Accelerated Immunisation and Health Systems Strengthening Program (AIHSS): Evaluation Report

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Author(s)	Mary Larkin, Christopher Maher, Judith Flowers
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Contact details

Details	Human Development Monitoring and Evaluation Services (HDMES)	Australian High Commission (AHC)
Name	Liesel Seehofer	Theresa Reu
Job title	Monitoring and Evaluation Specialist (Health)	Australian High Commission
Telephone	+61 484 558 072 (Australian mobile)	+675 7090 0529
Email	Liesel.Seehofer@hdmes-png.com	Theresa.Reu@dfat.gov.au

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Abbreviations and Acronyms

Term	Definition
AHC	Australian High Commission [Port Moresby]
AIHSS	Accelerated Immunisation and Health Systems Strengthening
AIP	Annual Implementation Plan
ANC	Antenatal Care
ARoB	Autonomous Region of Bougainville
AUD	Australian Dollar
BCG	Bacillus Calmette-Guérin [vaccine]
BCHS	Bougainville Catholic Health Services
BDoH	Bougainville Department of Health
BI	Burnet Institute
CAP	Corrective Action Plan
CCE	Cold Chain Equipment
CCEOP	Cold Chain Equipment Optimization Platform
CCHS	Catholic Church Health Services
CHAI	Clinton Health Access Initiative
CHS	Christian Health Services
cMYP	*Papua New Guinea Comprehensive EPI Multi-Year Plan for National Immunization Program 2016–2020*
COVID-19	Coronavirus Disease of 2019
CSO	Civil Society Organisation
DDA	District Development Authority
DFAT	Department of Foreign Affairs and Trade [Australia]
DOV	Deed of Variation
DSIP	District Services Improvement Program
DTP	Diphtheria, Tetanus, Pertussis
EHP	Eastern Highlands Province
EHPHA	Eastern Highlands Provincial Health Authority
eNHIS	Electronic National Health Information System
EOIO	End of Investment Outcome
EOP	End of Program
EOPO	End of Program Outcome
EPI	Expanded Programme on Immunization
ESP	East Sepik Province
EY	Ernst & Young Global Limited
FHO	Frontline Health Outcomes
Gavi	Gavi, the Vaccine Alliance [formerly Global Alliance for Vaccines and Immunisation]
GEDSI	Gender Equality, Disability, and Social Inclusion
GoA	Government of Australia

Term	Definition
GoPNG	Government of Papua New Guinea
HDMES	Human Development Monitoring and Evaluation Services
Hep B	Hepatitis B
HF	Health Facility
HFG	Health Function Grant
HIS	Health Information System
HMIS	Health Management Information System
HPP	Health Portfolio Plan
HSIP	Health Services Improvement Program
HSIP TA	Health Services Improvement Program Trust Account
HSO	Health System Output
HSS	Health Systems Strengthening
IIP	Immunization in Practice
IO	Intermediate Outcome
IPV	Inactivated Poliovirus Vaccine
ISP	Immunisation Support Provider
KEQ	Key Evaluation Question
KII	Key Informant Interview
KRA	Key Result Area
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MFAT	Ministry of Foreign Affairs and Trade [New Zealand]
MOU	Memorandum of Understanding
MR1	Measles-Rubella First Dose
NDoH	National Department of Health [Papua New Guinea]
NGO	Non-Government Organisation
NHIS	National Health Information System
NHP	National Health Plan
NIS	National Immunization Strategy
OECD DAC	Organisation for Economic Co-operation and Development – Development Assistance Committee
OIC	Officer-in-Charge
OPV	Oral Polio Vaccine
OSF	Oil Search Foundation
PATH	Papua New Guinea–Australia Transition to Health
PCV	Pneumococcal Conjugate Vaccine
Penta1	Pentavalent First Dose
Penta3	Pentavalent Third Dose
PFM	Public Financial Management

Term	Definition
PGK	Papua New Guinean Kina
PHA	Provincial Health Authority
PHO	Provincial Health Office
PNG	Papua New Guinea
PPF	PNG Partnership Fund
PRF	Performance Reporting Framework
PSEAH	Preventing Sexual Exploitation, Abuse and Harassment
RI	Routine Immunisation
SHP	Southern Highlands Province
SPAR	Sector Performance Annual Review
STC	Save The Children
TB	Tuberculosis
TMD	Temperature Monitoring Devices
UNICEF	United Nations Children's Fund
USD	United States Dollar
VHV	Village Health Volunteer
WHO	World Health Organization
WHP	Western Highlands Province
WV	World Vision
YWAM	Youth With a Mission

Executive Summary

The Accelerated Immunisation and Health Systems Strengthening (AIHSS) program is a 4-year (2019–2023), PGK68.5 million initiative, delivered through a partnership between the Governments of Papua New Guinea (PNG), Australia, and New Zealand, and Gavi, the Vaccine Alliance (Gavi), with the objective of improving immunisation coverage in Papua New Guinea. This report presents the findings of an independent evaluation of the AIHSS program.

