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Immunization Economics IHEA Pre-Congress Meeting

August 2025

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Immunization Economics IHEA Pre-Congress 2025 at a glance



The Immunization Economics pre-congress attracted **141 participants** from **32 countries**, with **80 institutions** represented among pre-congress attendees



The pre-congress delved into three priority topics: the economics of reaching zero-dose children; financing, sustainability, and donor transitions; and vaccine portfolio optimization and prioritization



Over two days, the pre-congress featured **11 sessions**, **27 presentations**, and **46 speakers**



95% of participants reported they learnt something new at the Immunization Economics pre-congress



97% of attendees would recommend the Immunization Economics pre-congress to others

Organized by

**THINK
WELL**

This meeting was supported by the
Gates Foundation and **Gavi, the Vaccine Alliance**.

Overview



On 19-20 July 2025, an Immunization Economics Pre-Congress meeting was organized in Bali, Indonesia, ahead of the 16th International Health Economics Association (IHEA) Congress.

The pre-congress brings the Immunization Economics community together to showcase the latest research findings and methodological advancements, discuss implications for policy and practice, facilitate peer-to-peer learning, foster partnerships, and align on research priorities relevant to support immunization programs in low- and middle-income countries.

The Bali 2025 meeting marked the third in-person convening of the Immunization Economics community of practice, and assembled a wide range of stakeholders from academia, governments, multinational organizations, nonprofit sector, consulting groups, and donor organizations.

The **Immunization Economics Community of Practice** is a platform for those **interested in immunization financing, costing, equity, and value**, and facilitates the dissemination of evidence, tools, and guidance on these topics. The Immunization Economics Special Interest Group at IHEA was established as a forum to discuss research relevant to the community and bring members of the community together with the broader health economic audience of IHEA.

This year, the pre-congress meeting focused on the following priority topics:

Economics of reaching zero-dose children: Comparing the cost and cost-effectiveness and equity trade-offs of different interventions aimed at reducing zero-dose prevalence in various settings, including integrated and mixed strategies or novel approaches such as drone delivery or extended hours and weekend sessions, improved microplanning, electronic immunization registries for identification, demand-side interventions, as well as financing and sustainability of zero-dose interventions.

Financing, sustainability, and donor transitions: Managing financial constraints in light of donor transitions and limited resources, prioritization of and advocacy for immunization programs, improving resource allocation and public financial management, and prevention of backsliding in middle-income countries.

Vaccine portfolio optimization and prioritization: Optimization of immunization delivery strategies and vaccine portfolios, the value of combination vaccines, priority setting and improving the use of economic evidence in decision-making processes, and improving efficiency, including through integration with other maternal and child health services.

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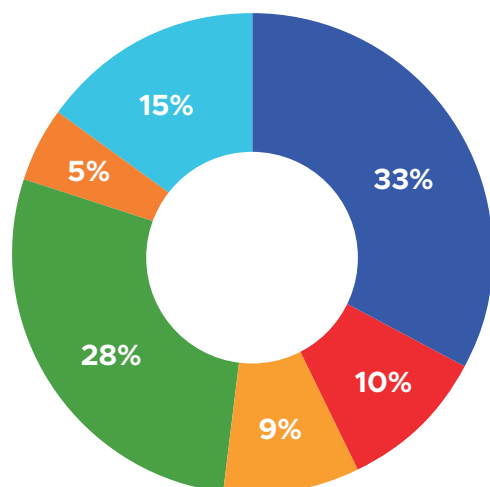
The pre-congress meeting was attended by **141 participants** representing **32 countries** and **80 institutions**.



More than one third of participants are based in Asia and one third represented academia or scientific organizations.

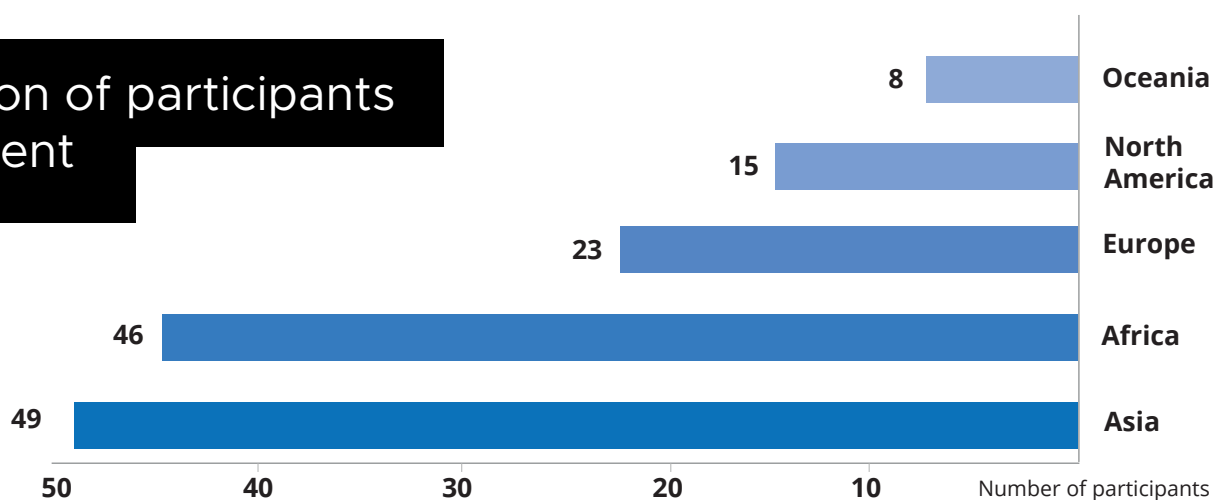
Participants

Types of organizations represented



- Academia or scientific organization
- Global agency (such as WHO, UNICEF, World Bank, Gavi)
- Government (policymakers, EPI managers, health professionals)
- Non governmental organization
- Think tank or policy research institute
- Private sector

Distribution of participants by continent



Top 5 countries represented

- 1) Indonesia
- 2) UK
- 3) USA
- 4) Kenya
- 5) Nigeria



What was covered?



The two-day program featured 27 presentations across 11 sessions, including presentations and panel discussions.

This year's meeting discussed three key priority areas: the economics of zero-dose children; financing, sustainability, and donor transitions; and vaccine portfolio optimization and prioritization.

The full agenda is noted on the next two pages and the [27 presentations can be found here](#). The bios of speakers are summarized in the **Annex**.

“The two days of the immunization economics pre-congress were incredibly useful. The sessions provided rich insights into the cost-effectiveness and strategic planning of immunization programs, especially in the context of reaching zero-dose children and transitioning funding



Day 1 - Saturday, July 19

7h30 - 8h30	Walk in, registration, coffee
8h30 - 8h45	Welcome & introduction

- Welcome, overview of the meeting & introduction to the theme of day 1 (Laura Boonstoppel, ThinkWell)

8h45 - 10h30	Zero-dose: the cost of Zero-Dose focused delivery strategies in hard-to-reach areas
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Moderator: David Bishai, University of Hong Kong

- The cost and efficiency of PIRI and MHNT compared with RI/RO to reach zero dose children in Afar and the Somali region in Ethiopia (*Fenot Associates*)
- Cost-effectiveness of drone delivery of vaccines to isolated satellite island communities for immunization outreaches in Uganda (*Emmanuel Okiror Okello, EPI Uganda*)
- The cost of immunizing zero-dose children through additional outreach sessions in Kaduna, Nigeria (*Florence Sibeudu, Nnamdi Azikiwe University*)
- Big catch-up: cost of reaching ZD children through house-to-house registration and targeted outreaches in Uganda (*Carol Kanya, IDRC*)
- Cost-effectiveness analysis of routine outreach and catch-up campaign strategies in Ethiopia: a modelling study (*Senait Beshah, Ethiopia public health institutes*)

Q&A and discussion

10h30 - 11h00	Coffee break
11h00 - 12h30	Zero-dose: the cost of Zero-Dose-focused delivery strategies in urban settings

