Overview of New Vaccine Introduction Prioritization and Optimization Program

CHOICES 2.0

Webinar 1, 8-9th October 2025

Development Catalysts

CHOICES 2.0

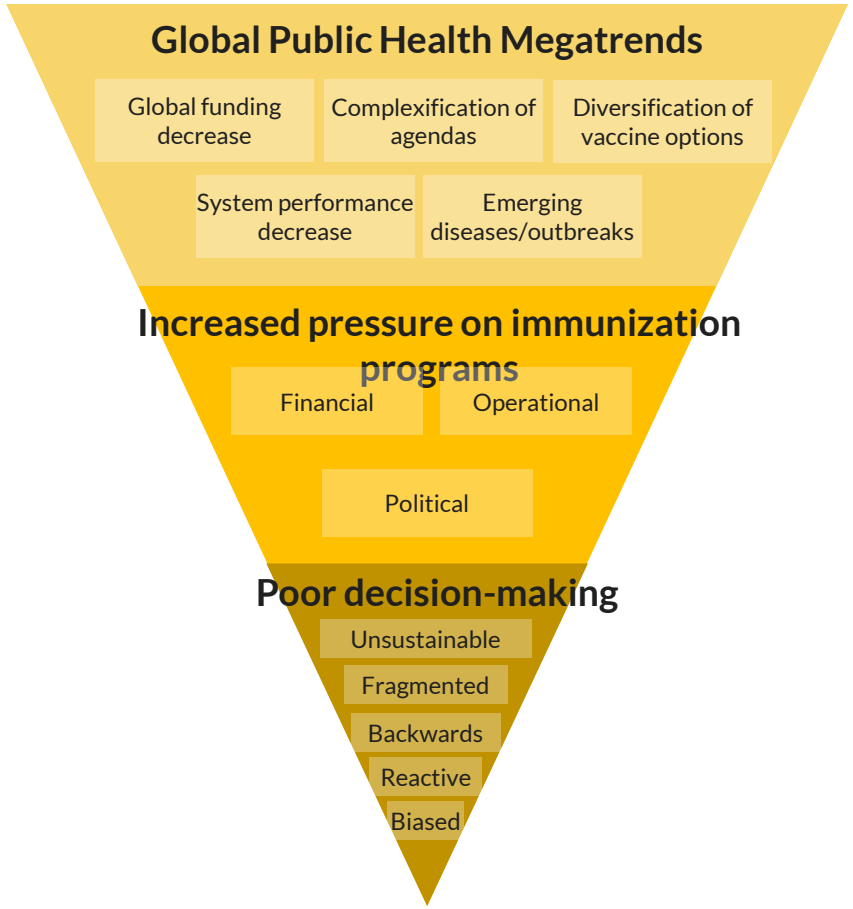
NISH
National Immunization Technical Advisory Group (NITAG) Support Hub

Agenda

1. Context
2. Core concepts and benefits
3. Triggers for action
4. Key principles, roles and responsibilities
5. Examples

The multiplication of vaccine options and the global decrease of funding negatively impacts vaccine-related decision-making

Under pressure, immunization programs are forced to make biased, fragmented and reactive decisions



Unsustainable programs due to overly ambitious roadmaps hindering ability to deliver and creating competition for resources

Fragmented options review resulting in poor coordination and missed opportunities

Backwards consultation, where decisions preempt NITAG guidance, turning advice into mere validation.

Reactive priority setting and limiting strategic and longer-term planning

Biased decision-making with limited consideration for existing evidence

In March 2025, WHO SAGE called on countries to consider prioritization of future NVIs and optimization of their schedules and portfolios

"In the context of an increasing number of available vaccines, SAGE emphasized that **each country should be empowered to prioritize these vaccines** (…). These decisions should be made using a **systematic, country-owned process based on the local context.**

SAGE called on countries to engage their NITAG in providing recommendations on the prioritization of new vaccines for introductions and optimization of vaccination schedules and portfolios in close consultation with their respective national immunization programmes.

