Impact: Denmark's approach of explicitly communicating the basis for policy decisions, including behavioral and social factors, is presented as a model for maintaining public trust.<br>● System learning<br>○ Integration of behavioral science and transparency: Impact: The crisis led to institutional learning regarding the absolute necessity of integrating behavioral science into advisory bodies, ensuring advisory independence, and utilizing open civic engagement forums to secure democratic legitimacy and compliance with NPIs. | |
| **The Institute of Medicine: ensuring integrity and independence in scientific advice on health** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ National academies, learned societies and networks (Institute of Medicine / National Academy of Medicine).<br>● Mandate<br>○ To provide independent, unbiased, authoritative advice on issues related to health and medicine to decision-makers and the public, standing soundly on the best available science and expertise. | **Key findings**<br>● The document argues that the benefits of an independent scientific academy to advise the nation are enormous, especially in an era of information overload and partisan politics.<br>● True advisory credibility relies on structural independence, rigorous conflict-of-interest screening, diverse volunteer expertise, and separating sponsors entirely from the | **Equity**<br>● Roundtable on the Promotion of Health Equity and the Elimination of Health Disparities addresses equity and the social determinants of health.<br>● The Forum on Population Health Improvement brings together public health experts from local, state, and national levels, along with leaders from |
| **Publication date** | October, 2015 | | | |
| **Author/Organization** | Dzau | | | |
| **Jurisdictions studied** | United States of America (USA) (with significant | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | international and global health extensions) | ● Governance model<br>○ Independent. The organization is strictly independent from political affiliations and commercial interests, adhering to policies ensuring reports are based entirely on scientific evidence.<br>● Advisory roles and participation<br>○ Utilizes volunteer experts, external peer reviewers, and dedicated IOM staff to gather information, deliberate, and draft reports.<br>● Membership composition and expertise<br>○ Multidisciplinary. The academy consists of over 2000 elected members (including 40 Nobel Laureates), integrating expertise from engineering, informatics, education, behavioural sciences, and environmental sciences alongside health professions.<br>● Membership structure and appointment model<br>○ Operates through multiple structures: ad hoc diverse committees of 10–20 volunteer experts for "Consensus studies", standing "Forums/Roundtables" for ongoing stakeholder engagement, and one-time "Workshops".<br>● Conflict-of-interest management<br>○ Extremely rigorous. All volunteers are screened for financial or other conflicts of interest before beginning work. The entire committee also spends time together disclosing any personal experiences that might bias them. Furthermore, once the statement of task is finalized, sponsors have zero influence over the conduct of the study, cannot participate in deliberations, and cannot see draft content.<br>● Equity considerations<br>○ Mechanisms to ensure diverse perspectives. The Forum on Population Health Improvement brings together public health experts from local, state, and national levels, along with leaders from sectors such as community development, housing, education, philanthropy, health care, and private industry. It aims to promote collective action to improve community health by fostering | deliberation process.<br>● The Institute of Medicine (IOM/NAM) relies on independent consensus committees, rigorous external peer review, and strict transparency guidelines to produce highly impactful, globally recognized policy recommendations.<br>● The author advocates that other nations, particularly low- and middle-income countries, should establish similar evidence-based, independent scientific academies adapted to their local political contexts to improve national decision-making and ensure integrity in public health advice.<br>**Impact**<br>● Impact on decision-making:<br>○ Uptake of advice: Exceptionally high. Although the advice is non-binding, the IOM reports have been widely used to inform the development of multiple health policies.<br>● Policy influence<br>○ Integration into policies: Exceptionally high. IOM reports have transformed medical thinking, shifted the FDA's regulatory authority on drug safety, spurred sweeping healthcare quality improvements, and changed US funding policies for needle exchange programs.<br>● Trust and legitimacy<br>○ Public or stakeholder trust: Because of its structural independence and rigorous peer review, it is widely trusted by disparate groups (e.g., both government agencies and pharmaceutical companies) to provide unbiased direction. | sectors such as community development, housing, education, philanthropy, health care, and private industry. It aims to promote collective action to improve community health by fostering collaboration between primary care and public health, strengthening governmental commitment to public health, and addressing equity and the social determinants of health.<br>● Equity is also addressed through international/global health extensions (e.g., the African Science Academy Development Initiative) to support capacity building in low- and middle-income countries.<br>**Transparency**<br>● Strongly emphasized via compliance with Section 15 of the Federal Advisory Committee Act (FACA). The IOM maintains an open "Public Access Folder" throughout the study process. Committee member biographies and the statement of task are posted online 20 days prior to the first meeting to allow for public comment, and all written materials provided to the committee are publicly accessible<br>**Adaptability**<br>● Ability to respond to crises. Highly adaptable. For example, during the peak of the Ebola virus disease outbreak, the IOM rapidly organized a workshop in response to urgent requests from government agencies to prioritize research for public health and medical practice response |
| **Methods used** | Descriptive policy analysis / Narrative / Expert opinion | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Expert opinion level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | collaboration between primary care and public health, strengthening governmental commitment to public health, and addressing equity and the social determinants of health. The Roundtable on the Promotion of Health Equity and the Elimination of Health Disparities is also utilized. | | |
| Health technology assessment in France: The French way of HTA: Between scientific rigor, independence and transparency | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee<br>● Mandate<br>○ Technical, Risk assessment, Strategic. To advise the government on the appropriateness of national funding for healthcare technologies (medicines, medical devices, digital devices, and procedures) by evaluating their intrinsic clinical benefit and clinical added value relative to existing alternatives.<br>● Governance model<br>○ Independent. The HAS holds the status of an independent public authority (the most advanced form of independence in French administrative law), with a legal identity distinct from the State, financial autonomy, and its own code of ethics and conflict-of-interest guide.<br>● Advisory roles and participation<br>○ Five specialized HTA committees cover distinct technology categories, with external professional experts and patient/user association representatives participating as invited contributors. Government ministries and health agencies hold advisory (non-voting) roles within committees.<br>● Membership composition and expertise<br>○ Multidisciplinary. The committees comprise around 30 members including medical doctors, allied health professionals, sociologists, pharmacists, epidemiologists, and health economists.<br>● Membership structure and appointment model<br>○ Standing membership with fixed terms of 3 years, renewable twice. Members are recruited through a public call for applications, and half of the Board is renewed | **Key findings**<br>● The French Haute Autorité de Santé (HAS) operates as an independent public authority with five specialized committees for health technology assessment (HTA). Its process is characterized by rigorous evidence synthesis, formal conflict-of-interest management, mandated gender parity, and a legally integrated "contradictory phase" allowing applicants to challenge provisional opinions. HAS ensures public trust by publishing all meeting minutes, votes, and declarations of interest. This transparent model directly informs equitable healthcare funding decisions, and is continuously evolving to integrate environmental sustainability criteria and European Joint Clinical Assessments.<br>**Impact**<br>● Impact on decision-making<br>○ HAS advisory opinions: Impact: Directly inform reimbursement decisions by UNCAM and price negotiations by CEPS, creating a consistent institutionalized link between advisory output and policy decisions.<br>● Trust and legitimacy<br>○ Independence and transparency: Impact: Mandatory publication of opinions, votes, agendas, meeting minutes, and public declarations of interest acts as the institutional basis for the credibility, legitimacy, and public trust of the HAS. | **Equity**<br>● Geographical diversity: Addressed through geographical diversity requirements in the recruitment criteria for committee members<br>● Variety in professional practice: Addressed through recruitment criteria requiring varied professional practices among members<br>● Mandatory gender parity: Addressed structurally through legal requirements mandating gender parity in committee appointments (except for the Board President)<br>● Patient/user representation: Addressed structurally through the mandatory inclusion of 2 to 3 patient/user association representatives in all five HTA committees<br>**Transparency**<br>● Transparency is pervasive and institutionalized: it includes mandatory public declarations of interest (DPI) for all staff, and the systematic public publication of committee agendas, debate contents, votes, meeting minutes, stakeholder contributions, and final opinions on the HAS website. |
| **Publication date** | April, 2025 | | | |
| **Author/Organization** | Baba et al. | | | |
| **Jurisdictions studied** | France | | | |
| **Methods used** | Descriptive policy analysis / Narrative / Descriptive Institutional Review | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | every 3 years.<br>● Conflict-of-interest management<br>○ Extremely rigorous/High focus. All committee members must declare any potential conflicts of interest and meet ethical requirements prior to recruitment. All HAS employees are subject to a mandatory public declaration of interest (DPI)<br>● Equity considerations<br>○ Mechanisms to ensure diverse perspectives include explicit recruitment criteria mandating geographical diversity, gender parity (except for the Board President), variety in professional practice, and the required inclusion of 2 to 3 patient/user association representatives per committee. | ○ Contradictory phase: Impact: Allowing applicants to challenge provisional opinions through written observations or hearings strengthens the reliability and acceptance of final opinions.<br>● System learning<br>○ Methodological evolution: Impact: The agency is actively evolving to integrate environmental sustainability criteria and adapt to mandatory European Joint Clinical Assessments | |
| **The First 10 Years: Reflecting on Opportunities and Challenges of the Tobacco Products Scientific Advisory Committee of the United States Food and Drug Administration.** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (Tobacco Products Scientific Advisory Committee - TPSAC).<br>● Mandate<br>○ Risk assessment. To evaluate the safety, health, and dependence of tobacco products and to provide recommendations to the FDA and the Secretary of Health and Human Services.<br>● Governance model<br>○ Embedded (Embedded into the US Food and Drug Administration).<br>● Advisory roles and participation<br>○ Included 12 committee members as well as extensive public input through open hearings and public testimony.<br>● Membership composition and expertise<br>○ Multidisciplinary. Health professionals practicing in oncology, pulmonology, cardiology, toxicology, pharmacology, addiction; government representatives; general public representative; and non-voting tobacco industry manufacturers, small businesses, and tobacco growers.<br>● Membership structure and appointment model | **Key findings**<br>● The TPSAC provided substantial public input and professional expertise over a decade, but the FDA's regulatory policies were largely nonconcordant with the committee's voting decisions.<br>● The study concludes that the advisory committee is underutilized and needs to proactively set agendas to improve the uptake and implementation of its advice for better population health in the US.<br>**Impact**<br>● Impact on decision-making<br>○ Nonconcordant regulatory policies: Impact: The FDA's regulatory policies implemented during this period were mostly nonconcordant with the voting decisions by the TPSAC, despite the FDA formally soliciting advice. .<br>● Policy influence<br>○ TPSAC's most influential policy work happened in the first two years when congressionally mandated reports were | **Equity**<br>● Impact of tobacco products on minorities: TPSAC explicitly evaluated the impact of products (like menthol) on African Americans, Hispanics, and other racial or ethnic minorities.<br>● Impact of modified risk claims on women: TPSAC prominently featured concerns about the impacts of modified risk claims on women and pregnant women<br>● Impact of modified risk claims on low-income groups: TPSAC evaluated the impact of modified risk claims and products on low socioeconomic populations. Impact of tobacco products on children: The committee evaluated the public health impact of tobacco products specifically on children.<br>**Transparency**<br>● High transparency in meetings and public testimony (open hearings), but a lack of transparency regarding why the |
| **Publication date** | 2020 | | | |
| **Author/Organization** | Fagan et al. | | | |
| **Jurisdictions studied** | United States | | | |
| **Methods used** | Qualitative content analysis of public documents / Policy case study. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 7/7 (Policy level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ 12 members, including a chair. 9 members can vote, while 3 members (representing the tobacco industry) cannot vote.<br>● Conflict-of-interest management<br>○ COIs were disclosed in this time period at TPSAC regarding funding from pharmaceutical companies and government agencies. Following a 2015 judge ruling that members may have received substantial public and private funding influencing recommendations, the FDA re-evaluated previous COIs and ended the terms of four members.<br>● Equity<br>○ Diverse committee membership: Race/ethnicity - The committee included 3 people from diverse racial representation from African American and Native American members.<br>○ Diverse committee membership: 44% of TPSAC voting members were women over a ten-year period.<br>○ TPSAC added representatives into subcommittees from groups representing equity-deserving populations like Substance Abuse and Mental Health Services Administration, Indian Health Services, CDC, and National Institute on Drug Abuse | due and many meetings took place. Following those reports, they had less policy influence.<br>○ Ignored recommendations: Impact: Despite transparent processes,the FDA frequently ignored the committee's scientific recommendations in its final regulatory actions.<br>● Trust and legitimacy<br>○ Transparent processes but ignored advice: Impact: While meetings and testimony were highly transparent, the lack of transparency regarding why the FDA chose to ignore the committee's scientific recommendations may have negatively impacted trust.<br>● System learning<br>○ Underutilization of committee: Impact: The findings prompted recommendations to re-evaluate the committee's structure and promote proactive agenda-setting to improve its efficiency and policy uptake at a systems level. | FDA chose to ignore the committee's scientific recommendations in its final regulatory actions.<br>**Adaptability**<br>● The membership composition, COI management, evidence inputs, and frequency of outputs are noted to be adaptable. |
| [Policy responses and government science advice for the COVID 19 pandemic in the Philippines: January to April 2020] | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee / Task Force (Current: IATF-EID Technical Working Group [TWG] and university task forces; Proposed: Science Advisory Group for Emergencies - SAGE)<br>● Mandate<br>○ Strategic, Technical. To synthesize science inputs to propose policy interventions for the crisis (Current). To provide timely, rapid, and focused risk options and science advice directly to the President to support cabinet functions during emergencies (Proposed).<br>● Governance model | **Key findings**<br>● The Philippine government effectively used epidemiological modeling to justify strict quarantine measures. However, the pandemic revealed critical gaps in diagnostic infrastructure, data integration, and formal science advice coordination. The authors strongly advocate for the institutionalization of a permanent Science Advisory Group for Emergencies (SAGE) under the Office of the President. This body must integrate social scientists to navigate public compliance, guarantee transparent open data, and ensure | **Equity**<br>● Financial assistance and food prioritization: The Bayanihan to Heal as One Act mandated social improvement financial assistance to low-income households, and experts recommended prioritizing food distribution over cash for the poorest communities.<br>● Militaristic quarantine enforcement: The authors raise serious concerns about the authoritarian enforcement of quarantines by police and local governments, emphasizing that basic |
| **Publication date** | June, 2020 | | | |
| **Author/Organization** | Vallejo et al. | | | |
| **Jurisdictions studied** | Philippines | | | |
| **Methods used** | Expert Opinion / Analytical Policy Review (Descriptive and | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | Evaluative policy analysis) | ○ Embedded (currently operating through the Interagency Task Force on Emerging Infectious Diseases [IATF-EID] and its technical working groups). The authors propose a new integrated body under the Office of the President, similar to the UK's SAGE.<br>● Advisory roles and participation<br>○ Science advice passes from academic task forces through the IATF-EID TWG to the President.<br>● Membership composition and expertise<br>○ Multidisciplinary. Relies heavily on epidemiological modelers, data scientists, economists, and medical professionals.<br>● Membership structure and appointment model<br>○ Currently relies on ad hoc task forces (TF) or technical working groups (TWG). The proposed structure is a permanent SAGE chaired by the President's chief science advisor, convened immediately during a crisis.<br>● Equity considerations<br>○ Inclusion of equity-relevant expertise: The authors emphasize a critical need to include social scientists within the advisory body to assess the effectiveness of advice across different communities, manage public sociology, and link science outcomes with social development goals. | that intrusive public health measures do not violate fundamental human rights and civil liberties.<br>**Impact**<br>● Policy influence<br>○ Epidemiological models and economic recommendations: Impact: High. Recommendations from the UP COVID-19 task force's epidemiological models directly influenced the President's decision to extend the Enhanced Community Quarantine (ECQ). Economic recommendations subsequently guided the transition to a General Community Quarantine (GCQ).<br>● Trust and legitimacy<br>○ Regular media briefings: Impact: The IATF-EID conducts regular (often daily) briefings by cabinet secretaries to ensure public trust and counter misinformation.<br>● System learning<br>○ Crisis weaknesses: Impact: The crisis exposed severe weaknesses in the public health system, diagnostic capabilities, and science advisory infrastructure, which led to rapid institutional learning, including the creation of integrated data portals and strong academic advocacy for a permanent, UK-style SAGE. | civil liberties and constitutional human rights must be respected during public health crises to prevent the rise of a surveillance regime.<br>**Transparency**<br>● The authors strongly advocate for open data policies and freedom of information guarantees for scientific data to improve analysis and trust. |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 5/5 (Expert opinion level) | | | |
| Modélisation du cadre conceptuel d'avis de recommandation pour la vaccination des enfants aux décideurs béninois (Modelization of recommendation framework advice for children immunization to Beninese decision makers) | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee (National Advisory Committee for Vaccination and Vaccines of Benin - CNCV-Bénin).<br>● Mandate<br>○ Strategic, Technical. To provide scientifically grounded advice on vaccination policy, introduction of new vaccines | **Key findings**<br>● Variation in expert methods often leads to erroneous or statistically weak conclusions when advising policymakers. Adopting a standardized model (4 scientific steps: ministerial referral, recommendation framework, evidence collection, evidence analysis; and 3 | **Equity**<br>● Vaccine distribution: Addressed during the strategic questions and programmatic aspects phase, the literature review focuses on equity in the distribution of the vaccine and mechanisms for advocacy regarding the |
| **Publication date** | September, 2020 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Author/Organization** | Fourn | into the Expanded Programme on Immunization (EPI), and advocacy mechanisms for vaccination of vulnerable children.<br>● Governance model<br>○ Hybrid. Comprised of independent experts appointed by the government, advising the Minister of Health, while supported by regional/international agencies such us WHO, UNICEF, among others.<br>● Advisory roles and participation<br>○ Comprised of experts appointed by the Minister of Health based on their competencies and specialties to advise on vaccination policy. Ordinary sessions also involve representatives from WHO, UNICEF, and the Ministry of Health's vaccination sector.<br>● Membership composition and expertise<br>○ Multidisciplinary. The CNCV-Bénin experts number nine and come from various fields of expertise. Ordinary sessions also include representatives from bilateral organizations (WHO, UNICEF) and the Ministry of Health's vaccination sector.<br>● Membership structure and appointment model<br>○ Members are appointed by the Minister of Health for a three-year mandate based on their skills and specialties.<br>● Conflict-of-interest management<br>○ Addressed during the deliberation phase. Each subgroup proposes the results of the performance analysis and assessments for the recommendation opinion without overlooking ethical aspects, including conflicts of interest. | administrative steps: plenary discussion, ordinary session, submission) harmonizes the process, reduces bias, and enhances the reliability of vaccination policies in West Africa<br>**Impact**<br>● System learning<br>○ Standardized advisory framework: Impact: Promotes institutional adaptation by standardizing the advisory framework. Outlining a strict model prevents statistical errors and ensures objective, harmonized advice across the ECOWAS region | vaccination of vulnerable children. |
| **Jurisdictions studied** | Benin | | | |
| **Methods used** | Descriptive policy analysis / Narrative Methodological Report | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |
| Making expert advice public in a time of emergency: Independent SAGE and the contestation of science during the Covid pandemic in the UK | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Independent Science Advisory Group / Group of independent scientists<br>● Mandate<br>○ Strategic, Technical. To provide independent scientific advice to the UK government and public on how to minimize deaths and support Britain's recovery from the | **Key findings**<br>● Independent SAGE emerged to counter the UK government's initial secrecy and marginalization of public health expertise during COVID-19. The group demonstrated that making expert advice public is crucial for building "situational response-ability" across society. By adopting four main rationales—openness, calling out | **Transparency**<br>● Fundamental to the group's existence. Indie SAGE was explicitly created to counter the secrecy of the official SAGE, providing a public record of scientific advice. They utilized unprecedented transparent communication practices, including live |
| **Publication date** | 2025 | | | |
| **Author/Organization** | Marres &Valderrama Barragán | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Jurisdictions studied** | United Kingdom | COVID-19 crisis, compensating for specific weaknesses in official mechanisms for communicating science to the public.<br>● Governance model<br>○ Independent<br>● Advisory roles and participation<br>○ Group of independent scientists operating on a voluntary basis. Several members were also members of the official SAGE..<br>● Membership composition and expertise<br>○ Multidisciplinary. Included virologists, public health experts, psychologists, mathematicians, institutional, and social researchers.<br>○ The group was clearly marked by diversity of perspectives, bringing together medical, behavioral, mathematical, institutional and social perspectives.<br>● Membership structure and appointment model<br>○ Composed of independent experts operating on a voluntary basis. | government failures, translating science into practical guidance, and responsively engaging diverse publics—Indie SAGE exhibited "situational adequacy," tailoring its interventions to specific crises. Ultimately, they proved that effective crisis advice involves actively building capacity within communities and institutions, not just advising the state.<br>**Impact**<br>● Policy influence<br>○ Public engagement and practical policy reports: Impact: Actively guided local authorities, mayors, trade unions, and civil society on safe protocols.<br>○ Spike in web posts and tweets (January 2021): Impact: Contributed to forcing the government to change its strategy and impose a third lockdown after easing restrictions.<br>● Trust and legitimacy<br>○ Indie SAGE implemented a distinctive approach to collaborating with diverse groups, such as professional communities, social groups, and the general public, in developing scientific advice, considering such collaboration essential for creating expert guidance in times of emergency.<br>● System learning<br>○ Making science public paradigm: Impact: Demonstrated a new paradigm for emergency science advice: moving beyond simply advising the state, to building "situational response-ability" and capacity directly within communities, institutions, and everyday publics. | weekly interactive YouTube briefings, open Q&A sessions with journalists/the public, and extensive public Twitter threads.<br>**Adaptability**<br>● The group exhibited "situational adequacy" by adapting their mode of intervention (openness, calling out, translation, or responsive engagement) to logically match the specific crisis at hand (e.g., collaborating with unions for schools vs. calling out the government for privatized testing).<br>● Ability to respond to crises<br>○ Formed explicitly in May 2020 as a rapid, independent response to the COVID-19 emergency and the perceived failures of official advisory mechanisms. |