Moderator: Stacey Orangi, KEMRI-Wellcome Trust

- Cost of reaching ZD children through integrated outreach, clinics on wheels, and leveraging identification through polio house-to-house campaigns compared with routine delivery in Punjab and Sindh (*Tahmeena Hassan, PHC Global*)
- Incremental costs and impact of evening and weekend vaccination sessions: lessons learnt from implementing the Zero-dose Reduction Operational Plan in Lagos state (Nigeria) (*Hadiza Salele, CHAI*)
- Costing study of interventions to improve routine outreach to reach ZD in Addis Ababa (*Alemnesh Angelo, CHAI*)
- The cost of immunizing zero-dose children through additional outreach sessions in Lagos, Nigeria (*Christina Banks, ThinkWell*)

Q&A and discussion

12h30 - 13h30	Lunch break: Exhibition Hall on Level 1
13h30 - 14h45	Zero-dose: community-based demand generation interventions

Moderator: Disha Agarwal, Gates Foundation

- Estimating the cost of HCD-based targeted communication materials and community engagement to reach ZD Children in urban India (Alan Noble John, JSI India)
- Cost and cost-effectiveness analysis of HCD-based targeted communication interventions for ZD children in high-burden regions of India (Devak Namdhari, CHAI India)
- Effectiveness and cost efficiency of active community-based surveillance augmented by referral slips on reducing zero-dose and under-immunized children in pastoralist/semi-pastoralist communities in Ethiopia (Alemnesh Teka, CORE Group Partners Project)

Q&A and discussion

Day 1 - Saturday, July 19

14h45 - 15h15	Coffee break
15h15 - 16h15	Zero-dose: financial incentives & financial reform

Moderator: Bryan Patenaude, Johns Hopkins University

- Unravelling the cost of reaching the unimmunized children to inform financing reforms in Indonesia (*Saffana Hilmy Mahmudah, CHAI Indonesia*)
- Costing outreach, conditional incentives, and trusted local pathways that lead to immunization in Pakistan (*Hania Qavi Khan & Muhammad Salman, Impetus*)
- Effectiveness of cash incentives for caregivers in increasing immunization coverage among zero-dose children (*Alex Adjagba, UNICEF*)

Q&A and discussion

16h15 - 17h30	Zero-dose: summary, discussion, takeaways & next steps
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- All-country evidence synthesis (*Laura Boonstoppel, ThinkWell*)
- Panel discussion: what are the policy implications from the ZD economics work? How can the zero-dose agenda fit into a funding-constrained future?
 - Todi Mengistu (*Gavi, MEL team*)
 - Carol Kamya (*IDRC, Uganda*)
 - Ali Turab (*PHC Global, Pakistan*)
 - Logan Brenzel (*consultant for the Gates Foundation*)
- Closing

Day 2 - Sunday, July 20

7h30 - 8h30	Walk in, coffee (from 8h00), registration for new arrivals
8h30 - 9h45	Immunization financing and donor transitions: Gavi transition prep & increasing domestic resources for immunization

Moderator: Alex Adjagba, UNICEF

- Sustainable finance for immunization and Gavi transition (Anthony Nguyen, Gavi IF&S team)
- Are countries poised to successfully transition from donor support? (Logan Brenzel, independent consultant)
- Fiscal space options for sustainable immunization financing in Gavi's accelerated transition phase countries: evidence from the Republic of Congo and Sao Tome and Principe (Soazic Elise Wang Sonne, World Bank)
- Ghana's transition journey: Lessons for countries & global reflections (Daniel Osei, consultant for Gavi)

Q&A and discussion

9h45 - 10h15	Coffee break
10h15 - 10h45	Immunization financing and donor transitions: how are LMICs managing the USG funding withdrawal?

Moderator: Laura Boonstoppel, ThinkWell

- Setting the scene: effects of USG funding cuts on immunization programs (Brendan Kwesiga, UNICEF)
- Panel with country representatives sharing their country's lessons learned so far and discussion on a way forward:
 - Girmaye Deye (Fenot Associates & health financing advisor to MOH Ethiopia)
 - Shabana Haider (Country Director, ThinkWell, Pakistan)
 - Rose Jalang'o (EPI manager, National Vaccines & Immunization Program, Kenya)
 - Soazic Elise Wang Sonne (World Bank)

10h45 - 12h15	Efficiency, prioritization, and vaccine portfolio optimization: optimization experiences & best practices Moderator: Navpreet Singh, Clinton Health Access Initiative (CHAI) - The case for efficiency in immunization: macro trends in aid efficiency and why optimization matters presenting two high-impact levers: VPOP and integration (<i>Anitha Athiyaman, CHAI</i>) - Country panel: short country case studies and discussion - Kenya: Early adopter of low-cost PCV (<i>Rose Jalang'o, NVIP Kenya</i>) - Nigeria: Optimization of PCV and MR presentation to open fiscal space to consider new vaccine introductions (<i>Dr Bakunawa Garba Bello, National Primary Health Care Development Agency</i>) - Indonesia: CAPACITY and portfolio planning (<i>Prof. Auliya Suwantika, NITAG Indonesia</i>) Q&A from the audience and group discussion
12h15 - 13h15	Group photo followed by lunch break in Exhibition Hall on Level 1
13h15 - 14h30	Efficiency, prioritization, and vaccine portfolio optimization: Combination vaccines & Gavi policy - Exploring the value of combination vaccines (Mercy Mvundura, PATH) - Gavi's thinking for the 6.0 strategy (Maria Verykiou, Gavi policy team) <i>Discussion: feedback on the draft strategy & what else is needed in terms of evidence and learnings?</i>
14h30 - 15h00	Coffee break
15h00 - 16h00	Efficiency, prioritization, and vaccine portfolio optimization: capacity strengthening to using economic evidence in decision-making for immunization programs Moderator: Mark Jit, New York University - Integrating health economics expertise in EPI programs in 22 EMRO countries (Palwasha Anwari, WHO EMRO) - Lessons learned from the Global NITAG Network (GNN) Vaccine Economics Training (Natalie Carvalho, University of Melbourne) <i>Discussion: how can we improve country-level health econ capacity, who should be targeted with what contents?</i>
16h00 - 17h00	Efficiency, prioritization, and vaccine portfolio optimization: tools & way forward Moderator: Todi Mengistu, Gavi - R-Shiny tool for immunization program analysis: an interactive web-based approach to estimating benefits, costs, ROI, and funding gaps (Salin Sriudomporn, Johns Hopkins University) - Leveraging the Vaccine Impact Modelling Consortium for estimating health economic outcomes in low- and middle-income countries (Allison Portnoy, Boston University & Kaja Abbas, London School of Hygiene & Tropical Medicine) <i>Discussion: feedback on VIMC proposed methodology, remaining evidence/tool gaps and needs, what are the research priorities for this econ community to focus on?</i>
17h00 - 17h30	Closing



“There was so much space to have open discussions regarding the topics being presented. Very valuable and engaging discourse.”

“The pre-congress meeting was highly valuable, offering rich insights into immunization economics, especially around zero-dose strategies and financing transitions.”

Key takeaways



The economics of reaching zero-dose children

On the first day, 15 presentations explored the latest evidence on the economics of reaching zero-dose children. The day concluded with a synthesis of findings and a panel discussion on the policy implications of this body of work, as well as the future of the zero-dose agenda in a funding-constrained environment.