These recommendations need to be aligned and **integrated with the priorities in their NIS and health sector strategy** and regularly updated"


World Health Organization
Weekly epidemiological record
Relevé épidémiologique hebdomadaire

Meeting of the Strategic Advisory Group of Experts on Immunization, March 2025: conclusions and recommendations

Réunion du Groupe stratégique consultatif d'experts sur la vaccination, mars 2025: conclusions et recommandations

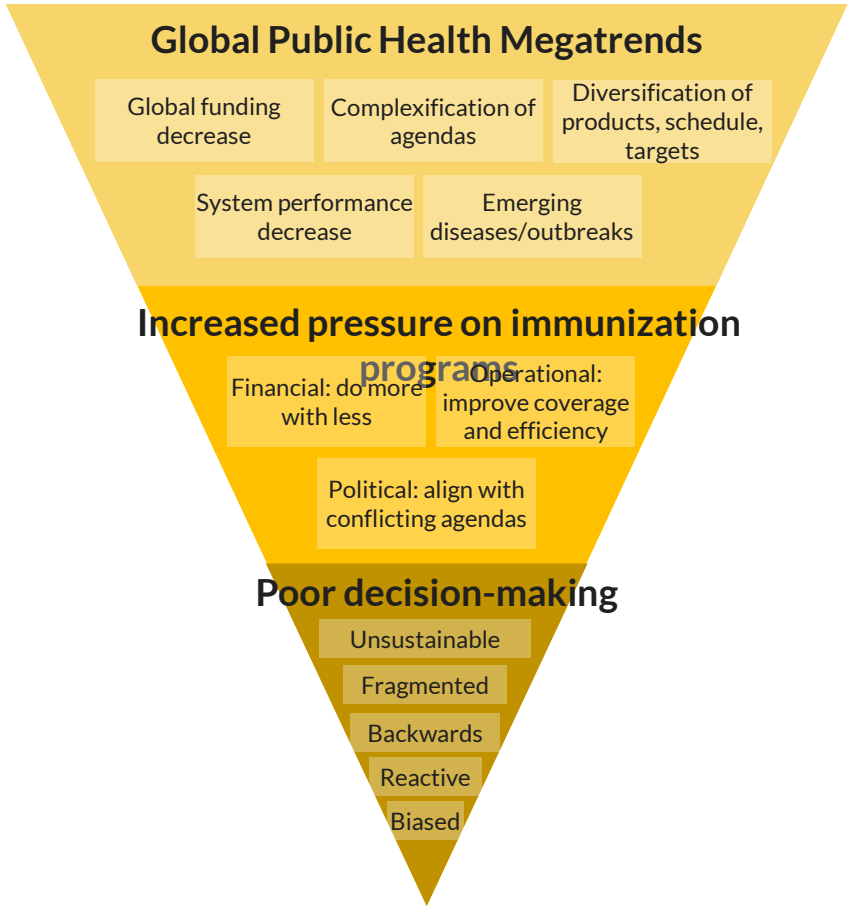
Report from the Department of Immunization, Vaccines and Biologicals (IVB)

Rapport du Département Vaccination, vaccins et produits biologiques (IVB)

Meeting of the Strategic Advisory Group of Experts on Immunization, March 2025: Conclusions and recommendations

SAGE recommendation pushes countries to rely on a structured process to review and conduct evidence-based prioritization and optimization

Under pressure, immunization programs are forced to make biased, fragmented and reactive decisions



Using a country-owned process helps topple the pyramid to strengthen immunization strategic planning (prioritization & optimization)

SAGE recommends that decisions on **prioritization of NVI and optimization opportunities** are **country led** (see more on next slide)

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What are prioritization and optimization?

According to you, what is prioritization and why is it important?

Similarly, what is optimization and why is it important?