| **Methods used** | Qualitative situational analysis (Semi-structured expert interviews, online workshops, and a situational analysis of media outputs) | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 9/10 (Qualitative study) | | | |
| Functionality of technical working groups in | | **Institutional Design of Advisory Bodies:** | **Key findings** | **Equity** |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| enabling evidence-informed decision-making within Malawi's Ministry of Health: a cross-sectional qualitative study | | • Type of advisory body<br>  ○ Advisory committee, Science Advisory Office / Agency (Technical Working Groups - TWGs).<br>• Mandate<br>  ○ Strategic, Technical. To provide evidence-based technical advice to assist the government in the creation and review of health policies, make recommendations, and develop policy documents. Also, to serve as a coordinating structure facilitating dialogue and alignment among stakeholders.<br>• Governance model<br>  ○ Embedded (The TWGs are formally integrated into the hierarchy of the Ministry of Health [MoH]).<br>• Advisory roles and participation<br>  ○ Multidisciplinary and multi-sectoral. Members participate in evaluating evidence and generating recommendations. Researchers actively share relevant research, while development partners, civil society, and the private sector also participate.<br>• Membership composition and expertise<br>  ○ Political leaders and directors from the MoH, health researchers, academics, development partners, representatives of civil society, the private sector, and specialized technical staff.<br>• Membership structure and appointment model<br>  ○ Consists of six permanent main TWGs and various temporary/ad hoc sub-TWGs (task forces). Membership is predominantly determined by institutional roles and direct invitations from the MoH, which the study notes is sometimes influenced by existing relationships rather than purely technical expertise.<br>• Conflict-of-interest management<br>  ○ The WHO-UNICEF Joint Reporting Form (JRF) used to assess the TWGs includes the "disclosure of conflict of interest" as a core functionality indicator.<br>• Equity considerations<br>  ○ Mechanisms to ensure representation of diverse perspectives: The groups are designed to be | • TWGs are formally established within Malawi's MoH and highly valued for coordination, but operational functionality varies. Well-functioning TWGs had diverse representation and frequent meetings. Poorly functioning TWGs suffered from irregular meetings, fragmented discussions, and severe underfunding. Members frequently lacked the internal capacity to access or synthesize research evidence. The MoH urgently needs to allocate sustainable domestic funding, institute continuous capacity-building in evidence synthesis, and use standardized assessment tools like the JRF to monitor performance and improve the uptake of recommendations.<br><br>**Impact**<br>• Impact on decision-making<br>  ○ Functional TWG operations: Impact: When TWGs function well—characterized by frequent meetings and diverse representation—their recommendations are usually taken into consideration by the MoH when making decisions.<br>• Policy influence<br>  ○ Political interests and funding constraints: Impact: The uptake of TWG recommendations into policy is frequently hindered by political interests, severe reliance on external donor funding, and departmental resistance to adopt evidence that conflicts with current practices.<br>• System learning<br>  The evaluation identifies critical weaknesses (such as reliance on external donor funding and low research translation capacity) and recommends annual self-assessments using the WHO- | • Civil society and diverse sector integration: Addressed through the intentional multisectoral design of the TWGs, which explicitly integrates representatives from civil society, academia, and the private sector alongside government actors.<br>**Transparency**<br>• The six main TWGs have formal Terms of Reference (TORs) that outline their purpose, functions, membership, and meeting frequency. The outcomes of deliberations are formally communicated to the Senior Management Team (SMT) and through digital channels such as emails and WhatsApp groups.<br><br>**Adaptability**<br>• TWGs are highly adaptable; the system includes temporary task forces, subcommittees, and expert groups (sub-TWGs) created specifically based on the tasks at hand, some of which meet only during emergencies and cease their meetings once the problem is resolved. |
| **Publication date** | May, 2023 | | | |
| **Author/Organization** | Sakala et al. | | | |
| **Jurisdictions studied** | Malawi | | | |
| **Methods used** | Cross-sectional descriptive qualitative study (In-depth semi-structured interviews, direct observation of TWG meetings, and a desk review of policy documents) | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 8/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | multidisciplinary, integrating staff from the Ministry of Health, development partners, civil society, the private sector, and academic institutions. A "diverse representation of members" is considered one of the reasons why a group functions well. | UNICEF JRF for TWG assessment. The tool can be used by the TWGs for annual self-assessment of their functionality to improve monitoring of their performance. | |
| Decision-making process for introduction of maternal vaccines in Kenya, 2017–2018 | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (Kenya National Immunization Technical Advisory Group - KENITAG).<br>● Mandate<br>○ Technical.To advise the Ministry of Health on immunization policies through evidence-based recommendations on vaccines and immunization schedules.<br>● Governance model<br>○ Hybrid. KENITAG operates under a hybrid model, as it is linked to the Ministry of Health while maintaining technical independence. Its role is to analyze evidence and provide recommendations, although final decisions are made by the government.<br>● Advisory roles and participation<br>○ KENITAG collates gathered information, reviews it critically to unearth pros and cons, and discusses it logically to form scientific recommendations.<br>● Membership composition and expertise<br>○ Multidisciplinary. Composed of senior members of relevant medical specialties (adult medicine, pediatrics, immunology), university experts (epidemiology, public health, microbiology, pathology, law), ex-officio Ministry of Health personnel, and non-government organization liaison members.<br>● Membership structure and appointment model<br>○ A standing technical advisory group guided by an Internal Procedures Manual. | **Key findings**<br>● Kenya's vaccine policy formulation is highly centralized, relying on KENITAG for evidence-based recommendations.<br>● While national officials understand the advisory process, county-level implementers feel entirely excluded from decision-making.<br>● The 2013 health system decentralization exacerbated this disconnect, creating severe intra-governmental communication gaps and confusion over resource allocation.<br>● Furthermore, maternal vaccine policies face significant implementation barriers from external sociocultural influences, particularly organized religious rumors.<br>● The study concludes that improving stakeholder engagement across all government levels and establishing clear communication pipelines is essential for successful vaccine rollouts.<br>**Impact**<br>● Impact on decision-making<br>○ The national government heavily relies on KENITAG to collate evidence and uncover pros and cons to shape decisions, though the final decision to roll out a vaccine remains at the government's discretion.<br>● Policy influence<br>○ High policy influence at the formulation stage, but successful implementation suffers severely at the sub-national level due to communication breakdowns and resource gaps. | **Equity**<br>● County-level implementers: The study emphasizes that sub-national/county-level officials are excluded from the national advisory formulation process, requiring them to "domesticate" or adapt national policies to fit unique local geographical needs prior to implementation<br>● Religious lobby groups and rumors: Addressed as a significant external barrier to policy implementation, as specific religious organizations actively propagated rumors that maternal vaccines were laced with contraceptives, leading to vaccine hesitancy.<br>**Transparency**<br>● Transparency and clear communication between national and county governments are cited as critical gaps. County officers reported poor communication from the national government, leaving frontline workers uninformed about updated packages and guidelines<br>**Adaptability**<br>● The policy process incorporates "domestication," where national policy directives are passed down to county committees so that local stakeholders can pick relevant issues and adapt the |
| **Publication date** | April, 2021 | | | |
| **Author/Organization** | Otieno et al. | | | |
| **Jurisdictions studied** | Kenya (National and County levels) | | | |
| **Methods used** | Qualitative study (Semi-structured interviews and grounded theory methodology) | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 7/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | ● Trust and legitimacy<br>○ Trust is actively threatened by vocal anti-vaccine lobby groups and religious misinformation (e.g., claims of contraceptives in vaccines), making community-level stakeholder engagement critical for program legitimacy.<br>● System learning<br>○ The system adapted poorly to the 2013 health system decentralization, exposing a lack of clear transition mechanisms. This resulted in severe intra-governmental communication breakdowns and isolated county implementers from the policy formulation process. | policy document to suit specific local needs before implementation. |
| Evidence-informed policy making at country level: lessons learned from the South African Tuberculosis Think Tank | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee (TB Think Tank).<br>● Mandate<br>○ Strategic, Technical. To advise the South African National TB Programme (NTP) on anti-tuberculosis treatment and prevention policy and programmatic implementation to achieve the National Strategic Plan (NSP)/World Health Assembly targets for TB.<br>● Governance model<br>○ Hybrid. Deeply embedded in the government's policy process (co-chaired by a government official), but designed to carry out work at "arm's length from ministers" to provide independent, objective analysis.<br>● Advisory roles and participation<br>○ Members/external experts<br>○ Co-chaired by a government official (Deputy Director General for Health Strategy) and the head of a South African research institute. Members engage directly as an "interface" between modellers and the government in a "policy dialogue forum."<br>● Membership composition and expertise | **Key findings**<br>● The South African TB Think Tank successfully bridged the gap between global WHO guidelines and localized policy needs. Adapting to a quarterly meeting format focused on high-priority decisions mobilized vigorous engagement from external experts and overworked NTP staff. Functioning as an evidence institution, policy dialogue forum, and interface for complex modelling, its work led to massive funding increases (ZAR 500M) and landmark changes in national MDR-TB treatment policy. For long-term sustainability, ensuring dedicated funding for modeling experts and giving the NTP greater ownership of the Secretariat role is recommended.<br>**Impact**<br>● Policy influence<br>○ Evidence generation and modelling: Impact: Successfully led to massive funding increases (ZAR 500 million conditional grant) and landmark changes | NR |
| **Publication date** | February, 2018 | | | |
| **Author/Organization** | White et al. | | | |
| **Jurisdictions studied** | South Africa | | | |
| **Methods used** | Qualitative study / Program Evaluation (Qualitative external evaluation / Programmatic case study). | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 7/9 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ Highly multidisciplinary and multi-sectoral. Composed of government Health and Finance Medicine (London, UK), technica Department officials, academic modellers, health economists, domestic research institutes (South African MRC), and international partners including the Department of the London School of Hygiene & Tropical I support agencies, funders and the WHO Global TB Programme and UNAIDS (Geneva, Switzerland).<br>● Membership structure and appointment model<br>○ Operates through an Executive Committee and three expert working groups, each chaired by two or more co-chairs (including an NTP staff member and domestic expert organizations). | in national MDR-TB treatment policy (e.g., using bedaquiline and 3HP preventive therapy).<br>● System learning<br>○ Meeting frequency and format: Impact: The operational format was adapted (shifting from monthly calls to quarterly high-stakes meetings) to solve engagement fatigue among unpaid external experts and overworked NTP staff. The Think Tank also formalized three clear roles: an evidence institution, a policy dialogue forum, and an interface to translate complex modelling for policy-makers. | |
| **Decision-making under epistemic, strategic and institutional uncertainty during COVID-19: findings from a six-country empirical study** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, Expert Panel, Task Forces (e.g., Ministerial Advisory Committee (MAC) in South Africa, Scientific Advisory Group for Emergencies (SAGE) in the UK, National Technical Advisory Committee in Bangladesh).<br>● Mandate<br>○ Strategic, Technical. To continuously review emerging epidemiological and clinical data, synthesize evidence from local and international sources, and deliver actionable advice to high-level decision-makers to manage pandemic uncertainty.<br>● Governance model<br>○ Embedded and Hybrid. Advisory bodies were often convened directly by Prime Minister Offices, Cabinet Divisions, or Ministries of Health, while heavily drawing on external academic, international, and civil society partnerships.<br>● Membership composition and expertise<br>○ Highly multidisciplinary.Academic experts such as | **Key findings**<br>● Regardless of the political, geographic, and economic context, the six countries adopted common decision-making strategies in the face of three types of uncertainty (epistemic, strategic, and institutional).<br>● Epistemic uncertainty was addressed by seeking expert advice and triangulating local data with international evidence.<br>● Strategic uncertainty (actor behavior) was managed via robust intergovernmental coordination, multi-sectoral collaboration, and public risk communication.<br>● Institutional uncertainty was managed by adapting pre-existing crisis mechanisms (like Ebola or SARS playbooks) and establishing new institutions and processes.<br>● The study emphasizes that integrating diverse expertise (including social sciences) and maintaining transparent communication about uncertainty are essential for effective crisis | **Adaptability**<br>● Extremely high. Success depended heavily on adapting pre-existing frameworks and forming new expedited legal and regulatory frameworks rapidly to manage institutional uncertainty.<br>● Ability to respond to crises<br>○ Managed through establishing strategic consistency across different levels of government by setting up ad hoc committees, working groups, and COVID-19-specific task forces that held regular meetings.<br>● AI-enabled processes<br>○ Research is needed to understand the application and integration of technological solutions, such as decision support systems, data analytics, artificial intelligence and modelling techniques, into |
| **Publication date** | January, 2025 | | | |
| **Author/Organization** | Asthana et al. | | | |
| **Jurisdictions studied** | Nigeria, Singapore, South Africa, Bangladesh, Jordan, and the United Kingdom | | | |
| **Methods used** | Qualitative comparative analysis / Comparative research design utilizing individual case studies A combination of literature review, desk reviews of documents, remote and in- person interviews with key | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | informants (KII) and focus group discussions (FGDs) were used to collect data for the study. | virologists, infectious disease and infection, bioinformaticians, public health specialists , epidemiologists, clinicians, modellers, immunologists. In the UK experts include natural sciences and social sciences. | decision-making and public trust.<br><br>**Impact**<br>● Policy influence<br>○ Advisory structures: Impact - Directly shaped national lockdowns, mask mandates, border controls, and vaccine rollouts.<br>● Trust and legitimacy<br>○ Transparent public communication: Impact - Openly communicating the concept of uncertainty and the assumptions behind decisions built public trust, whereas confusing or non-transparent communication undermined expert credibility and spurred misinformation.<br>● System learning<br>○ Pre-existing crisis mechanisms: Impact - Facing "institutional uncertainty," countries adapted pre-existing laws and playbooks (e.g., Ebola, SARS) and created new expedited policy mechanisms to manage the crisis. | decision-making systems while also considering their ethical and practical consequences. |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 10/10 (Qualitative study) | | | |
| **Strengthening National Immunization Technical Advisory Groups: Twelve Years of Progress (2012–2023)** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel, Advisory committee, (National Immunization Technical Advisory Groups - NITAGs)<br>● Mandate<br>○ Strategic, Technical. To provide independent, transparent, and evidence-based advice to national immunization policymakers; guide decisions on introducing new vaccines; optimize existing programs; and address broader health system challenges such as low vaccine coverage<br>● Governance model<br>○ Hybrid. Advisory bodies linked to/advising national | **Key findings**<br>● Marked global progress occurred between 2012 and 2023. By 2023, 88% of countries reported having a NITAG, with 77% meeting all six WHO process criteria.<br>● Surprisingly, low-income countries outperformed middle- and high-income countries in meeting all functionality criteria (84% vs. 64% and 69%).<br>● The weakest indicator globally was the advance circulation of meeting documents, highlighting a severe lack of dedicated technical secretariats to support operations. | **Equity**<br>● The study evaluated and stratified NITAG functionality by World Bank income status, finding that low-income countries surprisingly outperformed middle- and high-income countries in meeting all six functionality criteria (84% vs. 64% and 69%).<br>**Transparency**<br>● Formally evaluated via the indicators for mandatory conflict of interest disclosures and the advance distribution of meeting agendas. |
| **Publication date** | January, 2025 | | | |
| **Author/Organization** | Henaff et al. | | | |
| **Jurisdictions studied** | Global (Analyzes data from 193 WHO Member States) | | | |
| **Methods used** | Descriptive and | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | Evaluative policy analysis (Cross-sectional survey / Registry Data Analysis | Ministries of Health. The mandate is to provide independent expert reviews and advice.<br>● Advisory roles and participation<br>○ Composed of core members of multiple disciplines.<br>● Membership composition and expertise<br>○ Evaluated by the presence of a diversity of expertise among core members, specifically referencing pediatrics, public health, infectious diseases, epidemiology, immunology, or other relevant healthcare areas.<br>● Membership structure and appointment model<br>○ Requires a legislative or administrative basis and formal written terms of reference (ToR).<br>● Conflict-of-interest management<br>○ The "mandatory disclosure of any conflicts of interest" is one of the six core process indicators required for functionality. In 2012, this was the lowest-scoring indicator globally. | ● Despite this, NITAGs exhibited high policy influence, with 84% globally issuing vaccine-policy recommendations formally adopted by decision-makers in 2023.<br>● Evidence-to-recommendation frameworks used to review and formulate advice.<br>● The NITAGs give direct output to the MoH, which reviews and formally adopts (or rejects) the recommendations.<br>● Evaluated using the standardized WHO/UNICEF JRF indicators and NITAG Maturity Assessment Tool (NMAT) for comprehensive continuous evaluation. The tacking of these indicators has demonstrated their utility in measuring the institutionalization and growth of NITAG capacities globally.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of the advice: In 2023, 84% of NITAGs globally issued a vaccine-policy recommendation that was formally adopted by decision-makers.<br>● Integration into policies<br>○ Policy influence: NITAG recommendations have a high impact. In 2023, 84% of NITAGs globally issued a vaccine-policy recommendation that was formally adopted by decision-makers (Ministry of Health) | **Adaptability**<br>● Evaluated how small nations pool resources to establish subregional advisory groups (e.g., the Caribbean and Pacific Islands), highlighting the need for flexible advisory arrangements in politically unstable or fragile settings. Regarding the ability to respond to crises, the document identified challenges affecting the operation of NITAGs during health emergencies and periods of political instability. |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Cross-sectional) | | | |
| The role of National Immunisation Technical Advisory Groups (NITAGs) in strengthening national vaccine decision-making: A comparative case study of Armenia, Ghana, Indonesia, Nigeria, Senegal and Uganda. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, National academies, learned societies and networks (National Immunisation Technical Advisory Groups - NITAGs)<br>● Mandate | **Key findings**<br>● NITAGs play a highly valued role in establishing transparent, evidence-based immunization decisions in LMICs by translating global WHO guidelines into locally applicable policies.<br>● Their long-term sustainability is threatened by | **Transparency**<br>● Most NITAG members were willing to share governance documents, though many lacked dedicated websites and shared recommendations through the global NITAG Resource Centre. |
| **Publication date** | July, 2018 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Author/Organization** | Howard et al. | ○ Strategic, Technical. To provide independent technical guidance to national policy-makers and programme managers to support evidence-based and locally-relevant immunization policy and programme decisions.<br>● Governance model<br>○ Embedded / Hybrid. They provide independent technical expertise but are heavily integrated with and often rely on the MoH for funding and secretariat support.<br>● Advisory roles and participation<br>○ Consists of core members, secretariat staff (often seconded from national programmes), and ex-officio observer members representing the MoH, WHO, UN, or NGOs.<br>● Membership composition and expertise<br>○ Multidisciplinary. Core members covered the five Joint Reporting Form (JRF) expertise areas (i.e., epidemiology, immunology, infectious diseases, paediatrics, and public health), and included additional specialties such as microbiology, neurology, and health policy. A notable lack of expertise in economic evaluation and legal topics was observed across most groups.<br>● Membership structure and appointment model<br>○ All NITAGs had Standard Operating Procedures (SOPs) and nomination processes to ensure an appropriate range of expertise. Generally consisted of 10–15 core members (including a chair and deputy), 1–5 secretariat staff, and several ex-officio observers. Ex officio observers included representatives from the MoH and organizations such as WHO, UNICEF, and Sabin. Four NITAGs also established working groups of 5–7 members to develop specific recommendations.<br>● Conflict-of-interest management<br>○ Four of the NITAGs utilized formal COI procedures. However, members did not always fully understand the implications of signing the COI forms, and the actual consequences of declaring interests remained unclear. | insecure funding, reliance on unpaid experts, weak secretariat capacities, and a lack of health economics expertise.<br>● Despite these challenges, NITAGs successfully foster "country ownership" of health policies, empowering governments to push back against external pharmaceutical and donor pressures.<br>● Observed meetings demonstrated a high degree of due process and generally followed an evidence-based decision-making approach, with working groups playing a key role in synthesizing and assessing data.<br>● Interaction format and channels varied, but were usually through chairpersons and/or secretariat. Interviewees highlighted the importance of collaboration between NITAGs and national decision-making bodies.<br>● Mature NITAGs were generally well integrated into national decision-making processes and valued by MoH. While recommendations were often adopted, implementation sometimes depended on available funding.<br>● The researchers evaluated the advisory bodies using the SIVAC NITAG Evaluation Tool categories (Functionality, Quality, Integration).<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: High. Mature NITAGs were generally well integrated into national decision-making processes and valued by MoH. While recommendations were often adopted, implementation sometimes depended on available funding.<br>● Policy influence<br>○ Integration into policies: High impact for MoH adoption. Most recommendations | Meetings allowed non-member observers by prior arrangement.<br>**Adaptability**<br>● NITAGs respond to MoH requests or jointly develop agendas to adapt international recommendations to local conditions using local data. Recommendations also adapt to programmatic realities by commonly considering financial constraints and funding implications associated with their implementation. |
