Joint Appraisal (JA) Template

The Joint Appraisal (JA) is an **essential element of Gavi's regular monitoring and performance management (MPM).** The JA has evolved to align with Gavi 5.0 strategic shifts.

The JA is an **annual, country-led, multi-stakeholder** review/discussion that represents an important opportunity for countries to engage Gavi Alliance partners and other key stakeholders on annual progress of routine immunisation programmes against national goals and objectives, and to discuss how Gavi support is contributing to this progress. Key stakeholders involved in the country's immunisation programme should be represented at the Joint Appraisal, including civil society organisations (CSOs).

As an integrated part of Gavi's portfolio management process, the JA discussion should review **Gavi's contribution to immunisation programme performance** in 2021/early 2022, including delivery of COVID-19 vaccines and the impact of the COVID-19 pandemic on immunisation. A key feature of the JA is the joint discussion about the **promising practices, challenges met and future needs** for improving immunisation performance with a focus on reaching zero-dose children and missed communities.

The modality of the Joint Appraisal exercise is tailored to the country context and may be scheduled taking into consideration other planning exercises such as EPI reviews or National Immunisation Strategy Development.[1] The JA process will involve preparatory work to assemble and analyse data in advance of the discussion, exchange on the trends and their implications for the EPI program, and will conclude with the finalisation of a report and relevant deliberation outcomes and follow-up actions. At least one live discussion (in person or virtual) of the multiple stakeholders engaged in the Joint Appraisal should be organised.

The 2022 Joint Appraisal template is structured as follows

- **Section 1: Country situation**: overview of performance of Gavi support & discussion on progress and challenges faced
- **Section 2: Looking forward**: summary of discussion points and follow up actions

The information and indicators contained in section 1 on the country immunisation programme performance and Gavi support are mostly based on standard reporting. They are part of Gavi's monitoring and performance management framework, which will inform ongoing portfolio discussions, the JA, as well as discussions at Gavi's High-Level Review Panel (HLRP).

Section 1 is also where Gavi expects reporting against the Grant-linked Key Performance Indicators developed during FPP / EAF applications. For these indicators, results are to be analysed as (1) the absolute change in the indicator as a trend over time and; (2) the percent change in the indicator against the baseline value from the FPP or EAF application. Changes over time will be assessed against the end of grant target set during the application stage. Please ensure that sufficient data is provided to conduct such analyses, including the baseline values, targets, and sufficient annual data to infer trends.

The below set of cross-cutting questions should be considered to structure qualitative information:

Cross-cutting Questions

1. What factors have facilitated or impeded progress?
2. What promising practices and/or innovations have emerged?
3. What key contributions have partners made to drive performance?
4. What are the top risks that should be mitigated?

[1] Countries which are finalising in the course of 2022 a Full Portfolio Planning are not expected to conduct a JA.

Section 1 forms the analytical foundation to structure the JA discussion with Section 2 summarising the outcome of the JA and follow-up actions.

The outcome of this Joint Appraisal will include a joint assessment of promising practices, perceived challenges and opportunities for Gavi investments, and should elaborate future actions with clear targets and assigned responsibilities which is owned by the full set of in-country stakeholders.

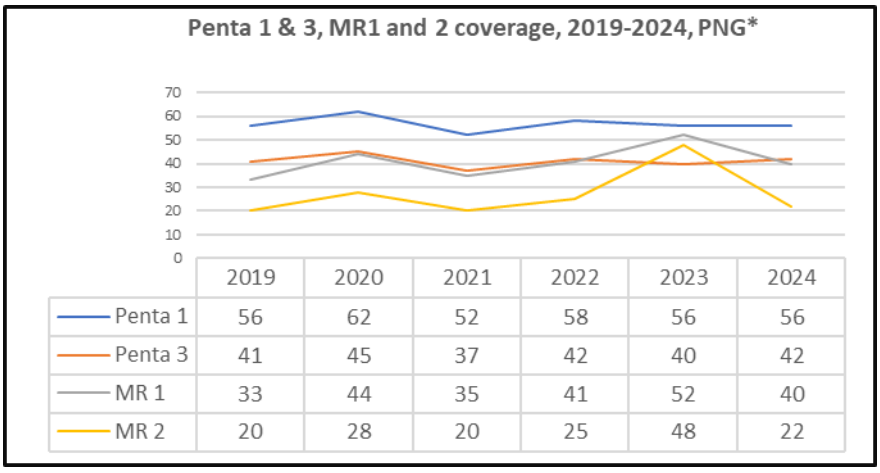
Section 1: Country situation: overview of performance of support & discussion on progress, challenges faced

A. Immunisation Programme Performance – Zero-dose, Routine immunisation coverage, Vaccine introductions, campaigns, and outbreak response

1. Learning Question: What progress has been made to reach zero-dose and under-immunised children with vaccinations?

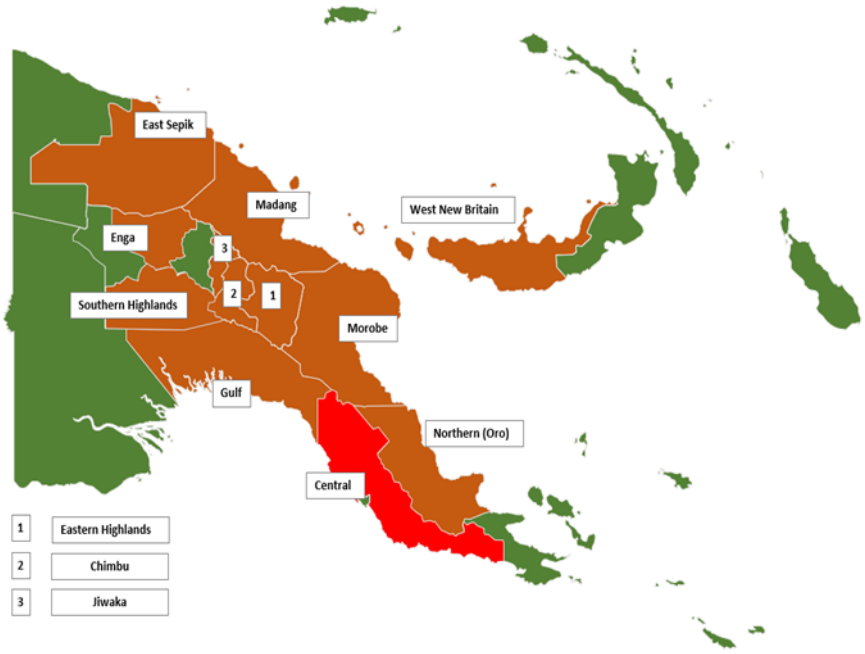
Indicator(s):

- Absolute reduction in the number of zero-dose children (total number)
- Percentage change in number of zero-dose children (disaggregated by previous year, baseline year)
- Number of children reached with DTP1 in areas targeted for intervention
- Gap in coverage between DTP1 and the last dose of MCV in the national schedule (MCV1 or MCV2) - both nationally and in areas targeted for intervention
- DTP1-DTP3 Dropout



	2019	2020	2021	2022	2023	2024
Penta 1	56	62	52	58	56	56
Penta 3	41	45	37	42	40	42
MR 1	33	44	35	41	52	40
MR 2	20	28	20	25	48	22

Figure 1: Penta 1 & 3, MR1 and MR2 % coverage, 2019-2024, PNG



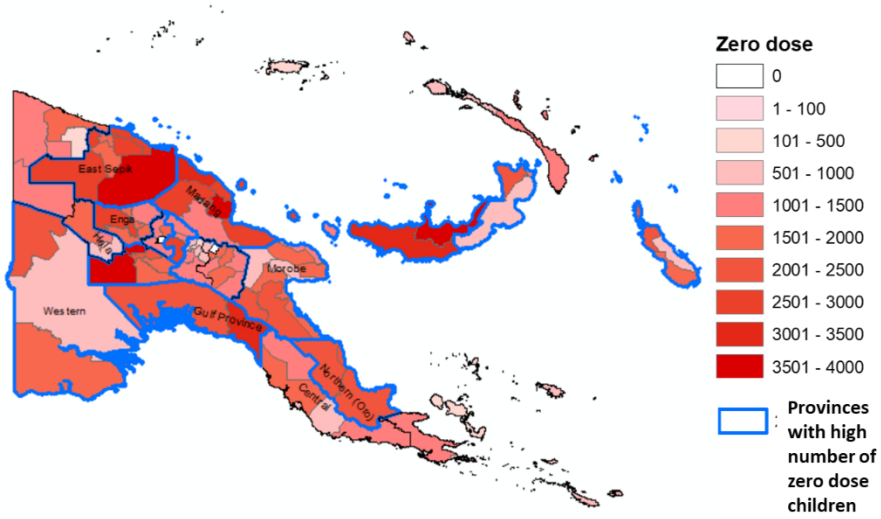


Figure 2: Provinces with high proportion or absolute number of ZDC in PNG 2023

Table 1: Dropout rates across key antigens from 2019-2024, Papua New Guinea

Dropout between:	2019	2020	2021	2022	2023*	2024
Penta 1- Penta 3	16	16	15	16	16	14
Penta 1- MR1	23	18	17	17	3	16
Penta 1- MCV2	36	34	32	34	8	34
MCV1- MCV2	13	16	15	16	4	18

**Outliers in 2023 is due to reporting of MR SIA in routine coverage*

Table 2: EPI performance of provinces and districts in Papua New Guinea, 2023

Province	Total number of districts	Number of districts with Penta 1 Coverage in 2023			Coverage in 2023				Support available
		> 80%	50-80%	< 50%	Penta 1	Penta 3	MR1	MR2	
Madang	6	0	2	4	43	20	28	18	AIHSS, WHO TA and HPO
East Sepik	6	0	2	4	41	29	71	32	AIHSS and HPO
Southern Highlands	5	0	0	5	40	32	29	16	AIHSS and HPO
Morobe	9	1	5	3	59	34	32	16	AIHSS and HPO
Enga	5	0	0	5	38	30	103	215	AIHSS and HPO
Eastern Highlands	8	1	5	2	63	41	61	31	AIHSS and HPO
West New Britain	2	0	1	1	47	32	25	12	AIHSS and HPO
Chimbu	6	1	1	4	50	41	36	28	
Jiwaka	3	0	3	0	56	44	33	27	AIHSS
Central	4	0	2	2	52	46	90	307	AIHSS, WHO TA and HPO
Gulf	2	0	0	2	34	24	33	22	AIHSS
East New Britain	4	0	3	1	60	44	45	26	
ARoB	3	0	3	0	59	41	42	23	AIHSS, WHO TA and
Western	3	0	2	1	60	43	41	16	AIHSS
Northern	2	0	0	2	49	36	36	29	AIHSS
West Sepik	4	1	2	1	62	46	54	37	AIHSS
Hela	3	0	3	0	62	48	54	41	
Western Highlands	4	1	2	1	76	60	127	91	AIHSS, WHO TA and HPO
Milne Bay	4	2	2	0	75	58	76	56	
New Ireland	2	0	2	0	70	56	58	51	
National Capital District	3	3	0	0	94	77	54	18	
Manus	1	0	1	0	74	59	74	128	
	89	10	41	38	56	40	52	48	

AIHSS= Accelerated Immunization and Health System Strengthening WHO - TA (Technical Assistance) WHO funding support for PIRI will be available as of 2025
Grey shaded areas in last 4 columns in above table reflect provinces with lowest coverage

Note: Grey shaded areas in last 4 columns in above table reflect provinces with lowest coverage

Table 3: Analysis of distribution of ZDC across PNG provinces

A	B	C	D	E	F	G
Province	Population < 1 year	Province contribution to population	Number of ZDC	Province % contribution to ZDC	Cumulative % of ZDC contribution	Ratio contribution to ZDC to population (E/C)
Madang	29286	9.1	15832	11.7	11.7	1.3
East Sepik	25405	7.9	14268	10.5	22.3	1.3
Southern Highlands	23564	7.3	13420	9.9	32.2	1.4
Morobe	31673	9.8	12157	9.0	41.2	0.9
Enga	15672	4.9	9393	6.9	48.1	1.4
Eastern Highlands	23224	7.2	8031	5.9	54.1	0.8
West New Britain	13306	4.1	6599	4.9	58.9	1.2
Chimbu	10973	3.4	5322	3.9	62.9	1.2
Jiwaka	12360	3.8	5082	3.8	66.6	1.0
Central	10975	3.4	5020	3.7	70.3	1.1
Gulf	7815	2.4	4914	3.6	74.0	1.5
East New Britain	12725	3.9	4787	3.5	77.5	0.9
ARoB	11862	3.7	4540	3.4	80.9	0.9
Western	12423	3.8	4525	3.3	84.2	0.9
Northern	9310	2.9	4492	3.3	87.5	1.2
West Sepik	12088	3.7	4313	3.2	90.7	0.9
Hela	10230	3.2	3707	2.7	93.5	0.9
Western Highlands	14915	4.6	3248	2.4	95.9	0.5
Milne Bay	11741	3.6	2656	2.0	97.8	0.5
New Ireland	7260	2.2	1974	1.5	99.3	0.6
National Capital Distr	14374	4.4	524	0.4	99.7	0.1
Manus	1866	0.6	442	0.3	100.0	0.6
Total	323047	100.0	135246	100.0	100.0	1.0

Note: shaded areas in column D & G represents the highest figures in corresponding column

A	B	C	D	E	F	G	H
Province	Population < 1 year	Province contribution to population	Number of ZDC	Proportion (%) of ZDC reached (from 2021 baseline)	Province % contribution to ZDC	Cumulative % of ZDC contribution	Ratio contribution to ZDC to population (F/C)
Madang	29286	9.1	15832	-9	11.7	11.7	1.3
East Sepik	25405	7.9	14268	14	10.5	22.3	1.3
Southern Highlands	23564	7.3	13420	6	9.9	32.2	1.4
Morobe	31673	9.8	12157	-13	9.0	41.2	0.9
Enga	15672	4.9	9393	12	6.9	48.1	1.4
Eastern Highlands	23224	7.2	8031	9	5.9	54.1	0.8
West New Britain	13306	4.1	6599	1	4.9	58.9	1.2
Chimbu	10973	3.4	5322	-2	3.9	62.9	1.2
Jiwaka	12360	3.8	5082	-8	3.8	66.6	1.0
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East New Britain	12725	3.9	4787	41	3.5	77.5	0.9
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National Capital Distr	14374	4.4	524	-48	0.4	99.7	0.1
Manus	1866	0.6	442	-20	0.3	100.0	0.6
Total	323047	100.0	135246	-2	100.0	100.0	1.0

Table 4: Analysis of Outreach Clinics Conducted by Province in PNG, 2023

Region	Province	Planned	Held	%	Region	Province	Planned	Held	%
Momase Region	East Sepik	1798	904	50	Southern Region	Central	2324	2006	86
	Madang	1546	919	59		Gulf	172	79	46
	Morobe	3589	2353	66		Milne Bay	8185	3504	43
	West Sepik	7428	2379	32		Northern	1819	1208	66
Highlands Region	Chimbu	6198	4185	68		Western	950	584	62
	Eastern Highlands	3586	2398	67		NCD	36	23	64
	Enga	925	470	51	Islands Region	ARoB	5044	2647	53
	Hela	1648	1280	78		East New Britain	2251	1693	75
	Jiwaka	3094	2230	72		Manus	521	384	74
	Southern Highlands	5850	3931	67		New Ireland	2683	1268	47
	Western Highlands	6074	4527	75		West New Britain	1395	896	64
	Legenda	>=75%	60-75%	50-60%	<50%				

Suggestion to add the following data:

- **Proportion of planned immunisation sessions (fixed/advanced/mobile) held (by province)**
  - ***Comment on why difference from plan, what was the key challenge, how are we addressing this going forward?***

	- ***Proportion of target ZD children reached (Province and national)***

Country comments (please consider the set of cross-cutting questions to structure comments):

Papua New Guinea faces a complex mix of challenges that impedes attainment of the ultimate objective of EPI program to reach every child. **The routine immunization coverage in country remains low across all antigens** in almost all provinces with high dropout rates between successive vaccine doses. Despite being more pronounced in certain provinces, **zero-dose children (ZDC) and missed communities are widespread across PNG**. The root causes of low immunization coverage in Papua New Guinea (PNG) revolve around significant geographical and financial barriers, with the country's diverse island, mountain, and coastal areas making resource allocation challenging. While the country's geographical situation warrants allocation of intensive resources, **the fragile economic support to health programs deepens the gap between 'what needs to be done' and 'what is being done'**.

Majority of the population can be accessed only by outreach and mobile sessions, and some need special arrangement like boats and choppers making delivery of immunization services a formidable task. **The widespread security concern**s **hampers with effective planning and implementation of the community interventions. Despite most of the community being accessible through outreach services, not conducting all the planned outreach vaccination sessions is a major problem. Only 30% of the province conducts more than 70% of the planned outreach sessions (Table 4).**

Other key challenges that may be considered as direct or indirect repercussions of geographical and funding difficulties are **lack of prioritization and ownership of the immunization program**, **severe shortages of staff** at all levels, **poor coordination and integration of health services** at the provincial level, and **insufficient community engagement** due to cultural and gender related barriers.

The recently developed **'National Immunization Strategy 2021-2025" has a strong focus on re-establishing immunisation service strategies** to set a clear path towards regularly reaching all children (especially under-immunised and ZDC to ensure equity) and considering the introduction of new vaccines.