Prioritization and optimization serve different purposes: the former shapes the future vaccine pipeline, while the latter strengthens today's portfolio

Sequencing decisions on **not yet introduced vaccines**, determining which to introduce first, expand, or delay based on impact, feasibility, and resources

Improving the use of **already introduced vaccines** by adjusting products, schedules, presentations, or target groups to maximizing the impact, efficiency, and coverage

Examples

2025 recommendation by ENITAG (Ethiopia) to introduce Hexavalent, followed by Rubella, Meningitis multivalent and RSV in Ethiopia

Decision to switch from PCV 13 to PCV 10 in South Africa in the context of the new PCV product tender in 2024

In practice, prioritization is guided by the NITAG and optimization by the EPI, with both processes complementing each other and occasionally intersecting in gray zones

	PRIORITIZATION	OPTIMIZATION
What does it cover?	• Prioritizing and sequencing vaccines (antigens) to be added to the routine immunization schedule	• Reviewing products, schedule, targets, presentation, use/administration, serogroup coverage
What is **not** included?	• Campaign-only vaccine introductions	• Arbitrage of delivery modes (campaign vs. routine)
What are the expected benefits?	• Adequation of immunization program to country context and priorities • Improved planning and coordination (realistic introduction pace) • Early alignment on financial and supply implications to guarantee feasibility	• Improved program and delivery performance (coverage, logistics, etc.) • Optimized value for money and potential reinvestment in other programs • Improved HR and patient/parent experience • Better disease control
Who should lead it?	• NITAG, with the support of the EPI	• EPI, with the support of the NITAG
What is the time horizon considered?	• Medium to long term (5 to 10 years)	• Short to medium term (1 to 5 years)

Some decisions can fall in the gray area between prioritization and optimization, like the introduction if Hexavalent or the introduction of vaccines (e.g HPV) impacting the age of administration of already introduced vaccines

According to you, are these policy questions prioritization or optimization decisions?

Example of policy questions	Prioritization	Optimization
Should the country switch from PCV13 to PCV10? When?		✓
Should we switch from Measles only to Measles-Rubella vaccine? When?	✓	
Should we introduce typhoid conjugate vaccine (TCV) in place of the polysaccharide vaccine used during outbreaks? When?	✓	
Should we introduce Hexavalent vaccine instead of the current DTP+IPV vaccine? When?		✓
Should we move from 10-dose measles vials to 5-dose vials? When?		✓
Should we add a second dose of measles-containing? When?		✓
Should we introduce the malaria vaccine as part of the routine EPI schedule in 2026? When?	✓	
Should the country introduce Meningitis pentavalent (Men5CV)? When?		✓