| **Jurisdictions studied** | Armenia, Ghana, Indonesia, Nigeria, Senegal, and Uganda. | | | |
| **Methods used** | Qualitative study / Mixed-method case series. Semi-structured key informant interviews with six national advisory bodies (56 experts), NITAG meeting observations, and documentary analysis. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 7/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | produced (e.g., in Armenia, Indonesia, and Senegal) were adopted by the national governments.<br>● Trust and legitimacy<br>○ Public or stakeholder trust: NITAGs play a highly valued role in establishing transparent, evidence-based immunization decisions in LMICs by translating global WHO guidelines into locally applicable policies. NITAG meetings demonstrated a high degree of due process and generally followed an evidence-based decision-making approach, with working groups playing a key role in synthesizing and assessing data.<br>● System learning<br>○ Institutional learning or adaptation: NITAGs served as an instrument of national ownership, capacitating LMICs to utilize local evidence to resist external political pressure, funding partner influence, or pharmaceutical manufacturer demands regarding vaccine introductions. | |
| Twenty-one-year report from the Danish Health Authority Expert Advisory Panel for review of treatment of 10 000 cancer patients | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Expert Panel, Advisory committee<br>● Mandate<br>○ Technical. To provide independent expert advice on treatment possibilities for individual patients with life-threatening diseases who have exhausted standard-of-care options, including nationally non-approved treatments, treatment abroad, and clinical trial participation.<br>● Governance model<br>○ Embedded. The Panel operates under the DHA, which administratively screens referrals before forwarding them | **Key findings**<br>● Over 21 years, the Danish Health Authority's Expert Advisory Panel evaluated 11,034 cancer cases, advising further treatment in Denmark for 53% of cases (primarily non-approved treatments or clinical trials). The Panel successfully identified recurrent unmet needs, triggering the establishment of six Experimental Units and early access programs for novel drugs. However, case referrals plummeted recently (to 51 in 2023) because regional reimbursement policies became highly restrictive. The report demonstrates that an | **Equity**<br>● Geographically distributed units: The creation of 6 geographically distributed Experimental Units was intended to optimize equitable geographical access to treatments.<br>● Individual expert assessment: A 2019 parliamentary consensus paper aimed to ensure "equal access to drugs" for all patients with life-threatening diseases based on individual expert assessments<br>**Transparency**<br>● COI declarations for all permanent |
| **Publication date** | May, 2025 | | | |
| **Author/Organization** | Ladekarl et al. | | | |
| **Jurisdictions studied** | Denmark | | | |
| **Methods used** | Descriptive / Programmatic Report | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | (Retrospective, descriptive analysis of a national administrative database) | to the Panel. A separate Executive/Coordinating Committee (headed by DHA, with Panel members, the Danish Medicines Agency, and Heads of Experimental Units) oversees identification and response to emergent medical needs.<br>● Advisory roles and participation<br>○ Permanent Panel members (clinical oncologists, hematologists, surgeons) conduct case assessments. Ad hoc members with specific expertise are appointed for rare cases. The DHA administratively screens referrals before forwarding them to the Panel.<br>● Membership composition and expertise<br>○ Clinicians with comprehensive research expertise and experience in treating cancer. Includes up to 4 clinical oncologists, up to 3 hematologists, and 2 surgeons as permanent members (recruited nationwide). Ad hoc members are recruited for rare or highly specialized cases.<br>● Membership structure and appointment model<br>○ Permanent members are appointed by the DHA for 2-year renewable terms. For the first 13 years, there were only 2 permanent members; this was later expanded to up to 9 members. Ad hoc members are appointed on a case-by-case basis.<br>● Conflict-of-interest management<br>○ All permanent members must submit an annual conflicts of interest (COI) declaration, which is published on the DHA website. | advisory panel's systemic impact and utility are fundamentally dependent on the availability of clinical units and associated healthcare reimbursement mechanisms.<br>**Impact**<br>● Impact on decision-making<br>○ Individual case review: Impact: The Panel evaluated 11,034 cases, advising further treatment in Denmark in 53% of cases (including non-approved treatments and trial participation).<br>○ Reimbursement policies: Impact: The recent decline in referrals demonstrates a direct link between restrictive reimbursement policies and the reduced practical applicability/effectiveness of the Panel's advice.<br>● Policy influence<br>○ Identification of recurrent unmet needs: Impact: Directly triggered the establishment of six Experimental Units and early access programs, facilitating the introduction of novel anticancer drugs that were later approved as national standard-of-care.<br>● System learning<br>○ Unmet needs tracking: Impact: The systematic review of individual cases allowed the health system to adapt by identifying unmet needs, initiating multiple investigator-driven clinical trials, and establishing Denmark's first certified phase 1 trial unit. | members are published publicly on the DHA website.<br>**Adaptability**<br>● The Panel demonstrated strong structural adaptability over 21 years: expanding from 2 to 9 permanent members, adjusting its mandate scope via Executive Order in 2017, shifting recommendations toward trial participation as the drug landscape evolved, and triggering the establishment of Experimental Units in response to unmet needs. |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 7/10 (Descriptive case series) | | | |
| When "Good Evidence" Is Not Enough: A Case of Global Malaria Policy Development (90) | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee. | **Key findings**<br>● High-quality scientific evidence (credibility) is insufficient to guarantee smooth policy uptake; | **Transparency**<br>● Crucial for legitimacy. IPTi was criticized for conflicts of interest due to WHO- |
| **Publication date** | March, 2018 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Author/Organization** | D'Souza and Parkhurst | ● Mandate<br>○ Strategic, Technical. To review evidence and advise the WHO on the development of global policy recommendations to control and eliminate malaria.<br>● Governance model<br>○ Embedded (Advisory body embedded in an international organization - WHO Global Malaria Program).<br>● Membership composition and expertise<br>○ Composed of technical experts and researchers in the field of global malaria control. Specific disciplines are not reported. | evidence must also be relevant (salience) and reviewed through a legitimate process. The IPTi policy process was undermined by conflicting agendas, aggressive researcher lobbying, blurred conflict-of-interest boundaries between the WHO and researchers, and a lack of transparency. Learning from this, the WHO restructured its advisory system to create the MPAC. This ensured that the subsequent SMC policy process was transparent, independent, and universally perceived as a legitimate model process, demonstrating that advisory bodies must enable credible, transparent evidence review<br><br>**Impact**<br>● Policy influence<br>○ WHO policy recommendations: Impact: Both interventions (IPTi and SMC) ultimately resulted in global WHO policy recommendations.<br>● System learning<br>○ Contentious IPTi policy process: Impact: The political fall-out from the delayed and contentious IPTi process acted as a catalyst for institutional adaptation, directly triggering the WHO-GMP's 2011 policy-setting strengthening exercise and the creation of the MPAC to increase the timeliness, transparency, independence, and relevance of its recommendations. | GMP's involvement, which weakened its legitimacy. In contrast, SMC was viewed more positively for maintaining transparency and independence, supported by a clearer and restructured evidence review process. |
| **Jurisdictions studied** | Global / International (Focusing on the World Health Organization (WHO) Global Malaria Program) | | | |
| **Methods used** | Qualitative interpretive case study.<br>Data for this analysis came from 29 key informants interviewed between October 2014 and October 2015. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 8/10 (Qualitative study) | | | |
| COVID-19 vaccine policy development in a sample of 44 countries – Key findings from a December 2021 survey of National Immunization Technical Advisory Groups (NITAGs) | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (National Immunization Technical Advisory Groups - NITAGs)<br>● Mandate | **Key findings**<br>● In many countries, NITAGs acted as the main advisory body, and Ministries of Health frequently adopted their recommendations.<br>● NITAGs showed adaptability during the | **Equity**<br>● Institutional capacity differences: Capacity varied starkly according to each country's income level, with low-income countries lacking the staffing |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Publication date** | November, 2022 | ○ Strategic, Technical<br>● Governance model<br>○ Hybrid. NITAGs advise Ministries of Health directly but are expected to operate with technical independence from government policymakers and external partners.<br>● Advisory roles and participation<br>○ NITAG members are primarily technical experts who participate in deliberative processes, and in some cases interact with or participate in other related committees (e.g., COVID committees)<br>● Membership structure and appointment model<br>○ Not clearly specified for NITAGs. However, 68% of responding countries reported dedicated COVID-19 vaccination committees operating alongside or in place of NITAGs, suggesting ad hoc or temporary advisory structures during the pandemic, although their exact structure was unclear. The study also reports limited increases in NITAG staffing capacity despite increased workload. | pandemic by issuing multiple guidance statements and addressing challenges such as prioritization, logistics, and supply constraints.<br>● WHO and the Global NITAG Network (GNN) were important sources of evidence, clarification, and coordination support.<br>● Key challenges included population prioritization, vaccine safety concerns, and programmatic and supply limitations.<br>● Most NITAGs did not increase staffing despite increased workload, and capacity varied across income levels.<br>● The pandemic highlighted opportunities to strengthen advisory systems through improved procedures, implementation data, and coordination.<br>**Impact**<br>● Impact on decision-making<br>○ NITAG recommendations: Impact: Frequently adopted by Ministries of Health, though sometimes limited by programmatic or supply constraints<br>● Policy influence<br>○ Contextual challenges: Impact: Guidelines did not fully address contextual challenges (e.g., logistics, supply), indicating a need for more context-sensitive and operationally relevant recommendations to improve policy integration<br>● Trust and legitimacy<br>○ Credible guidance source: Impact: NITAGs were largely trusted by Ministries of Health as a credible and reliable source of guidance on COVID-19 vaccine decision-making<br>● System learning | increases seen in high-income countries to accommodate extra workload, relying more heavily on WHO Country Offices<br>**Adaptability**<br>● Ability to respond to crises<br>○ During the COVID-19 pandemic, advisory processes and outcomes were continuously adjusted in response to rapidly evolving circumstances<br>○ NITAGs adapted global guidelines to local contexts |
| **Author/Organization** | Kahn et al. | | | |
| **Jurisdictions studied** | Multiple (44 countries across 6 WHO regions) | | | |
| **Methods used** | Cross-sectional study (Descriptive online survey) | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/9 (Descriptive) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | ○ Pandemic experience: Impact: Prompted reflection and adaptation, identifying opportunities to strengthen NITAGs, such as the need for more structured procedures, better integration of implementation data, and stronger coordination mechanisms | |
| Improving Vaccine Assessment Pathways and Decision Making in the Polish Immunization Program | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Expert Panel (National Immunization Technical Advisory Groups - NITAGs)<br>● Mandate<br>○ Strategic, Technical. The Vaccination Team (VT) prepares opinions on vaccinations on request of the MoH or the team's chairman, analyzes the vaccination program's consistency with epidemiological situations, and reviews the National Immunization Plan (NIP) calendar and legislative changes. The Sanitary and Epidemiological Council (SEC) is an advisory body to the Chief Sanitary Inspector that works based on internal policy; its scope is broader than only immunization.<br>● Governance model<br>○ Embedded within government structures. Poland has two NITAGs, the VT, which operates under the MoH, and the SEC, which is affiliated with the Main Sanitary Inspectorate.<br>○ The Polish Agency for Health Technology Assessment (AOTMiT) serves as the national HTA body.<br>● Advisory roles and participation<br>○ Unspecified. The authors mentioned academic experts and invited experts.<br>● Membership composition and expertise<br>○ Unclear. The study described is multidisciplinary. The NITAGs indicate the participation of academic experts, particularly those with expertise in infectious disease threats and strong knowledge of the country's epidemiological situation, supported by an efficient | **Key findings**<br>● Poland suffers from delayed vaccine access because its National Immunization Program lacks a formalized assessment framework<br>● Current NITAGs are under-resourced, lack transparency, and produce non-binding recommendations that are often ignored<br>● While the national HTA agency conducts timely reviews, it fails to incorporate necessary fiscal and broader economic modeling for vaccines<br>● Experts strongly recommend establishing a single, formally empowered, well-resourced, and independent NITAG integrated directly into national decision-making<br>● NITAG recommendations and statements are generally not publicly available, which limits their transparency and reduces their impact. They are also non-binding, meaning public health stakeholders are not required to consult or follow them.<br>● The researchers utilized an expert panel questionnaire to systematically evaluate the vaccine market access pathway based on four specific performance attributes: regularity/timeliness, inclusiveness, transparency, and consistency.<br>**Impact**<br>● Impact on decision-making<br>○ Uptake of advice: NITAG recommendations are non-binding, public | **Transparency**<br>● Consistently evaluated as poor<br>● Most experts rated early assessment steps, NITAG operations, and resource allocation as highly non-inclusive and non-transparent<br>● It is unclear how NITAGs disseminate their recommendations. The SEC does not publish meeting minutes, which can only be accessed through public information requests. The VT provides very limited information on its website, with only one protocol from 2019 available, leaving most recommendations unpublished and used primarily for internal MoH use. |
| **Publication date** | March, 2024 | | | |
| **Author/Organization** | Czech et al. | | | |
| **Jurisdictions studied** | Poland | | | |
| **Methods used** | Cross-sectional study / Expert survey (Desk research and roundtable expert panel) | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Cross-sectional) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | surveillance system that provides evidence for immunization decisions. The VT specifically mentions the involvement of pediatricians. Regarding AOTMiT, the participation of experts is noted, but their specific areas of expertise are not clearly specified.<br>● Membership structure and appointment model<br>○ The VT is an expert team formed by ordinance of the MoH.<br>○ The SEC was established on the basis of an act and consists of 15 members, a chairman, and secretaries appointed for three-year terms.<br>○ The AOTMiT operates on the basis of an act. | health stakeholders are not obliged to consult or consider them<br>● Policy influence<br>○ Integration into policies: Policy influence is low. NITAG recommendations are not binding, public health stakeholders are not obliged to consult or consider them. This lack of impact demotivates experts and contributes to Poland being a late adopter of new vaccines (averaging >6 years for access).<br>● Trust and legitimacy<br>○ Public or stakeholder trust: Transparency is remarkably low. Decision-making on vaccine availability in Poland is closely linked to public financing and reimbursement. Positive decisions are communicated through the reimbursement list or the annually published NIP calendar, although future communication will require formal ordinances and broader consultation following a 2023 Constitutional Court ruling, potentially increasing transparency. It is unclear how NITAGs disseminate their recommendations. The SEC does not publish meeting minutes, which can only be accessed through public information requests. The VT provides very limited information on its website, with only one protocol from 2019 available, leaving most recommendations unpublished and used primarily for internal MoH use.<br>● System learning<br>○ Institutional learning or adaptation: Experts strongly recommend establishing a single, formally empowered, well- | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | resourced, and independent NITAG integrated directly into national decision-making. | |
| Role of the National Immunisation Technical Advisory Groups in 13 European countries in the decision-making process on vaccine recommendations | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee<br>● Mandate<br>○ Strategic, Technical. To make recommendations on the incorporation of a vaccine into a national immunization program.<br>● Governance model<br>○ Hybrid. NITAGs are responsible for providing independent, well-informed advice to the national government bodies. And they have an advisory role, with the Ministry of Health or other authorities deciding on the recommendations.<br>● Advisory roles and participation<br>○ Mapped NITAG representatives including NITAG chairs, members and secretariats. | **Key findings**<br>● Disease burden and financial resource availability are the primary criteria driving vaccine recommendations in the surveyed European nations<br>● NITAG recommendations are overwhelmingly advisory, with only one country reporting binding advice<br>● The study revealed a fragmented advisory landscape with significant overlapping efforts, underscoring the need for stronger cross-country coordination among NITAGs to optimize evidence collation and resource use<br>● Lack of political and managerial commitment to these issues represents a gap worth addressing<br>**Impact**<br>● Policy influence<br>○ Advisory bodies: NITAGs drive the updates of national immunisation plans, targeting high-priority diseases, although final implementation is subject to financial and political approval<br>● System learning<br>○ Coordination mechanisms: The survey highlights a systemic need for European NITAGs to evolve from fragmented, autonomous operations to integrated networks that share evidence-to-recommendation processes, applying lessons learned from the robust coordination seen during the COVID-19 pandemic | **Equity**<br>● SAGE standards criteria: According to SAGE standards for the development of evidence-based vaccination-related recommendations, additional criteria such as equity and acceptability of the intervention should be considered<br>**Adaptability**<br>☐ The COVID-19 vaccine introduction showcased robust coordination between organizations like WHO SAGE, ECDC and national NITAGs, promoting real-time knowledge sharing and evidence-based practices |
| **Publication date** | October, 2023 | | | |
| **Author/Organization** | Martinelli et al. | | | |
| **Jurisdictions studied** | Multiple (13 European countries) | | | |
| **Methods used** | Cross-sectional study / Online survey | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 5/7 (Cross-sectional) | | | |
| Challenges to decision-making processes in the national HTA agency in Brazil: operational | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body | **Key findings**<br>● CONITEC synthesizes evidence from internal, | **Transparency**<br>● The CONITEC processes are largely |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| procedures, evidence use and recommendations | | ○ Advisory committee (National Committee for Health Technology Incorporation - CONITEC)<br>● Mandate<br>○ Technical<br>● Governance model<br>○ Embedded. CONITEC is part of the Brazilian Unified Healthcare System (Sistema Único de Saúde, SUS) and advises the Ministry of Health (MoH). | external, and mixed requests for health technology assessments to make recommendation reports to the Brazilian Ministry of Health<br>● There is a lack of compliance between CONITEC's internal regulations regarding required evidence type/quality, and the actual evidence considered from 2012-2016<br>● This difference in evidence varies depending on whether the request originated internally or externally<br>● CONITEC processes should be improved to standardize evidence requirements regardless of the requesting stakeholder<br>**Impact**<br>● Impact on decision-making<br>○ Embedded governance: Impact: Most relevant processes have an impact on decision making because CONITEC is embedded in the Brazilian government system, and recommendation reports go directly to the Ministry of Health<br>● Trust and legitimacy<br>○ Stakeholder submission: Impact: The ability of internal and external stakeholders to submit a request for a recommendation report increases the trust and legitimacy of multiple CONITEC processes<br>○ Application of evaluation frameworks like GRADE, Jadad scale, and Cochrane Collaboration Tool to Assess Risk of Bias increases legitimacy of CONITEC's reports.<br>● System learning<br>○ Procedural changes over time: Impact: The changes described over time (2012-2016) in CONITEC demonstrate system | transparent, but there is a notable disconnect between internal regulations about the type and quality of evidence considered, and the actual evidence utilized depending on if an internal or external body requested the report<br>**Adaptability**<br>● Some CONITEC processes are adaptable because of the wide range of evidence considered and the wide range of stakeholders involved in submitting requests, which could be useful in a crisis response situation |
| **Publication date** | April, 2018 | | | |
| **Author/Organization** | Yuba et al. | | | |
| **Jurisdictions studied** | Brazil | | | |
| **Methods used** | Descriptive Cross-sectional study / Document analysis | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 8/8 (Descriptive) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | learning and institutional changes to this advisory body | |
| Selection of essential medicines for South Africa - an analysis of in-depth interviews with national essential medicines list committee members | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee<br>● Mandate<br>○ Strategic, Technical. National Essential Medicines List Committee (NEMLC) is responsible for the development of an essential medicines list (EML) for use in the public healthcare sector and to prepare standard treatment guidelines (STG) for the health professionals.<br>● Governance model<br>○ Embedded. Final decisions on medicines selection are made by the NEMLC and presented to the Minister of Health for endorsement.<br>● Advisory roles and participation<br>○ Chairperson presides and manages conflicts of interest; Secretariat facilitates documentation; Technical experts provide input as part of the review process, to provide recommendations to the NEMLC; Provincial representatives provide feedback.<br>● Membership composition and expertise<br>○ Multidisciplinary. Content experts, technical experts, provincial representatives, pharmacists, medical specialists, and public health personnel, major clinical programmes representatives (e.g., TB and HIV cluster management).<br>● Membership structure and appointment model<br>○ A standing committee appointed by the Minister of Health on a three-year cycle.Their support structures include the 4 subcommittees, the PTCs and the Secretariat.<br>○ Notice of call for nominations: Issued by the National Department of Health. Advertised at provincial and departmental levels.<br>○ EDP chair+EDP team receives all nominations+supporting documents and conducts selection based on the criteria as stipulated in the call for nomination form. | **Key findings**<br>● The NEMLC's medicine selection has evolved into a predominantly evidence-based process prioritizing quality, safety, efficacy, and cost considerations which includes pharmacoeconomic evaluations, and pricing of medicines. Over 20 years, the committee improved review times, applied more stringent criteria, and developed clearer policies for membership and conflicts of interest. However, significant operational challenges remain, including a lack of local health economic expertise, fragmented national-provincial communication, poor alignment between selection and procurement, and a severe deficiency in monitoring and evaluating the clinical outcomes of EML policies.<br>**Impact**<br>● Policy influence<br>○ Essential medicines list development: Impact: The NEMLC is responsible for the development of an essential medicines list (EML) for use in the public healthcare sector and to prepare standard treatment guidelines for health professionals, which are presented to the Minister of Health for endorsement.<br>● Trust and legitimacy<br>○ Committee processes: Impact: Trust is maintained through the member nomination process, specific selection criteria, strict conflict of interest management, and formalization of advice.<br>● System learning<br>○ Committee maturation: Impact: Over its | **Equity**<br>● Place of residence: Addressed by including provincial representatives to provide feedback on local changes and non-essential medicines across different provinces.<br>**Transparency**<br>● Described by participants as a highly transparent process. All committee policies, terms of reference, and decision rationales were made publicly available online on the NDoH website. Declaration of Interests: This document stipulates that each NEMLC member must review the NEMLC guidance document on declarations of interests before making such a declaration |