- While constrained access drives zero-dose prevalence in rural areas, in urban areas multiple barriers required tailored interventions. In rural areas, limited access to immunization services is the main driver of zero-dose prevalence. On the other hand, root causes of zero-dose prevalence in urban areas vary more widely, requiring tailored, context-specific interventions. Therefore, the types of interventions that are effective at reaching zero-dose children in urban areas varied more, and the cost of implementing them varies more widely as well.
- There is a trade-off between cost and timeliness of immunization. Campaign-style strategies can be relatively cost-efficient per child reached, but there is a trade-off between the cost per child reached and the time children remain off schedule, as campaigns are conducted infrequently and linkage to routine remain weak.
- Strengthening service delivery is only cost-efficient if access is the key barrier. Increasing resources for service delivery, such as for intensified outreach approaches, is only cost-efficient in areas where access is the leading cause of zero-dose prevalence and is not as effective when barriers are mostly demand-related.
- Community-based interventions can adequately tackle deep-rooted demand-side barriers, but require high design costs. Community-based interventions to increase demand can be effective when they adequately tackle deep-rooted demand-side barriers, though design costs are significant. Cost per child reached could go down as design costs are amortized during the life of the intervention, though re-design would likely be needed when scaling up the interventions, to ensure fit to context in other settings.
- Financial burden on caregivers can be significant. Cash incentives have the potential to address the significant financial burden faced by caregivers. However, their effectiveness varies, and more evidence is needed to understand their impact on immunization and on reducing zero-dose prevalence in particular.
- High cost per dose may not imply in high budget impact. Some dedicated zero-dose strategies may come at a higher cost per child reached compared to campaigns that reach more children, though when adequately tailored and targeted, i.e. when only implemented in high-priority areas, they result in less overall budgetary pressure than larger-scale one-size-fits all campaign-style catch-ups.

- Identification should be an ongoing effort, and it is only effective as the underlying routine immunization system. Identification is critical, however zero-dose surveys were often conducted as a one-off exercise, while zero-dose prevalence is a moving target that should be followed closely. Moreover, identification efforts are only as effective as the underlying routine immunization system. Without adequate recordkeeping and effective follow up, linkages are not established and zero-dose children remain unreached, even if they are identified.
- More evidence is needed on effectiveness in terms of reduction to zero-dose prevalence and permanent linkage to the health system. Across studies presented, tracking the impact of zero-dose interventions was limited to estimating the number of zero-dose children reached, without assessing the impact on coverage and zero-dose prevalence. Moreover, most studies stopped short from assessing whether interventions linked children reached to the health system in a permanent way, as zero-dose children reached were defined as those receiving the first dose of DTP-containing vaccine, without measuring how many went on to receive subsequent doses.
- Reaching zero-dose children should focus on building linkages with the health system. Vaccinating zero-dose children was always meant to be a proxy indicator for reaching communities deprived of essential health services more generally. Moving forward, integration is going to be essential and zero-dose interventions should focus not only on whether zero-dose children are reached, but also on whether links are built with the health system.
- Integrated programs appear to be more costly compared to standalone immunization interventions but deliver greater health benefits. Reaching zero-dose children through integrated delivery strategies may come at a higher cost per child reached. However, zero-dose children tend to face multiple deprivations, and integrated interventions can be effective in addressing these comprehensively. Integrated service delivery may also increase demand for immunization, as demand for other essential health services (e.g. nutrition) is higher and pulls caregivers towards the health system. Moreover, in some settings, the incremental cost of immunization as part of the bundle of services was found to be small.
- Integration can also facilitate accountability at lower levels. Finally, integration with universal health care (UHC) schemes also increases accountability of local health managers to reduce zero-dose prevalence, though UHC schemes only can only go so far in settings where demand barriers are significant.



“The panel discussion sessions were outstanding opportunities to maximize our level of understanding from the presentations.”

Remaining evidence gaps on the economics of reaching zero-dose children



Creating permanent linkages with the health system

Which strategies link up children permanently with the health system? Permanently linking up children and their communities to the health system brings added value, which can be leveraged to make the case for additional investments on reaching zero-dose children.



Assessing how impact and costs change over time

As costs evolve with changes in zero-dose prevalence, strategies also need to change over time. A strategy that is initially cost effective may no longer be so once lower prevalence is achieved. For example, if a periodic intensification of routine immunization is successful at reducing zero-dose prevalence, it may cease to be cost effective once the pool of zero-dose children to be reached is much smaller. Moreover, there is a need to agree on concrete objectives that are feasible within the increasingly constrained budget envelopes: are we aiming for 100% coverage at all costs or at what point does reaching zero-dose children become cost-prohibitive?



Distilling clear recommendations for countries and donors

There is a need to synthesize evidence and learning to distil clear recommendations for countries and donors to pursue. Interventions need to be classified and matched to drivers of zero-dose prevalence, to then create investment cases for each class of intervention. Moreover, all the knowledge generated should be condensed and organized into manuals and guidelines.



Understanding broader health system benefits of reaching zero-dose children

Most studies have focused on estimating the cost of vaccinating zero-dose children, though there is a need to demonstrate the full health and economic benefits of reaching zero-dose communities, which are likely to be even more significant than for non-zero-dose communities. The positive externalities of a zero-dose-focused interventions, including achieving full vaccination as well as linking children up with the health system more broadly, should be quantified to estimate the full value of these programs. Without this broader approach, the value of reaching these communities is underestimated. Moreover, this will also help to more accurately assess equity vs. efficiency trade-offs.



Budget impact and sustainability

Budget impact analyses are critical for assessing the sustainability of resource-intensive, donor-funded zero-dose programs. Beyond evaluating whether countries can absorb or scale these interventions, such analyses can also inform domestic financing strategies and guide integration into routine health systems.



Financing, sustainability, and donor transitions

In the first half of the second day, presentations discussed key topics on immunization financing and the need to increase domestic resource mobilization within the context of donor transitions and funding cuts from the US government.

Experiences were shared from four countries in the accelerated transition phase.

- In Côte d'Ivoire, co-financing needs are expected to triple by 2030 and, key challenges highlighted include limited leadership engagement to increase vaccine financing, accountability, and lack of budget prioritization.
- In Congo and São Tomé and Príncipe fully financing vaccine portfolios would require significant portions of government health expenditures, highlighting the need for expanding fiscal space through reprioritization, efficiency gains, and tax revenues.
- In Ghana weak public financial management, procurement and supply chain gaps, limited political will, and poor coordination between health and finance actors were highlighted as key challenges, while leveraging a national health insurance scheme and cross-ministerial financing groups were proposed as possible solutions.

Gavi transition: outstanding questions, needs & gaps

- Gavi's transition process is focused on increasing co-financing payments for vaccines and domestic resource mobilization for immunization. But for transitions to be successful, tracking of financing for service delivery, which currently is not being tracked is equally important. Moreover, countries also need to be operational ready, including with sufficient capacity for planning, budgeting, financial management and budget execution for immunization at the national and subnational levels.
- Transition readiness is measured by GDP per capita, though in many low- and middle-income countries, tax revenue does not necessarily grow at the same rate. How can we improve taking actual tax revenue generation processes and systems into account in transition processes?
- Fiscal space analysis focuses on reprioritization, though this is a challenge, especially for countries in debt distress. Countries need to focus on correcting technical and allocative efficiency, improving budget execution rate, and closing leakages.
- How can our Immunization Economics community help countries further prioritize immunization and health? For instance, the community could help demonstrate how investing in immunization results in greater tax revenue, so that ministries of finance see concrete outcomes from investing in this.

“Immunization Economic pre-congress is serving as a key platform for sharing and exchanging knowledge, innovation, and emerging evidence in the vaccine delivery space and beyond.”



Panel discussion

How are low- and middle-income countries managing the US government funding withdrawal?