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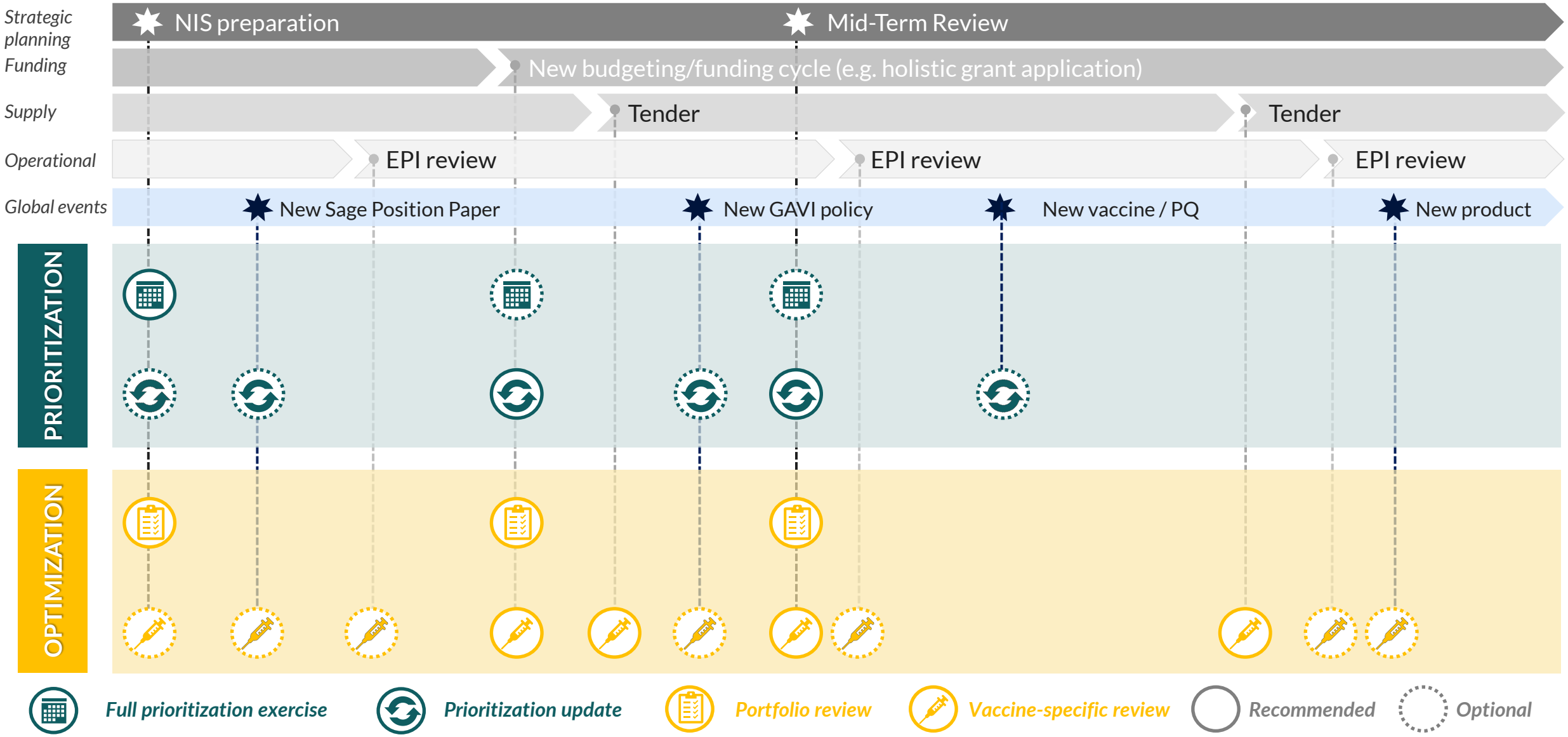
Triggers for action

When do you think prioritization and optimization can and should happen?

Both prioritization and optimization fit naturally into broader strategic planning, such as the NIS



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NITAGs and EPIs need to work together to deliver on-point prioritization and optimization recommendations

EPI

- Assess program performance (coverage, equity, CCE ,HR)
- Plan and implement immunization strategies and service delivery
- Allocate and optimize resources within national plans and budgets
- Set operational priorities (campaigns, logistics, outreach)
- Communicate with immunization stakeholders

NITAG

- Review evidence and data (burden of disease, cost-effectiveness, safety)
- Develop and recommend policies for vaccine introduction and use
- Provide independent, transparent guidance to MoH and EPI

Support prioritization

- Act as NITAG secretariat, facilitating workshops and logistics
- Share program constraints and programmatic considerations
- Lead evidence collection
- Translate priority lists and sequencing into strategic planning

Lead prioritization work

- Decide on timeline, vaccines and criteria
- Support evidence collection
- Review evidence and rank vaccines
- Define priority lists and propose NVI sequence

Informed decisions

Lead optimization work

- Review current portfolio in light of potential optin
- Select optimization questions and list potential options
- Collect data and evidence to facilitate decision-making
- Assess implementation feasibility of potential switches
- Translate decisions into strategic planning and implement

Supports optimization choices

- Review evidence and compare optimization options
- Provide technical recommendation on products, schedules, strategies, etc.
- Recommend evidence-based adjustments to policy and strategy as new data emerge

Both approaches are underpinned by MCDA, ensuring structured and transparent decision-making

Immunization decisions often involve trade-offs — MCDA helps weigh multiple factors transparently

Multi-Criteria Decision Analysis (MCDA) combines quantitative and qualitative evidence to support complex health decisions

- It helps compare options across various criteria representing trade-offs: health impact, cost effectiveness, market dynamics, programmatic feasibility, etc.