| **Publication date** | January, 2017 | | | |
| **Author/Organization** | Perumal-Pillay & Suleman. | | | |
| **Jurisdictions studied** | South Africa | | | |
| **Methods used** | Qualitative study Qualitative in-depth interviews and review of the NEMLC policy documents available on the NDoH website. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 10/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ Minister of Health: Appoints members onto NEMLC based on recommendations received from the EDP team.<br>● Conflict-of-interest management<br>○ Strict conflict of interest guidance document. Members must sign declarations upon appointment and at every meeting. The chairperson reviews these and may exclude conflicted members from decisions.<br>○ Declaration of Interests Guidance Document: Guides NEMLC members, members of Expert Review Committees and any working groups established by the committee as to the circumstances in which they should declare an interest in the health care industry.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: Representation of all 9 provinces is built into the committee's design. | 20-year history, the committee has learned to become more stringent, shifting from considering only acquisition price to implementing rigorous evidence-based medicine and pharmacoeconomic principles | |
| **Common drug review recommendations for orphan drugs in Canada: basis of recommendations and comparison with similar reviews in Quebec, Australia, Scotland and New Zealand** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee<br>● Mandate<br>○ Technical, Risk assessment. To provide a single national review process for approved drugs in Canada. CDR reviews clinical and economic evidence and prepares summary reports for CDEC, which issues non-binding positive or negative recommendations for listing to participating publicly funded drug plans.<br>● Governance model<br>○ Embedded. CDR/CDEC operates within CADTH, a federally funded agency. Recommendations are non-binding; each jurisdiction (provincial drug plan) independently decides whether to participate in collective product listing negotiations and whether to list the product. | **Key findings**<br>● CDR recommendations for orphan drugs were significantly more likely to be positive when both clinical and price parameters were considered. Positive recommendation rates increased from 50% to 86.7% after a 2016 CADTH framework change that accepted conditional clinical uncertainty with future real-world evidence development. Patient input also played a larger role post-2016. However, concordance between the CDR and international HTA bodies remained low, indicating a fragmented global advisory ecosystem. Finally, the non-binding nature of CDR recommendations resulted in highly variable provincial drug uptake across Canada.<br>**Impact**<br>● Impact on decision-making<br>○ CDR non-binding recommendations: Impact: Function as strong predictors of provincial listing — 93% of drugs with a | **Transparency**<br>● CDR recommendations and reasons are publicly published on the CADTH website, providing transparency about the basis of decisions. |
| **Publication date** | January, 2018 | | | |
| **Author/Organization** | McCormick, Berescu & Tadros.<br>McKesson Specialty Health (Canada) | | | |
| **Jurisdictions studied** | Canada (National level), Scotland, Australia, New Zealand, and Quebec | | | |
| **Methods used** | Cross-sectional study / Document review | | | |
| **Relevance rating** | Low | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Quality (JBI)** | 5/5 (Cross-sectional) | | positive CDR recommendation were subsequently listed in Ontario.<br>○ Clinical and price parameters: Impact: For orphan drugs specifically, the basis of the CDR recommendation directly determined the outcome: combined assessments yielded an 86.7% positive rate versus 45.5% for clinical-only assessments.<br>● System learning<br>○ March 2016 CADTH framework: Impact: The evolution of CDR's approach to orphan drugs — from strict thresholds toward conditional acceptance of clinical uncertainty with real-world evidence requirements — represents documented institutional learning in response to limitations of applying standard HTA criteria to rare disease drugs.<br>○ Reconsideration process: Impact: Provided limited evidence of learning — only 32% of reconsidered drugs received a positive recommendation. | |
| **Consolidating political leadership in healthcare: a mediating institution for priority-setting as a political strategy in a local health system** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, Advisory councils (Political Advisory Committee –PAC, which works in conjunction with a Technical Advisory Council –TAC)<br>● Mandate<br>○ Strategic. To prepare proposals and decisions for the Healthcare Board regarding priority-setting, promote deepened knowledge and decisiveness on priority-setting matters across the healthcare system, and engage various groups to establish joint priorities.<br>● Governance model<br>○ Embedded. It is composed entirely of elected regional politicians. | **Key findings**<br>● Establishing a political advisory body (the PAC) for priority-setting serves as a mediating institution to consolidate political leadership in healthcare. Its "mediating purposes" involve enhancing organizational collaboration, systematic governance, political decisiveness, and democratising decisions. Its "mediating functions" promote the political aspects of priority-setting: establishing frameworks, discussing common goals, handling trade-offs, managing competing interests, and deliberating on values. Ultimately, acknowledging scarcity and making explicit priorities helps politicians | **Transparency**<br>● Essential for priority-setting. Without transparent processes and explicit discussions about trade-offs and values, decisions are viewed as unaccountable or illegitimate by the public. |
| **Publication date** | March, 2024 | | | |
| **Author/Organization** | Bergstedt et al. | | | |
| **Jurisdictions studied** | Sweden (Regional authority level; specifically Västra Götaland) | | | |
| **Methods used** | Qualitative study | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Relevance rating** | High | • Advisory roles and participation<br>  ○ Preparing decisions, proposing priority-setting frameworks, and establishing joint priorities by acting as a mediating institution.<br>• Membership composition and expertise<br>  ○ The PAC is uniquely composed of politicians rather than technical experts, representing the eight political parties in the Healthcare Board, as well as representing the owners, purchasers, and providers. Supported by a TAC comprised of civil servants, researchers, and healthcare professionals.<br>• Membership structure and appointment model<br>  ○ The PAC was established in 2020 as a "temporary political advisory committee" consisting of 10 appointed political members, experienced politicians holding top positions. | avoid ad-hoc budgeting and enhances the democratic legitimacy and accountability of resource allocation.<br>**Impact**<br>• Policy influence<br>  ○ Political advisory body (PAC): Impact: Acts as a strategy to shift the region from ad-hoc, fragmented governance toward systematic, explicit priority-setting.<br>• Trust and legitimacy<br>  ○ Explicit priority-setting: Impact: Making priority-setting explicit and transparent democratises the decisions, allowing citizens to hold politicians accountable for resource allocation, thereby strengthening democratic legitimacy.<br>• System learning<br>  ○ Mediating functions: Impact: Enhances organizational collaboration and systematic governance by bringing together actors with different interests to seek mutual agreement, collective sense-making, and a clearer course of action. | |
| **Quality (JBI)** | 9/10 (Qualitative study) | | | |
| **The Role and Influence of Federally Established Health Policy Advisory Bodies in Canada.** | | **Institutional Design of Advisory Bodies:**<br>• Type of advisory body<br>  ○ Advisory committee, Ad hoc advisory groups / Commissions (e.g., National Forum on Health, Romanow Commission, Kirby Committee).<br>• Mandate<br>  ○ Strategic. To provide advice and make broad recommendations regarding structural health system design challenges across Canada, including healthcare funding, coverage, and delivery.<br>• Governance model<br>  ○ Embedded (Established by the prime minister's office or the senate, operating within the government sector rather | **Key findings**<br>• Federal ad hoc health advisory bodies in Canada generally fail to see their recommendations explicitly implemented. The primary barrier is deep-seated jurisdictional conflict between federal and provincial/territorial governments. Because advisory bodies dissolved after reporting, members relied on informal strategies like coalition building and citizen engagement. Ultimately, while direct implementation failed, the reports successfully acted as "influential ideas" shaping long-term policy. Future advisory bodies should include | NR |
| **Publication date** | 2025 | | | |
| **Author/Organization** | Quinn et al. | | | |
| **Jurisdictions studied** | Canada (National level). | | | |
| **Methods used** | Qualitative Study | | | |
| **Relevance rating** | High | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Quality (JBI)** | 10/10 (Qualitative study) | than as independent think tanks).<br>● Advisory roles and participation<br>○ Developing policy recommendations and attempting informal strategies to facilitate their execution.<br>● Membership composition and expertise<br>○ Multidisciplinary. Advisory body members included physicians, professors, policy experts, and politicians. Implementers included political and civil service leadership and consultants to the federal Ministry of Health.<br>● Membership structure and appointment model<br>○ Ad-hoc / Temporary. These advisory bodies dissolved following the submission of their final reports. | detailed implementation plans and mandatory evaluations.<br>**Impact**<br>● Policy influence<br>○ Direct implementation: Impact: Low direct implementation but high conceptual influence. Participants perceived that their specific recommendations were generally not implemented, but the reports were highly successful as "influential ideas" that shaped Canadian health policy discussions for a generation.<br>○ Intergovernmental conflict: Impact: A major barrier to policy influence was intense jurisdictional conflict and mistrust between the federal government and provincial/territorial governments.<br>● System learning<br>○ Advisory body design: Impact: To improve the impact of future advisory bodies, the system must adapt by prioritizing coalition building, integrating explicit implementation plans (with timelines and responsible parties) directly into policy recommendations, and requiring formal evaluations of the advisory reports and processes. | |
| **The critical factors in producing high quality and policy-relevant research: insights from international behavioural science units.** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Science Advisory Office / Agency, Behavioural Science Units (BSUs).<br>● Mandate<br>○ Strategic, Technical. To provide behavioural science evidence and advice to governments to help address societal problems and improve the design, development, and evaluation of public policies (e.g., health initiatives, | **Key findings**<br>● The successful production and implementation of behavioural science advice relies heavily on five factors (the STEPS framework): Sharing, Transparency, Engagement, Partnership, and Strong relationships. While demand for BSUs is high, operations are frequently hampered by precarious project-by-project funding, policymakers' lack of scientific literacy, and | **Equity**<br>● Evaluation of ethical implications: Certain BSUs explicitly evaluate the ethical implications of policy requests, refusing to work on interventions that perpetuate inequality or prop up fundamentally flawed programs.<br>**Transparency**<br>● Critically lacking / High tension. A major |
| **Publication date** | September, 2023 (First published online 14/09/2023) / 2024 (Journal volume). | | | |
| **Author/Organization** | Lecouturier et al. | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | tax compliance, organ donation).<br>● Governance model<br>○ Independent, Embedded, Hybrid (Models range from internally embedded government teams funded directly by the state, to external academic and commercial partners acting as independent advisors).<br>● Advisory roles and participation<br>○ Advice to governments to help address societal problems and improve the design, development, and evaluation of public policies.<br>● Membership composition and expertise<br>○ Multidisciplinary. Most members are behavioural scientists, psychologists, and behavioural economists. Non-government BSUs also employ experts in sociology, political science, health systems, education, epidemiology, anthropology, and service design.<br>● Membership structure and appointment model<br>○ Standing teams that manage critical capacity by employing external consultants, bringing in academic researchers for specific expertise, or funding fellowship schemes to supplement their core staff.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives:<br>■ Inclusion of equity-relevant expertise within the advisory body: When deciding on the projects they accept, BSUs consider the ethical implications of policies the research would inform to avoid interventions that perpetuate inequality. | institutional resistance to Randomised Controlled Trials (RCTs). Furthermore, policymakers frequently block the full public dissemination of research findings to avoid political embarrassment, which fundamentally undermines the accumulation of a reliable evidence base and public trust.<br>**Impact**<br>● Policy influence<br>○ Strong relationships: Impact: High, but heavily dependent on strong relationships. Influence is stymied if policymakers have preconceived expectations of results or reject findings that do not align with their political goals.<br>● Trust and legitimacy<br>○ Public dissemination of findings: Impact: The frequent restriction or embargoing of reports by policymakers due to the sensitivity of the topic or fear of political embarrassment fundamentally undermines the accumulation of a reliable evidence base and public trust.<br>● System learning<br>○ STEPS framework: Impact: High focus. The study resulted in the "STEPS" framework (Sharing, Transparency, Engagement, Partnership, Strong relationships), designed to help advisory systems institutionally adapt by improving knowledge exchange and securing adequate, continuous funding. | operational challenge is securing permission from policymakers to publicly disseminate findings. Policymakers frequently embargo reports or restrict peer-reviewed publication due to the sensitivity of the topic or fear of political embarrassment if an intervention fails. |
| **Jurisdictions studied** | Multiple (Focuses on 15 international Behavioural Science Units across North America, UK, Australia, Europe, Scandinavia, Middle East, and Africa). | | | |
| **Methods used** | Qualitative study (One-to-one semi-structured virtual interviews). | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 8/10 (Qualitative study) | | | |
| Assessing the impact of an evidence- and consensus-based guideline for controlling SARS-CoV-2 transmission in German schools on decision-making processes: a multi-component qualitative analysis. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Expert Panel / Advisory committee (An ad-hoc interdisciplinary guideline panel)<br>● Mandate | **Key findings**<br>● The guideline produced by the panel was known by decision-makers and was sometimes considered alongside other evidence when making decisions about public health and social | **Equity**<br>● Educational attainment evaluation: Unintended effects on educational attainment were systematically considered using the WHO- |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Publication date** | December, 2023 (Published 19/12/2023). | ○ Strategic, Risk Assessment. To rapidly develop an evidence- and consensus-based public health guideline (S3-guideline) to provide decision-makers with recommendations for preventing and controlling SARS-CoV-2 transmission in schools, aiming to keep schools open safely while minimizing unintended negative societal impacts.<br>● Governance model<br>○ Independent. (Functioned as an independent scientific and stakeholder consensus group, though its outputs were presented publicly by the Federal Minister for Education and Research and some members may have been governmental public health officials).<br>● Advisory roles and participation<br>○ Scientific experts and public health authorities engaged in formal consensus-building procedures alongside the "school family" (stakeholders representing students, parents, and teachers) who were directly integrated into the process.<br>● Membership composition and expertise<br>○ Highly multidisciplinary and inclusive. The panel included scientific experts, public health authorities, and crucially, those directly affected by school measures: stakeholders representing students, parents, and teachers.<br>● Membership structure and appointment model<br>○ An ad-hoc guideline panel structured around formal consensus-building and participatory representation of stakeholders.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: The panel deliberately integrated those directly affected by school measures—the "school family" (students, parents, teachers)—into the formal consensus process.<br>○ Inclusion of equity-relevant expertise within the advisory body: The panel explicitly utilized the WHO-INTEGRATE Evidence-to-Decision (EtD) framework to systematically | measures in schools in Germany. Enablers of the panel's impact included the range of members (including "school families"), adaptability, and transparency of the consensus process. However, major barriers were the non-binding nature of the guideline advice and the fact that it was not always applicable to the local context or fast enough to keep up with the dynamic pandemic.<br>**Impactt**<br>● Impact on decision-making<br>○ Guideline and recommendations: Impact: Uptake of advice and integration into policies was sometimes a result of the panel's processes. The guideline produced by the panel was considered by decision-makers in some instances, and not in others.<br>● Policy influence<br>○ Specific regulatory updates: Impact: Two states explicitly changed school regulations based on the guideline. However, the overall impact on macro-level political decisions was limited, as the advice was treated as just one of many information sources.<br>● Trust and legitimacy<br>○ Participatory, evidence-based consensus process: Impact: Decision-makers and panel members highly valued the transparency and legitimacy derived from the participatory, evidence-based consensus process.<br>● System learning<br>○ Rigorous consensus methodology: Impact: The consensus methodology caused the guideline to "lag behind" the | INTEGRATE EtD framework.<br>● Impact on female caregivers: The economic impact on female caregivers was systematically evaluated.<br>● Direct inclusion of civil society: The panel deliberately integrated those directly affected by school measures—the "school family" (students, parents, teachers)—into the formal consensus process.<br>● Psychosocial evaluation: Unintended negative societal impacts on psychosocial wellbeing were explicitly considered.<br>**Transparency**<br>● High. The structured voting utilizing an online tool and the WHO-INTEGRATE EtD framework ensured transparency in how societal values and evidence were weighed.<br>**Adaptability**<br>● Almost all processes described were adaptable to the then-current COVID-19 pandemic.<br>● Ability to respond to crises<br>○ Evaluated as limited. The rigorous consensus methodology reduced the panel's ability to respond quickly to the crisis, causing the guideline to "lag behind" the rapidly evolving pandemic. |
| **Author/Organization** | Wabnitz et al. | | | |
| **Jurisdictions studied** | Germany (National and Federal State levels, with specific focus on Bavaria and Bremen). | | | |
| **Methods used** | Qualitative study (Multi-component qualitative analysis). | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 10/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | consider unintended effects beyond health outcomes, such as educational attainment, psychosocial wellbeing, and the economic impact on female caregivers. | fast-paced pandemic, reducing its utility for acute crisis management. Participants learned that guidelines need to balance scientific rigor with speed and provide practical "micro steering" capability that is context-specific for local health authorities | |
| Knowledge mobilisation of rapid evidence reviews to inform health and social care policy and practice in a public health emergency: Appraisal of the Wales COVID-19 Evidence Centre processes and impact, 2021–23. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Science Advisory Office / Agency (Wales COVID-19 Evidence Centre [WCEC]).<br>● Mandate<br>○ Strategic, Technical.The purpose of the WCEC was to collect research evidence and ensure this was accessible and rapidly available to the people making decisions for health and social care policy and practice in Wales during the pandemic, and in the later move towards recovery.<br>● Governance model<br>○ Hybrid. A member of the Welsh Government Technical Advisory Cell (TAC) working closely with the WCEC core team to facilitate engagement and communication between Welsh Government teams and the Centre.<br>● Advisory roles and participation<br>○ The WCEC utilized a core team alongside dedicated partner research groups. Crucially, the process heavily relied on external stakeholders and policy-makers joining as active co-producers for individual reviews.<br>● Membership structure and appointment model<br>○ Comprised of a WCEC core team, associated research groups, and public associate members via the Public Collaboration Group (8 members). | **Key findings**<br>● In two years of operation (March 2021–23), the WCEC engaged and collaborated with 44 stakeholder groups and produced 51 reports from its rapid review work.<br>Co-production and early engagement with stakeholders were essential for ensuring research evidence was actually utilized in a crisis.<br>The WCEC successfully bridged the gap between evidence and policy using flexible, targeted knowledge mobilization tools—most notably, 2-page Topline summaries and infographics. Having a "boundary-spanning" individual working between the evidence centre and the government was invaluable for facilitating communication and tracking impact.<br>The WCEC's outputs directly influenced multiple Welsh Government pandemic responses and long-term recovery plans.<br>**Impact**<br>● Impact on decision-making<br>○ Targeted knowledge mobilization tools (Topline summaries, infographics): Impact - Successfully bridged the gap between evidence and policy, ensuring research evidence was actually utilized in a crisis.<br>● Policy influence<br>○ Rapid evidence reviews and reports: Impact - Twenty-one review reports were | **Adaptability**<br>● Knowledge mobilisation processes were highly iterative and flexibly tailored to meet the varying requirements of stakeholders. |
| **Publication date** | November, 2024. | | | |
| **Author/Organization** | Gal et al. | | | |
| **Jurisdictions studied** | United Kingdom (Wales) | | | |
| **Methods used** | Mixed-methods programmatic review (Primary study). Stakeholder survey (using a 5-point Likert scale and open-ended feedback), administrative metrics tracking (downloads, citations in policy documents). | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | N/A | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | explicitly referenced in Welsh Government advice and reports, directly informing policies.<br>● Trust and legitimacy<br>○ Co-production process with stakeholders: Impact - Fostered high trust; 90.9% of surveyed respondents strongly agreed that they trusted the information in the reports, largely attributing this to their direct involvement.<br>● System learning<br>○ Boundary-spanning individuals: Impact - Having a "boundary-spanning" individual working between the evidence centre and the government was identified as an invaluable adaptation for facilitating communication and tracking impact. | |
| **SAGE advice and political decision-making: 'Following the science' in times of epistemic uncertainty.** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, Scientific Advisory Group for Emergencies (SAGE), and its sub-groups like SPI-M.<br>● Mandate<br>○ Strategic, Technical. To provide coordinated, timely scientific and/or technical advice through the review and analysis of existing data, the assessment of existing research, and the commissioning of new research during emergencies.<br>● Governance model<br>○ Embedded. SAGE operates directly as the principal source of scientific advice for the UK government during emergencies.<br>● Advisory roles and participation<br>○ Co-chaired by the UK's Chief Scientific Advisor (CSA) and Chief Medical Officer (CMO), there are also observers and a secretariat. Members include academic researchers, public agency representatives, and departmental chief scientific advisers. Formulating pandemic interventions | **Key findings**<br>● The failure to implement an early lockdown in the UK was driven by a political decision to strictly "follow the science." This framing forced SAGE to prioritize high levels of scientific certainty before making recommendations. Because robust epidemiological models required weeks of real-world data, SAGE could not recommend early precautionary action. When data confirmed the healthcare system would be overwhelmed, policy shifted rapidly. Demanding high epistemic certainty during a fast-moving emergency makes timely, precautionary political action impossible.<br>**Impact**<br>● Policy influence<br>○ Demand for scientific certainty: Impact - High but delayed. Because SAGE required high scientific certainty, early precautionary action was stalled. When | |