Speakers: Girmaye Deye (Fenot Associates & health financing advisor to MOH Ethiopia), Shabana Haider (ThinkWell, Pakistan), Rose Jalong'o (National Vaccines & Immunization Program, Kenya), Soazic Elise Wang Sonne (World Bank)

Moderator: Laura Boonstoppel (ThinkWell)

Impact on immunization programs:

- Staffing cuts in many countries that were already short on health workers
- Service delivery: cancelled outreach, last mile delivery, polio campaigns cut
- Technical assistance from partners: cuts in areas such as surveillance, lab testing, vaccine logistics, procurement support, and data surveys (DHS)
- With little fiscal space to reprioritize, there is a real risk of polio and other vaccine-preventable diseases resurgence, and child morbidity and mortality are likely to go up
- Most funding cuts are for off-budget support
- At subnational level, where service delivery happens, the impact has been the greatest, while financing of the vaccines themselves was less impacted
- Francophone Africa has been less affected than Anglophone Africa

Funding levers used to fill the gaps:

- The crisis served as an opportunity to drive (re) allocation discussions: impressive increases in government commitments (up to 300% in Ethiopia, doubling in Uganda, Tanzania)
- Building/expanding relationships with new donors e.g. UAE, Islamic Development Bank, Saudi Arabia, China
- Subnational levels have started to mobilize more resources, talking to donors directly, co-financing from their own budgets
- There is a lot to gain in improving subnational budget execution, improving public finance management systems, to use existing resources more efficiently
- Optimization and prioritization discussions: to rationalize new vaccine introductions and explore efficiencies
- Bringing in actors and institutions that haven't traditionally supported immunization to fill immediate gaps

Political gains:

- Health has now become a political agenda, which has made it easier for the ministry of health to talk to the ministry of finance, and strengthened MOH's demand to prioritize health
- Unplanned donor transition served as a political realization that essential health services should not depend on donors. Countries should themselves fund the essentials, and donor funding should be for extras
- Political wake-up call that donors coming in should leverage existing systems rather than build vertical ones, as otherwise these are wasted opportunities. And all support should have clear sustainability plans
- Improved focus on integration of formerly vertical programs both at strategic and implementation level, though also recognizing that this will not address all shortages and gaps



Vaccine portfolio optimization and prioritization

Gavi 6.0 offers numerous new vaccines—potentially doubling portfolios—with more suppliers, products, presentations, and schedules to choose from, while countries are facing an increasingly tight fiscal landscape.

How can countries do more with less, and how should they decide? That's the question that was central during the afternoon of day 2, which focused on prioritization and vaccine portfolio optimization. We learned from countries' experiences in navigating this complex question, how VPOP is reflected in Gavi's new 6.0 strategy, and we discussed and identified what policies and evidence are needed to better support countries in this going forward. The importance of a tailored Gavi VPOP strategy and of including incentives linked to the NIS planning process around vaccine optimisation and prioritisation were also highlighted.

Prioritization

Which vaccines to introduce first? Which programmatic investments and improvements to prioritize given limited capacity and resources?

Optimization

Assessing new products, presentations, schedules or uses, and switch to more opportune ones.

Intergration

Explore opportunities for efficiencies both within the immunization program as well as with other PHC services to improve efficiency, equity, and demand.

“The sessions and topics were timely for the ongoing context of accelerating equity in immunization as well as the need to address efficiency in light of reduced resources.”





Panel discussion summary

Country experiences in vaccine portfolio optimization and prioritization

Speakers: Rose Jalang'o (National Vaccines & Immunisation Program, Kenya), Dr Bakunawa Garba Bello, (National Primary Health Care Development Agency, Nigeria), Auliya Suwantika (NITAG Indonesia)

Moderator: Laura Boonstoppel (ThinkWell)

As a part of this session, CHAI convened a panel of country experts to share learnings from PCV product switches in Kenya and Nigeria, and Indonesia's experience in evaluating its vaccine portfolio using the CAPACITI tool. Here are the key takeaways from the discussion:

- **Kenya and Nigeria's main reason for considering product switches were to achieve cost savings:** considering co-financing increases ahead of entering Gavi's accelerated transition phase, as well as to free up funding and cold chain space for new vaccine introductions, differences in serotypes included in other products, and reducing waste.
- **Indonesia used the CAPACITI tool to prioritize new vaccine introductions:** they conducted a full portfolio review to prioritize among several new vaccines for both their 2020-2024 cMYP as well as their 2025-2029 NIS. They added two unique criteria to the 12 criteria already present in the tool: potential for local manufacturing and vaccine availability.
- **NITAGs need to be strengthened to be able to make such recommendations, and most countries have only recently brought health economists into this process:** there is turnover in membership so capacity strengthening needs to be continuous so they can translate evidence into implementation. In addition, countries need TA support from partners primarily for costing, financing, and impact analyses.
- **Decision-making processes can be elaborate and lengthy but must include a wide range of stakeholders:** NITAGs can take 6-12 months to make a recommendation, and in addition, other working groups, the ministry of education depending on the vaccine, and most importantly ministries of finance and planning, and the national assembly need to be involved. As these are ultimately financial decisions, we need to ensure that funding is not only requested but also released.
- **Despite having to make the investments into the decision-making process, and actual implementation costs of a product switch, the EPI does not necessarily get to benefit from the financial savings:** their best bet is to immediately make a strong case for how the savings should be reinvested in other programmatic improvements (new vaccine introduction, product switch, scaling up of existing programs, etc.) or towards (co-) financing of vaccines, including by advocating for immunization-specific line items in the health budget. The only certain saving to the program is indirect in terms of freed up cold chain space and other resources.



Post-meeting feedback

Following the meeting, a survey was conducted to obtain feedback from attendees (response rate 27%). Overall, participants reported learnings from the pre-congress will make their work better aligned with policy priorities and more impactful moving forward. A combination of insightful evidence presented, and thought-provoking discussions contributed to a positive and rewarding experience for attendees. Participants also highly appreciated the opportunity to connect in person with other members of the community, to foster collaboration and alignment, and to facilitate exchange between younger researchers and seasoned professionals.