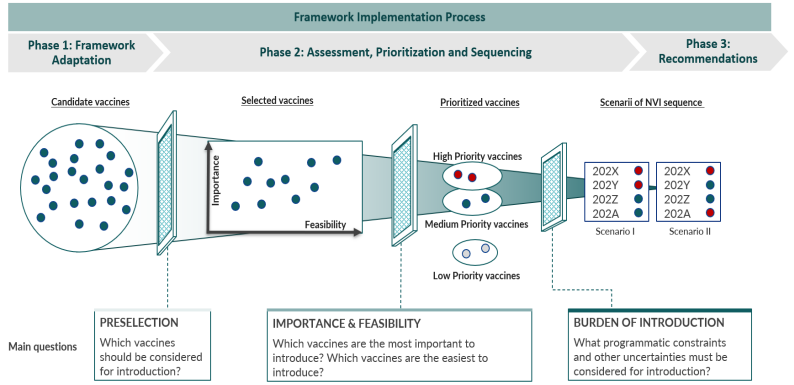
MCDA relies on a simple approach

Define question → Select options & criteria → Score or rank → Aggregate results → Deliberate and decide

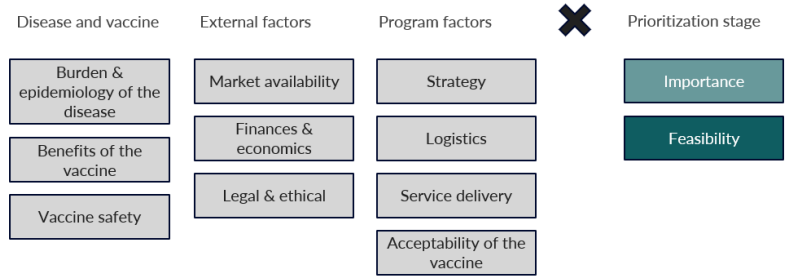
As a result, it improves transparency, consistency, and stakeholder engagement in immunization decision-making

Example: **NVI-PST process**

Prioritization funnel



Criteria categories (71 criteria)



Frameworks developed to support countries are guided by overarching principles: keeping the process simple, evidence-based, adaptable, and iterative

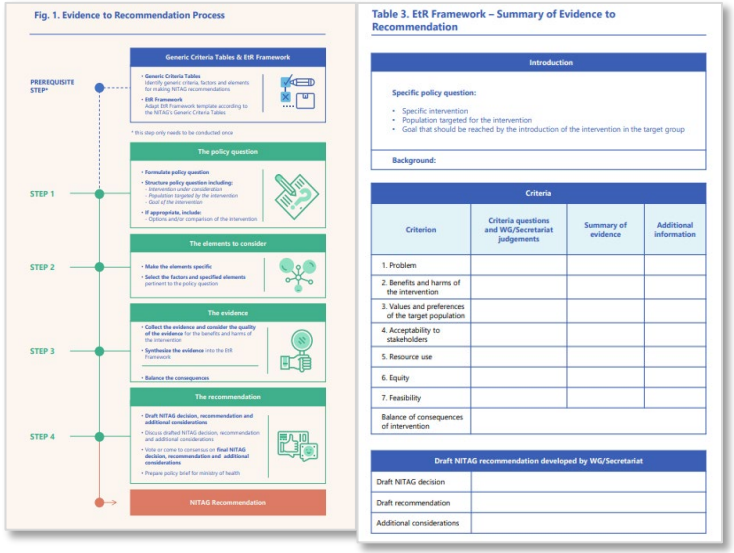
Evidence-based	• Decisions on sequencing are often influenced by national and international agenda and rely on opinions rather than facts • This framework relies on **measurable evidence** to ensure consistency of decision-making through time
Simple	• Existing tools and processes either refer to overabundant criteria or to no criteria at all • This framework refers to **a limited number of criteria** which will be selected by the NITAG • The selected criteria should allow the NITAG to answer simple but crucial questions.
Comprehensive	• Decisions regarding vaccine introductions are often taken independently and with different processes based on the nature of the decision • This framework is designed to **be comprehensive in terms of vaccines** and **type of country**
Adaptative	• To allow for better appropriation by countries, the prioritization framework will be **discussed and adapted by the NITAG**, which will be done mainly through the **addition or removal of secondary criteria** and the selection of **candidate vaccines**
Iterative	• Current decision-making on NVI sequencing is done on a reactive basis, often to answer requests from technical partners or submit grant applications to donors • This exercise can be conducted by the NITAGs on a **recurring basis** to ensure **adaptation to evolving research and markets**