| **Publication date** | November, 2021 (Published online) / 2022 (Journal Volume). | | | |
| **Author/Organization** | Evans. | | | |
| **Jurisdictions studied** | United Kingdom (National level). | | | |
| **Methods used** | Qualitative study / Document analysis. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 9/9 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | and timing the implementation of lockdown measures.<br>● Membership composition and expertise<br>○ Multidisciplinary. The group relied heavily on epidemiologists and modellers (SPI-M), with behavioural scientists added later (SPI-B), but notably lacked broader public health and social science representation.<br>● Membership structure and appointment model<br>○ Standing official emergency advisory group that convenes sub-groups (e.g., SPI-M for modelling) to handle specific technical inputs. | SAGE abruptly changed its advice on March 16 (warning that the NHS would be overwhelmed), the government immediately shifted policy and enacted stringent lockdown measures.<br>● System learning<br>○ Differentiation between technical and political phases: Impact - The author argues that advisory bodies and politicians must learn to differentiate between the "technical" and "political" phases of decision-making. Politicians must frame questions that allow experts to provide risk assessments based on uncertain data, rather than waiting for absolute scientific certainty. | |
| Association Between Food and Drug Administration Advisory Committee Recommendations and Agency Actions, 2008–2015. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, Human Drug Advisory Committees.<br>● Mandate<br>○ Technical, Risk assessment. To consult on matters of scientific and regulatory importance, evaluate new medical products, assess safety concerns, establish new drug development programs, and draft new guidance.<br>● Governance model<br>○ Embedded. Advisory committees are formally convened by and report to the FDA<br>● Advisory roles and participation<br>○ Advising the US Food and Drug Administration (FDA) in evaluating drug safety, efficacy, and risk-benefit profiles.<br>● Membership composition and expertise<br>○ Multidisciplinary. Consists of independent medical and scientific experts who possess relevant clinical, research, statistical, or other expertise, as well as patient, community, and industry representatives.<br>● Membership structure and appointment model<br>○ The FDA operates multiple specialized standing | **Key findings**<br>● FDA advisory committee recommendations and agency final actions agreed in 78% of cases (2008–2015). Higher committee consensus significantly reduced the likelihood of discordance. Safety-related meetings showed the highest discordance rate (48%). When discordant, the FDA took a more restrictive stance in 75% of cases, overriding favorable recommendations on novel products. Conflicts of interest and public speaker statements were not statistically associated with discordance. The FDA applies a higher decision threshold than its advisory committees under conditions of uncertainty.<br>**Impact**<br>● Policy influence<br>○ Advisory committee recommendations: Impact - Demonstrably influenced FDA regulatory decisions, though not deterministic. In cases where the FDA | **Transparency**<br>● High focus. Federal law mandates that advisory committee meetings are open to the public, and minutes, transcripts, and voting records are made publicly available. Public hearing sections provide a formal mechanism for external stakeholder input, although COI among public speakers was not systematically disclosed or documented. |
| **Publication date** | 2019 | | | |
| **Author/Organization** | Zhang et al. | | | |
| **Jurisdictions studied** | United States (National level). | | | |
| **Methods used** | Cross-sectional study / Document analysis (Retrospective analytical cross-sectional study). | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 8/8 (Cross sectional) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | committees (e.g., Oncologic Drugs) convened for specific regulatory meetings.<br>● Conflict-of-interest management<br>○ COI disclosure is formally required and governed by regulatory statute. The FDAAA sets a cap on the number of advisory committee members permitted to have conflict-of-interest waivers. | took a more restrictive stance than favorable committee recommendations, 54% of those were eventually approved.<br>○ Institutional and reputational concerns: Impact - Acted as potential drivers of divergence, as the FDA took a less restrictive stance than its advisory committees on safety actions to avoid reversing earlier approval decisions and damaging institutional credibility.<br>● Trust and legitimacy<br>○ Transparent deliberation: Impact - Advisory committees provide a critical opportunity for the FDA to build and maintain public trust through transparent deliberation | |
| Challenges to evidence-informed decision-making in the context of pandemics: qualitative study of COVID-19 policy advisor perspectives. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Expert Panel, Advisory committee, Independent scientific advisory groups, and university task forces.<br>● Mandate<br>○ Strategic, Technical. To rapidly evaluate, interpret, and translate evolving scientific evidence to inform decision-makers on appropriate COVID-19 public health containment strategies and non-pharmaceutical interventions (NPIs).<br>● Governance model<br>○ Independent, Embedded, Hybrid (Spanning from entirely independent panels of experts to embedded technical advisors within government ministries).<br>● Advisory roles and participation<br>○ Advising on policy formulation for community-based non-pharmaceutical interventions such as school closures, mask ordinances, and lock-downs.<br>● Membership composition and expertise<br>○ Multidisciplinary. Interviewees included scientific experts | **Key findings**<br>● Scientific advisors faced profound challenges interpreting and translating evidence for pandemic policy. Key barriers included the overwhelming speed of evolving/conflicting data, concerns over scientific rigor, a lack of local research capacity in LMICs forcing reliance on irrelevant HIC data, and extreme uncertainty. Furthermore, there was a severe lack of transparency from policymakers regarding how scientific advice was weighed and used. The study concludes that the world urgently needs formalized, adaptable global EIDM guidance that builds equitable research capacity and harmonizes transparent decision-making infrastructures.<br>**Impact**<br>● Impact on decision-making<br>● Policy influence<br>○ Scientific evidence/advice: Impact: High, | **Equity**<br>● Disparity in access to contextually relevant evidence: Emphasizes the disparity in access to contextually relevant evidence for LMICs compared to HICs. Advisors in LMICs faced severe challenges lacking local research capacity and relying on data generated in HICs, indicating a need for equitable global research investments.<br>**Transparency**<br>● Highlighted as severely lacking. A major recommendation is the need for decision-makers to be transparent about how scientific advice is weighed against other policy inputs.<br>**Adaptability**<br>● The study concludes that the world urgently needs formalized, adaptable global EIDM guidance that builds |
| **Publication date** | April, 2022 (Accepted 04/04/2022) / 2022 (Published) | | | |
| **Author/Organization** | Vickery et al. | | | |
| **Jurisdictions studied** | Multiple (11 countries across 4 WHO regions: Australia, Canada, Colombia, Denmark, Ghana, Hong Kong, Nigeria, Sweden, Uganda, UK, USA). | | | |
| **Methods used** | Qualitative study. | | | |
| **Relevance rating** | High | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Quality (JBI)** | 10/10 (Qualitative study) | from epidemiology, biology, infectious disease, immunology, and anthropology. The study strongly emphasizes the need to include social and behavioural sciences to understand public compliance and unintended societal impacts.<br>● Membership structure and appointment model<br>○ Mixed. Interviewees reported participating in diverse advisory structures, including independent advisory groups, panels and tables created in response to the crisis, consultancy partnerships, university-level committees, and existing governmental public health advisory structures. | but mediated by politics. Advisors informed major NPIs, but their evidence was only one part of a complex equation weighed against political feasibility, economic impacts, and public compliance.<br>● Trust and legitimacy<br>○ Opacity of policy-making: Impact: A lack of transparency regarding how politicians weighed the science bred frustration among advisors and skepticism among the public.<br>● System learning<br>○ Global EIDM stress-test: Impact: The pandemic revealed that the volume of science produced often came at the expense of interpretability and trustworthiness, demonstrating that global mechanisms (like the WHO R&D Blueprint) must adapt to better support localized research capacity in LMICs. | equitable research capacity and harmonizes transparent decision-making infrastructures. |
| Interaction between science advice and policymaking in time of COVID-19: a French perspective (67). | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory councils, Advisory committee (Haut Conseil de la Santé Publique - HCSP).<br>● Mandate<br>○ Strategic, Technical. To respond to formal requests from ministries and parliament committees on any matter relating to prevention, health security, and the performance of the health system.<br>● Governance model<br>○ Embedded / Hybrid. Acts as an official advisory arm to the government's central administration while utilizing external, independent experts.<br>● Advisory roles and participation<br>○ Formulating operational guidelines for protective | **Key findings**<br>● The HCSP faced intense operational pressure with median expected response times of just 4 days, severely limiting civil society consultation. Advice focused mainly on primary infection prevention, while mental health and systemic health inequalities were largely overlooked due to a lack of social science expertise on the COVID-19 task force. Despite these constraints, advice was highly impactful: 71% of guidelines were utilized by the government to draft mandatory regulations. Furthermore, guidelines served a critical legal function, being heavily relied upon by the Conseil d'Etat to legally justify the suspension of civil liberties during | **Equity**<br>● Lack of diverse social science expertise: The lack of mental health professionals, economists, and sociologists resulted in a heavily medical-centered response that largely failed to address the pandemic's massive side effects on mental health, poverty, and social inequalities. Only 5 of 102 guidelines specifically targeted vulnerable populations.<br>**Transparency**<br>● Guidelines are generally made public one month after being received by the commissioning entity, although during |
| **Publication date** | January, 2022 (Advance Access) / 2022 (Published). | | | |
| **Author/Organization** | Bruat et al. | | | |
| **Jurisdictions studied** | France (National and Regional levels). | | | |
| **Methods used** | Descriptive Cross-sectional study / Document analysis. | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Relevance rating** | High | measures, testing, and hygiene, which policymakers subsequently implemented into coercive regulatory texts and protocols.<br>● Membership composition and expertise<br>○ Multidisciplinary. HCSP includes nearly 80 independent experts from diverse disciplines. However, the dedicated COVID-19 task force was heavily medicalized, composed of 28 members (primarily infectious disease and hygiene physicians, with only 4 public health experts and few environmental/social scientists).<br>● Membership structure and appointment model<br>○ Organized into four specialized committees and two permanent task forces. During COVID-19, an ad hoc task force was explicitly convened to handle the crisis. | lockdowns.<br>**Impact**<br>● Impact on decision-making<br>● Policy influence<br>○ HCSP Guidelines: Impact: Extremely High. 73% of the guidelines were directly cited in official documents (generating 330 references). They heavily dictated national regulatory texts and coercive public health mandates (e.g., mask-wearing, facility closures).<br>● Trust and legitimacy<br>○ HCSP Guidelines: Impact: Provided judicial legitimacy. The French Conseil d'Etat (highest administrative court) cited HCSP guidelines in 74% of relevant cases to successfully reject citizens' and companies' legal challenges against the government's restrictive sanitary measures.<br>● System learning<br>○ Medically-focused task force composition: Impact: High. Acknowledging that their task force was too medically focused to manage societal side effects, the HCSP structurally adapted by launching a new working group explicitly integrating social scientists and psychologists to develop a more holistic public health model. | this period they remain confidential, while authorities may begin implementing or disseminating the recommendations.<br>**Adaptability**<br>● The HCSP adapted by creating an ad hoc COVID-19 task force to respond to the rapid demand for information to support decision-making, and later adapted structurally by launching a new working group to integrate social scientists.<br>● Ability to respond to crises<br>○ The HCSP faced intense operational pressure to respond to the crisis, with a median expected response time of just 4 days to provide recommendations, though this short timeframe severely limited civil society consultation and |
| **Quality (JBI)** | 5/5 (Cross-sectional) | | | |
| Association Between Food and Drug Administration Advisory Committee Recommendations and Agency Actions, 2008–2015. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, Human Drug Advisory Committees.<br>● Mandate<br>○ Technical, Risk assessment. To provide the FDA with independent insight and recommendations regarding the approval of prescription drugs, supplemental indications, | **Key findings**<br>● From 2010 to 2021, FDA regulatory actions aligned with 88% of advisory committee votes. However, the FDA sought independent expert advice far less frequently over time (declining from 50 meetings in 2012 to 18 in 2021). The degree of advisory committee consensus | **Transparency**<br>● High focus. Federal law mandates that these meetings are open to the public, which promotes agency reputation, transparency of clinical data, and allows public commentary. Public hearing sections provide a formal mechanism |
| **Publication date** | 2019 (Published in The Milbank Quarterly) / July 2023 (For Daval 2023 - | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | published in JAMA Health Forum. Note: Data extracted under the Daval 2023 ID reflects the JAMA article, though some metadata overlaps with Zhang 2019 in the protocol provided). | or their withdrawal from the market based on safety, efficacy, and risk-benefit profiles.<br>● Governance model<br>○ Embedded / Hybrid (The advisory committees are formally convened by the FDA but rely on independent experts unaffiliated with the agency).<br>● Advisory roles and participation<br>○ Advising the US Food and Drug Administration (FDA) in evaluating drug safety, efficacy, and risk-benefit profiles to support decisions on approval, supplemental indications, or withdrawal of drugs.<br>● Membership composition and expertise<br>○ Multidisciplinary. The committees consist of independent medical and scientific experts unaffiliated with the FDA, as well as patient, community, and industry representatives.<br>● Membership structure and appointment model<br>○ The FDA operates multiple specialized standing committees (e.g., Oncologic Drugs, Endocrinologic and Metabolic Drugs), which are convened for specific regulatory meetings.<br>● Conflict-of-interest management<br>○ COI disclosure is formally required and governed by regulatory statute. The FDAAA sets a cap on the number of advisory committee members permitted to have conflict-of-interest waivers. | strongly predicted agreement with FDA actions. Discordance was highest for safety-related actions. When discordant, the FDA generally took a more restrictive stance. Conflicts of interest and public speaker statements were not statistically associated with discordance. The FDA applies a higher decision threshold than its advisory committees under conditions of uncertainty.<br>**Impact**<br>● Impact on decision-making<br>○ FDA regulatory actions: Impact: Overall, FDA regulatory actions aligned with 88% of advisory committee votes (262 of 298 votes). Approval followed 97% of positive votes for initial approvals.<br>● Policy influence<br>○ Advisory committee recommendations: Impact: Demonstrably influenced FDA regulatory decisions, though not deterministic. In cases where the FDA took a more restrictive stance than favorable committee recommendations, 54% of those were eventually approved.<br>○ Institutional and reputational concerns: Impact: Acted as potential drivers of divergence, as the FDA took a less restrictive stance than its advisory committees on safety actions to avoid reversing earlier approval decisions and damaging institutional credibility.<br>● Trust and legitimacy<br>○ Transparent deliberation: Impact: Advisory committees provide a critical opportunity for the FDA to build and maintain public trust through transparent deliberation, especially as polls show decreasing trust | for external stakeholder input. However, COI among public speakers was not systematically disclosed or documented. |
| **Author/Organization** | Daval et al. | | | |
| **Jurisdictions studied** | United States (National level). | | | |
| **Methods used** | Analytical cross-sectional study / Document analysis. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 5/5 (Cross-sectional) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | in the FDA since the COVID-19 pandemic.<br>● System learning<br>○ Frequency of independent expert advice: Impact: The study highlights a significant institutional shift: the FDA sought independent expert advice far less frequently over time. Total meetings declined from 50 in 2012 to 18 in 2021. The authors suggest reforms are necessary to clarify the FDA's commitment to independent advice. | |
| **An evaluation of North Carolina science advice on COVID-19 pandemic response.** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (Vaccine Committee), Expert Panel (Informal Group), and Embedded State Health Advisors (NCDHHS).<br>● Mandate<br>○ Strategic, Technical, Risk assessment. To provide a "landscape view" of epidemiological modeling to evaluate scenarios for lifting stay-at-home orders, provide expert guidance on equitable vaccine distribution, and serve as the state's hub for assimilating scientific information.<br>● Governance model<br>○ Hybrid (Embedded government officials within NCDHHS relying heavily on ad-hoc, independent university experts and convened external task forces).<br>● Advisory roles and participation<br>○ Advising on executive orders, the lifting of stay-at-home restrictions, other non-pharmaceutical interventions (NPIs), and the development and operationalization of equitable vaccine distribution plans.<br>● Membership composition and expertise<br>○ Multidisciplinary. The Informal Group consisted of 12 epidemiologists, data scientists, and public health experts. The Vaccine Committee included ~50 participants representing public health experts, health care providers, advocacy organization leaders, essential workers, and at- | **Key findings**<br>● North Carolina's pandemic response utilized a fluid, collaborative relationship between the Governor, NCDHHS, and ad-hoc external groups (Informal Group, Vaccine Committee). Key strengths included mutual respect, excellent data transparency, and a strong commitment to equity in vaccine distribution. However, the advisory processes were structurally opaque, uninstitutionalized, and highly vulnerable to politicization. Policymakers sometimes inappropriately disguised political and moral trade-offs as purely technical choices. The study concludes that the state critically needs to establish a standing, independent, and transparent science advisory committee to prepare for future crises.<br>**Impact**<br>● Impact on decision-making<br>○ Informal Group's "Dimmer Switch" strategy: Impact - Governor Cooper explicitly adopted the Informal Group's strategy for reopening the state, utilizing their recommended four key metrics.<br>○ Vaccine Committee's input: Impact - Instrumental in designing the final vaccine | **Equity**<br>● Representation of historically marginalized groups (e.g., LatinX): Addressed by recruiting members with diverse lived experiences to unearth trust and immigration issues to ensure equitable vaccine rollout.<br>● Representation of essential workers and migrant workers: Addressed by explicitly including these representatives in the Vaccine Committee and specific NCDHHS response teams.<br>● Representation of marginalized and homeless populations: Addressed through the creation of specialized, community-linked NCDHHS response teams.<br>**Transparency**<br>● Mixed. While statistical data transparency (e.g., public dashboards, televised briefings) was excellent and publicly broadcast, transparency surrounding how the advisory mechanisms actually translated that data into policy decisions was highly opaque and shielded from public view. |
| **Publication date** | September, 2022. | | | |
| **Author/Organization** | Weinkle.<br>University of North Carolina Wilmington. | | | |
| **Jurisdictions studied** | United States (Specifically focusing on the state of North Carolina). | | | |
| **Methods used** | Qualitative case study | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 10/10 (Qualitative study) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | risk populations. NCDHHS teams integrated community leaders.<br>● Membership structure and appointment model<br>○ Ad-hoc and flexible. NCDHHS developed flexible internal structures to manage information flows. The Informal Group was an ad-hoc independent academic group. The Vaccine Committee was established as a temporary body by the quasi-governmental NCIOM under NCDHHS request.<br>● Conflict-of-interest management<br>○ Unclear/Lacking. COI management processes were unclear during the pandemic. The study suggests that NCDHHS should develop a centralized repository documenting the advice received and conflict of interest disclosures for all advisors.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: NCDHHS developed flexible response teams explicitly focused on representing specific populations, such as marginalized communities, migrant workers, and homeless populations. The Vaccine Committee actively recruited members with diverse lived experiences to "unearth issues" related to trust, immigration, and systemic abuse to ensure the vaccine rollout was equitable for historically marginalized groups.<br>○ Inclusion of equity-relevant expertise within the advisory body: Integrated diverse community leaders, representatives of essential workers, and advocacy organization leaders. | rollout plan submitted to the CDC.<br>● Policy influence<br>○ NCDHHS and external scientific advice: Impact - High influence; the NCDHHS successfully channeled formal and informal advice to the governor, integrating epidemiological models and vaccine plans directly into state policy.<br>● Trust and legitimacy<br>○ Data metrics transparency: Impact - Fostered trust and deflected political conflict by providing a publicly understood evidence base.<br>○ Vaccine Committee's closed meetings: Impact - Intentionally shielding meetings from the public protected participants and gave them the freedom to openly discuss sensitive vaccine prioritization issues without public pressure, though it reduced external transparency.<br>● System learning<br>○ NCDHHS and NCIOM structural adaptations: Impact - NCDHHS adapted by creating multiple flexible response teams to manage evidence flow. NCIOM modified its standard advisory role to provide rapid iterative feedback on draft plans rather than generating formal recommendations. | The Vaccine Committee's meetings and notes were intentionally kept private.<br>**Adaptability**<br>● High. NCDHHS adapted rapidly by creating flexible response teams to manage the expanding flow of pandemic evidence. NCIOM adapted its standard transparency practices and typical advisory format due to the urgency and sensitivity of the pandemic response. |
| Analysis of consumer comments into PBAC decision-making (2014–9). | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (Pharmaceutical Benefits Advisory Committee - PBAC).<br>● Mandate | **Key findings**<br>● The PBAC effectively informs Australian public healthcare policy by providing binding scientific evidence for the national public medicines and immunization programs. This study analyzed | **Equity**<br>● Consumer and carer engagement portals: Addressed through a dedicated online portal designed for public input. However, the study notes that a lack of |
| **Publication date** | February, 2022. | | | |