The Figure 1 shows trend of Penta 1 & 3, MR1 and MR2 coverage from 2019-2024. The Penta 1 coverage in PNG has remained low and static from 2019 (56%) to 2023 (56%). This translates in **135,246 ZDC in 2023, an increase from 2019 when it was 119,713**. Immunization coverage showed some improvement after 2021; however, significant progress is required to reach the 2025 NIS DPT3 target of 70%. Moreover, only a 2% decline was recorded in Zero Dose Children (ZDC) in 2023 compared to 2021. Most of the Zero Dose Children are concentrated in 12 provinces (figure 2): Madang, SHP, East Sepik, WNB, Enga, Morobe, Gulf, Northern, Western, Jiwaka, ENB, and ARoB. Eleven of these provinces have Gavi portfolio support.

Penta 3 coverage has been nearly 40% from 2019-2024, indicating **~15% drop out from Penta 1 to Penta 3**. The coverage for MR1, which was 44% in 2020, has decreased to 40% in 2024. It is noteworthy that the increase in MR1 coverage reported as 52% in 2023 is erroneous due to the reporting of supplementary immunization activity (SIA) coverage as routine immunization (RI). This issue is being discussed with NDOH. **The dropout rate from MR1 to MR2 in 2024 is 18%,** showing an increase compared to 2019-2023, where it varied from 13-16%. This indicates a pressing need to focus on immunization efforts in the second year of life to address these dropouts. Table 1 above summarizes the dropout rates across major antigens from 2019-2024:

The coverage of various EPI antigens amongst provinces and districts shows considerable variations. **There is a total of 22 provinces and 89 districts in PNG**. Due to COVID-19 related

disruptions in the EPI program, the number of districts with Penta 1 coverage below 50% increased to 44 in 2021 from 38 in 2019. By 2023, though this number had decreased to 38, close to the pre-pandemic level, it remains significantly high. In 2023, only 11 of 89 districts (11%) reported Penta 1 coverage > 80%. Two districts of National Capital District have consistently reported >100 % Penta 1 coverage since 2019 due primarily to difficulties in estimating accurate catchment population. Table 2 highlights the variations in coverage across provinces and districts based on the administrative coverage data for the year 2023.

Table 3 above highlights those **11 provinces** (Madang, East Sepik, Southern Highlands, Morobe, Enga, Eastern Highlands, West New Britain, Chimbu, Jiwaka, Central, Gulf) together **contributes to ~75% of the total ZDC in the country**. First 6 provinces from the list contributes >50% of ZDC in PNG. Additionally, all these provinces (+ Northern province) have high proportion of ZDC when adjusted for the population.

Based on the analysis presented in Table 2, Figure 2 above shows how provinces with high proportion or absolute number of ZDC are distributed in PNG. Among the provinces with the highest numbers of zero dose children, each province contains districts with significant geographic and security access issues.

Country's efforts to strengthen immunization during the reporting period:

Due to the high risk of outbreaks of vaccine-preventable diseases caused by significant immunity gaps as presented above**, a nationwide MR-bOPV Vitamin A SIA campaign was conducted from May to July 2023. This campaign aimed to protect nearly 1.3 million children under five in 22 provinces from measles, rubella, and polio**. Major funding for this initiative was provided by Gavi, while the WHO offered extensive technical support, including training, microplanning, data management, supportive supervision, and the development, printing, and distribution of SIA guidelines and reporting tools. **The campaign achieved a coverage of 71% for MR and 70% for bOPV, significantly reducing the risk of large-scale outbreaks of these diseases among the target population.**

To plan and implement MR-bOPV SIA and strengthen routine immunization, WHO deployed consultants across all 22 provinces in 2023. These consultants facilitated **188 training programs for 2,622 staff members**, including vaccinators, cold chain personnel, health facility officers-in-charge, and district officers, with around 70% of the trainees being female. Furthermore, 168 PHA staff and District Health Officers received training on supportive supervision and monitoring of routine immunization (RI), COVID-19 vaccination, and the MR-bOPV SIA. WHO provincial consultants, in collaboration with PHA staff, conducted bi-weekly supervision and monitoring visits to vaccination sites and health facilities to provide on-site technical support and capacity building.

UNICEF deployed the international consultants at the national level staffing to provide overall technical assistances in routine immunization as well as MR-bOPV SIA. Likewise, UNICEF deployed of 15 health promotion officers at provincial levels to provide support to the PHA including demand generation and community mobilization (for RI and MR-bOPV Vit A campaign), vaccine stock monitoring and capacity building health workers.

In April 2023, **WHO provided 800 Adverse Effects Following Immunization (AEFI) emergency kits to all health facilities**, ensuring preparedness for managing acute vaccine adverse reactions during the nationwide MR-bOPV SIA. These kits were crucial for maintaining vaccine safety and public trust in the immunization program, ultimately improving coverage and minimizing the risk of vaccine-preventable disease outbreaks.

To enable timely monitoring of the campaign's performance, **an ODK-based data collection and analysis system was introduced for the MR-Polio-Vitamin A SIA**. This system allowed for real-time data monitoring, cleaning, and analytical feedback, facilitating appropriate and timely

decision-making. The use of ODK is replicable as it proved effective and was well-accepted by the provinces for planning, implementing, monitoring, and documenting the campaign.

Although the campaign temporarily slowed routine immunization activities in Q2/2023, it was a long-term investment in enhancing the country's RI delivery capacity. The training and microplanning efforts contributed to overall staff capacity building, improving RI service delivery and preparedness for future vaccine-preventable disease outbreaks. Vaccines, cold chain equipment, and other logistic supplies provided for the campaign continued to support RI efforts for the remainder of 2023 and beyond.

It is important to note that **the MR-SIA campaign could not reach many hard-to-access areas**, therefore, National Technical Working Group on immunization has decided to **implement Periodic Intensification of Routine Immunization (PIRI) across all provinces, with support from key partners including AIHSS/DFAT, CHAI, Gavi, WHO, and UNICEF**. This will help to achieve overall MR-SIA coverage of 95% or higher and reaching out to zero dose and drop out beneficiaries further minimizing the risk of VPD outbreaks in the country.

As part of its commitment to improving disease surveillance, WHO updated the National Vaccine Preventable Disease (VPD) Surveillance Guideline and held a consultative workshop in November 2023. **New national guidelines for the surveillance of Adverse Events Following Immunization (AEFI) were also developed**, and the National AEFI Committee has been reactivated. These new guidelines also include sections on COVID-19 for integration into routine immunization. The PNG VPD surveillance is suboptimal with a non-polio AFP rate of 0.8 per 100,000 children under 15 years and a non-measles AFR rate of 0.5. As of October 2024, only 12 provinces reported AFP cases, and 9 provinces reported AFR cases.

M. A pilot study in Eastern Highlands Province tested the new forms, and national roll-out is planned soon.

WHO has advocated for and supported the establishment of the National Immunization Technical Advisory Group (NITAG). The draft Terms of Reference have been approved by the National Technical Working Group and awaits the Secretary's approval for appointing new members. Further plans include training workshops for NITAG members, and an offshore field visit to enhance its functionality and efficiency in supporting NDoH on immunization policy and strategy

The EPI TWG was revitalized in November 2022 with the primary objective of overseeing the MR-Polio- Vitamin A SIA. The EPI TWG was chaired by Executive Manager of Public Health, and EPI program acted as the secretariat of the TWG. The EPI TWG has efficiently steered four working groups of MR-Polio-Vitamin A SIA to coordinate with partners, provinces, and stakeholders to achieve 71% coverage among the targeted children. In 2024, the EPI TWG was further expanded by inviting key implementing partners of immunization program such as AIHSS, CHAI in addition to traditional technical partners WHO, and UNICEF. The regular monthly meeting (every 4th Thursday of the month) has been continuing to oversee the NIS (2020-2025) implementation, address challenges, advocacy to higher level NDOH (SEM) for strategic decision making such as new vaccine introduction proposal development (HPV), MNTE roadmap implementation and mSupply deployment, digital solutions for EPI. Etc.

2. Learning Question: How well are vaccine stocks being managed?	
Indicator(s):	**Graphs:** *(Examples to be replaced with specific country versions)*

• Number of health facilities that reported no stock-outs of DTP containing vaccine • Number of health facilities that reported no stock-outs of Measles containing vaccine • Closed vial wastage of DTP-containing vaccine •	

Country comments (please consider the set of cross-cutting questions to structure comments):

NDOH reactivated the immunization logistics working group taking the lessons and good practices from the success of MR SIA implementation in 2023. The working group is led by EPI Manager/Senior Technical Officer of NDOH, UNICEF, CHAI, and WHO, and reports to National EPI TWG to provide updates on the vaccine logistics, vaccine order review, and distribution status, **status of the mSupply rollout to the provinces as well as to resolve the supply chain issues**. The working group also oversees the implementation of the effective vaccine management improvement plan (EVM cIP). UNICEF served as the secretariat of the NLWG.

EVM

EVM implementation status

		# Targets	Behind schedule	On schedule	Ahead of schedule
C1	Infrastructure	12	4	8	0
C2	Equipment	11	1	7	3
C3	Information technology	13	0	8	5
C4	Human resources	11	0	10	1
C5	Policies & procedures	12	2	9	1
C6	Financial resources	8	0	7	1
NA		0	0	0	0
Total		67	7	49	11

EVM cIP completion Status

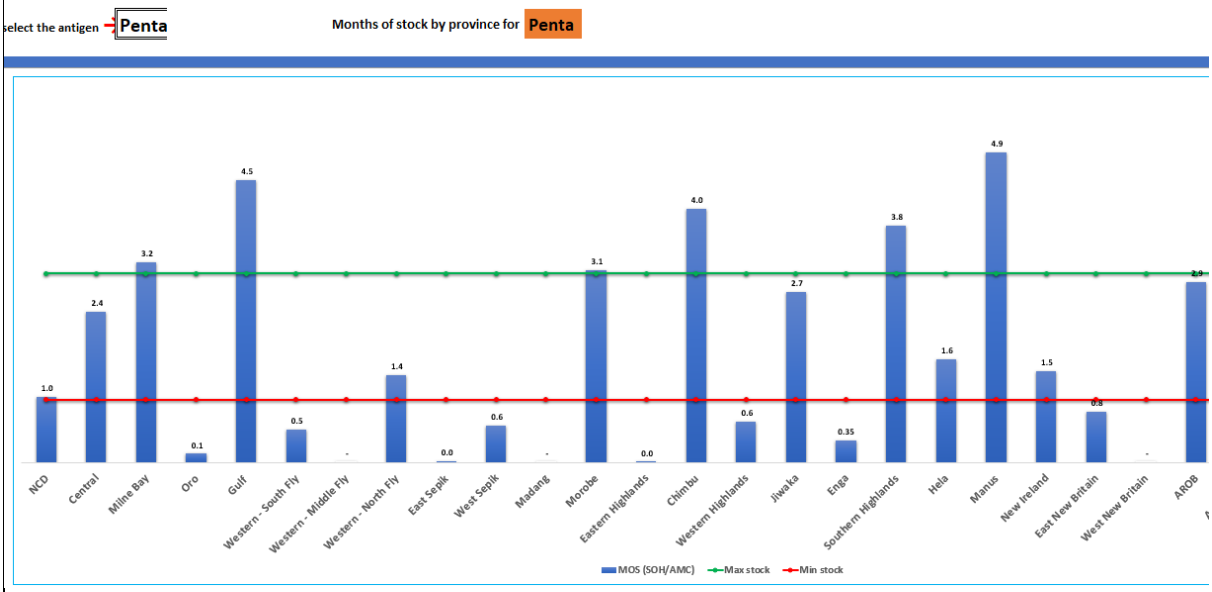
		# Targets	Not started	In progress	Completed
C1	Infrastructure	12	4	6	2
C2	Equipment	11	1	10	0
C3	Information technology	13	0	8	5
C4	Human resources	11	0	10	1
C5	Policies & procedures	12	4	7	1
C6	Financial resources	8	0	7	1
NA		0	0	0	0
Total		67	9	48	10

The NLWG maintains the standby agenda on the mSupply coordination to discuss about the mSupply deployment for immunization. The coordination meeting is held monthly (on every third

Thursday of the month) chaired by EPI manager, UNICEF, World Vision International (WVI) and the mSupply PNG.

Three main successes of the logistics working group are 1) **establishment of a systemic approach on vaccine order review and approval decision**, 2) **revision of the vaccine distribution plan through set maximum and minimum stock level** 3) **regular report to EPI TWG on the vaccine stock visibility (figure4) at national and provincial level**.

Fig The vaccine stock visibility at national and provincial level (June, 2024, Source mSupply/stockreport).



EPI logistics officer of NDOH, UNICEF Health Officer works closely in reviewing vaccine orders from sub-national levels and deciding on the quantities to distribute based on the stock on hand and planned activities at the provincial levels. From January to June 2024, a total of 57 order requests from PVSs and DVSs were received and reviewed to ensure effective and efficient deliveries of 57 orders to provinces (Fig3).

Fig 3. Pentavalent vaccines distributed from national vaccine stores to Provinces (Jan-June 2024)

Vaccine stores	Total qty doses
AROB PVS	17,300
Central - Kwikila DVS	2,600
Central PVS	2,400
EHP - Kainantu DVS	1,000
EHP PVS	13,000
ENB PVS	14,065
Enga PVS	28,200
ESP PVS	45,255
Gulf PVS	11,000
Hela PVS	4,855
Jiwaka PVS	11,400
Madang PVS	20,200
Manus PVS	3,500
MBP - MISIMA DVS	1,400
MBP PVS	14,000
Morobe PVS	22,800
NCD PVS	23,500
NIP PVS	12,050
ORO PVS	6,700
SANDAUN - AITAPE DVS	2,200
SANDAUN PVS	9,000
SHP PVS	20,000
Simbu PVS	5,000
Western - MIDDLE FLY DVS	4,500
Western - NORTH FLY DVS	6,200
Western - SOUTH FLY DVS	2,650
WHP PVS	15,000
WNB PVS	15,100
YWAM Medical Ship	350
Grand Total	**335,225**

Since the beginning of the 2024, NDOH made significant progress in the implementation and advancement of the mSupply system in Papua New Guinea. The program has focused on enhancing vaccine management across all levels of the health system through strategic planning, capacity building, stakeholder engagement, and on-the-job training (OJT).

Key Achievements:

I. **Roadmap Development:**
A comprehensive roadmap was established, outlining clear milestones for system deployment, capacity building, and continuous monitoring and evaluation. This roadmap has guided the successful rollout of mSupply across 21 provinces.

II. **Training of Trainers (TOT):**
A TOT was conducted, empowering NDoH EPI officers to become national trainers. This initiative has ensured that mSupply expertise is locally sustained, with these officers now independently conducting training and providing technical support. A total of 15 (7 females and 8 Males) from UNICEF, NDoH, MSPNG and WV were trained as national trainers to be deployed to the provinces.

III. **Strengthening the mSupply Support Unit (MSU):**

The MUS is composed of NDOH EPI Data/Surveillance Officer, Senior Technical Officer, UNICEF, consultants, and World Vision. The MSU has been bolstered to provide ongoing technical assistance, troubleshooting, and training, ensuring the smooth operation of mSupply across the health system. This unit plays a critical role in maintaining the efficiency of the supply chain.

IV. **Stakeholder Engagement:**

Regular meetings with key stakeholders, including the National Department of Health (NDoH) and Provincial Health Authorities (PHAs), have been instrumental in ensuring the successful implementation of mSupply. A dedicated mSupply sub-committee was formed to oversee progress.

V. **On-the-Job Training (OJT):**

OJT sessions were conducted at various health facilities and provincial vaccine stores, providing hands-on experience, and reinforcing skills learned during TOT sessions. Over 115 (58 males and 57 females) provincial health authorities' staff have been trained. In the 3 provinces, over 35 health care workers have been trained on the use of mSupply. This practical training has significantly improved the system's usability at the ground level.

VI. **Dashboard Development:**

A password-protected dashboard has been developed to facilitate real-time data visualization and management decision-making. This tool has enhanced the ability to monitor vaccine stocks, distribution, and usage, contributing to reduced vaccine wastage.