Sources: discussions with WHO/GAVI, Capaciti manual

Several tools are available to support countries in these decisions – however, EtR is the sole tool suited for NITAG to make recommendations on whether and how vaccines should be introduced

Evidence to Recommendations

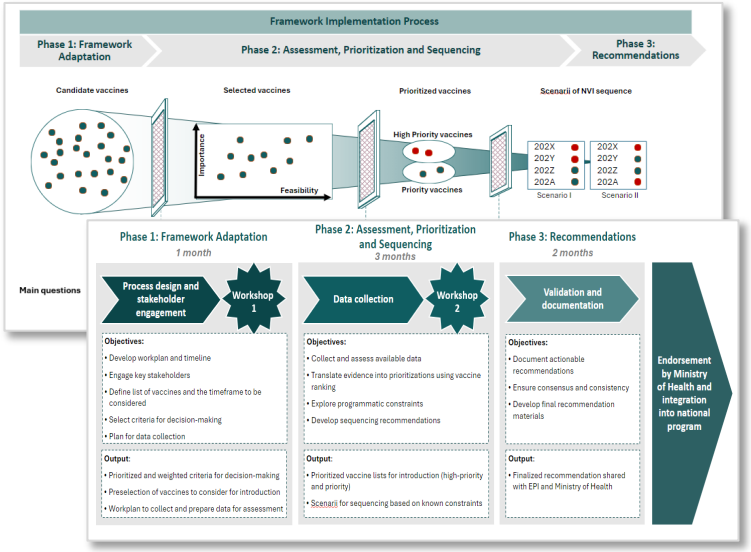
Evidence-to-Recommendations (EtR) is a framework that enables the adoption of recommendations regarding potential interventions by NITAGs. It is based on a list of criteria representing aspects that need to be incorporated when considering introduction of a new vaccine or intervention.



Unique process for recommendations on whether an intervention should be implemented

NVI-PST

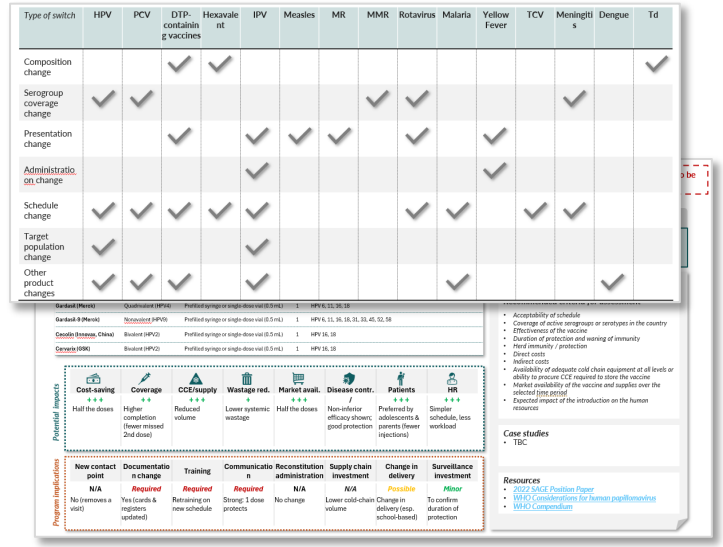
NVI-PST is a proven NITAG-driven framework supporting the prioritization of new vaccine introductions. It leverages a simple, evidence-based and comprehensive approach to support the preparation of NVI sequencing scenarios based on a pre-hierarchized list of potential criteria.