| **Author/Organization** | Tjeuw & Wonder. | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | Wonder Drug Consulting (Australia). | ○ Strategic, Technical, Risk assessment. To recommend new medications for the pharmaceutical benefit scheme and new vaccines for the national immunization program.<br>● Governance model<br>○ Independent (Independent expert body appointed by the Australian Government).<br>● Membership structure and appointment model<br>○ Members of the Advisory Committee are appointed by the national government.<br>● Conflict-of-interest management<br>○ External commentators (consumers/public) participating via the online portal are encouraged to disclose any financial, professional, or personal conflicts of interest.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: The PBAC maintains a dedicated online portal designed to formally collect input from consumers whose health the technology aims to improve, as well as their carers and advocacy organizations, aiming to integrate public perspectives into technical decision-making. However, as this study shows, although there is a platform for these consumer comments, the comments have limited impact in practice. | consumer comments in PBAC Public Summary Documents (PSDs) from 2014–2019. It found that while mechanisms exist for consumer participation via an online portal, a high proportion of agenda items still lack consumer input. Improvements are needed to make information more accessible and to address the dominance of industry-backed patient groups over individual consumers, ensuring that diverse patient and stakeholder voices equitably inform the scientific deliberation process.<br>**Impact**<br>● Impact on decision-making<br>○ PBAC recommendations: Impact - Highly associated with the uptake of advice because the national public medication and immunization programs explicitly require an official recommendation from the PBAC before listing a technology.<br>● Policy influence<br>○ PBAC recommendations: Impact - Directly integrated into policies as they determine the public funding and listing of new medications and vaccines.<br>○ Binding nature of advice: New medicines and vaccines cannot be listed as part of the pharmaceutical benefit program nor the national immunization programme unless they are recommended by the Advisory Committee<br>● Trust and legitimacy<br>○ Clear and transparent processes (PSDs, Agendas): Impact - The transparency of the PBAC processes fosters public and stakeholder (government) trust.<br>● System learning<br>○ Consumer comment process evaluation: | accessible information hinders equitable public engagement, often leaving participation dominated by industry-backed patient groups rather than individual consumers.<br>**Transparency**<br>● The PBAC has progressively increased transparency since 1999, publishing meeting agendas and releasing Public Summary Documents (PSDs), and ability to subscribe to email notification service about PBAC activities. However, the study identifies limitations such as vague agendas and inconsistent reporting of consumer comments in the PSDs.<br>**Adaptability**<br>● The PBAC demonstrates flexibility in its meeting schedules, having the ability to hold ad hoc or extraordinary meetings out of session if required, which could be useful in crisis response situations. |
| **Jurisdictions studied** | Australia. | | | |
| **Methods used** | Descriptive policy analysis / Cross-sectional document analysis. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Descriptive) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | Impact - The study evaluates the consumer comment process compared against other international agencies to identify systemic limitations and suggest institutional improvements for better integrating patient voices. | |
| World Health Organization and knowledge translation in maternal, newborn, child and adolescent health and nutrition. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, Expert Panel (STAGE at the global level; TAGs at the national/regional levels).<br>● Mandate<br>○ Strategic, Technical. To summarize the WHO STAGE working group's consensus recommendations on how to improve knowledge translation and explicitly outline how to strengthen national and subnational Technical Advisory Groups (TAGs).<br>● Governance model<br>○ Independent, Hybrid (STAGE advises the Director-General of WHO directly. The paper recommends that national TAGs be embedded/accountable to Ministries of Health while providing intellectually independent advice).<br>● Advisory roles and participation<br>○ Developing comprehensive national MNCAHN blueprints, adapting global guidelines to local contexts, and overseeing quality improvement programs.<br>● Membership composition and expertise<br>○ Highly multidisciplinary. STAGE itself includes representatives from diverse professional disciplines across LMICs and HICs.<br>○ For national TAGs, the membership of the national TAG should be determined in-country. STAGE recommends including epidemiologists, academics, professional associations, UN agencies, non-health sectors (education, finance, law, and private sector where relevant). Membership should also include consumer, community and civil society representatives, such as women's | **Key findings**<br>● The volume and complexity of WHO guidelines overwhelm low-resourced countries. To achieve SDGs, knowledge translation must be decentralized by empowering robust, multidisciplinary national and subnational Technical Advisory Groups (TAGs) to locally adapt integrated, "living" guidelines. STAGE recommends these TAGs include frontline workers and civil society to ensure equity. WHO should produce fewer, consolidated clinical handbooks and significantly increase investment in digital education and multimedia communication (e.g., multilingual videos and mobile apps) to reach frontline practitioners directly.<br>**Impact**<br>● Policy influence<br>○ STAGE report: Impact - Acts as a strategic blueprint to inform how WHO structurally supports national ministries in building their domestic scientific advisory capacity.<br>● System learning<br>○ Decentralized "living guidelines": Impact - The global health architecture must adapt away from releasing complex, fragmented guidelines toward supporting localized "living guidelines" that empower national advisory groups to iteratively learn from | **Equity**<br>● Monitoring in disadvantaged communities: Central to the recommendations; emphasizes monitoring interventions specifically in disadvantaged communities to measure fair access and universal health coverage.<br>● Inclusion of diverse populations: STAGE recommends that advisory bodies include diverse populations, including women's groups, youth leaders, and Indigenous groups.<br>**Transparency**<br>● National TAG membership should ensure intellectual independence and lack of conflict of interest.<br>**Adaptability**<br>● Promotes the use of digital, modifiable "living guidelines" that can rapidly evolve alongside changing epidemiology. |
| **Publication date** | July, 2022. | | | |
| **Author/Organization** | Duke et al.<br>Members of the Strategic and Technical Advisory Group of Experts (STAGE) for maternal, newborn, child and adolescent health and nutrition, World Health Organization (WHO), and various global academic/health institutions. | | | |
| **Jurisdictions studied** | Global (WHO international level) and National/Subnational (Recommending frameworks for domestic TAGs). | | | |
| **Methods used** | Expert opinion / Consensus policy perspective. | | | |
| **Relevance rating** | Low | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Quality (JBI)** | 5/5 (Expert opinion level) | groups, a community youth leader and Indigenous groups where they exist. and crucially, frontline healthcare workers (midwives, nurses) as they will be tasked with implementation. .<br>○ Subnational (state, province or district) or local committees should have wide representation, including frontline healthcare workers such as a midwife, child health nurse or allied healthcare professional, and ensure that civil society has a voice in decision making: such as a community leader, women's group or representatives of other sectors such as a teacher.<br>● Membership structure and appointment model<br>○ Recommended to be established as a statutory or standing body existing for the long term, with properly defined terms of reference and governance.<br>● Conflict-of-interest management<br>○ The report explicitly notes that national TAG membership must ensure intellectual independence, lack of conflict of interest, and allow for a range of perspectives.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: STAGE strongly recommends that advisory bodies include consumer, community, and civil society representatives—specifically listing women's groups, community youth leaders, and Indigenous groups—to ensure marginalized voices drive priority-setting and equitable access to services.<br>○ Inclusion of equity-relevant expertise within the advisory body: Frontline healthcare workers and diverse professional disciplines across LMICs and HICs are explicitly recommended. | implementation data. | |
| A summary of the Advisory Committee for Immunization Practices (ACIP) use of a benefit-risk assessment framework during the first year of COVID-19 vaccine administration in the United States. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (ACIP).<br>● Mandate<br>○ Technical, Risk assessment.To make rapid evidence- | **Key findings**<br>● The ACIP developed a benefit-risk assessment framework directly comparing COVID-19 vaccination benefits (preventing hospitalizations/deaths) with risks (rare adverse | **Adaptability**<br>● An ACIP COVID-19 Vaccine Safety Technical Work Group (VaST) was established to rapidly review post-authorization vaccine safety data. |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Publication date** | October, 2023. | based decisions regarding benefits and risks of COVID-19 vaccines and issue public health recommendations for vaccine use following FDA Emergency Use Authorizations (EUA) or licensure.<br>● Governance model<br>○ Embedded (Embedded within government; ACIP advises the Centers for Disease Control and Prevention (CDC)). | events like TTS, myocarditis, GBS). During the first year, this framework successfully guided seven critical COVID-19 vaccine policy decisions.<br>● The assessments proved to be a valuable decision-making tool, but they required reliable and detailed data to stratify the analyses and appropriately focus on populations at higher risk of experiencing a specific adverse event.<br>● The COVID-19 vaccine benefit-risk assessment framework has been a critical tool for ACIP discussions and decision-making during the pandemic, as it enabled a rapid response and flexible implementation.<br>**Impact**<br>● Policy influence<br>○ Benefit-risk assessment framework: Impact - The framework directly informed seven major national policy decisions within a single year, including lifting the Janssen vaccine pause, recommending mRNA vaccines for young adults, approving pediatric doses, and preferential mRNA recommendations.<br>● System learning<br>○ Iterative adaptation of the framework: Impact - The framework iteratively adapted to the changing crisis. Methodologies repeatedly shifted time horizons, modified incidence multipliers, and expanded metrics (e.g., Number Needed to Vaccinate) to account for precise vaccination status rates and virus variants. | |
| **Author/Organization** | Wallace et al.<br>Centers for Disease Control and Prevention (USA) | | | |
| **Jurisdictions studied** | United States (National level). | | | |
| **Methods used** | Narrative / Descriptive Methodological Report. This article describes the development and application of a benefit-risk assessment framework that directly compared the estimated benefits of COVID-19 vaccination for individuals (e.g., prevention of COVID-19-related hospitalization) with the risks associated with COVID-19 vaccines. | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 | | | |
| Implementing efficient and sustainable collaboration between National Immunization Technical Advisory Groups: Report on the 3rd | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, National academies, learned | **Key findings**<br>● The 3rd International Technical Meeting aimed to design an organizational structure | **Equity**<br>● Inclusion strategy for LMICs: Addressed by designing the network to include |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| [International Technical Meeting, Paris, France, 8–9 December 2014.] | | societies and networks.<br>● Mandate<br>○ Technical. To develop evidence-based vaccination recommendations for public health policy at country level, expanding to collaborative inter-NITAG work on systematic reviews and disease models.<br>● Governance model<br>○ Hybrid. National NITAGs are embedded within national health authorities, but proposed coordination platforms operate via independent WHO Collaborating Centres and the ECDC.<br>● Advisory roles and participation<br>○ Invited experts from academic institutions and international organizations participate in specific discussions. Liaison members and NITAG secretariats support coordination.<br>● Membership composition and expertise<br>○ Multidisciplinary vaccination and public health experts representing established and newly formed NITAGs, the WHO, and the ECDC.<br>● Membership structure and appointment model<br>○ Standing national membership within each NITAG. The proposed inter-NITAG network would involve voluntary participation with a minimum set of obligations and commitments.<br>● Conflict-of-interest management<br>○ High focus. The report explicitly emphasizes that for collaboration and the sharing of unpublished/confidential data to succeed, ensuring that conflicts of interest are fully declared is essential. Confidentiality agreements and codes of conduct are necessary conditions.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: The network is designed to progressively expand to bring in countries with limited resources, reducing the technical barrier for low- and middle-income countries (LMICs) to access high-quality vaccine evidence. It established that the burden of generating | for effective collaboration between worldwide NITAGs. Two levels of collaboration were agreed upon: sharing completed products globally, and jointly developing systematic reviews and mathematical models regionally. GRADE was reaffirmed as the common methodology for evidence quality to ensure reproducible and trusted shared products. Crucially, trust relies on strict COI disclosures, confidentiality agreements, and process transparency. Equity is central, allowing LMIC NITAGs to participate without bearing disproportionate burdens. Ultimately, each NITAG retains full autonomy over its national recommendations.<br>**Impact**<br>● Impact on decision-making<br>○ Shared systematic reviews: Impact - Shared systematic reviews and common methodological frameworks (GRADE) are presented as drivers of improved decision-making quality and policy influence across NITAGs.<br>● Trust and legitimacy<br>○ Transparency and COI management: Impact - Transparency of processes and COI management are linked to legitimacy and cross-national trust.<br>● System learning<br>○ Network design: Impact - The voluntary, progressive, and equity-sensitive design of the proposed network enables system-level learning, particularly for less experienced NITAGs. | LMICs, reducing technical barriers, ensuring the burden of generating products is shared fairly, and prioritizing support for less experienced NITAGs through training and access to mature NITAGs' work.<br>**Transparency**<br>● Highlighted as the foundational requirement for international collaboration; processes, agendas, work plans, and COI declarations must be transparently shared via the NITAG Resource Centre for NITAGs to trust external advice.<br>**Adaptability**<br>● Addressed through the progressive, step-by-step design of the network (beginning with experienced NITAGs, expanding regionally before globally, and starting with simple sharing activities before moving to joint product development). |
| **Publication date** | February, 2016. | | | |
| **Author/Organization** | Perronne et al. Haut Conseil de la Santé Publique (France), Agence de Médecine Préventive (France), World Health Organization (Switzerland), Health Council of the Netherlands, Robert Koch Institute (Germany). | | | |
| **Jurisdictions studied** | Global (WHO international level) and Regional (e.g., European Union level via the ECDC). | | | |
| **Methods used** | Expert opinion / Consensus meeting report. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 4/5 (Expert Opinion) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | collaborative products should not always fall on the same countries. | | |
| Supporting national immunization technical advisory groups (NITAGs) in resource-constrained settings. New strategies and lessons learned from the Task Force for Global Health's Partnership for influenza vaccine introduction. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (NITAGs).<br>● Mandate<br>○ Strategic, Technical. Responsible for providing independent, evidence-informed vaccine policy recommendations to national health authorities<br>● Governance model<br>○ Hybrid. NITAGs are formally linked to Ministries of Health (secretariat typically appointed by the Ministry) while operating as independent advisory bodies. In 7 of 10 surveyed countries, NITAGs reported good or high integration with the national decision-making process.<br>● Advisory roles and participation<br>○ NITAG full committee responsible for deliberation and recommendation issuance. Working groups systematically gather, analyze, and prepare evidence. Secretariat provides technical and scientific support. External partners (TFGH, CDC, WHO) provide capacity-building support.<br>● Membership composition and expertise<br>○ Multidisciplinary national experts.<br>● Conflict-of-interest management<br>○ The capacity-building workshops addressed gaps identified in COI statements as a key operational weakness in several LMIC NITAGs.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: The PIVI program was specifically designed to address structural inequity by providing targeted technical assistance and capacity-building to LMIC countries wanting to develop sustainable, evidence-based policies. | **Key findings**<br>● LMIC NITAGs are heavily under-resourced, lacking access to scientific literature and epidemiological expertise to interpret complex data. Supplying an "influenza resource package" (pre-assessed systematic reviews mapped to a decision framework) successfully bridged this gap, enabling countries to draft technical dossiers and launch vaccine programs. A primary lesson learned is that achieving global functional NITAG targets requires long-term, coordinated donor investment and technical assistance, as isolated workshops are insufficient without sustained follow-up.<br>**Impact**<br>● Impact on decision-making<br>○ Targeted technical assistance and capacity-building: Impact - Enabled countries to draft technical dossiers and launch vaccine programs<br>● Policy influence<br>○ Targeted technical assistance (Resource package): Impact - Three countries achieved concrete policy outcomes following the intervention (e.g., Côte d'Ivoire developed national recommendations for influenza vaccine use and began phased introduction).<br>● Trust and legitimacy<br>○ Rigorous, transparent, evidence-based processes: Impact - The paper explicitly links the rigor and transparency of NITAG evidence review processes to the | **Equity**<br>● Structural inequity between LMIC and high-income country NITAGs: LMIC NITAGs are documented as considerably under-resourced, lacking adequate secretariat staffing, technical support, and access to global peer-reviewed literature. The PIVI program was specifically designed to address this inequity through targeted technical assistance.<br>**Transparency**<br>● COI management is a transparency mechanism; the paper identifies gaps in COI statements as a key operational weakness. Evidence inputs are treated as transparency tools: the influenza resource package was fully documented (search strategies, screening results) to allow reproducibility.<br>**Adaptability**<br>● NITAGs are essential for tailoring global immunization targets to the realities of national contexts, adapting external strategies to reinforce national immunization programs. |
| **Publication date** | June, 2019 (Published 19/06/2019). | | | |
| **Author/Organization** | Antoinette Ba-Nguza, Adeel Shaha, Joseph S. Bresee, Kathryn E. Lafond, Kathy Cavallaro, Abigail Shefer, Morgane Donadel, Jane F. Seward / Task Force for Global Health (Atlanta, GA, USA); Centers for Disease Control and Prevention (Atlanta, GA, USA). | | | |
| **Jurisdictions studied** | Multiple / Global (Focuses on Low- and Middle-Income Countries [LMICs], specifically Laos, Mongolia, Vietnam, Armenia, Côte d'Ivoire, Moldova, and the Republic of Georgia). | | | |
| **Methods used** | Narrative / Descriptive Programmatic Report / Lessons Learned. | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Relevance rating** | Moderate | | credibility of national immunization programs and government legitimacy.<br>● System learning<br>○ Skill transfer across vaccine topics: Impact - Demonstrated institutional learning beyond the immediate training content (e.g., Laos PDR applied rotavirus training to develop HPV recommendations).<br>○ Post-training requests: Impact - Requests for continued technical assistance indicated internalization of the evidence review approach. | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |
| **Health Technology Assessment and Its Use in Drug Policies: Singapore.** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (Drug Advisory Committee - DAC) and Science Advisory Office / Agency (Agency for Care Effectiveness - ACE).<br>● Mandate<br>○ Strategic, Technical. To conduct HTA evaluations, with a focus on efficacy and cost-effectiveness (ACE) and to appraise HTAs and evidence to recommend drugs for public funding/subsidy by the Ministry of Health (DAC).<br>● Governance model<br>○ Embedded (DAC is embedded in the MoH) / Hybrid (ACE involves government and sends HTAs to DAC but operates as an independent technical agency).<br>● Advisory roles and participation<br>○ ACE conducts evaluations and produces HTA reports; DAC deliberates on this evidence to make subsidy recommendations.<br>● Membership composition and expertise<br>○ DAC comprises senior health care professionals. ACE comprises a technical team of HTA researchers and analysts.<br>● Membership structure and appointment model<br>○ A centralized, standing decision-making body (DAC) supported by a dedicated technical evaluation agency | **Key findings**<br>● Singapore effectively utilizes a two-advisory body system for drug subsidy approvals: the Agency for Care Effectiveness (ACE) conducts rigorous Health Technology Assessments (HTA), and the Drug Advisory Committee (DAC) uses these assessments alongside broader evidence to make national subsidy recommendations. This structured process provides a transparent, evidence-based pathway for public funding decisions. To address financial equity, the system uses tiered subsidies based on means-testing. The narrative highlights the ongoing need for capacity building and incorporating real-world data for novel therapies.<br>**Impact**<br>● Impact on decision-making<br>○ ACE's technical evaluations and DAC's recommendations: Impact - Highly associated with uptake, as it is mandatory for DAC's drug subsidy recommendations to be implemented on a national level in Singapore. | **Equity**<br>● Tiered drug subsidies: The advisory outputs explicitly target financial equity, establishing clinical criteria so that lower- to middle-income households can receive higher drug subsidies (up to 75%) based on means testing.<br>**Transparency**<br>● High. Unlike older models, detailed guidance documents explaining the committee's rationale, conditions of subsidy, and evidence summaries are made publicly available online.<br>● Drug utilization reviews and audits to track appropriate use and patterns of drug dispensing are conducted by the Ministry of Health to monitor the impact of ACE on prescriber behaviour.<br>**Adaptability**<br>● Adaptability demonstrated by use of online publication to disseminate information and communicate, and flexible consensus/voting deliberation processes |
| **Publication date** | June, 2019 | | | |
| **Author/Organization** | Pearce et al. Ministry of Health, Singapore; Agency for Care Effectiveness, Singapore. | | | |
| **Jurisdictions studied** | Singapore. | | | |
| **Methods used** | Narrative / Descriptive and Analytical Policy Analysis | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/7 (Policy level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | (ACE). | • Policy influence<br>  ○ ACE's technical evaluations and DAC's recommendations: Impact - Directly integrated into policies dictating public funding of drugs.<br>  ○ Binding nature of ACE / DAC recommendations ensure that all public health care institutions are mandated to make drugs recommended by these groups available for patients.<br>• Trust and legitimacy<br>  ○ Evidence-based processes and transparency: Impact - The structured, transparent operations of ACE and DAC build public and stakeholder trust.<br>  ○ Oversight: International Advisory Panel oversees Singapore's HTA process to make sure their assessments are aligned with best practices.<br>• System learning<br>  ○ Two-advisory body system: Impact - The study describes the historical development of HTA in Singapore and how the ACE and DAC were established, demonstrating institutional learning and adaptation over time to improve evidence-based decision-making. | |
| **The Use of Evidence-Informed Deliberative Processes for Health Insurance Benefit Package Revision in Iran.** | | **Institutional Design of Advisory Bodies:**<br>• Type of advisory body<br>  ○ Expert Panel, Advisory committee (Task Forces, Technical Working Groups [TWGs], National Advisory Committee [NAC]).<br>• Mandate<br>  ○ Strategic, Technical. Evidence-informed priority setting and policy recommendation for health benefit package design, aimed at improving legitimacy, efficiency, and | **Key findings**<br>• Iran applied the EDP framework to revise its Health Insurance Benefit Package using MS services as a pilot case.<br>• A multi-level advisory system (TFs, TWGs, NAC, HCHI) created a clear pathway from evidence generation to policy adoption.<br>• The inclusion of experts, policymakers, insurers, and patients strengthened the legitimacy of | **Equity**<br>• Task Force on Patient Involvement (TFPI): Addressed by formally integrating patient representatives into key bodies like the TWGs and NAC to ensure the inclusion of different viewpoints during deliberation.<br>• Financial risk protection: Out-of-pocket expenses and financial risk protection |
| **Publication date** | March, 2022 | | | |
| **Author/Organization** | Nouhi et al. | | | |