Stock levels for 18 items across 29 facilities

Store	Item	Pref.pack	SOH	AMC	MOS	On order	Expiry Dates
SHP PVS	536890: Syringe, Disposable, Auto-Disable, Sterile, 0.5ml, Box/100	1	36 K	12.3 K	2.93	0	2027-07-31,2027-07-31,2027-07-31,2026-12-31
Morobe PVS	536890: Syringe, Disposable, Auto-Disable, Sterile, 0.5ml, Box/100	1	199 K	9.93 K	20.0	0	2027-02-28,2027-06-30,2026-09-30
Jiwaka PVS	536890: Syringe, Disposable, Auto-Disable, Sterile, 0.5ml, Box/100	1	9.60 K	8.74 K	1.10	0	2027-09-30
AROB PVS	536890: Syringe, Disposable, Auto-Disable, Sterile, 0.5ml, Box/100	1	43.9 K	4.94 K	8.89	0	2027-07-01
WNB PVS	536890: Syringe, Disposable, Auto-Disable, Sterile, 0.5ml, Box/100	1	150 K	4.60 K	32.6	0	2029-10-31,2027-02-13,2027-02-13,2027-02-13
NIP PVS	536890: Syringe, Disposable, Auto-Disable, Sterile, 0.5ml, Box/100	1	126 K	4.29 K	29.5	0	2027-02-28,2027-07-31,2026-01-31,2026-09-30
Morobe PVS	12430030: Diphtheria, Tetanus, Pertussis, Hep B recombinant and Hib Co…	1	8.84 K	4.13 K	2.14	0	2026-08-31
EHP PVS	536890: Syringe, Disposable, Auto-Disable, Sterile, 0.5ml, Box/100	1	170 K	3.35 K	50.5	0	2026-09-30,2029-10-31,2027-09-30,2027-08-31
Enga PVS	536890: Syringe, Disposable, Auto-Disable, Sterile, 0.5ml, Box/100	1	160 K	3.35 K	47.8	0	2027-07-31,2029-10-26,2027-07-01,2027-02-13
ESP PVS	536890: Syringe, Disposable, Auto-Disable, Sterile, 0.5ml, Box/100	1	98.5 K	3.28 K	30.0	0	2027-07-01,2027-07-01,2029-10-26,2029-10-26,2027-07-25
Morobe PVS	12430070: Pnuemococcal Conjugate Vaccine 13 valent (PCV13)	1	5.38 K	3.08 K	1.74	0	2026-04-30
ESP PVS	12430030: Diphtheria, Tetanus, Pertussis, Hep B recombinant and Hib Co…	1	12.9 K	2.71 K	4.77	0	2026-08-31,2026-08-31
ESP PVS	12430070: Pnuemococcal Conjugate Vaccine 13 valent (PCV13)	1	11.6 K	2.69 K	4.32	0	2026-04-30,2026-04-30

Store performance indicators

Store	Days since last Sync	No. of Unfinalised SIs	Days since last Stocktake	Days since last Requisition	CIs in last 30 days	CIs per weekday in last 30 days
ESP PVS	5	0	52	31	28	1.33
MBP - MISIMA DVS	3	0	32	58	5	0.238
Central - Kwikila DVS	3	0	10	6	2	0.0952
EHP PVS	9	0	11	65	25	1.19
Western - MIDDLE FLY DVS	2	0	17	17	7	0.333
SHP PVS	4	0	22	10	19	0.905
Madang PVS	9	0	18	18	0	0
Gulf - Kikori DVS	137	0	100	100	0	0
EHP - Kainantu DVS	380	0	100	100	0	0
MBP PVS	2	0	10	40	33	1.57
NIP PVS	2	0	10	16	23	1.10
ENB PVS	6	0	9	12	8	0.381

Figure 5. mSupply dashboard to monitor the key performance indicators.

Progress Snapshots:

- mSupply successfully deployed in 21 provinces and over 37 health facilities across three provinces.
- Notable improvements in vaccine stock reporting and inventory management, leading to vaccine distribution plan, order approval, mitigate stock out and reduced wastage.
- Positive feedback from users on system usability and support.

Next Steps:

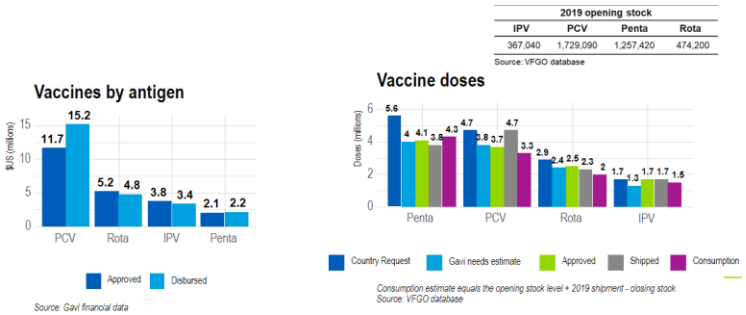
- Complete mSupply deployment to additional facilities and provinces as per the workplan.
- Expand training programs, including refresher courses for existing users.
- Enhance dashboard features with additional analytics and reporting capabilities.
- Strengthen NDOH leadership and stakeholder collaboration (WVI, UNFPA, Rotarians Against Malaria, etc) sustain momentum, address emerging challenges and to ensure sustainability.

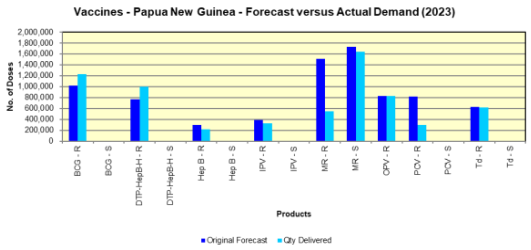
Transition to Open mSupply:

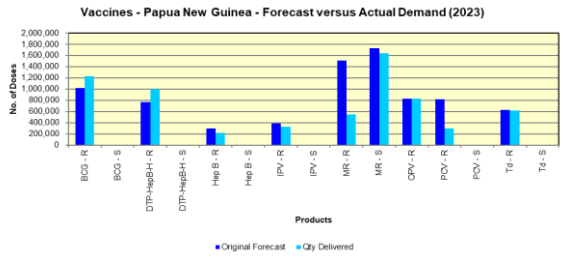
- Papua New Guinea is exploring a transition to open mSupply, an open-source version of the system. The testing of Open mSupply is currently carried out in the central provincial vaccine store. This shift will offer increased flexibility, cost-effectiveness, and the ability to customize the software, promoting long-term sustainability and adaptability.

The mSupply implementation in Papua New Guinea has made substantial strides in improving vaccine management. Ongoing efforts in training, stakeholder engagement, and system enhancements will be crucial to sustaining and building on these achievements. This progress reflects the collaborative efforts of all stakeholders and sets the stage for future advancements in the health system.

3. Learning Question: Are vaccines being consumed at rates that are in-line with approved forecasts? What are the key drivers of consumption compared to expectation (e.g., stockouts, increased coverage, wastage)?

Indicator(s):	**Graphs:**
● Percentage of forecasted Annual Vaccine Requirement (AVR) consumed in prior period (by antigen)	*(Examples to be replaced with specific country versions)* 





Vaccines	Original Forecast	Qty Delivered
BCG - R	647,902	432,000
DTP-HepB-H - R	364,092	186,000
Hep B - R	197,953	116,000
IPV - R		
MR - R	1,136,976	724,000
OPV - R	818,854	378,000
PCV - R	754,572	349,000
Td - R	531,968	435,500

Vaccines	Original Forecast	Qty Delivered	Consumption	Opening (2023)	Closing 2023	Consumption rate
BCG - R	1,023,487	1,232,000	710,980	0	521,020	58%
DTP-HepB-H - R	773,025	994,580	474,236	155,136	675,480	48%
Hep B - R	296,078	213,000	198,880	39,500	53,620	93%
IPV - R	385,696	324,800	334,325	270,475	260,950	103%
MR - R	1,506,496	553,000	214,150	46,700	385,550	39%
OPV - R	825,921	830,000	306,000	16,000	540,000	37%
PCV - R	815,441	293,000	290,500	0	2,500	99%
Td - R	629,516	618,000	448,900	52,200	221,300	73%

Country comments (please consider the set of cross-cutting questions to structure comments):

Vaccine Supply in PNG/UNICEF:

- IPV2 data inclusion in the eNHIS reporting form. eNHIS has not included in IPV2 in the system, despite the introduction almost 2-3 years ago.
  Action: eNHIS and PMRB to provide an update on updating eNHIS with IPV2 data.
- PIRI: All routine vaccines will be used with the same targets of <2years.
- Shipment days: Delays in arriving to health facilities can impact vaccination sessions. Current stock levels are for national level vaccine store.
  - Ordering cycle now is now quarterly no longer 2-weekly to reduce any logistics issues.
  - Weekly vaccine orders are done by AMS-tracking of orders done, when logistics company receives nudge on request, after 3 days of delay elevated at EPI Manager NDoH level.
  - GAVI: During emergency situations in the event that there are stockouts within provinces, do provinces contact amongst each other and borrow from each other?

- Efforts on optimization of distribution: Orders do not link with microplan, etc., Inadequate planning causes such adhoc ordering, and on opportunity basis when there is a chopper in the province taking HCWs to a remote area example, AROB.
- What next? Two things, 1. once provinces submit orders, they are not provided supplies the team will analyze based on their consumption data. 2. Call provinces to understand their consumption of vaccines and analyze the order requested for.
- **Action**: Strengthen partnership between national level team and at subnational level to improve vaccine and dry supplies orders at that level.
- Current arrangement is through MSPD support with EPI riding on this. Some delays occur due to delay in funding received by Logistics company by the MSPD, which delays the distribution of vaccines. Some logistics companies don't have cold chain capacity, EPI team is unable to answer per the agreement done between MSPD and logistics companies. Are logistics company employees trained on importance of observing cold chain requirements?

4. Learning Question: Is the country complying with co-financing requirements in a timely manner?

Indicator(s):

- Country co-financing obligation met in a timely manner

Graphs:

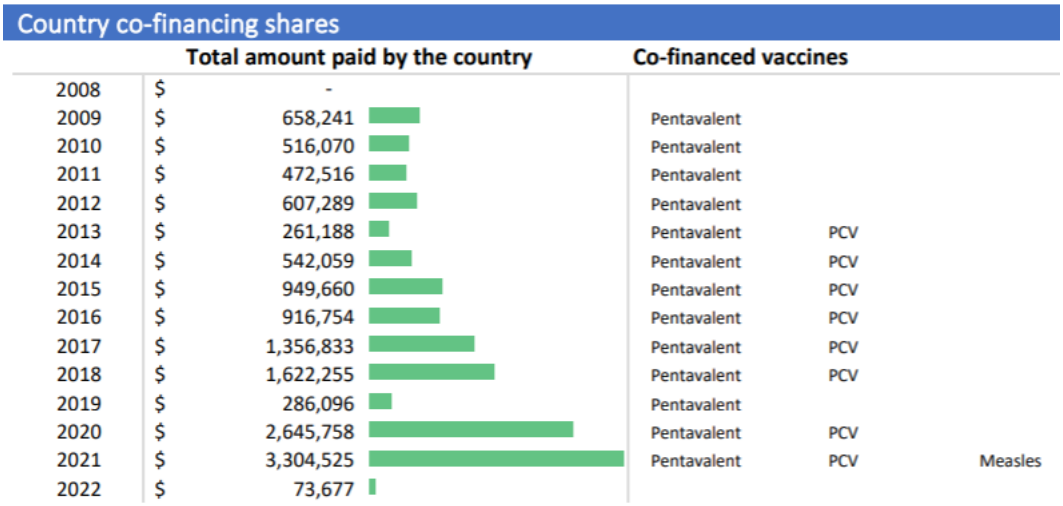
(Examples to be replaced with specific country versions)

Country comments:

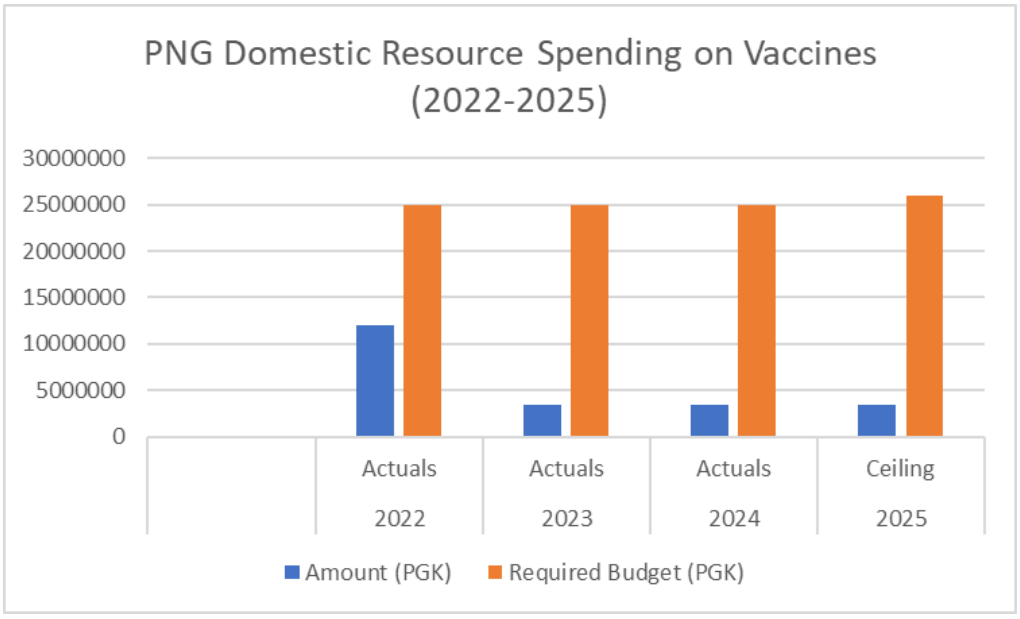
Did the country's domestic contributions to the immunisation program change during the year under review? If so, how? (e.g., increased/decreased domestic funding)

Countries co-finance a variable rate towards Gavi supported vaccines. However, from 2022 PNG is meant to be self-financing vaccines. PNG's GNI is at $2,700, 50% higher than the eligibility threshold to enter Gavi's Accelerated Transition Phase. PNG has extended their transition several times, and in December 2023 the Gavi Board approved extension until end 2027 on the understanding that PNG is fully funding their vaccines. PNG now has a special strategy where fully self-financing routine vaccines but receive campaign, operational support, HSS and technical assistance. This means that Gavi with is current Gavi 5.1 policy will not cover the shortfall for vaccine payments. PNG might receive vaccine support under the SIDS component of the Gavi 6.0 Strategy, but this is dependent on the Gavi December 2024 Board Approval and replenishment.

Prior to self-financing PNG was meeting its vaccine co-financing requirements, as per the table below.



Vaccine budget should have increased since PNG is self-financing Gavi and traditional vaccines since 2022. Unfortunately, they are currently severely underbudgeting for vaccines and total spend on vaccines is declining based on appropriation and projections in Budget Volume 2B. This has been exacerbated by the PGK depreciation.



- The spending on vaccines has decreased dramatically since 2018 from PGK 9.7 million to PGK 3.5 million in 2025

Table on value of vaccine procurement budget line

Year	Budget Category	PGK '000s
2018	Actuals	9,684.50
2019	Actuals	6,510.70
2020	Actuals	9,515.80
2021	Actuals	5,000.00
2022	Actuals	11,966.00
2023	Appropriation	3,466.00
2024	Appropriation	3,466.00
2025	Projection	235.2

2026	Projection	240.5
2026	Projection	266.9

Gavi and partners are severely concerned regarding the situation of vaccine financing. For 2024 PGK3.466m was allocated, against a total need of PGK28.940m. PGK 3,336,938 was released in August 2024. DFAT is providing once off support estimates at PGK17.519m. NDOH has allocated funding to cover the shortfall of PGK7.955m, and the release of this is in progress. This should cover stock up to the end of Q1 2025. The financing situation has led to PCV stockouts in 2023 and 2024.

For 2025 partners supported in drafting the budget for commodity procurement. The budget request is presented below. The budgeted figure has not yet been made public or approved. There are concerns on underbudgeting in many areas due to fiscal space concerns.

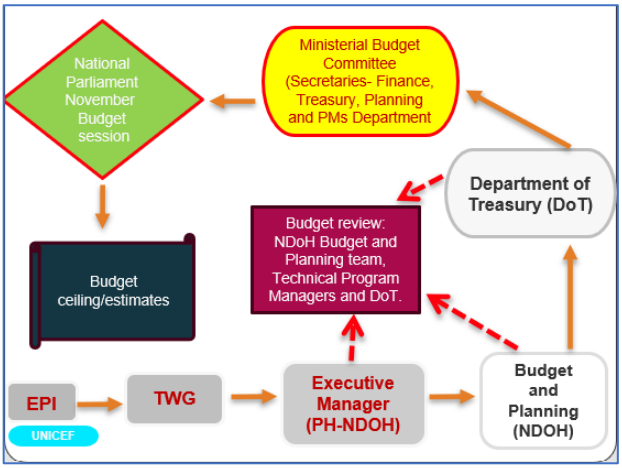
Gavi is supporting technical assistance, along with World Bank, to improve the budgeting for vaccines and other commodities. World Bank has two TA in place. They are currently recruiting for a third role, funded by Gavi, to support vaccine budgeting and releases in 2025. This role should be advertised on the 6th of December.

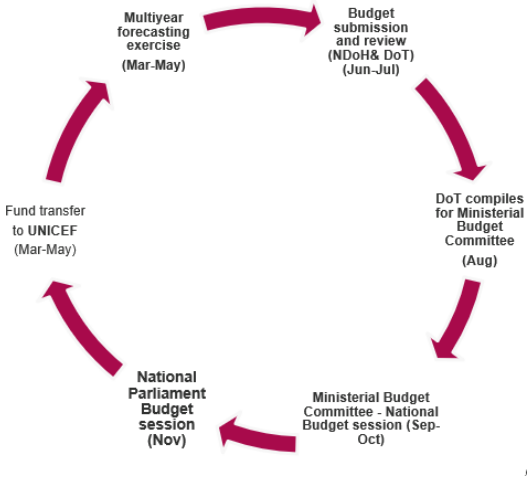
Unless systemically resolved with Department of Treasury this problem will continue. Gavi 6.0 changes may provide some relief in 2026 to 2031. Procurement costs will increase if HPV is introduced, and so financing needs to be guaranteed.