Optimization tool

Currently being developed

A structured tool that **helps countries navigate trade-offs between budget, health impact, and program feasibility on** vaccine options linked to product, composition, presentation, use, schedule and target·



Complementary tools to compare and rank options, define sequence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Prioritization

ETHIOPIA

Background: Experience of Ethiopian National Immunization Technical Advisory Group's (ENITAG) in using a structured, multi-criteria decision analysis (MCDA) approach—the New Vaccine Introduction Prioritization and Sequencing Tool (NVI-PST)—to guide new vaccine introduction and sequencing for the 2026–2030 period.

Methods: ENITAG, in collaboration with the Federal Ministry of Health (FMoH) and partners, adapted the NVI-PST to Ethiopia's context. Six candidate vaccines were shortlisted—hexavalent, rubella (MR), multivalent meningococcal conjugate (MMCV), typhoid (TCV), cholera (OCV), and respiratory syncytial virus (RSV) vaccines. Thirteen criteria across importance and feasibility domains were selected and weighted. Data were gathered by thematic working groups and used to score and rank each vaccine through a participatory process involving ENITAG members and stakeholders.

Results: The hexavalent and rubella vaccines were prioritized as the highest for early introduction due to their combined public health importance and programmatic feasibility. RSV and MMCV were ranked as medium priorities, while TCV and OCV were deemed lower priorities for routine immunization. The recommendations considered existing programmatic constraints, such as upcoming introductions (e.g., malaria, yellow fever, hepatitis B birth dose) and supplementary campaigns. ENITAG also emphasized strengthening its secretariat, improving data systems, and integrating community perspectives in future prioritization efforts.

Conclusion: This exercise marks a pivotal shift in Ethiopia's immunization decision-making—from reactive, one-off vaccine assessments to a strategic, systematic approach aligned with national priorities and health system capacity. Despite challenges related to data quality and resource limitations, the process offers a replicable model for other low-income countries seeking to optimize immunization investments in a transparent, evidence-informed manner.

CHINA

Background To prioritize the introducing of new vaccines into China's National Immunization Program (NIP) among 10 candidate vaccines across four classes.

Methods We developed a vaccine value framework using Multi-Criteria Decision Analysis (MCDA) to simulate the introduction of new vaccines into NIP, covering 21 criteria encompassing six dimensions: safety, effectiveness, economy, innovation, accessibility, and appropriateness. Two decision scenarios were considered: Scenario One prioritized the four classes of vaccines, while Scenario Two identified specific vaccines within each class.

Results In the vaccine value framework, safety received the highest weight, while innovation received the lowest. The Human Papillomavirus (HPV) vaccine was identified as a top priority for inclusion in NIP, followed by Pneumococcal Conjugate Vaccine (PCV), Haemophilus Influenzae Type B (HIB), and Rotavirus (RV) vaccines. The specific types are domestic bivalent HPV vaccine, imported 13-valent PCV vaccine, domestic HIB vaccine, and domestic RV vaccine. The results of the one-way and probabilistic sensitivity analysis demonstrated robustness.

Conclusions This study provides a transparent, comprehensive, and quantifiable vaccine value framework to aid decision-making for introducing new vaccines into China's NIP. According to the MCDA results, HPV should be considered the top vaccine candidate for the NIP.