| **Jurisdictions studied** | Iran (National level). | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| **Methods used** | Descriptive and Evaluative policy analysis (Narrative / Descriptive Programmatic Report). | resource allocation within the health system.<br>● Governance model<br>○ Embedded. Advisory body embedded in the Ministry of Health and Medical Education<br>● Advisory roles and participation<br>○ Task Forces (TFs): Expert-driven technical bodies responsible for generating and synthesizing evidence, including clinical, economic, patient, and regulatory inputs.<br>○ Technical Working Groups (TWGs): Multi-stakeholder deliberative bodies that review evidence across multiple criteria and formulate coverage recommendations.<br>○ National Advisory Committee (NAC): High-level policy and appraisal body that validates TWG recommendations and connects technical analysis with governmental decision-making.<br>○ High Council for Health Insurance (HCHI): Governmental decision-making body that formally endorses recommendations and forwards them to the Minister of Health for adoption.<br>● Membership composition and expertise<br>○ TFs: Expert-driven groups including clinicians, health economists, epidemiologists, pharmacologists, data analysts, patient representatives, and regulatory experts. Around 10 members per condition (11 in the MS case study).<br>○ TWGs: Multi-stakeholder bodies including clinicians, scientists, patients, insurance representatives, and government officials. Usually 10–15 members (25 in the MS neurology TWG).<br>○ NAC: Composed mainly of senior government and institutional representatives, with occasional participation of TWG experts. Includes 24 members.<br>○ HCHI: Composed of representatives from ministries, public agencies, and health insurance organizations, representing nine formal entities.<br>● Membership structure and appointment model<br>○ A tiered, stepwise advisory structure designed by the | decisions.<br>● Combining evidence and structured deliberation supported transparent and consistent prioritization based on quality, necessity, and sustainability.<br>● The process led to concrete policy changes, including conditional coverage, exclusion of low-value services, and internal reference pricing, while maintaining a zero net budget impact.<br>● The pilot demonstrated the system's adaptability and scalability to other disease areas.<br>● Remaining gaps included the lack of formal COI management, broader equity considerations, and evaluation mechanisms.<br>**Impact**<br>● Impact on decision-making<br>○ Structured governance and formal reporting chain: Impact - The advisory recommendations are actually used in decision-making; proposals made by the committees are passed to the HCHI and then to the Minister of Health, who adopts them.<br>● Policy influence<br>○ EDP Framework implementation: Impact - Strongly influences policy by aligning agenda setting, evidence, and deliberation. In the MS case, it led to adding new services, removing others, and adjusting prices at a zero net budget impact.<br>● Trust and legitimacy<br>○ Multi-stakeholder deliberative process: Impact - Involving experts, policymakers, and patient representatives directly in structured deliberation helps build public and stakeholder trust and optimizes the | were explicitly included as core decision criteria for assessing necessity.<br>**Transparency**<br>● High. Transparency is explicitly built into the design using structured, stepwise reporting lines. Evidence sheets are used to structure presentations, and decisions and materials are made publicly available through official channels.<br>**Adaptability**<br>● The HIBP revision is an ongoing process allowing for periodic updates. The MS pilot illustrates adaptability by introducing conditional coverage decisions during deliberation to address uncertainty and facilitate consensus. |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | HCHI, including condition-specific Task Forces (TFs), disease-specific Technical Working Groups (TWGs), the National Advisory Committee (NAC), and the HCHI. TF membership may vary depending on the condition, while selected TWG members may participate in NAC meetings.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: A dedicated "Task Force on Patient Involvement (TFPI)" was established to formally integrate patients or their representatives into the process. MS Patient Support Union representatives held official seats in the TWG and NAC. | legitimacy of decisions.<br>● System learning<br>○ Pilot-based approach: Impact - Showed that the system can learn and adapt over time (e.g., introducing conditional coverage during deliberation). The process highlighted the need for better operationalization of secondary sub-criteria rather than relying solely on expert judgment. | |
| Towards a transparent, credible, evidence-based decision-making process of new drug listing on the Hong Kong Hospital Authority Drug Formulary: challenges and suggestions | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (Drug Advisory Committee - DAC).<br>● Mandate<br>○ Technical. To systematically and critically appraise new drugs before they are included in the Hospital Authority Drug Formulary based on scientific evidence (safety, efficacy, and cost-effectiveness).<br>● Governance model<br>○ Embedded within government/public health institution (Hospital Authority). Internal to the Hospital Authority governance structure, operating as a sub-committee of the Drug Management Committee (DMC). Not independent from the institutional hierarchy..<br>● Advisory roles and participation<br>○ Appraising new drugs and making listing decisions.<br>● Membership composition and expertise<br>○ Administrators, pharmacists, academics, and clinical experts from different specialties (medicine, surgery, orthopaedics, paediatrics, psychiatry, oncology, etc.). Notably lacks representation from health economists and methodologists.<br>● Membership structure and appointment model<br>○ A standing committee of 12 members that holds meetings | **Key findings**<br>● The DAC appraises new drugs for the Hong Kong Hospital Authority based on safety, efficacy, and cost-effectiveness. However, the process suffers from restricted submission channels, a closed meeting format with anonymous members (except the Chairperson), and a lack of published rationales for approved drugs. Compared to international HTA agencies, the DAC lacks transparency, stakeholder engagement, and health economics expertise. To improve credibility and trust, the DAC should integrate health economists, unblind committee members, publish rationales, and implement formal COI disclosures.<br>**Impact**<br>● Trust and legitimacy<br>○ Anonymous panel members and closed meetings: Impact - Identified as structural factors undermining the credibility and accountability of the DAC.<br>● System learning<br>○ 2013 restructuring and 2015 manual publication: Impact - Presented as | **Transparency**<br>● Central concern of the paper. Identified deficits include: anonymous committee membership (except Chairperson), no published decision rationale for approvals, no meeting minutes, no formal COI disclosure from members, closed meeting format, and no quantitative weighting of decision criteria. |
| **Publication date** | 2018 | | | |
| **Author/Organization** | Wong et al. | | | |
| **Jurisdictions studied** | China (Hong Kong / Scotland compared) | | | |
| **Methods used** | Narrative / Descriptive Policy Review | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | four times per year (January, April, July, and October).<br>● Conflict-of-interest management<br>○ The Chairperson must disclose name and position publicly; all other DAC members remain anonymous on the formulary management website. COI declaration is required from submission initiators, but not from the committee members themselves. | institutional learning responses to governance deficiencies and public pressure, though key gaps in methodology and transparency remain. | |
| Translating evidence into practice with the National Advisory Committee on Sexually Transmitted and Blood-Borne Infections. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee (National Advisory Committee on STBBI - NAC-STBBI).<br>● Mandate<br>○ Strategic, Technical. To provide PHAC with ongoing, timely advice and recommendations for the development of STBBI guidelines in support of the agency's mandate to prevent and control infectious diseases.<br>● Governance model<br>○ Independent / Hybrid (It is a formal external advisory body composed of independent experts, but PHAC acts as the Secretariat and retains all decision-making authority).<br>● Advisory roles and participation<br>○ Independent experts providing the PHAC with ongoing, timely advice and recommendations for the development of STBBI guidelines.<br>● Membership composition and expertise<br>○ Multidisciplinary. Consists of experts in healthcare epidemiology, infectious disease, medical microbiology, laboratory diagnostics, pharmacology, obstetrics and gynecology, paediatrics, primary care, psychology, and public health.<br>● Membership structure and appointment model<br>○ The committee consists of 15 voting members. Working Groups (WGs) composed of NAC-STBBI experts and occasional external contributors are formed for specific prioritized topics.<br>● Conflict-of-interest management | **Key findings**<br>● The NAC-STBBI evolved into a formal external advisory body supported by PHAC to develop trustworthy, evidence-based recommendations. To ensure rigor, PHAC implemented a new transparent process featuring formal topic prioritization, strict COI declarations, and structured evidence synthesis. By utilizing PICO questions, scoping reviews, PRISMA-compliant systematic reviews, and the GRADE Evidence to Decision (EtD) frameworks, the committee systematically moves from evidence gathering to drafting recommendations, which are then published online with full methodological transparency.<br>**Impact**<br>● Impact on decision-making<br>○ NAC-STBBI recommendations: Impact - Taken up by PHAC, but PHAC retains all decision-making authority and decides ultimately how to use the committee's advice<br>● Policy influence<br>○ NAC-STBBI recommendations: Impact - Provides recommendations based on PHAC's prioritization of topics; PHAC decides ultimately how to use the committee's advice. | **Equity**<br>● Geographic representation across Canada explicitly considered during member recruitment: Place of residence<br>**Transparency**<br>● High focus. The entire transition of the committee's methodology was designed to make evidence synthesis and deliberations explicit and transparent to primary care providers and public health professionals using GRADE methodologies. Recommendations and methodological statements are published online. |
| **Publication date** | 2020. | | | |
| **Author/Organization** | Shanmugasegaram, Gadient & Gale-Rowe. Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada (PHAC), Ottawa, ON. | | | |
| **Jurisdictions studied** | Canada (National level). | | | |
| **Methods used** | Narrative / Descriptive methodology report. | | | |
| **Relevance rating** | High | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ Strict. The PHAC Secretariat assesses and manages competing interests. NAC-STBBI members must declare any conflicts upon joining, on an annual basis, and prior to each meeting to maintain impartiality.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: Geographic representation across Canada is explicitly considered during member recruitment, as public health challenges may differ regionally. | ● Trust and legitimacy<br>○ Transparent and evidence-based recommendation development process: Impact - Generates trustworthy national public health guidelines.<br>● System learning | |
| **FAO/WHO Joint Expert Meeting on Microbiological Risk Assessment (JEMRA): Twenty Years of International Microbiological Risk Assessment.** | | **Institutional Design of Advisory Bodies**<br>● Type of advisory body<br>○ Expert Panel, Advisory committee (FAO/WHO Joint Expert Meeting on Microbiological Risk Assessment - JEMRA).<br>● Mandate<br>○ Technical, Risk assessment. To provide scientific advice to the Codex Alimentarius Commission to assist in the development of standards, guidelines, and recommendations for safe food and fair trade.<br>● Governance model<br>○ Independent. Convened by Joint FAO/WHO secretariats, functioning as a neutral international forum that gathers independent experts.<br>● Advisory roles and participation<br>○ Codex decision-making to develop international standards, guidelines, and recommendations.<br>● Membership composition and expertise<br>○ Multidisciplinary. Over 370 individuals with experience in academia, consumer and industry associations, government, and the private sector have participated.<br>● Membership structure and appointment model<br>○ Operates through ad hoc expert meetings drawing from a dynamic roster of experts. Participants are invited and appointed strictly in their independent (personal) capacity; they do not represent their governments or employers.<br>● Conflict-of-interest management | **Key findings**<br>● Over twenty years, JEMRA engaged over 370 independent experts to produce nearly 40 microbiological risk assessment monographs that directly inform Codex Alimentarius standards. The body successfully maintains scientific integrity by enforcing strict conflict-of-interest rules, ensuring geographic and gender inclusiveness, and relying on consensus rather than voting. While highly successful in shaping global policy, JEMRA continues to face challenges related to conducting virtual meetings across time zones and addressing the chronic lack of primary food safety data originating from LMICs.<br>**Impact**<br>● Policy influence<br>○ JEMRA's outputs: Impact - High. Directly informed major international standards, including Codex guidelines for the control of Listeria monocytogenes in ready-to-eat foods, and guidelines for Campylobacter and Salmonella in chicken meat.<br>● System learning<br>○ Evolving novel pathogens, processing technologies, and shifting consumer behaviors: Impact - International risk | **Equity**<br>● Mandate for inclusiveness requiring broad geographic input from Low- and Middle-Income Countries (LMICs).<br>● Requirement for gender diversity.<br>**Transparency**<br>● Strict core principle. Maintained through open calls for data, rigorous COI disclosures, and explicit documentation of data limitations/uncertainty.<br>**Adaptability**<br>● The international risk assessment must constantly adapt its methodologies to keep pace with evolving novel pathogens, processing technologies, and shifting consumer behaviors. |
| **Publication date** | August, 2021 | | | |
| **Author/Organization** | LeJeune et al. | | | |
| **Jurisdictions studied** | Multiple (International / United Nations system) | | | |
| **Methods used** | Narrative / Descriptive Institutional Report. | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ High focus. All experts are required to declare any real, potential, or apparent conflicts of interest. These are evaluated by the joint secretariats using pre-defined criteria. Depending on the conflict, an individual may be dismissed or restricted to participating only as a "resource person." Conflicts and their management plans are publicly disclosed.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: The framework has a mandate for inclusiveness, explicitly requiring broad geographic input (especially to ensure perspectives from Low- and Middle-Income Countries [LMICs]), gender diversity, and the formal consideration of minority scientific opinions. | assessment must constantly adapt its methodologies to keep pace with these factors. | |
| **The Spanish Network of Agencies for Health Technology Assessment and Services of the National Health System (RedETS).** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee, National academies, learned societies and networks (Spanish Network for Health Technology Assessment of the National Health System - RedETS).<br>● Mandate<br>○ Strategic, Technical. Informing the revision (i.e., approval, funding, changes in indications, or disinvestment) of the Benefit Portfolio of the Spanish NHS.<br>● Governance model<br>○ Embedded. It is a formally integrated network of public agencies functioning directly under the Ministry of Health and the Interterritorial Council of the NHS.<br>● Advisory roles and participation<br>○ Assessing non-drug health technologies to inform national benefit portfolio decision-making.<br>● Membership composition and expertise<br>○ RedETS is formed by the Agencia de Evaluación de Tecnologías Sanitarias del Instituto de Salud Carlos III through formal collaboration agreements with HTA public organizations from the autonomous communities.<br>● Membership structure and appointment model | **Key findings**<br>● RedETS successfully consolidated diverse regional HTA agencies into a unified national network in Spain, eliminating duplicative evaluations and producing 50-60 high-impact reports annually. The network uses the PRITEC web tool to systematically gather and prioritize assessment needs across regions. Furthermore, the network implemented a framework guaranteeing patient participation across the HTA lifecycle. Moving forward, RedETS aims to strengthen its capacity for disinvestment assessments, improve the use of real-world observational data, expand early warning systems, and formalize transparent procedures for industry involvement.<br>**Impact**<br>● Impact on decision-making<br>○ Full HTA reports: Impact - Commonly used by the Directorate-General and Regional Health Authorities to officially decide on the national coverage and public funding of health technologies. | **Equity**<br>● Patient inclusion framework: Standardized through the 2016 patient participation framework, which guarantees that patient voices are represented from the agenda-setting phase through to the dissemination of final reports. |
| **Publication date** | March, 2019 | | | |
| **Author/Organization** | Serrano-Aguilar et al. | | | |
| **Jurisdictions studied** | Spain (National level and across 17 autonomous regional communities). | | | |
| **Methods used** | Narrative / Descriptive Institutional Report. | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 5/5 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ Structured around a Plenary Board (composed of the heads of all HTA agencies and MoH directorates), a Permanent Commission, a rotating Presidency (annually among HTA agency heads), and a Technical Secretariat.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: In 2016, RedETS defined a formal patient participation framework envisaging patient involvement in almost every step of the HTA process (including identifying/prioritizing topics, defining the scope, and providing experiential knowledge). | ● Policy influence<br>○ Full HTA reports: Impact - High influence on the revision, approval, and funding of the Benefit Portfolio of the Spanish NHS.<br>● System learning<br>○ Regional consolidation and continuous adaptation: Impact - The network is continuously adapting; having successfully unified a fragmented regional system, current institutional adaptations focus on expanding early warning systems, assessing disinvestment of obsolete technologies, and formalizing industry participation frameworks. | |
| Health Technology Assessment in Australia: The Pharmaceutical Benefits Advisory Committee and Medical Services Advisory Committee. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, Science Advisory Office / Agency, Health Technology Assessment (HTA) Agency.<br>● Mandate<br>○ Strategic, Technical. To evaluate new and existing medical procedures and pharmaceuticals for their safety, clinical effectiveness, cost-effectiveness, and budget impact to advise the Australian government on whether they should be subsidized under the Pharmaceutical Benefits Scheme (PBS) or Medical Benefits Schedule (MBS).<br>● Governance model<br>○ Independent. PBAC is an independent statutory body; MSAC is an advisory committee supported by the Commonwealth Department of Health.<br>● Advisory roles and participation<br>○ Evaluating clinical and economic evidence to formulate national public funding and reimbursement decisions.<br>● Membership composition and expertise<br>○ Multidisciplinary. PBAC is made up of doctors, health professionals, health economists, consumer representatives, and an industry-nominated member. | **Key findings**<br>● Australia's independent HTA advisory bodies (PBAC and MSAC) utilize highly structured evaluation cycles based on clinical and economic evidence to inform public healthcare funding. They balance budget sustainability with access to innovation and have developed sophisticated cross-committee coordination mechanisms for "codependent technologies" (e.g., pairing a drug evaluation with its companion diagnostic). A central challenge is navigating the growing demand for public transparency against the need for confidential pricing agreements, as well as evaluating high-cost personalized medicines with highly uncertain early evidence.<br>**Impact**<br>● Policy influence<br>○ PBAC and MSAC recommendations: Impact - Extremely high. The committees directly dictate the national reimbursement landscape for all prescription drugs and medical services in Australia. | **Transparency**<br>● A major theme of the paper is Transparency vs. Confidentiality. While advocates call for full transparency in HTA decision-making, the authors note that this conflicts with the government's need to keep special pricing arrangements (commercial-in-confidence rebates) secret to negotiate affordable drug access without affecting global reference prices |
| **Publication date** | May, 2021 | | | |
| **Author/Organization** | Kim et al. | | | |
| **Jurisdictions studied** | Australia (National level) | | | |
| **Methods used** | Narrative / Descriptive Policy Perspective | | | |
| **Relevance rating** | | | | |
| **Quality (JBI)** | 6/6 | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| | | MSAC consists of individuals with expertise in clinical medicine, health economics, and consumer matters.<br>● Membership structure and appointment model<br>○ Standing advisory structures. PBAC: one-third nominated by the health minister, the rest by professional organizations. Meets 3 times/year with a 17-week evaluation cycle. Supported by subcommittees (ESC, DUSC). MSAC meets 3 times/year, supported by ESC and PASC.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: Consumer representatives are officially included as members on both the PBAC and MSAC committees. | ● System learning<br>○ Complex technologies and coordination mechanisms: Impact - The committees continuously adapt their methodologies to handle emerging complex technologies (e.g., CAR-T personalized medicines, early crossover in oncology trials) and have developed sophisticated inter-committee coordination for codependent technologies. | |
| **The Use of Evidence-Informed Deliberative Processes for Health Benefit Package Design in Kazakhstan** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ SAB, Advisory committee.<br>● Mandate<br>○ Strategic, Technical. To evaluate the effectiveness, safety, cost-effectiveness, and budgetary impact of health technologies to develop recommendations for the Ministry of Health (MoH) regarding which services should be included in the State Guaranteed Benefit Package (SGBP) and Mandatory Social Health Insurance (MSHI) benefit packages.<br>● Governance model<br>○ Embedded within government. Operating under the MoH and supported by the Republican Center for Health Development (RCHD). The MoH is responsible for creating the advisory committee and appointing its members.<br>● Advisory roles and participation<br>○ Permanent members with the responsibility of developing recommendations on HTA and benefit package design.<br>● Membership composition and expertise<br>○ Multidisciplinary. The committee comprised the vice-minister of the MoH (chair), MoH department reps (2), | **Key findings**<br>● Kazakhstan established a 15-member multidisciplinary advisory committee using the Evidence-Informed Deliberative Processes (EDPs) framework to prioritize 25 health technologies for its benefit packages. Utilizing rapid reviews and standard summaries, the committee preferred Quantitative Multi-Criteria Decision Analysis (MCDA) to explicitly rank technologies based on criteria like effectiveness and safety. Despite practical challenges—such as lack of local cost-effectiveness data, varying HTA literacy among members, and COVID-19 disruptions—the structured EDP approach successfully improved the transparency, quality, and legitimacy of the priority-setting process.<br><br>**Impact**<br>● Impact on decision-making<br>○ EDP framework and committee methodology: Impact - The evidence-informed deliberative processes played a key role in determining an evidence-based | **Transparency**<br>● A central goal of the EDP implementation. Utilizing standardized templates, evidence briefs, and explicit MCDA weights ensured that the rationales behind the advisory body's recommendations were fully transparent to all stakeholders. |
| **Publication date** | September, 2022 | | | |
| **Author/Organization** | Oortwijn et al. | | | |
| **Jurisdictions studied** | Kazakhstan (National level) | | | |
| **Methods used** | Descriptive Policy / Narrative (Mixed methods including desk research, surveys, workshops, and HTA report generation). | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| | | Social Health Insurance Fund reps (2), HTA expertss (2), an ethics scientist, public association reps (2), patient reps (2), a clinician (oncologist), a nurse, and a disease management expert.<br>● Membership structure and appointment model<br>○ The MoH decided on the composition of an advisory committee consisting of 15 permanent members reflecting broad stakeholder groups.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: The process deliberately included patient and public association representatives on the committee<br>○ Inclusion of equity-relevant expertise within the advisory body: "Financial risk protection" (out-of-pocket burden) was identified as a core decision criterion for equity, and social priority disease status was explicitly used to assign technologies to specific guaranteed or insurance-based packages. | and transparent health benefits package in Kazakhstan.<br>● Trust and legitimacy<br>○ EDP framework implementation: Impact - Successfully established a legitimate, stepwise approach to priority setting, bringing diverse stakeholders to the table to explicitly rank criteria rather than relying on opaque decision-making.<br>● System learning<br>○ Standardized checklists and frameworks (EDP): Impact - The project directly facilitated institutional capacity building. By implementing the standardized INAHTA checklist and EDP framework, the MoH learned how to systematize evidence synthesis, remove ad-hoc author judgments, and substantially improve transparency and output quality. | |