Table on projected need of existing routinue vaccines as of June 2024

	2025	**2026**	**2027**	**2028**	**2029**
BCG	$251,291	$231,098	$239,335	$246,515	$279,302
HepB	$61,973	$67,587	$77,350	$79,671	$82,061
OPV	$233,309	$296,094	$325,309	$335,068	$345,120
IPV	$0	$0	$0	$0	$0
DTP-HepB-Hib	$1,337,639	$1,579,169	$1,734,980	$1,787,030	$1,840,641
PCV	$3,177,447	$3,524,522	$4,148,866	$4,273,332	$4,401,532
MR	$1,058,461	$1,257,940	$1,289,920	$1,328,618	$1,368,476
Td	$97,254	$124,474	$136,755	$140,858	$145,084
0.05 ml syringes	$14,139	$15,604	$17,143	$17,657	$18,187
0.5 ml syringes	$471,729	$538,748	$601,586	$624,975	$643,724
2 ml syringes	$8,483	$7,802	$7,347	$7,567	$7,794
5 ml syringes	$5,760	$6,846	$8,710	$9,146	$9,420
Safety boxes	$53,439	$58,287	$65,054	$67,555	$69,581
Total (USD)	**$6,770,925**	**$7,708,171**	**$8,652,355**	**$8,917,991**	**$9,210,922**
Total (PGK)	PGK25,980,038	PGK29,576,253	PGK33,199,088	PGK34,218,333	PGK35,342,308

Fig Processes for decision making for EPI program





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Key challenges around strategic & operational planning

- Government funding for vaccines remain insufficient**.**
- Inadequate involvement and influence by NDoH Program level managers involved in the Budget review process.
- Lack of adequate vaccine financing advocacy to Department of Treasury prior to GAVI support which ended in 2021.
- Inadequate demand forecasting data due to low demand forecasting ratio and order fulfilment associated with budget shortfall for the past three years 2021-2024.

Lessons learned or best practices.

- Establishment of National EPI TWG that is fully functioning and endorses submissions to NDOH Finance and Planning Committee for increased financing (e.g. reallocation of fund)
- Engagement with DoT to explain the rationale of the forecast and budget requirement and return on the investment.
- Support of development partners for advocacy to NDOH, DoT for improved and sustainable immunization financing (20 million PGK supported by DFAT 2023/2024)
- Support from UNICEF for vaccine forecasting including rollout of immunization supply chain SOP, enhance supply chain data use for decision making (review the vaccine utilization, wastage monitoring, etc)
- Should attempt to VII subscription (to address the long lead time of fund transfer to UNICEF SD) together with the active engagement of Department of Treasury (DoT) to secure the medium -term financial commitment for vaccines.

Way forward

- Active participation of the program managers from public health division in the budget brief preparation for 2025 and future submissions and review process and engagement with DoT
- Support from partners (Gavi, World Bank and UNICEF) to prepare the budget brief, evidence -based planning and strong justification/rationale on the forecast and advocacy for increased investment in health

5. Learning Question: If applicable, have new vaccines been introduced as planned and if not, why? Is coverage of recently introduced vaccines being scaled-up as expected?

Indicator(s):	**Graphs:**
● Number of routine introductions completed over number of targets set for the calendar year ● Coverage of recently introduced vaccines **In addition, forecasted routine introduction & campaign dates should be validated during the JA discussion**	**IPV2 coverage for 2021-2023 in PNG** **IPV1 coverage for 2021-2023 in PNG**

Country comments (please consider the set of cross-cutting questions to structure comments):

IPV2 Introduction

As a part of global initiative on polio eradication, PNG has introduced IPV1 in 2016 and IPV2 in 2021. Similar to other routine immunization performances, both IPV1 and IPV 2 coverages are still low. (Refer above two figures) IPV 2 introduced in 2021 has shown slow improvement. Operational challenges, HR issues, low public demand are cross cutting challenges for RI including for recently introduced IPV2.

HPV vaccine Introduction

Cervical cancer poses a significant threat to women's health in PNG, ranking as the second most frequent cancer among women including even younger girls aged between 11 and 15 years). With 3.2 million women over 15 years of age at risk of cervical cancer, the statistics indicate the urgency of the situation. Annually, 1,077 women are diagnosed with cervical cancer, and a devastating 650 women lose their lives to this disease. In addition to the significant health burden imposed by cervical cancer in PNG, there exists a substantial financial implication associated with screening and treatment, further underscoring the urgency of preventative measures. The financial burden includes transportation costs, accommodation, treatment fees and opportunity cost for missing the productive hours and days for the families. Furthermore, for those with advanced disease requiring treatment such as radiation or chemotherapy, expenses can escalate dramatically, with costs implication to the families and health system. Moreover, considering the opportunity costs associated with seeking screening and treatment, including lost wages for guardians and potential disruptions to education and work for patients, the economic benefits of prevention become even more apparent.

Addressing this dire scenario necessitates the introduction of HPV vaccinations in PNG as a critical intervention to mitigate the burden of cervical cancer and ultimately save lives. In a country with poor access to even the most basic forms of healthcare, the HPV vaccine takes on additional importance as one of the few options available to reduce the burden of cervical cancer at a population-level. Therefore, by prioritizing HPV vaccination as a preventative measure, PNG can not only mitigate the financial strain on individuals, families and health system but also alleviate the broader economic impact of cervical cancer on society. Preventing cervical cancer through

vaccination represents a prudent investment in the health and well-being of PNG women, offering a pathway towards a more sustainable and prosperous future for the nation.

Opportunities: PNG is eligible to get support from Gavi for HPV vaccine introduction until 2027. Gavi HPV vaccine introduction grant will helpful in planning, coordination, training, advocacy, communication, etc. For the HPV vaccine introduction, the Government of PNG must contribute to vaccine cost at 80% in 2025, 90% in 2027 and 100% starting 2028.

Past and current experiences about HPV introduction in PNG

In 2017, the NDOH has piloted the HPV vaccine introduction in National Capital District and many lesson learnt documented during the pilot. Moreover, in April 2024, Western Highland Provincial Health Authority as part of the Elimination of Cervical Cancer in the Western Pacific (ECCWP) project is undertaking systematic implementation planning for delivery of a one-dose schedule of Human Papillomavirus Quadrivalent vaccine (Gardasil/MSD) for girls aged 9-14 years in Western Highland Province. Drawing from past and current experiences, the upcoming rollout in the country is poised for success.

Challenges: Despite the opportunities and experiences, yet the country need to address few key challenges before final decision on nationwide HPV vaccine introduction.

1. Financial sustainability of vaccine procurement and operational cost: given low government allocations for RI vaccines, having prior government strong commitment on vaccine financing is essentially necessary. Senior Executive Management at NDOH has not yet approve the HPV vaccine introduction. **As of now no functional NITAG in the country for evidence-based policy recommendation to the NDOH, risking that NDOH ad-hoc decision may risk the HPV vaccine introduction**. Having commitment from PHAs to support operational cost is also necessary.

2. Public demand and acceptance: PNG track record with new vaccine introduction including COVID-19 vaccine is not in favour to high public demand or acceptance. Therefore, country will require a strong public awareness and social mobilization programme to support HPV introduction

6. Learning Question: If relevant, how effective have recent Gavi supported vaccination campaigns been?[2] Please highlight lessons learned which are applicable for routine immunisation and upcoming campaigns (e.g., timeliness of outbreak response, quality, campaign reach and link back to strengthening routine immunisation).	
Indicator(s): ● Number of vaccination campaigns conducted (stratified by type of campaigns, including preventive, reactive, catch-up, follow-up, sub-national and national)	

[2] Please reflect on those campaigns conducted since the last Joint Appraisal/Multi-Stakeholder Dialogue exercise.

- Coverage of recent Gavi-supported campaigns, compared to target
- Number of reported outbreaks of vaccine-preventable diseases (for which GAVI supports with reactive campaigns)

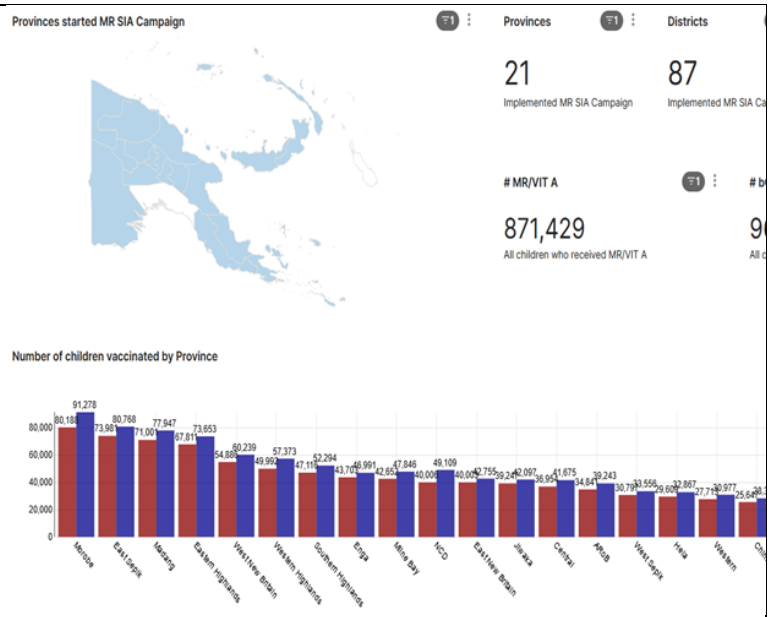


Figure 1: Number of areas and children covered in the MR/Vitamin A and bOPV SIA in PNG in 2023. (Data As of 4 Aug 2023)

Figure 2: National and provincial coverage rates of MR/Vitamin A and bOPV SIA in PNG in 2023 (Data As of 4 Aug 2023)

Table 1: National and provincial coverage rates of MR/Vitamin A and bOPV SIA in PNG in 2023 (Data As of 4 Aug 2023)

Province	No. of health facilities	No.of health facilities implementing MR-VitA-SIA	MR-VitA				bOPV			
			Target population	No. of children vaccinated	Unvaccinated children	Vaccination coverage	Target population	No. of children vaccinated	Unvaccinated children	Vacc cov
West New Britain	38	37	52731	54886		104%	58878	60239		
Jiwaka	28	28	40798	39247	1551	96%	46974	42097	4877	
Hela	38	36	30785	29609	1176	96%	36028	32867	3161	
Enga	42	38	45772	43703	2069	95%	54004	46991	7013	
Western Highlands	46	46	55405	49992	5413	90%	63344	57373	5971	
Milne Bay	44	43	51004	42652	8352	84%	56876	47846	9030	
Central	43	42	44933	36954	7979	82%	50420	41675	8745	
NCD	28	25	51119	40006	11113	78%	58100	49109	8991	
Eastern Highlands	38	38	93319	67811	25508	73%	105349	73653	31696	
Southern Highlands	52	47	65941	47116	18825	71%	78182	52294	25888	
ARoB	42	39	50974	34841	16133	68%	56907	39243	17664	
East Sepik	52	51	110228	73981	36247	67%	123637	80768	42869	
East New Britain	32	32	60021	40003	20018	67%	66868	42755	24113	
Chimbu	37	37	39585	25647	13938	65%	45134	28360	16774	
Manus	13	12	9634	6211	3423	64%	10570	6958	3612	
Morobe	56	50	129696	80188	49508	62%	145331	91278	54053	
Madang	48	45	115071	71001	44070	62%	129725	77947	51778	
West Sepik	38	38	49950	30797	19153	62%	56098	33556	22542	
Northern	20	18	36956	20306	16650	55%	41605	23118	18487	
Western	42	37	51376	27713	23663	54%	57981	30977	27004	
New Ireland	34	18	37992	8765	29227	23%	42051	9775	32276	
PNG	811	757	1223284	871429	351855	71%	1384062	968879	415183	

Country comments (please consider the set of cross-cutting questions to structure comments):

Routine immunization (RI) performance in PNG is significantly low due to weak immunization system at provincial level and risking resurgence of Vaccine Preventable Disease (VPD) including measles outbreaks due to the population immunity gaps. Exacerbating this situation was the advent of COVID-19 pandemic and response causing already low immunization coverage to decline due to a combination of movement restrictions, health worker repurposing and vaccine hesitancy to the new COVID-19 vaccines. **The last major measles outbreak was reported in 2014** with over 12,000 cases. PNG required a Supplementary Immunisation Activity (SIA) because a large proportion (>55%) of these age cohorts were not vaccinated through routine immunization and also due to the new cohorts of children have become susceptible to measles and rubella in addition to those missed because of COVID-19 pandemic.

To address the existing immunity gaps, PNG has implemented a nationwide measles-rubella-polio-vit A Supplementary Immunisation Activity (MR-bOPV-Vit A SIA) from 01 May 2023 to 31 July 2023. It was initially planned to end by June 2023, but the implementation period was extended by one month due to delays in supplies and funding arrivals. The SIA 2023 is the third nationwide MR SIA within the last ten years, the last being in 2019.

Aiming to prevent measles, rubella and polio outbreaks and reduce vitamin A deficiency, the SIA bundled measles and rubella combined vaccine (MR) with bivalent oral polio vaccine (bOPV) and vitamin A supplementation. The SIA 2023 targeted all children (1,416,584) aged 0-59 months for vaccination against polio and all children (1,252,198) aged 6 – 59 months for immunization against measles and rubella and Vit A supplementation.

DFAT, Gavi, UNICEF, and WHO were the lead international funding and technical partners that supported the government of PNG to implement SIA. The National Department of Health (NDoH) led the campaign through its National Technical Working Group (NTWG). The NTWG membership includes immunization technical officers from UNICEF and WHO and other partner agencies.

To operationalize the SIA plans, NTWG established and coordinated Working Groups (subcommittee) for logistics, finance, communications, and operations. Provincial-level operations were led by the re-activated provincial emergency operation centre (PEOC) at provincial Public Health Authorities (PHAs) with support from NTWG. The PHAs were also assisted by WHO

consultants recruited for each of the 22 provinces and by UNICEF with Health Promotion Officers recruited for 15 provinces.

Although the funds, vaccines and other supplies estimated and received were sufficient, an unanticipated delay in vaccine distribution and operational funds reaching operational teams necessitated the extension of the implementation period. The UNICEF country office facilitated the ordering with bundling of vaccines and supplies, as well as devices and printed material, ensuring cost savings.

During the preparations, the WHO readiness assessment tools were used periodically to identify problems and ensure corrective actions were taken before the SIA. A cold chain gap analysis was completed for all levels, and additional required supplies, such as vaccine carriers and cold boxes, were purchased and distributed. They will be helpful in routine immunization as well. All provincial staff assigned for SIA were trained. Training also included components that benefit routine immunization programs, such as microplanning, vaccine cold chain management, communication, and adverse events following immunization (AEFI). All health facilities received AEFI management kits provided by WHO.

Advocacy, communication and social mobilization (ACSM) to increase vaccine acceptance was considered more critical for this campaign than the 2019 SIA. The 2019 campaign was a response to a polio outbreak when parents were more motivated to vaccinate, and no COVID-19 vaccine hesitancy lingered around that time. UNICEF and WHO assisted NDOH and PHAs in implementing a strong ACSM campaign. The national launching ceremony, held on 8 May 2023, followed by the provinces holding official launching ceremonies, was part of the ACSM.

Except for the Gulf province, **all other 21 provinces implemented the SIA campaign during the scheduled period, spanned 87 districts and 756 health facilities**. A total of 871,429 children received MR vaccine and vitamin A supplementation, and 968,879 children received a bOPV dose irrespective of their previous vaccination status. **The overall national coverage rate excluding gulf target population) was 71.2 % for MR and Vit A, which targeted 1,223,284 children,** and 70% for bOPV, which targeted 1,384,062 children. Gulf province has later completed the SIA with 54% and 53% coverage respectively for MR and bOPV. However, the overall SIA coverage even including Gulf province remained unchanged as 71% and 70% respectively for MR and bOPV, due to the change of the denominator.

A significant highlight of SIA is conducting a large number (534) of rapid convenience monitoring (RCM) assessments in 20 provinces. RCM is a tool used to rapidly assess if a particular area requires mop-up operations to ensure all unvaccinated children are vaccinated. RCMs resulted in immediate mop-up campaigns in villages that failed the assessment. The ODK platform and the dashboard were utilised to optimise the RCM implementation and monitoring. A total of 75,811 were vaccinated in the campaign, representing 8% of the children vaccinated in SIA as an addition resulting from RCM activity. Gender-specific data are not collected through the general SIA data collection, but RCM assessed male and female differences in the coverage. It showed that there was no significant difference between males and females. RCM also assessed Zero-dose (not received even a single DPT-containing vaccine) children and found 8% of children with zero doses. This is valuable information for the immunization program managers to target those areas specifically for routine and catch-up immunization.

Several challenges were faced before and during the SIA, as well as lessons learned and best practices that can have implications for the next mass campaign. Among the key challenges were the unavailability of vaccines and supplies and operational funds in provincial accounts before the

SIA. The leadership and commitment of the CEO of the PHA were critical for the effective planning and implementation of the SIA, but that was not uniform across the provinces. Rain, inclement weather, and high plantation activity periods in a few provinces made SIA operations difficult during the scheduled time. A whole-of-society approach involving other government departments, especially education and private sectors, including churches, was not adapted to a reasonable extent in the current SIA but must considered seriously for the next SIA.

Despite the challenges, achieving overall vaccination and vitamin A supplementation coverage of 71% in the SIA is remarkable. The immunity protection that the targeted population of children received because of Measles-Rubella-bOPV-Vitamin A SIA would reduce risk of a near future large surge of measles, rubella or polio cases if infections are introduced to the country. Still, it is crucial to consider conducting subnational and province-specific SIA in the two provinces with the lowest coverage and for other provinces to replan a targeted SIA for those hard-to-reach populations not covered in the current campaign. Depending on the RI coverage, another countrywide SIA will be required in three or four years to mitigate the risk of measles, rubella or polio outbreaks.

While campaign has led to slow down the RI service in Q2 2023, in return it was a long-term investment for improving country RI delivery capacity. Training and microplanning contributed overall staff capacity building in enhancing RI service delivery and to prepare for VPD outbreak response vaccination. Vaccines, cold chain equipment and other logistic supplies provided will be used in RI for remaining period of 2023 and beyond.