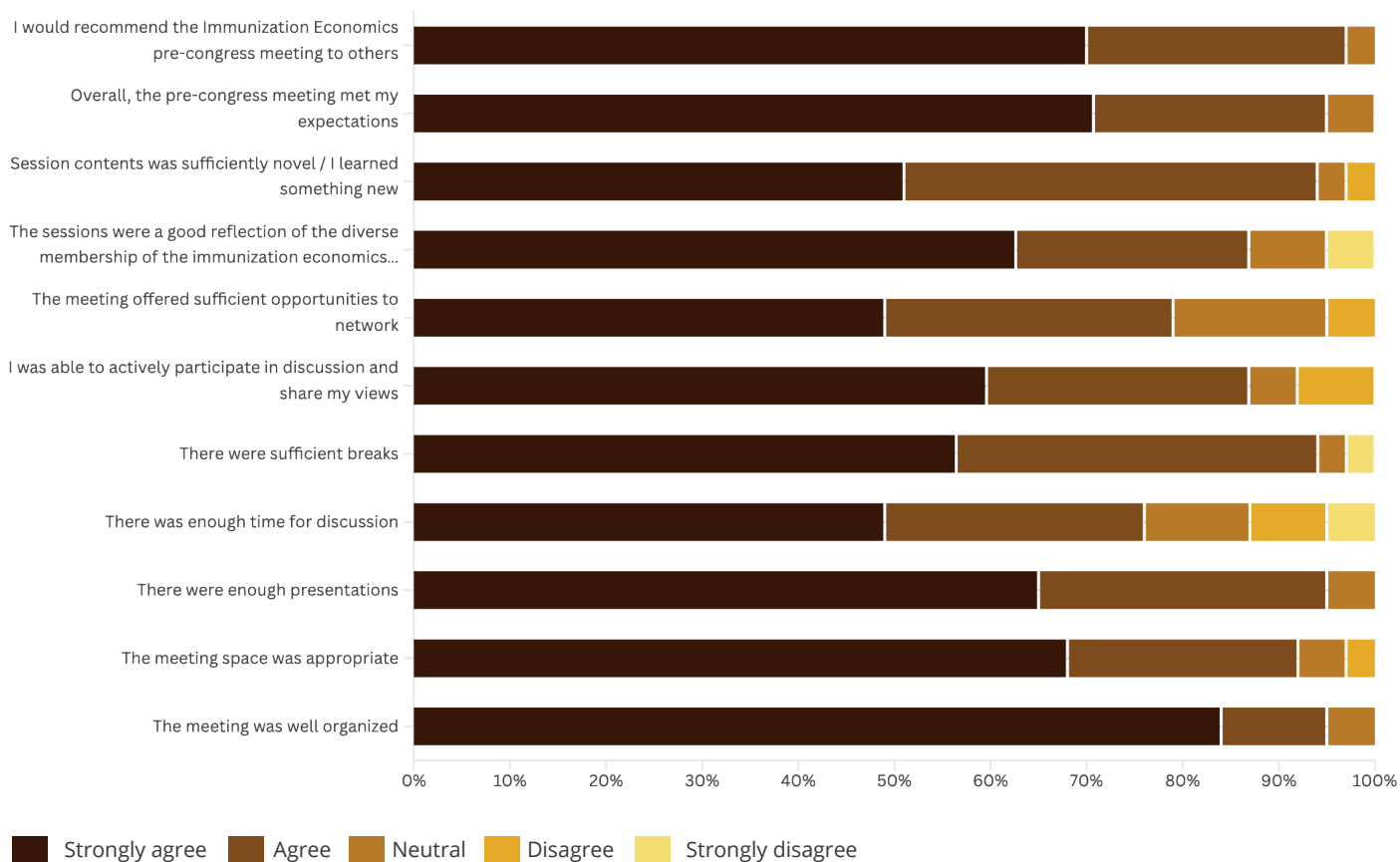
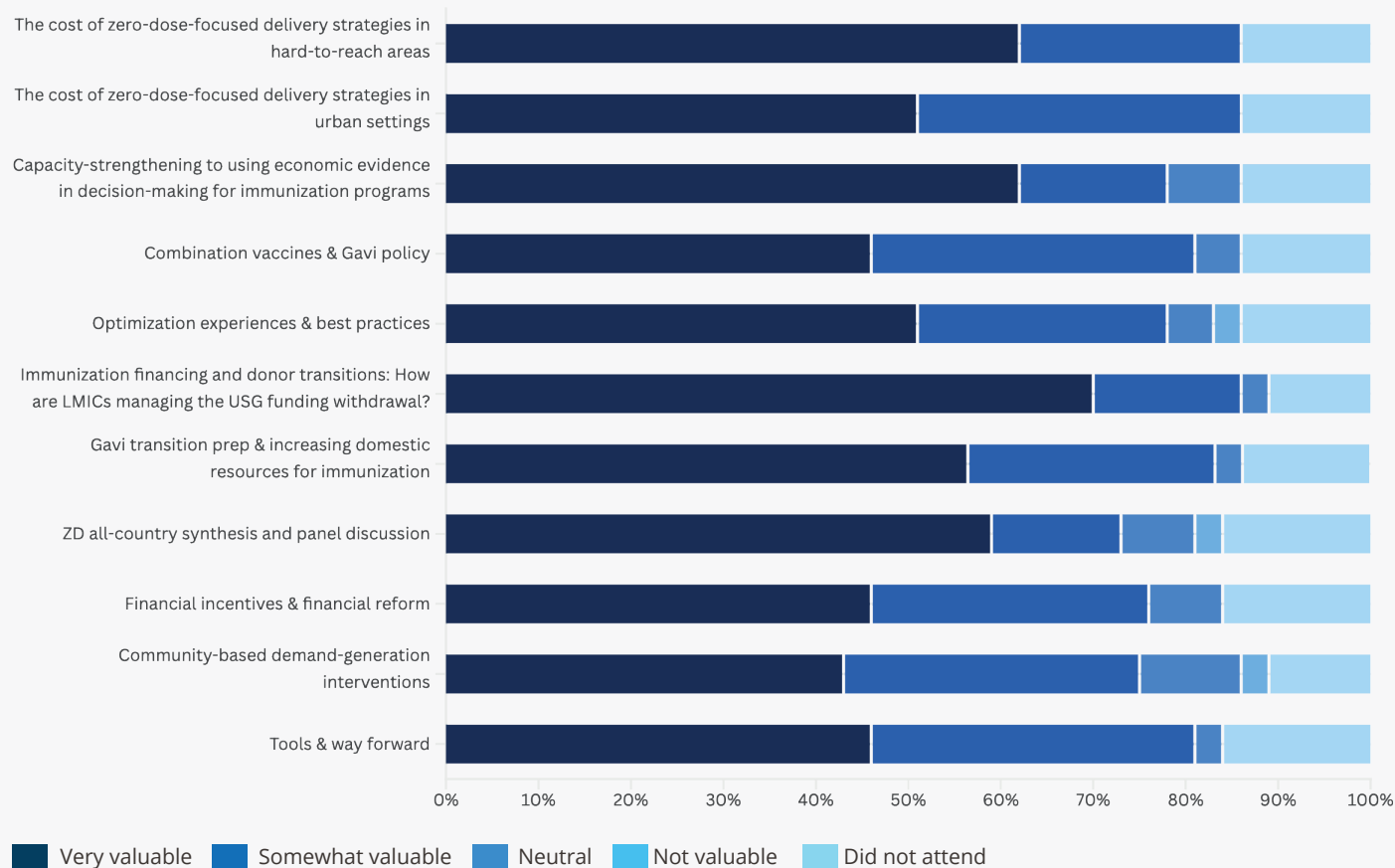
What did people gain from the pre-congress?

1. Expand knowledge of research methods and enhance policy-relevance of future research

- Participants noted that the Pre-Congress enhanced their knowledge of research methods, which will help strengthen the methodologies applied in their work, ultimately improving policy recommendations and program design.
- Participants noted that sessions provided valuable tools and frameworks for using economic evidence in decision-making, which participants reported will strengthen planning, budgeting, and advocacy within immunization programs.
- Participants noted that learnings from the Pre-congress will make their work more comprehensive, robust, and policy-relevant.

2. Identify synergies, leverage learnings from other countries, and foster collaboration

- Participants emphasized the value of being exposed to diverse country experiences and policy discussions, which helped them contextualize local challenges and identify scalable solutions aligned with global best practices.
- The Pre-Congress also provided opportunities to capitalize on synergies and learnings from the work being conducted across other organizations, supporting alignment of related scopes of work.
- Many highlighted that connecting with experts and fellow researchers expanded their professional networks and opened avenues for future collaborations on research, policy design, and advocacy.



Suggested improvements:

1. Engagement and continuity

- Establish an alternative forum during non-IHEA years to sustain engagement.
- Enhance participation and visibility of country programs representatives.
- Engage more speakers from middle-income countries such as China, India, and Brazil.

2. Content and focus of future convenings

- Incorporate a specific session on the use of evidence providing examples of concrete actions.
- Expand meeting focus beyond economic evaluations of immunization programs and their delivery, to also include discussions on vaccine markets.
- Include more sessions on country-level experiences and practical policy applications of economic evidence.
- Continue prioritizing discussions about equity, with a focus on zero-dose and hard-to-reach populations.

3. Opportunities for early-career development and capacity building

- Provide additional platforms during the pre-congress to facilitate interaction between early-career researchers and senior colleagues, including abstract presentations.
- Support capacity building at country level for early-career community members.

4. Networking and cross-country learning

- Facilitate networking and collaboration among participants, including through a formal networking event.
- Facilitate exchange among Portuguese-speaking attendees and those coming from Small Island Developing States (SIDS).
- Promote cross-country exchange of implementation experiences.

What are key gaps for the community of practice to focus on in the future?