| **The Use of Evidence-Informed Deliberative Processes for Designing the Essential Package of Health Services in Pakistan.** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee / Task Forces (Technical Working Groups [TWGs], National Advisory Committee [NAC], and UHC EPHS Steering Committee [SC]).<br>● Mandate<br>○ Strategic, Technical. To review technical aspects of interventions, evaluate evidence, appraise interventions across the three dimensions of UHC, and provide prioritized recommendations for the inclusion of essential services in the national UHC-EPHS within fiscal space constraints.<br>● Governance model<br>○ Hybrid - embedded within the Ministry of Health (MNHSR&C) as the institutional host, but designed with multi-level deliberative structure incorporating external technical experts, international advisors, and sub-national | **Key findings**<br>● The Evidence-Informed Deliberative Processes (EDP) framework successfully facilitated the priority setting of 170 health interventions in Pakistan across tiered advisory committees involving over 150 stakeholders. By utilizing specific criteria (e.g., cost-effectiveness, equity) and voting mechanisms, the bodies constructed a fiscally viable essential health package. Surveyed participants found the process highly legitimate. However, challenges included difficulty translating international economic evidence to the local context, relying purely on expert judgment for criteria like "equity", rushed deliberation times, and COVID-19 shifting meetings online which hindered provincial engagement. | **Equity**<br>● Formally included appraisal criterion: Included as an appraisal criterion (along with financial risk protection) to ensure the package addressed vulnerable populations.<br>● Lack of sub-national and patient representation: Process evaluations revealed that representation from sub-national/provincial stakeholders, patients, and frontline healthcare providers was limited.<br>**Transparency**<br>● Maintained through explicit voting protocols, argumentation documentation, and the utilization of the EDP framework. |
| **Publication date** | October, 2023. | | | |
| **Author/Organization** | Baltussen et al. | | | |
| **Jurisdictions studied** | Pakistan. | | | |
| **Methods used** | Narrative / Descriptive Programmatic Report (Descriptive and Evaluative policy analysis). | | | |
| **Relevance rating** | Moderate | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
|---|---|---|---|---|
| **Quality (JBI)** | 6/6 (Narrative level) | stakeholders.<br>● Advisory roles and participation<br>○ Technical Working Groups (TWG) members reviewed decision criteria, conducted appraisals, assessed feasibility, and provided priority categorizations. NAC members conducted prioritization, reviewed interventions and packages, considered fiscal space constraints, and made recommendations to the SC.<br>● Membership composition and expertise<br>○ Multidisciplinary. Involved over 150 members across four TWGs representing relevant stakeholders for four disease clusters (reproductive, maternal, neonatal, child and adolescent health; NCDs; communicable diseases; health services access).<br>● Membership structure and appointment model<br>○ Mixed standing and ad hoc. Four TWGs were existing bodies that normally advise the MNHSR&C on their respective disease areas and were repurposed for this process. The NAC was newly established for this process with 15 formal members.<br>● Conflict-of-interest management<br>○ Conflict of interest declaration forms were drafted for completion by TWG and NAC members.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: "Equity" was explicitly defined as a core decision-making criterion. However, process evaluations revealed that representation from sub-national/provincial stakeholders, patients, and frontline healthcare providers was limited, prompting recommendations for more inclusive participation mechanisms in the future.<br>○ Inclusion of equity-relevant expertise within the advisory body: The assessment of equity during the appraisal stage was based entirely on TWG and NAC members' expert judgements rather than quantitative evidence. | **Impact**<br>● Impact on decision-making<br>○ TWG deliberations and voting: Impact - Directly produced the priority categorizations of 170 interventions that formed the basis of all subsequent advisory decisions.<br>○ NAC recommendations: Impact - Formally reviewed and approved by the SC and Inter-Ministerial Council, translating directly into Pakistan's national UHC-EPHS.<br>● Policy influence<br>○ Advisory committee outputs: Impact - Directly translated into national health policy as they were implemented as Pakistan's national Universal Health Coverage-Essential Package of Health Services (UHC-EPHS).<br>● Trust and legitimacy<br>○ EDP framework implementation: Impact - Optimized the legitimacy of decision-making by replacing opaque prioritization with structured, transparent, evidence-based stakeholder deliberation.<br>● System learning<br>○ Process evaluation / Institutional learning: Impact - Highlighted critical areas for institutional adaptation, noting that complex criteria (equity and feasibility) relied entirely on expert judgment, translating international cost-effectiveness data required rapid novel methods, and the time allocated for deliberation was insufficient. Emphasized the need to proactively invite sub-national and patient representatives. | **Adaptability**<br>● The advisory structure had to rapidly adapt to the COVID-19 pandemic midway through the process, transitioning from face-to-face workshops to virtual meetings, which participants noted reduced their ability to fully engage. |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| Canada's National Advisory Committee on immunization: Adaptations and challenges during the COVID-19 pandemic. | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Advisory committee, National Immunization Technical Advisory Group (NITAG).<br>● Mandate<br>○ Strategic, Technical. To provide ongoing, independent, and timely medical, scientific, and public health advice to PHAC relating to vaccines.<br>● Governance model<br>○ Embedded (Embedded within government, NACI serves as an External Advisory Body to the Public Health Agency of Canada [PHAC], which provides its technical and administrative secretariat).<br>● Advisory roles and participation<br>○ Formulating national policies on vaccine prioritization, extended dose intervals, heterologous schedules, and booster doses.<br>● Membership composition and expertise<br>○ Multidisciplinary. Composed of 16 volunteer members with expertise in immunization, public health, infectious diseases, geriatrics, allergy/immunology, vaccine safety, nursing, pharmacoeconomics, social sciences, epidemiology, and infectious disease modelling. Utilizes liaison representatives from health professional associations.<br>● Membership structure and appointment model<br>○ Open nomination process based on expertise, knowledge, and experience. Operates through a main committee supported by specialized working groups.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives:<br>■ Inclusion of equity-relevant expertise within the advisory body: To support equitable early vaccine rollout during extreme supply constraints, NACI explicitly utilized an established health equity tool and an ethics/equity framework to systematically prioritize key populations for early immunization. | **Key findings**<br>● The COVID-19 pandemic necessitated a massive acceleration of NACI's outputs, requiring the secretariat to double its staff and implement rapid-response publication formats. Confidential parallel evidence reviews alongside Health Canada allowed for real-time guidance upon vaccine authorization. NACI heavily relied on off-label recommendations—such as extended dose intervals and mixed schedules—guided by fundamental immunological principles to optimize scarce vaccine supplies and promote health equity. The committee learned that using volunteer scientific members as primary media spokespeople is unsustainable, leading to an institutional transition to dedicated government communicators.<br>**Impact**<br>● Impact on decision-making<br>○ NACI advice: Impact - Uptake was highly associated with PHAC engaging the committee frequently and at strategic time points throughout the evidence lifecycle to continuously reassess the relevance of guidance.<br>● Policy influence<br>○ Proactive "off-label" advice: Impact - Served as the primary driver for Canada's highly successful dose-optimizing strategies, particularly the adoption of extended dose intervals and heterologous (mixed) schedules, which rapidly expanded population immunity despite supply shortages.<br>● Trust and legitimacy<br>○ Nuanced preferential recommendations: Impact - Early media criticism suggested that NACI's use of nuanced, evidence- | **Equity**<br>● Ethics/equity framework prioritization: Explicitly utilized an established health equity tool and an ethics/equity framework to systematically prioritize key populations for early immunization.<br>● Dose-optimizing strategies: Extended intervals and population prioritization frameworks were actively championed by the committee as essential equity interventions to ensure scarce vaccines were distributed for maximum population benefit.<br>**Transparency**<br>● Concerns were raised regarding transparency of NACI processes during the COVID-19 pandemic. Authors noted challenges in maintaining transparent communication about NACI's projected forward work plans and decision timelines.<br>**Adaptability**<br>● The advisory mechanism demonstrated immense adaptability, transitioning to weekly meetings, adopting rapid-response publication formats, integrating machine-learning tools for daily literature screening, and revising spokesperson strategies on the fly. |
| **Publication date** | August, 2023 | | | |
| **Author/Organization** | Tunis et al. | | | |
| **Jurisdictions studied** | Canada (National level) | | | |
| **Methods used** | Narrative / Descriptive Institutional Report. | | | |
| **Relevance rating** | | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | | informed preferential recommendations could potentially undermine vaccine confidence.<br>● System learning<br>○ Workload increase: Impact - Demonstrated that routine advisory structures cannot handle emergency paces without massive adaptation; required PHAC to vastly expand the secretariat staff from 18 to 39 personnel, integrating former NITAG members to ensure technical capacity. | |
| **Public Health Academic Alliance for COVID-19 Response: The Role of a National Medical Task Force in Puerto Rico.** | | **Institutional Design of Advisory Bodies:**<br>● Type of advisory body<br>○ Expert Panel, Advisory committee (Medical Task Force - MTF).<br>● Mandate<br>○ Strategic, Technical, Risk assessment. To advise the Governor on the preparation, rapid response, and management of the epidemic; to reduce and stop transmission; to provide clinical guidelines; and to minimize impact on the healthcare system.<br>● Governance model<br>○ Independent (Appointed to serve as an independent advisory board utilizing the University of Puerto Rico academic faculty).<br>● Advisory roles and participation<br>■ Assist the Puerto Rico Department of Health, develop evidence-based recommendations, create protocols for crisis management, and estimate the future needs of the health system.<br>● Membership composition and expertise<br>○ Multidisciplinary. Public health specialists and physicians with extensive clinical and research experience from the Medical Sciences Campus (CCM) of the University of Puerto Rico.<br>● Membership structure and appointment model | **Key findings**<br>● The Puerto Rico Medical Task Force successfully advised the government, leading to early lockdown and universal masking policies that flattened the COVID-19 curve within five weeks. A major operational success was the MTF's use of fatality-based mathematical models to accurately estimate and prepare for ICU and ventilator needs, bypassing the territory's severe deficit in diagnostic testing capacity. Additionally, direct coordination with Economic and Social Task Forces ensured a balanced, integrated response that prevented the collapse of Puerto Rico's healthcare system.<br>**Impact**<br>● Impact on decision-making<br>○ MTF recommendations: Impact - Highly translated into public policy decisions such as the universal use of face masks, early lockdown, and shelter-in-place.<br>● Policy influence<br>○ Academic-government alliance: Impact - Successfully flattened the contagion curve in five weeks and reduced the daily growth rate of positive cases by more than half, | **Equity**<br>● Infection protocols for all society members: The MTF explicitly generated specific guidelines and protocols tailored to vulnerable and at-risk populations, including nursing homes, convalescent homes, the correctional system.<br>**Adaptability**<br>● The MTF successfully adapted international guidelines to the distinct social, cultural, geographical, and weakened healthcare infrastructure reality of Puerto Rico. |
| **Publication date** | July, 2020. | | | |
| **Author/Organization** | Cruz-Correa et al. | | | |
| **Jurisdictions studied** | Puerto Rico. | | | |
| **Methods used** | Narrative / Programmatic Report (Perspective). | | | |
| **Relevance rating** | Moderate | | | |
| **Quality (JBI)** | 6/6 (Narrative level) | | | |

| Study ID and characteristics | | Dimension of organizing framework | Key findings/Impact | Cross-cutting Dimensions |
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| | | ○ Ad-hoc / Temporary volunteer group divided into specific working groups aligned with WHO priority areas.<br>● Equity considerations<br>○ Mechanisms to ensure representation of diverse perspectives: Each member was expected to establish collaborations with other health professionals, public and private entities, and professional organizations to strengthen the health system's response. | from 27.1% to 11.5%.<br>● System learning<br>○ Fatality-driven mathematical model: Impact - Because Puerto Rico faced severe limitations in diagnostic testing capacity (less than 0.2% tested), the MTF adapted by creating a fatality-driven mathematical model to accurately predict hospital surge needs. This allowed the healthcare system to adequately estimate and purchase needed ICU beds and ventilators before a crisis occurred. | |

# Appendix 4: Documents that were excluded in the final stages of review

| No. | Exclusion reason | Hyperlinked title | First author /year |
|---|---|---|---|
| 1 | Wrong Publication Date | 1948 and all that | Mackie, 2008 |
| 2 | Wrong Publication Date | A perspective on the development of the healthy people 2020 framework for improving U.S. population health | Fielding, 2013 |
| 3 | Wrong Publication Date | A process for incorporating comparative risk into environmental policymaking in Louisiana | Thompson, 1994 |
| 4 | Wrong Publication Date | An overview of the national immunization policy making process: The role of the Korea expert committee on immunization practices | Cho, 2012 |
| 5 | Wrong Publication Date | Best practices in use of research evidence to inform health decisions | Whitworth, 2006 |
| 6 | Wrong Publication Date | Bridging the gap between environmental science and policy-making: Why public policy often fails to reflect current scientific knowledge | Sebek, 1983 |
| 7 | Wrong Publication Date | Clinton inaugurates science council | Mervis, 1994 |
| 8 | Wrong Publication Date | Commission on infections, hospital hygiene and antibiotics policy: Functions, activities, responsibilities | Maravi-Poma, 2000 |
| 9 | Wrong Publication Date | Controlling public health nuisances: Guidelines for local health departments | Holmes, 1993 |
| 10 | Wrong Publication Date | Differences in Australian and New Zealand medicines funding policies | Babar, 2014 |
| 11 | Wrong Publication Date | Employers and drugstores press for pbm transparency: A labor department advisory committee has recommended changes | Barlas, 2015 |
| 12 | Wrong Publication Date | Evidence-based policy and practice leads to changes in the criteria for MSM to donate blood | Slowther, 2013 |
| 13 | Wrong Publication Date | Food for Thought? Conflicts of Interest in Academic Experts Advising Government and Charities on Food Policy | Newton, 2015 |
| 14 | Wrong Publication Date | Framing climate change as a health issue: The role of the sector | Armstrong, 2011 |
| 15 | Wrong Publication Date | How to optimally integrate a Paediatric Investigation Plan into a drug development programme | Métais, 2010 |
| 16 | Wrong Publication Date | Improving the use of research evidence in guideline development 10. Integrating values and consumer involvement | Schünemann, 2006 |
| 17 | Wrong Publication Date | Improving the use of research evidence in guideline development: 1. Guidelines for guidelines | Schünemann, 2006 |
| 18 | Wrong Publication Date | Improving the use of research evidence in guideline development: 13. Applicability, transferability and adaptation | Schünemann, 2006 |
| 19 | Wrong Publication Date | Improving the use of research evidence in guideline development: 16. Evaluation | Oxman, 2006 |
| 20 | Wrong Publication Date | Improving the use of research evidence in guideline development: 2. Priority setting | Oxman, 2006 |

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| 21 | Wrong Publication Date | Improving the use of research evidence in guideline development: 3. Group composition and consultation process | Fretheim, 2006 |
| 22 | Wrong Publication Date | Improving the use of research evidence in guideline development: 4. Managing conflicts of interests | Boyd, 2006 |
| 23 | Wrong Publication Date | Improving the use of research evidence in guideline development: Introduction | Oxman, 2006 |
| 24 | Wrong Publication Date | Introduction of pharmaceutical benefits scheme reforms at three Victorian public health services | Larmour, 2016 |
| 25 | Wrong Publication Date | National immunisation technical advisory groups-a framework for assessment and insights from research | Kleintjens, 2014 |
| 26 | Wrong Publication Date | News and notes from the 2009 carrier advisory committee meeting: Medical necessity, off-label chemotherapy, and more | McAneny, 2009 |
| 27 | Wrong Publication Date | Nutritional surveillance and policy | Wiseman, 2015 |
| 28 | Wrong Publication Date | Nutritional surveillance and policy | Wiseman, 2011 |
| 29 | Wrong Publication Date | Omissions, biases, and nondisclosed conflicts of interest: Is there a hidden agenda in the NAMS position statement? | Tiefer, 2005 |
| 30 | Wrong Publication Date | Opinion of the national advisory committee on ethics (CCNE) | Michaud, 2000 |
| 31 | Wrong Publication Date | Organization of the early diagnosis of environmental problems - In the context of the scientific advice to environmental policy: Part III: Critique and new methods | Ell, 1998 |
| 32 | Wrong Publication Date | Perinatal mental health policy and service development in Australia: National clinical practice guidelines for depression and related disorders (anxiety, bipolar and puerperal psychosis) in the perinatal period | Austin, 2011 |
| 33 | Wrong Publication Date | Policy making: How the advisory committee on immunization practices reached recent decisions | Grabenstein, 2000 |
| 34 | Wrong Publication Date | Privacy and security solutions for interoperable health information exchange | Sunil Kumar, 2013 |
| 35 | Wrong Publication Date | Regulatory Reforms in India | Sanghavi, 2013 |
| 36 | Wrong Publication Date | Report of the advisory committee on health research | Unknown, 1997 |
| 37 | Wrong Publication Date | Safety of HIV therapies targeted by new advisory committee | Unknown, 2004 |
| 38 | Wrong Publication Date | Scientific and regulatory advice through the federal institute for drugs and medical devices (BfArM) | Hey, 2007 |
| 39 | Wrong Publication Date | Selecting options for national nutrition policy: A consideration of scientific evidence and alternative perspectives | De Wit, 2011 |
| 40 | Wrong Publication Date | Strategies for containment of antimicrobial resistance by WHO and some countries around the world | Yi, 2014 |
| 41 | Wrong Publication Date | The Australian experiment: The use of evidence based medicine for the reimbursement of surgical and diagnostic procedures (1998-2004) | O'Malley, 2006 |
| 42 | Wrong Publication Date | The development of a strategy for tackling health inequalities in the Netherlands | Mackenbach, 2004 |
| 43 | Wrong Publication Date | The place of public inquiries in shaping New Zealand's national mental health policy 1858-1996 | Brunton, 2005 |
| 44 | Wrong Publication Date | Three steps to ensure good science and safe research | Resnik, 2007 |
| 45 | Wrong Publication Date | Translating science into the 2015 Dietary Guidelines | Goodwin, 2014 |

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| 46 | Wrong Publication Date | Transparency in IARC Monographs | Cogliano, 2005 |
| 47 | Wrong Publication Date | UK alcohol policy - Genius, pure genius | Luty, 2005 |
| 48 | Wrong Publication Date | USDA nutrition evidence library: Support to the 2010 dietary guidelines advisory committee | MacNeil, 2010 |
| 49 | Wrong Publication Date | What research means to patients, and the importance of partnership with practitioners in research | Thornton, 2009 |
| 50 | Wrong Publication Date | WHO and rational reduction of patient dose | Hanson, 1995 |
| 51 | Wrong Publication Type | We did everything we could': An account of toxic leadership. | Paton, 2021 |
| 52 | Wrong Publication Type | The Tobacco Market Commission's reports: too opaque, too irrelevant. | Peruga, 2025 |
| 53 | Wrong Publication Type | A cause for concern. | Hamzelou, 2020 |
| 54 | Wrong Publication Type | A Checklist for the Conduct, Reporting, and Appraisal of Microcosting Studies in Health Care: Protocol Development. | Ruger, 2016 |
| 55 | Wrong Publication Type | A comprehensive home-care program for health promotion of mothers with preeclampsia: protocol for a mixed method study. | Rastegari, 2019 |
| 56 | Wrong Publication Type | A methodology to effectively develop national care pathways for people with pancreatic cancer, as part of the National Pancreatic Cancer Roadmap | Philip, 2024 |
| 57 | Wrong Publication Type | ACIP Recommends Shared Decision-Making for COVID-19 Vaccination | Unknown, 2025 |
| 58 | Wrong Publication Type | Addressing the challenges and constraints of social protection policies for Peruvian women domestic workers: the ANITA project study protocol. | Tenorio-Mucha, 2025 |
| 59 | Wrong Publication Type | Advocacy and Action to End the Opioid Epidemic by the AMA Opioid Task Force. | Harris, 2020 |
| 60 | Wrong Publication Type | Angewandte Chemie's Redefined International Advisory Board: Strengthening Connections between the Journal and Its Community. | Compton, 2021 |
| 61 | Wrong Publication Type | Assessing Patient And Societal Unmet Needs: The Needs Examination, Evaluation And Dissemination (NEED) Assessment Framework | De Noordhout, 2024 |
| 62 | Wrong Publication Type | Barriers and facilitators associated with steps of the HIV care cascade for migrants in OECD countries: a systematic mixed studies review protocol. | Arora, 2020 |
| 63 | Wrong Publication Type | Biden names former DARPA leader Arati Prabhakar as science adviser. | Tollefson, 2022 |
| 64 | Wrong Publication Type | Bridging the Expertise Gap: Developing and Utilizing a Radiological Advisory Committee for New York City. | Maiello, 2018 |
| 65 | Wrong Publication Type | Communication of Science Advice to Government. | Hutchings, 2016 |
| 66 | Wrong Publication Type | Coordinating the research response to COVID-19: Mali's approach. | Doumbia, 2020 |
| 67 | Wrong Publication Type | Coronavirus: Lombardy lessons for policy and governance. | Simone, 2020 |
| 68 | Wrong Publication Type | Coronavirus: three things all governments and their science advisers must do now. | Unknown, 2020 |
| 69 | Wrong Publication Type | Council of science advisers for US lawmakers - as well as presidents. | Nouri, 2020 |
| 70 | Wrong Publication Type | Daily briefing: Three things all governments and their science advisers must do now to fight COVID-19. | Graham, 2020 |
| 71 | Wrong Publication Type | Defeating poverty-related and neglected diseases in Africa: harnessing research for evidence-informed policies | Makanga, 2017 |

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| 72 | Wrong Publication Type | Developing Treatment Guidelines During a Pandemic Health Crisis: Lessons Learned From COVID-19. | Kuriakose, 2021 |
| 73 | Wrong Publication Type | Dismal performance in response to coronavirus: the problem no one wants to discuss - the NHS. | Bleetman, 2020 |
| 74 | Wrong Publication Type | Drawing lessons from the COVID-19 pandemic: science and epistemic humility should go together. | Mazzocchi, 2021 |
| 75 | Wrong Publication Type | Eag solutions to child poverty report and progress thus far | Wills, 2014 |
| 76 | Wrong Publication Type | Embedding patient engagement in the R&D process of a life sciences company through co-creation with a patient expert R&D board: a case study. | Jobson, 2024 |
| 77 | Wrong Publication Type | Encourage governments to heed scientific advice. | Colglazier, 2016 |
| 78 | Wrong Publication Type | Enhancing Epidemiology's Impact on Policy: Mediation by Expert Committees. | Savitz, 2023 |
| 79 | Wrong Publication Type | Enhancing the uptake of core outcome sets: An essential role for health technology assessment bodies | Clifford, 2019 |
| 80 | Wrong Publication Type | Ensuring scientific integrity in the Age of Trump | Goldman, 2017 |
| 81 | Wrong Publication Type | Evaluation of the decision-making process underlying the initial off-label use of vaccines: a scoping review protocol. | Diallo,2021 |
| 82 | Wrong Publication Type | Exploring the links between NITAGs and academic institutions: a landscape analysis protocol. | Oduwole, 2025 |
| 83 | Wrong Publication Type | First science adviser in US president's cabinet talks COVID, spying and more. | Subbaraman, 2021 |
| 84 | Wrong Publication Type | France needs a chief science adviser. | Lemaire, 2024 |
| 85 | Wrong Publication Type | Freedom of speech and public interest, not allegiance, should underpin science advisement to government. | Singh, 2020 |
| 86 | Wrong Publication Type | Governance of the Covid-19 response: a call for more inclusive and transparent decision-making. | Rajan, 2020 |
| 87 | Wrong Publication Type | Harnessing Country Experiences for Health Benefit Package Design: Evidence-Informed Deliberative Processes and Experiences From the Joint Learning Network Comment on "Evidence-Informed Deliberative Processes for Health Benefit Package Design - Part II: A Practical Guide". | Nagpal, 2023 |
| 88 | Wrong Publication Type | How to convince a politician: a science adviser's lessons from the pandemic. | Sanderson, 2023 |
| 89 | Wrong Publication Type | Improve how science advice is provided to governments by learning from "experts in expert advice". | Pielke, 2023 |
| 90 | Wrong Publication Type | Institutionalizing Health Technology Assessment in South Africa-An Opportunity in National Health Insurance. | Jugathpal, 2023 |
| 91 | Wrong Publication Type | JACR Health Policy Expert Panel: Bundled Payments. | Liao, 2022 |
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