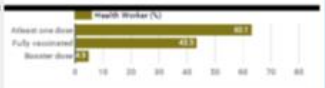
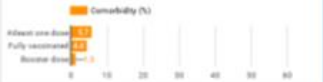
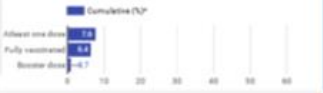
Introduced for the SIA 2023, the successful use of the Open Data Kit (ODK) tool for electronic daily supervision and real-time monitoring supplemented with dashboard analysis for national and provincial levels was a significant highlight of SIA 2023. The NDoH and PHAs highly appreciated it. It had the potential for use in future SIAs as well.

Vaccine accountability was a new exercise introduced during the SIA, and due to proper vaccine handling, the current SIA experienced one of the lowest vaccine wastage rates (0.6%). This experience would be beneficial to the RI. The saved vaccines will be used in routine immunization.

7. Learning Question: How has the introduction of COVID-19 vaccine progressed?	
Indicator(s): ● Reflect on current coverage levels of the adult population and key at risk population.	

- Describe how the country plan to use opportunities for integrated delivery of COVID-19 vaccine with routine immunisation & other primary health care services

PNG: COVID-19 vaccination National level coverage as of 31 Dec 2023

Category	At least one dose received	Fully vaccinated	Booster dose received	Coverage(%)
Health Worker	18140	12519	1396	
45 years and above	115691	99192	13972	
Persons with comorbidity	8869	6951	2044	
Cumulative	399330	338136	37551	

Country comments (please consider the set of cross-cutting questions to structure comments):

In response to the global COVID-19 pandemic, PNG established a National Control Centre (NCC) in March 2020 with overall responsibility on pandemic management, including the use of COVID-19 vaccine. In addition, COVID-19 Ministerial Task Force (MTF) was in place to facilitate linkages between government units such departments including National Department of Health (NDOH) and the NCC. Subsequently, the National COVID-19 Vaccine Taskforce was established within the NCC in September 2021 to support the rollout of COVID-19 vaccines, with the aim of enabling the NDOH to focus on routine immunization (RI). WHO and UNICEF took the lead role in providing technical and logistic support to the NCC and NDOH in COVID-19 vaccine deployment. While NDOH remained the technical advisor to NCC, its involvement in NCC activities was minimal.

COVID-19 vaccine deployment in PNG began in late March 2021 on a limited geographical scale and expanded nationwide in May 2021. Three COVID-19 vaccines - AstraZeneca (AZ), Johnson & Johnson (J&J) and Sinopharm (SP) - have been used in the country. Vaccine introduction and implementation is guided by the National Deployment and Vaccination Plan (NDVP), which was initially developed in early 2021 and was revised in late 2022 to re-strategize COVID-19 vaccination with a focus on improving service delivery, data management, advocacy, and communication. However, to date, the country's COVID-19 vaccination coverage remains very low due to the complex challenges, including lack of coordination at national level between NCC and NDOH, limited vaccine service delivery, low vaccine uptake by health care workers and high vaccine hesitancy among the population.

The COVID-19 vaccination coverage target is 50 per cent of the total population, as per the revised NDVP. By 31 December 2023, only 7.9 per cent the eligible population aged 45 years and above and 43.5 per cent of health workers had completed primary vaccination. Only 9.3 per cent of the eligible population and 63.1 per cent of health workers had received at least one dose. Despite many efforts, progress of vaccination coverage remains low. Starting from January 2022, PNG offered booster doses for the eligible population and as of 31 December 2023, a total of 37,551 people has received the booster doses of either AstraZeneca or J&J vaccine. PNG has been supported by the COVAX facility to secure and deploy COVID-19 vaccines. A total of 1,912,400 doses of COVID-19 vaccines were secured through COVAX facility and bilateral donors, etc., ensuring availability of COVID-19 vaccines throughout the implementation period

There is a significant variation in COVID-19 vaccination uptake across provinces. The NCD has the highest coverage for at least one dose and is fully vaccinated with 47.5 per cent and 43.8 per

cent, respectively. In contrast, Southern Highlands is the lowest with 1.6 percent (at least one dose) and 1.4 percent (fully vaccinated).

The partnership between WHO and UNICEF, technical leadership, and operational support, including development and implementation of the COVID-19 vaccination and deployment plan, tailored training, establishment of data management system had helped NDOH to successfully implement the nationwide COVID-19 vaccination. As a part of WHO's commitment to improve disease surveillance system, the national vaccine preventable disease (VPD) surveillance guideline was updated to include COVID-19 surveillance. In addition, vaccine and immunization safety was improved through the development of new national guidelines for the surveillance of adverse events following immunization (AEFI) and reactivation of the national AEFI committee. In total, national, 22 provincial and all district and HF staff throughout the country were trained during the COVID-19 vaccine introduction period. WHO regional laboratory team provided technical support to the Central Public Health Laboratory to strengthen laboratory testing capacity, including updating SOPs and laboratory data management. With UNICEF's unwavering support, cold chain capacity was strengthened at all levels of the supply chain with 225 cold chain equipment such as solar-powered refrigerators, cold boxes, continuous temperature monitoring devices, etc. 93 per cent of all health facilities have adequate cold chain for routine childhood vaccines and COVID-19 vaccines. The programme support has been sustained through the transition to the National Immunization Programme, for example, COVID-19 vaccines distribution has been integrated into the routine vaccine distribution system to continue COVID-19 vaccination.

Integration of COVID-19 Vaccine into the RI and Primary Health Care (PHC) service

The NDOH has developed a draft 'Papua New Guinea COVID-19 Transitional Plan 2023-2025' and the functions of NCC will be gradually returned to NDOH by the end of 2025. The recommendation for integration of COVID-19 vaccine was also formulated to guide national and provincial health authorities to maintain COVID-19 vaccination as part of the primary health care delivery and to prepare for and respond to future surge of COVID-19 transmission in the country.

In September 2023, NDOH conducted a readiness assessment for integration of COVID 19 vaccination into RI and PHC delivery system.

Table: Assessment findings on Integration of COVID-19 Vaccination with Immunization Programmes & Primary Health Care

Integrated health workforce	Partially integrated
Demand generation and community engagement	Partially integrated
Cold chain management (e.g., COVID-19 vaccine available in PHC facilities)	Yes, integrated
Supply chain (e.g., COVID-19 vaccine distributed by EPI)	Yes, integrated
Integrated waste management	Yes, integrated
Coverage monitoring and reporting integrated with other vaccines	Partially integrated
Leveraging digital immunization record of COVID-19 into RI	Not integrated
Sharing of COVID-19 vaccination costs and resources with other health interventions/programmes	Not integrated
COVID-19 vaccination integrated in routine immunization policy	Not integrated
COVID-19 vaccine safety surveillance into overall RI safety surveillance	Not integrated

Challenges in Operationalizing Integration

The COVID-19 integration readiness assessment in PNG revealed that while some integration is occurring, significant challenges must be addressed before it can be operationalized. At the national level, the NDOH has not yet issued a formal policy or guidance on COVID-19 integration, creating uncertainty among PHAs and impeding the development and implementation of integration plans. Funding remains a challenge and external funding is needed to address human resource shortages and continue RCCE. Strategies for integrated demand generation and community engagement are not yet in place at the PHA level. Increasing demand for COVID-19 vaccination in the community is a key challenge requiring targeted, intensive, and accelerated ASCM activities. The delivery of integrated COVID-19 vaccination and PHC services varies from facility to facility, necessitating the standardization of an operational service delivery model. Despite an integrated workforce, this is insufficient to address the ongoing problem of nurse and other HCW shortages and capacity deficiencies in HFs, given that HF staff are still recovering from the pandemic. Additionally, existing health management information systems (HMISs) or data platforms have not been updated or expanded to include recording an individual's COVID-19 vaccination status. COVID-19 is also not yet included in the electronic National Health Information System (eNHIS). There is no clear system in place to identify and link eligible individuals who have contact with other routine PHC services to COVID-19 vaccination. While there is an integrated supply chain, there are still gaps in vaccine access and supply, resulting in stockouts, expiries of COVID-19 vaccines, and longer turnaround times for vaccine ordering and shipment.

Opportunities for COVID-19 Integration

On the other hand, the recent COVID-19 integration readiness assessment in PNG presented several opportunities that the NDOH can capitalize on to operationalize integration. The NCD/PHA Integrated Service Delivery model offers a promising foundation to build on, as it has enabled the provision of integrated services in the urban clinics. The government's recent plans to merge the NDOH and the NCC into a single organization to develop and implement integration plans could also help to improve coordination and efficiency. The increased demand for vaccines, particularly among young people wanting to travel, study abroad, get a job, or those who come for voluntary vaccination, presents an opportunity to reach out to this group and increase vaccination rates. The overall moderate acceptability among HCWs in both urban and rural health clinics to implement and deliver integrated COVID-19 vaccination and PHC services suggests that HCWs are willing to support integration. The NDOH circular stating that the ordering of COVID-19 vaccines will be

combined with RI vaccines through the mSupply system provides an opportunity to streamline the procurement, cold chain, and storage of vaccines at the health facility level.

Way forward for COVID-19 vaccine integration

1. Comprehensive guidance from the Department of Health (DOH) on how to implement COVID-19 integration is needed.

o The NDOH should issue a policy or guidance on COVID-19 integration to provide clear direction to provincial health authorities (PHAs). Prior to this, the government should expedite the merging of the DOH and the National Commission on COVID-19 (NCC) into one single organization to improve coordination and efficiency.

o Additionally, the NDOH should establish clear guidelines for the referral of COVID-19 vaccination from other health programs and services in primary healthcare facilities, such as provincial and district hospitals, to other health facilities/clinics and within health facilities/clinics.

2. Build on the existing NCDPHA Integrated Service Delivery model and expand to other PHAs. To maintain COVID-19 vaccination and periodic boosters targeting priority populations, such as people with comorbidities and immunocompromised individuals, PHAs should:

o Leverage the existing NCDPHA integration model to initiate collaboration and coordination with PHC stakeholders and with other health programs and services, such as noncommunicable diseases (NCDs)/lifestyle diseases, TB/HIV, and MCH/ANC, as points of entry.

o Initiate involvement of clinicians, utilize lifestyle clinics, and establish bidirectional referral between HCW and physician particularly for high-risk groups e.g., people with comorbidities

o Conduct training for HCWs on the importance of integrating COVID-19 vaccination into routine and primary health services. Develop clear guidelines for HCW on how to offer COVID-19 vaccination to priority high-risk groups.

o Develop a clear system to identify and link eligible individuals who have contact with other routine PHC services to COVID-19 vaccination.

3. Enhance public knowledge and understanding of COVID-19 disease.

o Update messaging on the importance of COVID-19 vaccination for high-risk groups to incorporate clinical perspectives and adapt ACSM activities and messaging tailored for high-risk groups with support from UNICEF.

o Develop integrated demand generation activities and community engagement strategies at the HF and PHA levels.

8. Learning Question: Trajectory and PROGRAMMATIC progress against targets set

- ~~How has **COVID-19** and **COVID-19 vaccination** impacted your routine immunisation programme, what has been done to maintain and restore immunisation and what has been the impact of it (please include reference to trends in DTP3 and MCV1 coverage)?~~

- If there are **other factors** (e.g., government transitions, natural disasters, other disease outbreaks, etc.) which have led to disruptions in your immunisation programme over the last year, please also reflect on those.

Indicator(s):

- Number of children who received DTP3 and number of children who received MCV1 in the past year compared to the number who received those vaccines in 2019.
- Qualitative information
- **Proportion of planned workplan activities implemented as per the plan**

Figure 1. DTP3 and MR1 coverage for AIHSS provinces and non-AIHSS provinces, 2020-2023.

Country comments (please consider the set of cross-cutting questions to structure comments):

In this section please consider to include an overview of progress on implementation by investment area (as per the GAVI HSS workplan/budget (FPP). Please consider the most important 3-5 activities in each investment area, and look at %fund absorption, please reflect on reason for challenges in implementation/low absorption. or whether the interventions are on track or possibly needs to be changed/ reallocated. In addition, please try to respond to the specific questions listed below if information is available. The intention of this section is to get a joint overview of progress on implementation and highlight where there are needs for changes to the support.

- **Service delivery** :
- What are most important 3-5 activities/interventions supported by Gavi, how is the %fund absorption, please reflect on reason for challenges in implementation/low absorption. or whether the interventions are on track or possibly needs to be changed/ reallocated.
    - To what extent are the planned immunization sessions (fixed, advance, mobile) being held? If they are not progressing, what is the most critical challenge that needs to be addressed?

Over the 4-year period 2019-2023, the number of outreach clinics conducted and Penta 1 coverage followed the same pattern as the Penta 3 coverage, that is, higher in 2020 and 2022 and lower during 2021 and 2023 (Table 7). For ARoB and West Sepik an increase in outreach clinics resulted in an increase in Penta 3 coverage however, for Central and Western Highlands there was a decrease in outreach clinics and an increase in coverage. In Western Highlands, electoral related violence in 2022 resulted in closure of clinics and reallocation of staff to other facilities that impacted on the number of outreach clinics provided but boosted the staff numbers in other facilities. Health facilities in Western Highlands are much more accessible by road than in other provinces and would contribute to the consistently higher coverage observed in this province when compared with other provinces.

Table 7. Number of outreach and mobile clinics conducted by Province and Year, 2020-2023.

Province	Number of outreach and mobile clinics conducted

	2020	2021	2022	2023
ARoB	1579	1008	2856	2647
Central	1877	2436	2082	2006
East Sepik	2407	2144	1817	904
Eastern Highlands	4194	3394	2478	2398
Gulf	403	156	152	79
Jiwaka	1883	1795	2388	2230
Madang	1398	1170	1228	919
Morobe	1452	2000	1912	2353
Southern Highlands	2661	2995	3840	3931
West Sepik	2258	1652	2638	2379
Western	571	464	579	584
Western Highlands	4377	5030	4648	4527
Total	25,060	24,244	26,618	24,957

- To what extent are the tailored strategies for targeted geographies and population groups being implemented? What is the biggest challenge?
-
- Challenges - funding, fitness and willingness of staff to go to remote locations, safety and security of staff, accessibility to villages, vaccine stock-out,

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-
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Figure 4. Enga Health Care Workers conducting a foot patrol to a hard-to reach-location in Lower Tupikores, April 2024.

In Western province integrated health patrols are planned and executed very well in 3 of the 4 districts. Travel is by boat and then foot and/or car. Only 1 trip was cancelled this year due to a death on the boat. Integrated patrols are coordinated by the District Managers with the partners (WV, ADI, YWAM).

- In ARoB, the PATH AIHSS2 Senior Grant Manager attended a review meeting and stayed on to help them plan more mobile services and use funds to go to the outer islands that are infrequently visited due to cost and safety in getting there. There was a substantial increase in outreach and mobile services from 2021-2022 that was also reflected in an increase in coverage.**Electronic Supervisory tools and dashboard for improved data used and decision making for service delivery**
-
- **Supply Chain**
- What are most important 3-5 activities/interventions supported by Gavi, how is the %fund absorption, please reflect on reason for challenges in implementation/low absorption. or whether the interventions are on track or possibly needs to be changed/ reallocated.
    - Does the country routinely monitor and report stock performance from national to district levels? How is this done (eLMIS/other technology, paper-based) and at what frequency?
- **Cold Chain Expansion to last miles HFs**
- **eLMIS rollout**
-

Health Information Systems and Monitoring and Learning

The Monitoring & Evaluation Strategic Plan for the National Health Plan 2021-2030 outlines over 200 indicators for monitoring progress in the health sector, in addition to actions for strengthening monitoring and evaluation of health programmes. These actions include reducing fragmentation of information systems, strengthening that National Health Information System (NHIS/eNHIS), improving quality of routinely reported data, and building capacity in data collection, analysis and use at all levels of the health system.

The NHIS is the primary system for data on health service delivery and health outcomes. It is a well-established system in which data are reported from health facilities to provinces and then to the national level on outpatient and limited inpatient services. Indicators cover services such as family planning, antenatal care, childbirth, immunizations and well-childcare, sick child care, school health services, outreach clinics, malaria and drug

shortages. The system is now electronic nationally (the eNHIS), with data entry in health facilities done directly on tablets.

WHO supported the National Department of Health in revising the NHIS recording and reporting forms to align with the indicators in the new Monitoring & Evaluation Strategic Plan for the National Health Plan 2021-2030, as well as global recommendations (the reporting forms were last revised in 2017). After the revision, WHO also supported the piloting of the revised forms in three provinces: Central, Morobe, and EHP. The forms were piloted in 8-10 selected health facilities in these three provinces for three months. The NHIS pilot was crucial to assess feasibility of reporting the revised/new variables in the forms, and understand whether the data could be collected and reported correctly. The revised forms include age and gender disaggregation for immunization and IPV2, HPV, AEFI, and integrated outreach. The piloting of the revised NHIS recording and reporting forms was completed in January 2024 and necessary adjustments made following consultations with NDoH programs and relevant stakeholders, including development partners, health information officers, health workers, and medical records officers. The forms are now given to the eNHIS vendor to reflect the changes in the electronic forms.

In 2021 to 2023, the NDoH conducted data quality assessments of data reported in the eNHIS for the first time during annual supportive supervision visits in selected health facilities in a sample of provinces. Assessments were done using a standard tool based on WHO recommended methodologies. The DQAs conducted from 2021 to 2023 revealed significant discrepancies between reported and recounted data across the assessed indicators, including Penta 3 immunization. Data inaccuracy (discrepancies between recounted values and reported values in the eNHIS) was found to be a major problem across all provinces assessed, with both under-reporting and over-reporting observed. Factors contributing to data inaccuracy include arithmetic errors during data compilation, missing source documents (such as tally sheets, registers, and summary sheets), failure to follow standard reporting procedures, late reports, stock-outs of NHIS recording tools, and lack of coordination among health facility staff.