In the post-meeting feedback survey, we also asked participants to identify key gaps for the community of practice to focus on in the future. Below is a summary of the responses:

- Evidence and guidance on integration: evidence on integrating the zero-dose and the immunization agendas in the primary health care and universal health coverage frameworks, as well as integration of immunization in general with other health services, and more evidence on savings generated from integration.
- Evidence on financing in the current donor landscape and on prioritization: including more evidence on the sustainability of immunization programs after donor transitions, evidence and guidance on increased efficiency in use of funds, more evidence from prioritization experiences, and fiscal space analyses for vaccine financing.
- Guidance for countries and researchers: guidance and support for countries to effectively plan for donor transition and increase domestic financing without compromising equity; evidence and guidance for countries to address public finance management-related issues for immunization programs; and guidance for researchers to engage in the policy process more effectively.
- More evidence from a societal perspective and for fragile countries: more evidence and guidance on generating evidence on costs incurred by caregivers (societal perspective) under different delivery strategies and more evidence on immunization equity and costs in fragile countries.

A close-up photograph of a person's hand holding a smartphone. The phone screen shows a Menti poll interface with the question 'takeaway(s)? / recommendation country policymakers and donors?'. The background is a blurred crowd of people.

“The Pre-Congress provided valuable feedback that will directly strengthen my work”

“Thank you for organizing such a meaningful event.”

Speaker Bios

Welcome, introduction to the community of practice,
and overview of existing evidence and tools



Laura Boonstoppel, ThinkWell

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Ms. Laura Boonstoppel is a Program Director at ThinkWell, leading its immunization economics portfolio, which covers the development of methods for, and implementation of, numerous country studies to estimate the cost of delivering immunization and other essential health services, including integration of campaigns, COVID-19 vaccine delivery, and reaching zero-dose children. In this capacity, she also oversees the management of the immunization economics.org global community of practice. She is a health economist, primarily with expertise in immunization costing, financing, and modeling, efficiency analysis, fiscal space analyses, and other health financing studies.

Zero-dose: the cost of zero-dose focused delivery
strategies in hard-to-reach areas



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Professor David Bishai is Clinical Professor in Public Health and Director of the School of Public Health, The University of Hong Kong. A leading health economist, his research focuses on the performance and financing of global public health activities, primary healthcare, health disparities. He is the author of two books and more than 260 peer-reviewed scientific publications. His award-winning courses on systems thinking and health economics have reached over forty-thousand students. He received his MPH from UCLA, his MD from the University of California at San Diego, and his PhD from the Wharton Business School at the University of Pennsylvania.



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Dr. Firew Bobo is a Postdoctoral Research Fellow at the University of Sydney and a Health Financing Analyst at Fenot Associates. His expertise and current work focus on social epidemiology and global health, with a strong interest in using data to improve health outcomes and address health inequalities.



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Dr. Florence Tochukwu Sibeudu is a Public Health Nurse and Health Economist at Nnamdi Azikiwe University, Awka, Nnewi Campus, Nnewi, Nigeria. She currently serves as the Head of the Department of Nursing Science and coordinates the Health Economics Research Group (HERG) at the university. At present, she is the Principal Investigator (PI) for a study titled “Estimating the cost of immunizing zero-dose children through outreach in Nigeria.”



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Carol Kamya is a health economist at the Infectious Diseases Research Collaboration and the Menzies School of Health Research. Her work focuses on economic evaluations in immunisation, malaria, HIV and maternal and child health. She brings an interdisciplinary background in health economics and public health, aiming to integrate economic insights into infectious disease research across Africa and the Asia-Pacific regions.



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Dr. Senait Alemayehu Beshah is a health economics researcher with expertise in economic evaluation, healthcare financing, and health systems research. She holds a BSc in public health, Doctor of Dental Medicine (DMD) and an MPH in Health Economics. She has led key studies for EPHI and served as an independent consultant for WHO, the CDC Foundation, and AfHEA. Her work spans costing, cost-effectiveness, and cost-benefit analyses in areas such as VPD surveillance, cardiovascular health, health extension programs, and non-motorized transport. She also led the ECOVA study in Ethiopia as part of the Equitable Access to COVID-19 Vaccines in Africa.

Zero-dose: the cost of Zero-Dose-focused delivery strategies in urban settings



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Stacey Orangi is a Research Fellow at KEMRI-Wellcome Trust with expertise in pharmacy and health economics. She holds a Master's Degree in Public Health, specializing in Health Economics, from the University of Cape Town and a Bachelor's Degree in Pharmacy from Nelson Mandela University. Her research focuses on economic evaluations and the economics of health systems, contributing to evidence generation that informs health policy and resource allocation.



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Hadiza is a seasoned public health professional with over a decade of experience supporting national and state governments in coordinating, implementing, and monitoring impactful and innovative projects that enhance access to sexual, reproductive, maternal, neonatal, and child health services in Nigeria and beyond. She currently serves as an Associate on Gender Programming at the Clinton Health Access Initiative (CHAI), where she provides technical expertise to integrate gender considerations into the design and implementation of CHAI's vaccine programs.



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Alemnesh Angelo is a Senior Analyst at the Clinton Health Access Initiative (CHAI) Ethiopia with a strong background in economics and over five years of experience in health financing and health economics including Cost-benefit analysis, value for money analysis, affordability assessments, investment cases for public-private partnerships in diagnostic services and medical oxygen, primary healthcare provider payment reform, hospital case-based payment design, and costing study on the zero-dose learning agenda. She has provided technical support to the Ethiopian Health Insurance Service (EHIS), the Ministry of Health (MoH), and the Ministry of Finance (MoF). Prior to joining CHAI, she worked with the Agricultural Transformation Agency (ATA) on the Rural Finance Program, focusing on the National Financial Inclusion Strategy and improving access to finance for marginalized communities.



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Christina Banks, MPH, is a global health researcher, having worked on a diverse portfolio of projects including immunization costing, health system development, and eHealth. As a Technical Advisor at ThinkWell, Ms. Banks oversees a study on the cost of reaching Zero-Dose children in Nigeria, and manages the Immunization Economics community of practice. Previously, she contributed to costing studies on the delivery of COVID-19 vaccines in six countries, led an analysis of the cost of the 2019 integrated MR campaign in Sierra Leone, and contributed to costing modelling in relation to the COVID-19 pandemic. Prior to joining ThinkWell, Ms. Banks was a consultant at the World Health Organization leading the first quantification of WHO's country level presence by country bloc and report of the Organization's global country level presence in 2018-2019. Ms. Banks holds a Master of Public Health from Imperial College London.

Zero-dose: community-based demand generation interventions



Disha Agarwal, Gates Foundation

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Dr. Disha Agarwal is a Program Officer – Vaccine Delivery at the Gates Foundation, focusing on improving immunization coverage and equity in India, with special focus on Zero Dose children.



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Dr. Alan Noble John is a clinician turned public health professional, currently working as a Senior Program Officer at John Snow India. He leads costing and implementation research under the Zero Dose Learning Agenda, focusing on behaviourally informed, human-centered interventions to reach zero-dose children in urban India. His current work estimates the health system and operational investments required to integrate these interventions into routine immunization systems.



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Devak Namdhari is an Associate with the Immunization Program at the India office of Clinton Health Access Initiative (CHAI). Under the Gates Foundation Led-Zero Dose Learning Agenda, CHAI is testing hyperlocal interventions co-created with communities in high burden regions, leveraging human-centred design principles for addressing root-causes hindering vaccine uptake among ZD children. Devak is contributing to the efforts to understand the cost and cost-effectiveness of developed interventions in reaching ZD children under low-resource settings.



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Alemnesh Teka Seboka is a program officer at the Ethiopian CORE Group Partners Project (CGPP) Secretariat at the Consortium of Christian Relief and Development Association (CCRDA), which is a legally registered non-profit membership organization of NGOs/CSOs. She is the lead person in Borena Zone, and Kelem Wolega (Oromia region), Previously, she coordinated a research project with funding from the Sabin Vaccine Institute.