With GAVI funds, WHO also worked with NDoH and partners to conducttraining on data management with a focus on analysis and quality assessments for PHA staff, district health managers, clinicians, and health facility OICs. A total of 98 staff were trained in Jiwaka and ARoB, provinces where such training is not being done by other partners. The training covered requirements of the National Standard Operating Procedures on Management of Data in Routine Information Systems, the use of eNHIS data and analytical tools available in the eNHIS, and conducting data quality audits. WHO will continue to provide targeted support to provinces to support institutionalization of data quality audits.

Lastly, WHO has been working with the NDoH on development of data products. This includes a new format for the annual Sector Performance Assessment Report (SPAR), which includes disaggregated analyses by factors such as sex and age for the first time to support equity analyses. A report summarizing key clinical indicators (such as leading causes of morbidity and mortality) is also being finalized and will be disseminated in quarter 1 of 2025.

The eNHIS transition was planned to happen before the end of February 2025 in line with the 5-year contract end date. However, the NDoH decided to provide an extension of 34 months to the existing vendor to allow enough time for the transition. Currently, HSSDP (the project manager) is negotiating with the vendor regarding the extension cost and additional activities, including rolling out eTB to the remaining provinces and making changes in the eNHIS as per the revised NHIS tools. The outcome of the discussion will be known before the end of November 2024.

- What are most important 3-5 activities/interventions supported by Gavi, how is the %fund absorption, please reflect on reason for challenges in implementation/low absorption. or whether the interventions are on track or possibly needs to be changed/ reallocated.
    - Are we able to track the change in the Zero Dose population in the targeted areas? How frequently is this tracked, and what data source is used? If not, how does the country plan to measure progress on ZD?

AIHSS2 will start tracking ZD children at the health facility level in 2025 understanding that this may over represent ZD children who have been vaccinated in another clinic if the Child Health Register for that facility has not been updated with the information in the child held record book. Also of importance to note is that in the Provincial Capital

Cities there is often more children vaccinated than the population denominator due to displacement of peoples from tribal fighting or natural disasters so number of ZD children in some of these capitals will be underrepresented.

AIHSS2 will also be tracking outreach activities to ZD and disadvantaged districts to improve the reach of outreach and mobile services to these locations.

- What are key data quality issues, and what is the progress done to address them?

During supervisory monitoring trips data from the Child Health Register book will be triangulated with the daily and monthly tally sheets. It is likely that the Child Health Register book will be lower that the daily and monthly tally sheets if names are not recorded during the mobile and outreach visits to update the Child Health register book and visitors vaccinated are not recorded. The electronic immunisation register will help to address some of these issues so children can be tracked by their name and DOB however progress towards the development of the EIR has stalled.

- How is inmunisation data being well capture under eNHIS? What is the potential way forward for eNHIS as a Health Information system for PNG.

Aggregated data is entered into eNHIS at the district and/or provincial level. Data accuracy checks on aggregated data is challenging other than to identify if data is missing or if the number range is well above what would be expected for a health facility. Internet access (cost and service) is also very varied between provinces but WhatsApp is now used in many locations to relay immunisation and surveillance data up the reporting chain.

- **Demand Generation and Community Engagement**
- What are most important 3-5 activities/interventions supported by Gavi, how is the %fund absorption, please reflect on reason for challenges in implementation/low absorption. or whether the interventions are on track or possibly needs to be changed/ reallocated.
    - Has an analysis or a BeSD assessment been conducted to identify demand related barriers? What are key findings? What are interventions needed to address this?
    - To what extent is the country tracking the progress of the workplan activities of CSOs? Are there any concerns related to implementation of CSO led activities?
    - as a follow up from the demand mission in July 2024, there were several recommendations related to HCD and Besd, perhaps you want to reflect on the progress on these recommendations (email from Smita Singh).

- The Demand Promotion Strategy, that has been appended to the National Immunization NIS (2020-2025), has been the cornerstone for all planning and rollout of all demand promotion effort in PNG.
- Notably, key interventions rolled out since 2022, including the Human-centred Design HCD approach for zero dose children, Behavioural & Social Drivers Study BeSD, the RI Toolkit as well as the deployment of Health Promotion & Programme Officers HPPO.
- Enlisting competent CSO partners for HCD, especially for the provinces where access is constrained by endemic insecurity and tribal fights, such as Enga and Southern Highlands, has been major challenge considering safety and high cost associated with work in these areas. This has required extraordinary advocacy at different levels and budget negotiations.
- Taking into consideration the PNG context-related challenges and constraints, timelines and stages of the rollout of BeSD study, production and dissemination of the RI Toolkit to all PHAs, CSO partnerships well as training of master trainers of government cadres, CSO partners and HPPO have been carefully aligned to achieving the strategic objectives of the HCD.
- Preliminary findings of the BeSD, for example, have been prioritized for HCD implementing provinces to help inform the rollout with rigorous qualitative and quantative data.
- Lack of effective coordination among the different partners working on demand promotion, has been a challenge to harmonizing demand promotion effort and strategies. However, establishment of the Immunization Demand Generation Coordination Group IDCG in Oct 2024 ensured better working relationship among the PNG demand community of practice. The IDCG groups UNICEF, AIHSS, ISPs and HCD IPs, aims for optimized utilization of the multiple partners' resources and technical expertise towards improving demand and access to immunization.
- 9 Health Promotion & Programme Officers engaged and deployed to 10 Provincial Health Authorities where zero dose rates are high and immunization coverage and service delivery systems are substandard. The HPPO were trained on HCD, vaccine and cold chain management, digital monitoring

tools. To date the HPPO conducted 27 district missions in support of outreach and health promotion, VHA and HCW capacity building and community engagement effort.

- UNICEF SBC capacity has been strengthened with additional SBC Specialist at P3 level while recruitment of SBC national officer is underway.
-
- **Human resources for health**
- What are most important 3-5 activities/interventions supported by Gavi, how is the %fund absorption, please reflect on reason for challenges in implementation/low absorption. or whether the interventions are on track or possibly needs to be changed/ reallocated.
    - What is the most critical gaps in HRH in the EPI program, what are the key remaining challenges to address this? please also comment on distribution and critical training/capacity building needs.
- **AIHSS2 is tracking the 5 critical positions for EPI that are mentioned in the NIS in the 15 provinces that we work in. Org charts are provided in the annual proposals and a progress update on where each of the PHAs/BDoH are at if these 5 critical positions are not yet approved by the board and funded by Department of Personal Managment.**
- **Governance, policy, strategic planning and programme management**
- What are most important 3-5 activities/interventions supported by Gavi, how is the %fund absorption, please reflect on reason for challenges in implementation/low absorption. or whether the interventions are on track or possibly needs to be changed/ reallocated.
    - To what extent have the gaps identified in the HSS/EAF application been addressed? What gaps remain, according to the Key Shifts Analysis, IRC Report, and Previous JA?
    - Is the overall workplan on track and completed on time? If not, what is the most critical challenge?
    - Are the established governance mechanisms functioning as expected? (e.g. NITAG, ICC, Logistics Working Group, Routine Imunisation Working Group etc.)

EPI TWG meeting in 2024 was monthly attended mostly by NDoH, Unicef, WHO, Gavi, CHAI and AIHSS2

- **Health Financing**
- What are most important 3-5 activities/interventions supported by Gavi, how is the %fund absorption, please reflect on reason for challenges in implementation/low absorption. or whether the interventions are on track or possibly needs to be changed/ reallocated.
    -

AIHSS Phase 1 goal to achieve 80% DTP3 coverage by 2022 in 3 of the 12 provinces was not achieved despite the disruptions of COVID-19 and the MR SIA. DTP3 coverage was higher in 2020 and 2022 than in the other 2 years when RI was being delivered without having to factor in any other vaccination schedules for AIHSS provinces and non-AIHSS provinces (Figure 1). MR1 coverage was similar to DTP3 coverage but increased in 2023 due to the inclusion of MR SIA data with the RI data in some provinces. The introduction of the COVID-19 vaccinations in 2021 and the vaccine hesitancy that followed impacted RI coverage in 2021 and in 2023 the MR SIA had a similar impact.

Lessons Learnt

Vaccine hesitancy needs to be addressed with culturally and inclusive materials and personnel. Monitoring a range of information sources is beneficial to identify hesitancy issues early.

B. Programme Management

Financial implementation of Gavi cash grants

Cash[3] Support Summary*

Grant	Recipient	Period	Status as of 30 June 2024						Compliance**	
			Grant Value	Appr.	Disb.	Exp	Util %	Cash Bal	Fin. Rep	Audit
HSS2	Abt Ass.	01-Mar-2019 to 30-Jun-2023	7,146,777	7,146,777	5,720,931	TBD	TBD	-	EHPHA pending	EHPHA pending
	UNICEF	01-Mar-2020 to 30-Jun-2023	4,372,253	4,372,253	4,372,253	4,360,807	100%	11,446	Ok	N/A
	WHO	01-Mar-2020 to 30-Jun-2023	2,740,580	2,740,580	2,740,580	2,590,733	95%	149,847	Ok	N/A
HSS3	Abt Ass.	01-Jul-2023 to 31 Dec 2027	13,324,676	4,416,501	2,410,745	1,620,086	67%	790,659	Ok	Not due
	UNICEF	01-Jul-2023 to 31 Dec 2027	10,729,157	9,036,272	4,953,361	96,551	2%	4,856,810	Ok	N/A
	WHO	01-Jul-2023 to 31 Dec 2027	2,366,339	1,416,735	1,018,436	109,774	11%	908,662	Ok	N/A
MR SIA (2023)	UNICEF	8-Dec-2022 to 30-Sep-2024	705,672	705,672	705,672	600,235	85%	105,437	Ok	N/A
	WHO	17-Apr-2023 to 30-Sep-2024	4,404,412	4,404,412	4,404,412	1,339,052	30%	3,065,360	Ok	N/A
CDS EAW	Abt Ass.	15-Nov-2021 to 31-Mar-2023	2,345,604	2,345,604	1,354,445	1,631,091	120%	-	Ok	Ok
	CDC	15-Nov-2021 to	400,000	400,000	400,000	TBD	TBD	TBD	Due & Pending	Due & Pending
CDS NBS	PwC	24-Feb-2022 to 31-Mar-2023	2,628,792	2,628,792	1,977,000	930,653	47%	1,046,347	Ok	Ok

All amounts are in USD
**Comment below in case of non-compliance

Grant		Planned Start Date	Planned End Date	2023	2024	2025	2026	2027	2028	Total
1HSSEAFBudget	HSS	1-Jul-23	31-Dec-25	$5,029,241	$8,564,085	$7,308,907	$5,036,947	$4,978,808	$0	$30,917,988
2PEFTCABudget		1-Jul-23	31-Dec-25	$1,028,239	$3,068,662	$2,885,932	$1,130,995	$1,138,465	$0	$9,252,293
										$0
										$0
										$0
										$0
										$0
										$0
										$0
										$0
			Total budget	$6,057,480	$11,632,747	$10,194,839	$6,167,942	$6,117,274	$0	$40,170,282

Funds Recipient	2023	2024	2025	2026	2027	2028	Total
UNICEF-SD	$1,023,969	$1,027,858	$1,023,969	$0	$0	$0	$3,075,797
UNICEF-CO	$1,597,315	$2,526,325	$1,836,835	$867,291	$825,593	$0	$7,653,360
WHO	$249,050	$702,759	$464,926	$471,443	$478,161	$0	$2,366,339
Expanded Partner-AIHSS	$1,658,907	$3,214,327	$2,958,176	$2,758,212	$2,735,054	$0	$13,324,676
Expanded Partner-LMC	$425,000	$425,000	$375,000	$290,000	$290,000	$0	$1,805,000
Expanded Partner-CSO/FBO	$0	$0	$0	$0	$0	$0	$0
Expanded Partner-EIR-PNG eNHIS F	$0	$0	$0	$0	$0	$0	$0
Expanded Partner-TBD	$0	$312,389	$0	$0	$0	$0	$312,389
Expanded Partner-CHAI	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0
Total budget	$4,954,241	$8,208,657	$6,658,907	$4,386,947	$4,328,808	$0	$28,537,561

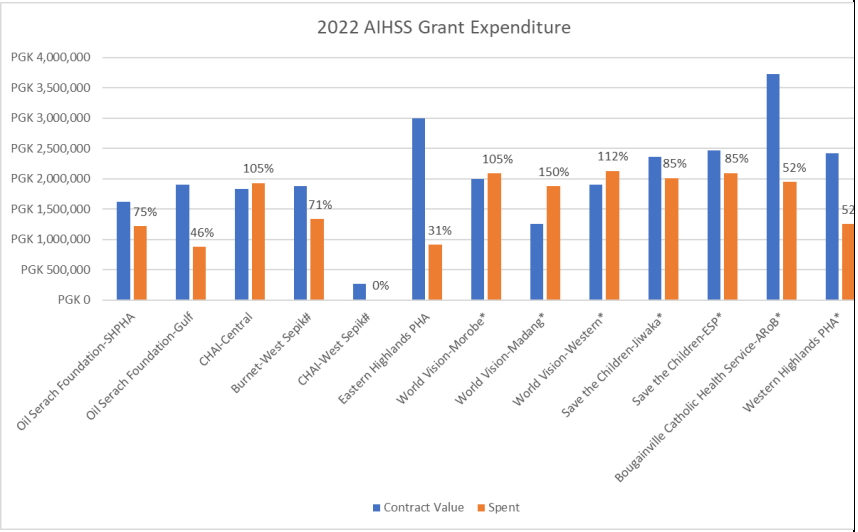
[3] All HSIS grants (HSS, VIGs, OPS, Switch), EAF and CDS cash support as applicable.

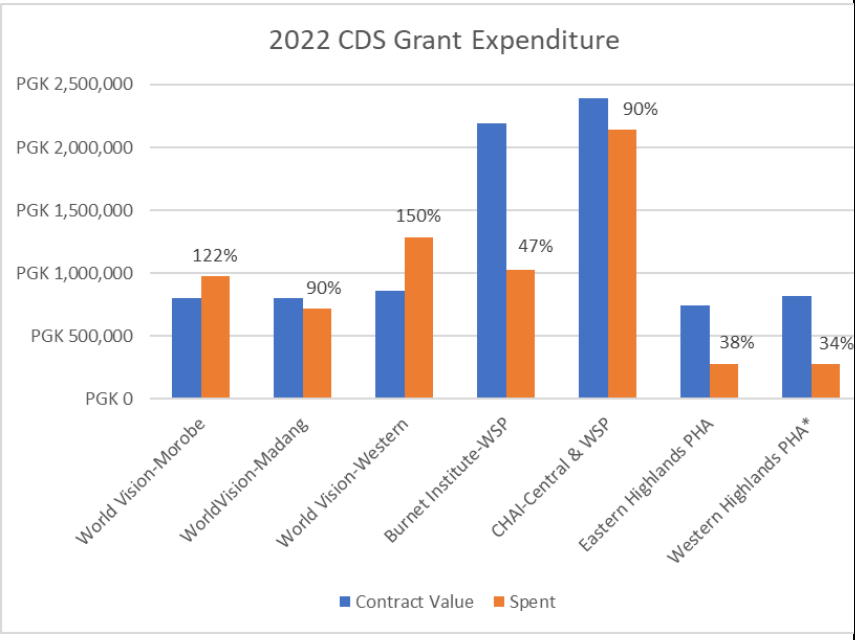
9. Learning Question: How well is the country able to absorb Gavi funding and what are the drivers? (This should cover all funding including funds channelled through partners.)

- Comment on the financial implementation progress of grants including but not limited to the utilisation rates. What are the key issues?

Indicator(s):

- Percentage of grant funds utilised
- Amount of cash balance in-country





Burnet-West Sepik budget is from Jan - June 2022, CHAI-West Sepik budget from Oct to Dec 2022.

* DFAT funded grants

Country comments:

Ability to spend and absorb funding is usually impeded due to delays in approvals and contracting and often rushed planning after commitments have been made. Partners would benefit from longer term commitments (or at least much earlier approvals), and this would reduce funds not being spent in the planned budget period due to longer lead times for planning programmatic activities. Long term, multi-year commitments to partners would likely increase their ability to utilise funding. While it is clear that some provinces do have the potential to absorb additionally funding, some provinces are not able to spend the funds allocated to them. There does seem to be consistencies between expenditure rates of certain ISPs and direct recipients.

10. Learning Question: How well is the country resolving issues arising from assurance activities? What issues are left to solve and what is the path forward?

- What is the progress of Grant Management Requirements implementation?
- How has the country addressed recommendations arising from past audit recommendations (annual external audits + Gavi Programme Audit)?
- Comment on the improvements that have been made to financial management and risk assurance activities with support of assurance providers (e.g., Fiscal Agents, Monitoring Agents, Financial Management Technical Assistance)?
- Specifically, what actions have been taken to enable a larger % of Gavi funds to be channelled back through government systems?

Country comments:

A Programme Capacity Assessment (PCA) was conducted in September 2018 and Grant Management Requirements (GMRs) formally shared with the Government of PNG (GoPNG) in June 2020. The PCA noted weaknesses with the NPHCDA's financial management, including some outstanding issues from the last Gavi Programme Audit of 2017. The GMRs were updated and re-issued in December 2021, adding a Fund Manager for receipt and management of CDS funding on behalf of the C-19 Task Force.

The country has not provided updates on the status of implementation of PCA recommendations and/or the GMRs. Gavi agreed with the Global Fund to include follow up of past recommendations in the Global Fund Capacity Assessment of the NDoH, which would inform the development of a financial management action plan with a view to agreeing a roadmap with the GoPNG on strengthening and using (as appropriate) the country's financial systems and processes in the medium to long-term.

Recently in 2024, Gavi has engaged PwC as an Assurance Provider for PNG on a Framework Agreement basis, with scope to be agreed depending on needs. This will include, but not limited to, budget reviews, follow up of implementation of audit recommendations, and assisting the country with FM improvements as appropriate.

11. Learning Question: Please comment on any other financial management-related bottlenecks for implementation and compliance.

Country comments:

Several financial management issues were raised in the last Gavi Programme Audit of 2017 and were followed up in the PCA that followed in 2018. These issues were around vaccines and cold chain management, as well as budget, financial and procurement as summarised below:

- Cold chain equipment – implementation of EVMA plan
- Vaccine stock management – gaps in inventory records
- Vaccine wastage due to human error
- Weaknesses in vaccine stock management in Eastern Highlands
- HSS workplan and progress reporting
- Reporting inconsistencies and delays
- Non-compliance with Gavi External audit requirements
- Ineligible expenditure
- Outstanding travel advances
- Incomplete and untimely Provincial acquittals
- Eastern Highlands Province - Lack of justification for payment
- Payment of allowances without proof of receipt
- Procurements were unplanned
- Consideration was not given to existing "Whole of Government" contracts
- No evidence of requests for quotation from tendering vendors
- Quotation register not maintained
- Procurement without Minor Contract Agreements
- Fixed assets registers were not maintained
- Procurement undertaken outside of the designated procurement unit
- Budget overrun and unbudgeted procurement
- Unsupported procurement
- Contracts awarded without demonstrating competition
- Inadequately supported delivery
- Payments not supported by a valid invoice and timing inconsistency

Given that Gavi has not been disbursing funds directly to the government systems, it is difficult to assess the extent to which most of these issues are still prevalent. A Gavi Programme Audit conducted in October 2024 is expected to provide recommendations that will be followed up for improvement of financial management of the grants.

12. Learning Question: Is the country effectively addressing gender related barriers (e.g. faced by caregivers or adolescents in accessing immunisation services and barriers faced by health workers in delivering immunisation services)?

Indicator(s):

- Has the country implemented initiatives that remove or reduce gender related barriers?

Qualitative information

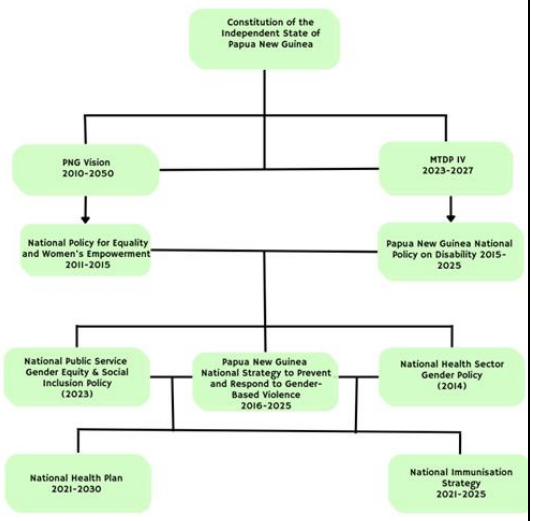


Figure 1. Flowchart of key GoPNG policy documents relevant to GEDSI.

Country comments:

- **Goal**
- The goal of the GEDSI Immunisation Strategy is to enable the PHAs and BDoH embed GEDSI principles into service delivery to increase equity and reach of routine immunisation.
- **Specific Objectives**
- Specifically, this Strategy seeks to:
- Promote the integration of GEDSI principles in PHAs and BDoH organisational and management structures and service delivery activities.
- Support PHAs, BDoH and Implementing Service Partners (ISPs) in addressing GEDSI-related barriers and opportunities to increase immunisation coverage in hard-to-reach locations, vulnerable populations and districts identified as disadvantaged.[1]

- **Target audience**
- The target audience for this Strategy consist of:
- PNG National Department of Health (NDoH), PHAs, BDoH and ISPs
- PNG faith-based organisations, women organisations, and Organisation for Persons with Disabilities (OPDs); and
- The AIHSS2 program

Methodology

The 9 WHO gender-responsive immunisation approaches were used as best practice guidance to inform this Strategy.

1. Invest in gender data and analysis.
2. Make community engagement and social mobilisation gender-responsive and transformative.
3. Engage with men to transform gender norms.

4. Empower and collaborate with civil society and change agents.
5. Implement gender-responsive actions for health workforce.
6. Improve the quality, accessibility, and availability of services.
7. Integrate services and collaborate across sector.
8. Implement GEDSI responsive immunisation services in emergency settings.
9. Apply a GEDSI lens to research and innovation.

A document review was conducted to inform the GEDSI context in immunisation section and identify key government documents to provide guidance on the GoPNG expectations for incorporating GEDSI principles into practice. The 9 WHO approaches were then aligned with implementation focus areas from the AIHSS2 design document[1] and the WHO Gender Matters document to determine how the approaches can best be implemented. Indicators for monitoring and evaluating the approaches and implementation focus areas were developed building on the indicators from the AIHSS2 design document.

The 9 WHO approaches, and implementation focus areas were then workshopped with GEDSI focal people from PHAs, ISPs and Department of National Planning and Monitoring to discuss their relevance and applicability to the PNG context (NDoH, Department of Personnel Management, PNG Assembly of Disabled Persons and PNG Disability Coalition Sector had been invited but were unable to attend).

A second workshop is to be conducted with those unable to attend workshop 1 to further validate the relevance, applicability and responsible organisations to lead each approach and implementation focus area.

Policy Alignment

There were 10 key PNG government policy documents arising from the Constitution of the Independent State of PNG identified as relevant to the development of the GEDSI Immunisation strategy (Figure 1).

Table 1. WHO gender responsive approaches identifying relevance to key GoPNG documents for GEDSI immunisation strategy.

WHO Approaches	Key GoPNG policy documents	Application to GEDSI strategy
1.Invest in gender data and analysis.	National Policy for Gender Equality and Women's Empowerment 2011-2015	The currently expired policy is being reviewed but yet to be approved by NEC. The revised policy has a priority area on health with a focus on sexual reproductive health, HIV/AIDS and GESI disaggregated data, WHO approach one is appliable to this policy.
5. Implement GEDSI-responsive actions for health workforce	PNG Vision 2010-2050	Pillar, one focuses on Human Capital Development, Gender, Youth and People. A key outcome in this pillar is non-discriminatory laws and policies that can be achieved through greater gender balance in participation. WHO approach five is applicable to Vision 2050
	National Health Sector Gender Policy	Strategy 3.3.2.1 calls for NDoH to develop human resource polices that are gender sensitive and implemented and strategy 3.3.2.3 calls for gender-sensitised policies and procedures to be developed
	National Public Service Gender Equity and Social Inclusion Policy (2023)	The GESI policy is the document which calls for government departments and agencies to mainstream GESI in areas of employment; women's leadership and decision-making; GBV, education and training and health includes HIV/AIDS. This is the core document that will guide PHAs and BDOH in mainstreaming GESI and implementation of WHO approach five.

6. Improve the quality, accessibility, and availability of services	Medium-Term Development Plan IV 2023-2027	The MTDP IV strategic priority area three is on quality and affordable health care and strategic priority area eleven is on population, youth, and women empowerment these two priority areas are appliable to WHO approach six.
	National Policy for Gender Equality and Women's Empowerment 2011-2015	The revised policy has a priority area on health with focus on sexual reproductive health, HIV/AIDS and GESI disaggregated data, WHO approach six is appliable to this policy.
	Papua New Guinea National Strategy to Prevent and Respond to Gender Based Violence 2016-2025	The National Strategy to Prevent and Respond to Gender Based Violence (2016-2025) aims to strengthen and institutionalize the work on GBV to achieve zero tolerance towards GBV. Health supports this strategy through the Family Support Centre services. WHO approach six is applicable to GBV mainstreaming.
7.Integrate service and collaborate across sector	Papua New Guinea National Strategy to Prevent and Respond to Gender Based Violence 2016-2025	The National Strategy to Prevent and Respond to Gender Based Violence (2016-2025) aims to strengthen and institutionalize the work on GBV to achieve zero tolerance towards GBV. Health supports this strategy through the Family Support Centre services. WHO approach seven is applicable to GBV mainstreaming.
All approaches	Papua New Guinea National Policy on Disability 2015-2025	The Disability policy strategy two is on improving access to quality services and support programs for persons with disabilities; all WHO approaches are appliable.
	National Health Sector Gender Policy (2014)	The objective of the policy is to promote equal access for men and women, and use of health information and health services that are free from discrimination. All WHO approaches appliable to achieving the objective of the policy.
	National Health Plan 2021-2030	Four out of the five Key Result Areas of the National Health Plan are applicable to all WHO approaches.
	National Immunisation Strategy 2021-2025	Phase two of the national immunisation strategy, which focuses on immunisation system and financing for national and provincial governments; all WHO approaches are appliable.

Implementation Focus Areas

In the design of AIHSS2 a table of GEDSI activities in immunisation was identified that has been aligned with the 9 WHO approaches to determine implementation focus areas that show how the approaches can best be implemented (Table 3).

Table 3. GEDSI approaches and implementation focus areas.

Approaches	Implementation Focus Areas
1.Implement GEDSI-responsive actions for the health workforce.	1.1 Integrate GEDSI awareness into routine immunization standard operating procedur and regular training for staff and PHA/BDoH managers responsible for routine immunizati
	1.2 Ensure safeguarding training and support for all staff and organisational partners
	1.3 Develop PHA/BDoH GEDSI action plans adopting approaches from this GEDSI strate based on results from GEDSI stock take.
	1.4 Ensure staff in a supervisory position are aware of existing policies, expectations, a obligations regarding procedures for handling reported PSEAH and Child Protection case
	1.5 Ensure staff are aware of existing policies, expectations and obligations and reporti procedures regarding PSEAH and Child Protection
	1.6 Include GEDSI indicators into routine immunisation performance for sen management, staff, facilities, and PHAs/BDoH.
	1.7 Ensure senior management build into budget allocations and expenditure decisions meeting the "unmet' demand and improve access and coverage of vulnerable groups routine immunisation and maternal and child health services.
	1.8 Ensure socialisation and build demand for GEDSI responsive PHA/BDOH hum resource policies and practices developed and trailed by the Sapotim Lida Program
2. Invest in GEDSI data and analysis	2.1 NDoH to update health data sources (birth books/records, child clinic book and ta sheet) to collect immunisation data disaggregated by sex, age, and disability for entry ir eNHIS.

	2.1.1 NDoH to add child development stage for immunisation in the child clinic book, birth registry and tally sheet to monitor immunisation by sex, age group, and disability.
	2.1.2 PHAs to train VHAs and other staff to conduct physical and visible disability assessments at birth and at each child developmental milestone.
	2.2 NDoH to work with PHAs to ensure all relevant programmatic data are disaggregated by sex, age, and disability; health data analysed to include GEDSI.
	2.3 Monitoring and tracking (including of unvaccinated children) is actively. informed by gender and disability data and social mapping.
	2.4 Make GEDSI data available in immunisation briefs, updates, reports, and publications.
	2.5 Undertake one GEDSI-specific learning event with participation by local GEDSI partners, and integrate into regular learning events
	2.6 Conduct a pilot study on behaviour change communication interventions around women and men decision-making on child immunisation with strict safeguarding and Do No Harm Protocols
3. Improve the quality, accessibility, and availability of services.	3.1 Ensure immunisation mobile teams and village health assistants have both women and men, to support health facilities where there is a gender imbalance in immunisation home visit
	3.2 Ensure training and transport allowance of VHAs to conduct GEDSI-responsive community outreach, based on social mapping of child populations.
	3.3 Make sure safeguarding measures for VHA staff institutionalised and implemented by PHAs/BDoH (regarding training for personal) and link explicitly with accountability mechanisms to communities.
	3.4 Identify more convenient times and locations for fathers, mothers, and parents with disability to access immunisation. Create fast lines and specific spaces for caregivers (parents with disabilities) who are working or come only for immunisation to avoid long wait times.
	3.5 Combine training and guidance for PHAs' EPI/routine immunisation staff to undertake GEDSI-responsive planning and integrate GEDSI into micro-planning
	3.6 Integrate Sexual and Gender Based Violence module into routine immunisation (or PHA/BDOH) staff training packages, and monitoring of delivery and post-training implementation
	3.7 Provide referral pathways and training for immunisation workers and health partners to support Sexual and GBV survivors access Family Support Centres.
	3.8 Provide security personnel in mobile outreach services especially to displaced communities (tribal fights) who have relocated into a neutral location for safety.
4. Integrate services and collaborate across sector to reach hard to reach locations.	4.1 Incorporate immunisation advocacy messages into other health programs, education, and social protection programs that women and communities fully participate in to boost immunisation opportunities for hard-to-reach locations (partner with HIV, malaria, WASH, nutrition, sexual and reproductive services).
	4.2 Strengthen partnership with church health services to incorporate GEDSI approaches from this Strategy into church health immunisation services for hard-to-reach locations.
5. Empower and collaborate with civil society and change agents.	5.1 Invite role models (particularly parents and parents with disability who have fully immunised children in areas with low immunisation coverage or displaced communities) to take part in immunisation planning, delivery, monitoring, and evaluation.
	5.2 VHA and local organisation of women and OPDs are sufficiently supported to conduct group and individual outreach activities with PHA teams to targeted towards young mothers and households including persons with disabilities and hard to reach locations
	5.3 EPI staff and GESI focal personal to build and strengthen linkages between PHAs and local women's organisations and OPDs
6. Implement immunisation demand generation that is GEDSI-responsive	6.1 Ensure gender-balance and engagement of persons with disabilities in planning and delivery of social mobilisation and community engagement teams.
	6.2 Create immunisation materials, messages, and interventions to challenge harmful stereotypes and gender norms. All immunisation materials and messaging must promote positive parenting with shared responsibilities.
	6.3 Make sure GEDSI-responsive communication materials, channels and platforms are inclusive of needs of persons with disabilities (TV, radio, newspaper, WhatsApp, internet, and social media)
	6.4 Work in collaboration with PNG Women Lead on developing male engagement frameworks to ensure the reinforcement of men as fathers and carers of their children then just as, traditional/cultural/religious leaders.

7. Integrate efforts to reduce disability stigma and discrimination	7.1 PHAs/BDoH to invest in improving infrastructure access to health facilities for persons with disability.
	7.2 Ensure all immunisation outreach and messages are addressing disability stigma and discrimination
	7.3 Consult organisations for disabled persons when planning outreach and mobile clinics to improve access for immunisation, by parents with disability and children with disability.
	7.4 Sensitise health workers to have a positive attitude towards parents with disability or children with disabilities who are visiting health centres for immunisation and prioritise disability in outreach and mobile clinic visits
	7.5 Train VHA with technical input from ODP to be able to identify and ensure parents with disability and children with disability are included in outreach and mobile clinic visits
8. Implement GEDSI-responsive immunisation services in emergency settings.	8.1 Include GEDSI and protection specialists on outbreak/disaster assessment teams where feasible to ensure everyone is reached.
	8.2 Integrate immunisation into emergency and disaster centres by ensuring equitable access for parents and children (parents and children with disability)
	8.3 Ensure integration of Do No Harm Principles into risk matrix and immunisation support in disasters
9. Apply a gender lens to research and innovation	9.1 Build local capacity to conduct research to identify interventions and new technologies that improve coverage and equity and support tailored solutions to address gender related inequalities
	9.2 Provide lessons learned regarding improved services, practices, and technologies to address barriers associated with gender.

C. Implementation of Technical Country Assistance (PEF-TCA)

13. Learning Question: Is the country implementing PEF TCA as expected? Please explain how the TCA has helped to support the achievement of the country objectives.

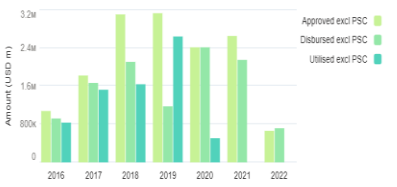
Indicator(s):

- Country analysis on partner performance as per workplans

Graphs:

(Examples to be replaced with specific country versions)

Year	Approved excl PSC	Disbursed excl PSC	Utilised excl PSC
2016	$1,077,849	$920,953	$834,135
2017	$1,823,216	$1,666,390	$1,524,042
2018	$3,104,880	$2,108,660	$1,638,787
2019	$3,129,892	$1,176,234	$2,641,124
2020	$2,414,138	$2,414,138	$507,557
2021	$2,652,460	$2,150,440	$0
2022	$662,143	$716,813	$0



Country comments:

Through PEF TCA, the Clinton Health Access Initiative (CHAI) as an extended partner supports two critical areas towards achieving the country's EPI program objectives.