Zero-dose: financial incentives & financial reform



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Bryan Patenaude is an Associate Professor of Health Economics & Economic Evaluation in the Department of International Health at the Johns Hopkins Bloomberg School of Public Health. His research focuses on understanding health system financial sustainability, equity, and efficiency in low and lower-middle income countries, applying behavioral economics to the economic evaluation of public health policy, linking theoretical models from epidemiology, social psychology, and economics to inform decision-making, and understanding the economic impact of public health interventions, with a particular interest in infectious disease surveillance, prevention, and treatment. Through his research, Bryan has worked closely with local partners in over 30 low-and-middle income countries, and has directed health and development economics research and policy evaluation for USAID, WHO, CDC, UNICEF, Gavi, The Global Fund, The World Bank, and Gates Foundation. Bryan holds a doctoral degree in Global Health Economics from Harvard University, a M.A. in Global Development Economics from Boston University, and a B.A in International Economics from Boston College and recently served an appointment as Senior Economist for Global Health within the Global Health Bureau of USAID.



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Saffana Hilmy Mahmudah is a Program Officer for Vaccine Management System and Capacity (MSC) at the Clinton Health Access Initiative (CHAI), Indonesia. She supports strategic planning, budgeting, and resource mobilization for immunization programs, focusing on new vaccine introduction and reaching zero-dose children. Her work also includes evidence-based advocacy and strengthening subnational capacity. Saffana holds an MPH from King's College London.



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Hania Qavi Khan is a Senior Associate at Impetus Advisory Services, working at the intersection of systems design, economic analysis, and last-mile service delivery. She currently leads the Gates Foundation's Zero-Dose Learning Agenda in Pakistan, focusing on the design, implementation, and costing strategy for grassroots immunization interventions in high-risk urban communities of Karachi. Her broader portfolio spans provincial digital transformation in health, community behavior change, and organizational development to strengthen equitable public service delivery.



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Muhammad Salman is the Implementation Lead at Impetus Advisory Services, where he leads work on immunization program costing and delivery strategies. He is currently working on estimating the cost of interventions to reach zero-dose children in polio high-risk areas of Karachi, as part of Pakistan's Zero-Dose Learning Agenda. His work supports strategic planning and policy decisions to expand immunization coverage in underserved urban communities.



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Dr. Alex Adjagba is a physician and health economist with over 20 years of impactful experience in global health, specializing in health system reform, economic policy, and sustainable financing. He has worked closely with governments, international NGOs, and UN agencies across diverse settings. As Senior Health Financing Adviser at UNICEF headquarters, Alex offers strategic and technical guidance to countries, combining clinical expertise with economic insight to enhance system performance and support progress toward Universal Health Coverage. His recent work has concentrated on supporting recipient countries in managing donor transitions more effectively, to foster long-term sustainability and national ownership of health programs. Alex holds a Doctorate of Medicine (MD) from the University of Cotonou in Benin, a Master of Science (MSc) in Health Financing from the London School of Economics (UK), and a PhD from the University of the Western Cape in South Africa.

Zero-dose: summary, discussion, takeaways & next steps



Laura Boonstoppel, ThinkWell (see bio on [page 24](#))



Todi Mengistu, Gavi

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Dr. Tewodaj (Todi) Mengistu is a Senior Programme Officer in the Measurement and Strategic Information team at Gavi, the Vaccine Alliance. In her role, she leads data and analysis for strategic decision-making and reporting, with a focus on robust estimates of the health and economic impact of Gavi-supported vaccines. Prior to Gavi, she worked at the U.S. Centers for Disease Control and Prevention (CDC) as a health economist with the Division of Global HIV/AIDS evaluating the effectiveness of delivery services for HIV prevention, care, and treatment in countries with high HIV burden.



Carol Kamya, IDRC (see bio on [page 25](#))



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Dr. Syed Muhammad Ali Turab is a medical doctor and a Public Health professional with expertise in Immunization and vaccinology. He is the Director Global Health at PHC Global, a firm aiming to improve Human Health by testing and scaling solutions to last mile. He has the experience of designing and scaling electronic immunisation registries; determining effectiveness of incentives on vaccine coverage; costing and mapping of funding flows of essential services for immunisation and primary health care.



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Logan Brenzel is a health economist with more than 35 years of worldwide experience providing policy and strategic advice to governments and global health partners, including Gavi, the Vaccine Alliance; leading, designing and managing complex multi-country implementation research on the cost, cost-effectiveness, financing and sustainability of PHC interventions including immunization; coordinating and leading multi-partner engagements; and building capacity of country counterparts. Logan has supported countries in areas such as health systems strengthening; results-based financing; resource tracking; transition from donor support; and aid-effectiveness in her work with the Gates Foundation, the World Bank, the US Agency for International Development, and John Snow, Inc. Logan has a PhD from the Johns Hopkins University School of Hygiene and Public Health, and a Master's degree from the Harvard University School of Public Health. She is a graduate of Stanford University. Logan currently is an independent consultant based in Paris, France.

Immunization financing and donor transitions: Gavi transition prep & increasing domestic resources for immunization



Alex Adjagba, UNICEF (see bio on [page 29](#))



Anthony Nguyen, Gavi

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Anthony has a background in Social Policy and Planning (MSc) and Applied Economics (MSc) from the London School of Economics and Université de Neuchâtel respectively. Anthony joined Gavi in 2021 as a Technical Officer in the COVAX Joint Allocation Task Force, before eventually moving to Gavi's Immunization Financing and Sustainability (IF&S) team, where he currently works as the team's Senior Analyst. Prior to joining Gavi, Anthony worked as a researcher and/or analyst for Merck KGaA's Access to Health office, the International AIDS Society, and the OECD among others.



Logan Brenzel, consultant for the Gates Foundation (see bio on [page 30](#))



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Soazic Elise Wang Sonne is an Economist and data scientist with the Health, Nutrition and Population (HNP) unit of the World Bank Group based in Washington, DC. She has been leading immunization financing analytical work in Lower Middle-Income Country (LMIC) countries in the Africa region, including the Republic of Congo, São Tomé and Príncipe, and Angola. She joined the World Bank Group in 2019 under the coveted Young Professional Program (YPP). Her main areas of interest include public finance for health and children, big data, AI and analytics applied to human development sectors, and economic impacts assessments. She holds a PhD in innovation, economics and governance for sustainable development (IEGDS) from the United Nations University-Maastricht Economic and Social Research Institute on Innovation and Technology; a joint research and training institute of the United Nations University and Maastricht University (UNU-MERIT) (The Netherlands), an MBA from Imperial College London (UK) and a double Msc/Eng degree in statistics and applied economics from the National School of Statistics and Applied Economics from (ENSAE/CAPESEA Paris). She also holds a Graduate Public Leadership Credential from the Harvard Kennedy School (with distinction) and a graduate certificate on Public Finance from the National School of Public Administration of Canada/ Quebec (ENAP).



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Daniel Osei is an independent contractor for Gavi, the Vaccine Alliance, based in Accra, Ghana. In this capacity, he supports the Ghana Ministry of Health on topics relating to immunisation financing and budgeting for sustainability.

Immunization financing and donor transitions: how are LMICs managing the USG funding withdrawal?



Laura Boonstoppel, ThinkWell (see bio on [page 24](#))



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Brendan Kwesiga is a Health Economist/Health Financing Specialist with over 15 years' experience in technical advisory positions at country, regional and global level. He currently works as a Senior Health Specialist at UNICEF HQ supporting efforts for sustainable financing for immunization and primary health care. Before joining UNICEF, he worked as a Technical Officer at the World Health Organization (WHO), where he supported countries in the African Region with health financing policy formulation, implementation of financing reforms, and with generation and use of economic evidence to improve health system performance. He has also served as a Health Financing Advisor at Management Sciences for Health (MSH) in Uganda and has worked as a health economics and financing consultant for various bilateral and multilateral agencies, as well as academic institutions. A Ugandan national, Brendan holds a B.Sc. in Quantitative Economics from Makerere University (Uganda), a Masters in Health Economics from the University of Cape Town (South Africa), and Public Finance from SOAS University of London (United Kingdom).