CHAI has supported the three key national level roles that are essential to the EPI program's success. The acting EPI Manager is temporarily filling the vacant EPI Manager position, CHAI is bridging the salary gap of the EPI Manager until a permanent manager is recruited by the National Department of Health and the full compensation of that managerial role. In addition, CHAI has recruited and seconded two technical officers to the National Department of Health. The Technical Officer and Vaccine Logistics officer are supporting the acting Manager and together are forming the core team responsible for coordinating the EPI program, overseeing program implementation, providing operational guidance, and ensuring the efficient management and distribution of vaccines throughout the country. Specifically, the EPI Technical Officer delivers the day-to-day operational guidance and ensures effective coordination and execution of the national EPI activities including the MR SIA and PIRI activities. The EPI Logistics Officer manages vaccine storage, ordering, supply and timely distribution of antigens to maintain vaccine availability at all immunization clinics throughout the country. The gaping of these roles is a key part of the NIS

implementation and important in ensuring sustainable program management through eventual government transition.

Furthermore, CHAI is supporting the implementation of the National Immunisation Strategy (NIS) to achieve the strategic objectives at both the national and provincial level. Through this partnership, CHAI is supporting the development of operational plans that link the objectives to the NIS strategies and main interventions whilst attempting to foster a longer-term plan to increase visibility of activities beyond the one-year timeframe. This has been done by translating the NIS objective and strategies into an excel tool and supporting its uptake through training. Six provinces were trained in 2023 through this support and three provinces are planned for this year.

UNICEF

Through the TCA fund UNICEF supported NDOH in implementing and overseeing four investment areas such as supply chain, service delivery, demand generation and community engagement, and health financing by supporting NDOH in close collaboration with other alliance partners, extended partners, and CSOs. Major activities include procurement, distribution, and installation of cold chain equipment across prioritized provinces, districts, and health facilities, capacity building of health workers on the effective vaccine management, use of digital tools for microplanning and supportive supervision, deployment of mSupply to six provinces, conceptualisation and implementation of the Human-centred Design (HCD) approach.

UNICEF supported NDOH to reactivate the immunization logistics working group taking the lessons and good practices from the success of MR SIA implementation in 2023. The working group is led by EPI Manager/Senior Technical Officer of NDOH, UNICEF, CHAI, and WHO, and reports to National EPI TWG to provide updates on the vaccine logistics, vaccine order review, and distribution status, status of the mSupply rollout to the provinces as well as to resolve the supply chain issues. The working group also oversees the implementation of the effective vaccine management improvement plan (EVM cIP). UNICEF served as the secretariat of the NLWG.

The NLWG has the standby agenda on the mSupply coordination to discuss about the mSupply deployment for immunization. The coordination meeting is held monthly (on every third Thursday of the month) chaired by EPI manager, UNICEF, World Vision International (WVI) and the mSupply PNG.

Three main successes of the logistics working group are 1) establishment of a systemic approach on vaccine order review and approval decision, 2) revision of the vaccine distribution plan through set maximum and minimum stock level 3) regular report to EPI TWG on the vaccine stock visibility (figure4) at national and provincial level.

The UNICEF Health Officer supported the EPI logistics officer in reviewing vaccine orders from sub-national levels and deciding on the quantities to distribute based on the stock on hand and planned activities at the provincial levels. From January to June 2024, a total of 57 order requests from PVSs and DVSs were received and reviewed to ensure effective and efficient deliveries of 57 orders to provinces.

UNICEF staff and cold chain consultants worked with the National Department of Health, Health Facility Standard Branch engineers, and Provincial EPI teams to review the cold chain need for the health facilities based on the requirements identified during the FPP application. A total of 177 new health facilities were identified to be equipped with cold chain equipment (CCE), 85 equipment for replacement of obsolete CCE, and 20 to expand the current capacity at health facilities. 88 health facilities to be equipped with icepack freezing capacity to enhance the outreach/patrol activities.

Cold chain technician training was completed, whereby 45 participants (EPI officer, cold chain officers) from 22 provinces were trained on immunization supply chain management (vaccine management, stock management) as well as 221 participants (health workers) from six provinces (Eastern Highlands, Western Highlands, National Capital District, Central, Madang and Morobe) in 2023 and 2024.

UNICEF works very closely with the Health Facility Standard Branch of NDOH to empower the cold chain technician at national and provincial level to manage the cold chain equipment maintenance. The biomedical engineers or technicians from the provinces will be equipped with the skills on cold chain refrigeration, installation, repair, and maintenance to address the cold chain problem at the provincial level. The training will be conducted by experienced and skilled trainers from the centre of excellence on cold chain system strengthening (South-South cooperation) in first quarter of 2025. The exchange visits to the cold chain training centre will also be arranged for the health facility standard branch manager and engineer team to learn and replicate the training centre in PNG to sustain the cold chain management capacity in PNG.

UNICEF has supported NDOH to revise the immunization supply chain (ISC) SOPs which were used to rollout the training in 6 provinces as well as integrated into the PNG immunization in practice (IIP) training. The ISC forms and job aids are designed based on the supervision findings and are under field testing. The job aids will be designed both paper and online tools to ensure the effective use by the health workers. The paper tools will be printed and distributed to all health workers while the online contents will be integrated into the remote health worker learning platform easy access and reference.

Since the beginning of the 2024, UNICEF has supported NDOH to make significant progress in the implementation and advancement of the mSupply system in Papua New Guinea. The program has focused on enhancing vaccine management across all levels of the health system through strategic planning, capacity building, stakeholder engagement, and on-the-job training (OJT).

UNICEF worked closely with NDOH, WHO and partners to review and revise the existing tools to assist supervisors in the systematic monitoring and evaluation of immunization programs, ensuring adherence to established standards and enabling the identification of areas requiring improvement particularly associated to service delivery. The tools include digital checklists for supportive supervision, advocacy and communication, cold chain equipment monitoring, and immunization session tracking. The existing and new checklists were revised/developed by UNICEF in collaboration with key stakeholders, including the National Department of Health (NDoH) and WHO.

With the support of Gavi HSS-3 grant, UNICEF is continuing its focused effort on enhancing the Remote Health Worker Training (RHWT) platform, originally established during the COVID-19 pandemic. This platform is being expanded to include comprehensive modules on routine immunization (RI) and maternal, newborn, and child health (MNCH) services. The training leverages the existing Moodle platform, offering new courses on immunization microplanning, cold chain management, temperature monitoring, and newborn health, as well as a foundational module on digital health. This initiative is crucial in building the capacity of health workers across the country to deliver high-quality healthcare services.

Stakeholder engagement remains a top priority, with ongoing collaboration with the National Department of Health (NDoH) and professional associations. Additionally, preliminary reviews of the MNCH modules are underway, with efforts focused on digitizing and customizing content to

meet the **specific** needs of health workers in PNG. The rollout of these initial courses is scheduled for August 2024 in the National Capital District (NCD), Central, and Eastern Highland provinces, with the technical assistance of UNICEF Headquarters.

The National TOT on the HCD for immunization was conducted in March 2024. A total of 34 participants (14 male and 20 female) from the National EPI program and the Health Promotion branch of NDOH, WHO, UNICEF, Health Promotion and Program Officer (HPPO), as well as representatives from PHAs and CSOs (such as TTU, World Vision, FHi360, Catholic Church Health Services, Child Fund, Christian Health Services, Burnet Institute, and PATH) were trained during a 4-day intensive program. The training utilized a mixed methodology of classroom and field rapid inquiry application.

UNICEF partnered with competent CSO partners for implementation of the HCD in the six zero dose provinces with three partners; both technically relevant and operationally capable, Burnet, Care Int and World Vision.

The HCD aims at transformative and enduring impact through putting people at the heart of the solutions while engaging partners on scaling up the application to engage with more people to co-create sustainable, positive social and behaviour change solutions.

Orientation session of the routine immunization toolkit and HCD workplan was conducted for Government, WHO country team, field consultants, AIHSS team. The HCD approach will be conducted in 6 provinces with high zero dose and the AIHSS partners, PHAs and UNICF HPPO will be engaged by working together with the CSOs for successful implementation of HCD by linking with the immunization service providers in the selected provinces

Row Labels	Completed	Major Delays	Minor Delays	On Track	Re-programmed	Unreported	Grand Total	Achievement
COVAX Technical Assistance								
Target Country Assistance								
Grand Total								

Section 2: Looking forward: Summary of key discussion points and follow up actions

Briefly summarise the **key discussion points**, including **identified needs** and **follow up actions** resulting from the Joint Appraisal review and dialogue.
This may include

- Identified (future) needs and priorities
- Follow-up actions to accelerate planned activities

- Expected adjustments to activities and as applicable the Gavi workplan, targets and budget, such as budget reallocations, modifications in TCA planning, revision of dates for anticipated new vaccine applications or introductions, etc. [4]
- Roll-out or expansion of promising practices and innovations
- Other aspects and follow up actions

Follow points day 1

- Increase PHA accountability: Establish ---- to monitor and evaluate PHA activities regularly, ensuring they meet targets and utilize funds effectively.
- Improve the quality of district and health facility level Routine Immunization Microplanning: Conduct mentoring and training sessions for district and health facility staff involved in microplanning to enhance their skills in preparing quality and realistic micro plans.
- Supportive Supervision:
- National and Provincial TA support - Continue providing technical assistance to sustain skill transfer and capacity building.
- HPV vaccine introduction: Support updating of the SEM agendum based on the new Gavi financing plan and support preparation and submission HPV vaccine Gavi application proposal.
- Operational support for reaching Zero-Dose Children: Continue providing funding support to conduct PIRI to reach zero-dose children and reduce drop out.
- NITAG Formation: Follow up on the endorsement of the National Immunization Technical Advisory Group (NITAG) Terms of Reference (TOR).
- Support evidence-based decision making for EPI TWG: Provide coverage analyses, operational issue summaries, supportive supervision findings, subnational level challenges for decision-making for EPI TWG.
- Updating of NIS: Revise and update the National Immunization Schedule (NIS) to ensure it has realistic targets, costing and implementation strategies
- EPI Performance Review: Organize annual or semi-annual national/regional EPI performance review meetings to assess progress in reaching zero-dose children, address challenges, and share effective strategies.
- Improve Data Quality: Conduct subnational training on Data Quality Assessment (DQA) to support PHAs in integrating DQA into supportive supervision activities and use findings to develop data quality improvement plans.

[4] This refers to all types of Gavi support

PNG Joint appraisal. High level recommendations

Recommendations / actions	Timeline	Lead
Ensure **quality microplanning** is done at health facility level in all provinces; to **better inform forecasting, targeting and budgeting.** • The outreach service microplanning to be informed by the data on health facility performance and missed children • Targeted outreach to address/prioritize the missed children	Q1 - onwards	AIHSS2.UNICEF, WHO, NDOH, PHAs
Increase the implementation of mobile and outreach service delivery model: • Regardless of age, all children that have missed should be vaccinated. Strengthen the message and implementation by HW, particularly for patrol and outreach. (refer to WHO missed opportunities for vaccination) • Urgently disseminate guidance / mini handbook (learn from emeregencies), also ensure its in pre-service trainings. • Review workplans and budgets to reallocate towards outreach	Q1/Q2	
Establish realistic targets • Change the NIS coverage targets to realistic actual capacity. Based on those adjusted targets it will allow more realistic forecast and linked co-financing for vaccines. • Assessment / review of NIS implementation, update new NIS in 2025.	2025 Q1 (start NIS revision)	NDOH
Performance review and provincial /PHA monitoring and supervision • expand good practice of provincial reviews of EPI key indicators: PHA committees (with support from ISPs) doing quarterly provincial reviews of performance and discussions on accountability at various levels to use data for action; reviewing forecasting, targets, coverage, dropouts and stock levels, supply chain performance (Use of KPIs from ISC SOP and mSupply system), health facility functionality, triangulate stock data and coverage. • Annual review across all provinces at central level, link with AOPs. • Increase frequency of supervisory visits to provinces, and reviewing the performance and to provide tailored technical assistance and problem solving *(1.timely vaccine distribution and stock availability, 2.fund availability for outreach at HF level, 3.planning – PHA, 4.HRH availability,)* • **Reprioritize TA** to better support at subnational level, build into TOR support for AOP, and performance review in province)	Continuous	ISP, subnational TA (UNICEF/WHO)
AOP • IHSS2 to include AOPs in AIHSAOP – to be developed by PHAs, linked with key immunisation indicators, coverage, drop out, planned vs actual mobile / outreach, stock data, etc • AS2 grant agreements in selected provinces (included but not limited to those with direct implementation)	Q1 2025	Abt associates CHAI
Enhance Supportive Supervision at various levels (NDOH-PHA-HF) • Operationalization of the supportive supervision plan • Maximize supportive supervision to build capacity of PHA/DH/HFs • Focus PHA level training or OJT approach for quality of training and follow up on the gaps	Continous	NDOH and PHA Support from ISP, UNICEF and WHO

Establish NITAG or adapt existing body to assume a role as functioning scientific decision body to decide on vaccine intro and vaccine optimization. • Prepare one pager/share the justification document with Dr Amos including orientation session on NITAG and TOR. NDOH to resubmit the NITAG TOR to SEM and secure approval • Based on NITAG recommendation prepare Submit **proposal for HPV intro and MAC**	Q4 2024	NDOH WHO
Supply chain and logistics / distribution • Strengthen vaccine inventory control system and timely distribution of vaccine orders • Enhance the vaccine distribution activity by contractors by training contractors, updating contracts and ToRs, and review performance of logistics companies. • Advocate to equip EPI cold chain facilitate at the international airport in collaboration with Air Niugini • Improve vaccine management practices at provincial and health facilities vaccine stores, through Improved vaccine visibility at health facilities level through mSupply and paper based ISC tools. Strengthen capacity using OJT, job-aids, and supportive supervision • Strengthen cold chain maintenance	Continuous	UNICEF
eNHIS • Plan for the mandatory or core indicators/reporting in eNHIS, including IPV2 and HPV. • Once eHNIS tendering contract with the supplier has been solved, to include the electronic immunisation registry in 1-2 provinces. • WHO and UNICEF to provide technical support for the Electronic Immunization Registry (EIR). This includes review/technical input, managing data, visiting pilot sites, and ensuring alignment the digital health strategy. • Explore to collect data to get visibility on coverage achieved through static, outreach and mobile in AIHSS2 provinces. And then explore to include this in eNHIS. (programme data in AIHSS2 provinces)	Q4 2024-Q2 2025	WHO UNICEF
Demand • Ensure and strengthen ASCM as part of micro-plan, and synchronization between outreach plan and social mobilisation plans (avoid “surprise” outreach) • Link community and vaccine services/health facilities through **Community mobilization**, setting a mechanism to share timely and accurate information about the vaccination sessions • **Reallocate** the budget to reduce HCD activities with more demand interventions for active implementation reaching communities, informed by the BeSD and HCD work.	Q4 2024	UNICEF
VHA • Approve approach of transferring volunteers to VHA (potential commitment of Govt to fund 2000 VHA in Q2/Q3 2025). • NDOH need to reactivate the VHA – TWG, to clarify roles and standardizing training. NDOH to coordinate and unify VHA guideline	Q2 2025	NDOH and WHO
Fund flow – fund availability at facility level January		

• Look into solutions to ensure funds are available at health facility level for outreach at the beginning of the year		

MEL plan update

With the FPP the following indicators were agreed upon, we need to confirm targets and update reporting on this.

Suggested Grant-Linked KPI Values							
Indicator	**Baseline**	**Baseline Year**	**End of Grant Target**	**Change from Baseline *(Calculated)***	**Data source**	**Frequency of reporting**	Reporting 2023
Number of Zero Dose Children at national level	150,267	2021	-80%	30,053	WUENIC & UNPD	Annually	
Drop out from DTP1 to DTP3 at national level	21%	2021	-11%	10%	WUENIC	Annually	
Drop out from DTP1 to last routine dose of MCV at national level	49%	2021	-10%	39%	WUENIC	Annually	
Percentage of health facilities that reported no stock-outs for the full year for DTP	26%	2021	5.00%	31%	Admin (JRF)	Annually	
Annual timely fulfilment of co-financing obligation	60%	2021	Yes	40%	Gavi Secretariat	Annually	
Number of children reached (with DTP1) in areas targeted for intervention	[baseline value]	[year]	[target value]	#VALUE!	Admin (JRF)	Annually	
Drop out from DTP1 to DTP3 in areas targeted for intervention	[baseline value]	[year]	[target value]	#VALUE!	Admin (JRF)	Annually	

Learning or evaluation activities	**Linked to grant objective**	**Use case**	**Progress on learning questions since FPP? Any action required?**
Where, who and how many are zero-dose children, and missed communities? Why are they being missed and what are the root causes?	Support PHA and districts managers to better identify underserved communities and monitor progress	Develop strategies to identify under-immunized and ZDC, including disaggregated sub-national data and mapping new settlements and migrant communities Decision to use and triangulate all available data source to support microplanning and adequate resourcing by the PHAs. Information is needed annualy for resource	

		allocation, then quarterly to monitor progress made.
How have approaches influenced vaccine hesitancy, vaccine uptake, vaccine choice? (Incl. to address gender-related barriers, dropouts, provision of product information, C&E)	Improve demand generation and vaccine uptake	Engage communities to improve understanding of barriers to access to immunization and develop interventions for reaching zero-dose populations, including targeted outreaches for identified underserved populations, reducing missed vaccination opportunities Decision to involve communities at all stages of immunization service delivery planning. Needed annualy for planning purpose, then quarterly to ensure proper implementation of outreaches and clinics. Districts and HF are responsible for initiation and collection of evidence.
What are the key barriers, and enabling factors, including gender and demand-related, to close immunity gaps?	Addressing gender-related barriers (access to services)	Decision to use micro-integration, dialogue with men leaders and women from the communities, by districts and HF. Promotion of gender-training of HCWs by NDOH and PHAs. Evaluation of the effectiveness and efficiency of the approach during implementation for results to be available end 2025.