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Dr. Shabana Haider is a global health leader with over 15 years of transformative experience spanning health systems strengthening, policy development, and sustainable financing across low-and middle-income countries. As Country Director of ThinkWell in Pakistan, she leads strategic initiatives in health financing, human resources, governance, and systems reform, advising three provincial governments.





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Dr. Rose Jalang'o is Head of Kenya's National Vaccines and Immunization Program, specializing in vaccinology, global health leadership, and sustainable immunization financing. She has led the introduction and nationwide roll-out of vaccines including HPV, Yellow Fever, Meningitis, COVID-19, Typhoid, and Measles-Rubella, combining strategic planning, data-driven policy, and resource mobilization to strengthen Kenya's immunization systems. She holds an MBChB, an MPH, and advanced training in vaccinology and biomedical research.



Soazic Elise Wang Sonne, World Bank *(see bio on [page 31](#))*

Efficiency, prioritization, and vaccine portfolio optimization: optimization experiences & best practices



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Ms Navpreet Singh is a Technical Manager on the Global Vaccine Delivery program at CHAI, where she leads strategic and technical design and management of new vaccine introductions—such as HPV and malaria vaccines – across approximately 15 countries in Sub-Saharan Africa and Southeast Asia. With over eight years of experience in public health, she has supported vaccine policy and advocacy team across the UK and globally to improve vaccine coverage through the development and design of evidence-based policy and communication activities working with governments and public health organisations. She holds a Master of Science in Public Health from the London School of Hygiene and Tropical Medicine



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(see bio on [page 32](#))



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Bakunawa Garba Bello started as a clinician and later joined the National Primary HealthCare Development Agency (NPHCDA) to start a new career in public health in 2011. Currently, he serves as a Country's desk officer for Gavi investment in Nigeria. An immunization specialist and strategist, leads the New Vaccine strategy task team (NVSTT) and head of Vaccine Financing and Accountability Task Team (VFATT). Led the development of the 10-year immunization strategy (NSIPSS) and the finance, service delivery and new vaccine optimization working groups of the recently developed FPP. Working in many interventions aimed at improving the immunization strategy and vaccine financing in Nigeria.



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Efficiency, prioritization, and vaccine portfolio optimization: Combination vaccines & Gavi policy



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Mercy Mvundura, PhD, works as a health economics technical advisor at PATH, based in Seattle USA. She has over 15 years of experience designing and conducting economic evaluations of health care programs, interventions, and technologies. Her current and past work involves leading the design and conduct of cost of delivery and cost-effectiveness studies aimed at evaluating immunization program activities and interventions. She also conducts economic evaluations of technologies and interventions focused on maternal and child health and non-communicable diseases.



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Maria Verykiou joined Gavi the Vaccine Alliance as a Policy Manager in 2023. She is currently supporting the development of Gavi's 6.0 Partnerships approach, and has previously led the evaluation of vaccine candidates under the Vaccine Investment Strategy 2024, the review of Gavi's prioritization mechanism and funding policies. Her background is in health economics and has previously worked in research at Bocconi University, Italy.

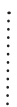
Efficiency, prioritization, and vaccine portfolio optimization: capacity strengthening to using economic evidence in decision-making for immunization programs



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Mark Jit is professor and chair of the Department of Global and Environmental Health at New York University. He also holds honorary appointments at the London School of Hygiene & Tropical Medicine, the University of Hong Kong and the National University of Singapore. His research focuses on epidemiological and economic modelling of vaccines to support evidence-based public health decision making.



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Dr. Palwasha Anwari, Health Economics Consultant at WHO-EMRO, holds a DrPH from the London School of Hygiene and Tropical Medicine. Her work focuses on benefit-risk assessment, cost-utility analysis, and vaccine effectiveness. She supports EMRO Member States in generating economic evidence for immunization policy, including cost estimates for National Immunization Strategies, budgeting, and expenditure tracking.



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Associate Professor Natalie Carvalho is Head of the Economics of Global Health and Infectious Diseases Unit in the Centre for Health Policy, Melbourne School of Population and Global Health (MSPGH), University of Melbourne. Her work focuses on methodological advancements for, and application of, economic evaluation as one input for equitable and efficient decision-making on new interventions, with a particular focus on vaccines and other interventions targeting communicable and neglected tropical diseases. She coordinates the Health Economics & Economic Evaluation Specialisation within the Master of Public Health (MPH) at MSPGH and teaches Introduction to Economic Evaluation. She convenes a Special Interest Group on the Economics of Infectious Diseases through the Australian Health Economics Society.

Efficiency, prioritization, and vaccine portfolio optimization: tools & way forward



Todi Mengistu, Gavi (see bio on [page 30](#))



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Salin Sriudomporn is a Research Associate II/Health Economist in the International Vaccine Access Center (IVAC) at the Johns Hopkins Bloomberg School of Public Health. She has primarily worked on economic impact modeling for the Gavi investment case and WHO's Immunization Agenda 2030, and has contributed to projects including HIV/AIDS index testing in India, measles school-based campaign delivery in Zambia, and digital health initiatives in Brazil, Ghana, Rwanda, and India. Her current work focuses on costing, financing, funding gaps, and return on investment for immunization programs through the Decade of Vaccine Economics (DoVE) project and Vaccine Economics Research for Sustainability and Equity (VERSE), including the development of the R-Shiny tool for immunization program analysis.



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Dr. Allison Portnoy is an assistant professor of global health focused on vaccine decision science and policy. Her research includes economic evaluation and public health policy, simulation modeling, health equity, and the impact of vaccination on population health and economic outcomes. She is particularly interested in broadening the value of vaccination in high-burden settings. Her ongoing work spans multiple diseases areas, including human papillomavirus (HPV), measles, and tuberculosis (TB). Dr. Portnoy received a Doctor of Science from the Department of Global Health and Population and completed a postdoctoral fellowship at the Center for Health Decision Science, both at the Harvard T.H. Chan School of Public Health. Her previous education includes an MSPH in Health Policy & Management from the Johns Hopkins Bloomberg School of Public Health and a BA in International Relations from Stanford University. She previously worked as a health economist at the International Vaccine Access Center at Johns Hopkins, and conducted research projects with the World Health Organization, Agency for Healthcare Research and Quality, and the University of Washington in Seattle.



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Kaja Abbas is an Associate Professor at the London School of Hygiene & Tropical Medicine and Nagasaki University. His research area is vaccine impact modelling with a focus on estimating the health, economic, and equity impact of vaccination programmes to support evidence-based decision-making on vaccination strategies.



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Australia

Bangladesh

Benin

Burkina Faso

Cameroon

China

Egypt

Ethiopia

France

Gabon

Germany

Ghana

Guinea Bissau

Hong Kong

India

Indonesia

Japan

Jordan

Kenya

New Zealand

Nigeria

Pakistan

Philippines

Portugal

Singapore

South Korea

Switzerland

Taiwan

Thailand

Uganda

United Kingdom

United States of America

Affiliations of participants

Aga Khan University

Asian Development Bank

Boston University School of Public Health

CCRDA

Center for Child Health

Center for Health Policy and Management

Center of Health Economics and Policy Studies

Cermel

CGPP

Chulalongkorn University

CISDI

Clinton Health Access Initiative

Ethiopian Public Health Institution

Fenot Associates

Gachon University

Gates Foundation

Gavi, the Vaccine Alliance

Gobin Global

Guangzhou University of Chinese Medicine

Harvard University

Health Intervention and Technology Assessment Program

Heidelberg Institute of Global Health

IDRC

IHME, University of Washington

Imperial College London

Impetus

Infectious Disease Research collaboration

Inke Maris

Institut de Recherche en Sciences de la Santé (IRSS)

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 International Federation of Red Cross and Crescent
 John Snow Institute
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