Program overview

The AIHSS program commenced in July 2019 and is being implemented in 11 provinces and the Autonomous Region of Bougainville (ARoB) in PNG, by Provincial Health Authorities (PHAs) and the Bougainville Department of Health (BDoH) in partnership with Immunisation Support Providers (ISPs).[1] To achieve its objectives, the program provides resources to directly support health service planning, delivery, monitoring, reporting and supervision, capacity building support to lead a multi-stakeholder immunisation program, and support for effective use of the Health Services Improvement Program Trust Account (HSIP TA). The AIHSS program receives technical support from the World Health Organization (WHO) and United Nations Children's Fund (UNICEF). The End of Program Outcome (EOPO) is increased vaccination coverage of the target population (children and pregnant women) in program provinces, aiming to reach at least 80% immunisation coverage in each province.

Evaluation approach

This independent evaluation considered the relevance, coherence, effectiveness, efficiency, and sustainability of AIHSS, as well as the adequacy of the approach to monitoring and evaluation (M&E) and gender equality, disability and social inclusion (GEDSI). The evaluation used a mixed methods approach, including a review of over 150 documents, interviews with 75 key stakeholders, analysis of immunisation coverage data, surveys of PHA and WHO Provincial Consultants, and field visits to 4 provinces. Key Evaluation Questions (KEQs) are included in Annex 2.

Key findings

AIHSS program relevance – KEQ1

Immunisation is recognised as an essential and highly effective health intervention, contributing to reducing child and maternal morbidity and mortality, increasing life expectancy, and improving educational and economic outcomes. Accordingly, the AIHSS program and its objectives are strongly aligned with the Government of Australia (GoA) *Portfolio Plan: PNG Health Sector Program 2018–2023* (known as the Health Portfolio Plan or HPP); as well as Government of Papua New Guinea (GoPNG) strategic development, health sector and immunisation policies and priorities; and international development and immunisation goals. The drastic deterioration of routine immunisation (RI) coverage in PNG, from 60% to 37% between 2013 and 2017, underlines the urgency of rebuilding the immunisation program in PNG.[2]

Program operating context – KEQ2

Delivery of the immunisation program across PNG has been severely impacted by the COVID-19 pandemic. Particularly in 2021, it disrupted program implementation and significantly delayed progress towards AIHSS program goals. In 2022, security restrictions and local unrest during the

[1] For simplicity, in the remainder of this report, ARoB and the 11 provinces will be referred to collectively as 'provinces'; and the BDoH and 11 PHAs will be referred to collectively as 'PHAs', unless referring specifically to ARoB and the BDoH.
[2] National Department of Health (NDoH), Papua New Guinea, Population and Family Health Services, 27 September 2022, *Analysis on Zero-Dose Children and Missed Communities in Papua New Guinea: Summary Findings* [Presentation].

national elections further affected AIHSS program delivery. Local conflict in several provinces also prevented conduct of outreach to affected areas. Uneven progress towards establishing PHAs and the lack of 'readiness' in some provinces has deepened the challenge of coordinating effective service delivery and sustainable achievement of program goals.

Progress towards the End of Program Outcomes and Health System Outputs – KEQ3

The AIHSS program has strengthened PHA focus and commitment to the immunisation program in many of the AIHSS target provinces. The positive impacts that the AIHSS program has contributed to, although varying in extent across program provinces, include:

- increased reach of immunisation and (to a lesser extent) other maternal and child health (MCH) services to remote and underserved areas
- increased immunisation coverage for key antigens and doses
- strengthened reporting and analysis of immunisation and related program data
- improved skills and updated knowledge of health workers in planning and delivery of immunisation activities
- strengthened volunteer networks
- supported upgrades of cold chain equipment in remote areas.

An analysis of GoPNG National Health Information System (NHIS) immunisation data shows that:

- AIHSS provinces overall delivered more vaccinations in 2020, 2021 and 2022 (defined as the 'program period') compared to the 3 preceding, non-project years (2017–2019). There was an increase in the number of vaccinations in AIHSS target provinces in these periods (27% for Pentavalent first dose (Penta1), 33% for Pentavalent third dose (Penta3), and 64% for Measles-Rubella first dose (MR1)).
- In contrast, the overall number of vaccinations for these key antigens in non-AIHSS program provinces declined or achieved a modest increase over the same period (−3% Penta1, −6% Penta3, and a 4% increase for MR1). This indicates that the AIHSS program has been influential in maintaining or improving immunisation performance in participating provinces.
- Performance varied across AIHSS provinces, with substantial increases in the number of Penta3 vaccinations delivered in the program period of up to 195% in East Sepik Province (although this is compared to a relatively low starting point). Other provinces, such as Western Highlands Province (WHP), Eastern Highlands Province (EHP) and Morobe Province, maintained the pre-program level of immunisation delivery, despite the impact of the COVID-19 pandemic.
- None of the AIHSS program provinces have yet achieved the EOPO 'success measure' of 80% Penta3 coverage by 2022, although there have been recent dramatic increases in some provinces, such as ARoB and West Sepik, reporting 77% and 63.5% coverage[3] respectively.

Some common features (in addition to outreach) found in better performing provinces include:

- an effective Provincial Emergency Operations Committee or Technical Working Group
- strong partner coordination and participation
- targeted and comprehensive micro-plans to guide outreach activities
- proactive monitoring and supervision of RI implementation
- a strong focus on community engagement/effective Village Health Volunteer (VHV) networks

[3] GoPNG electronic National Health Information System (eNHIS) data, available at: http://healthpng.com. Accessed 4 April 2023.

- involving the Family Health Services Coordinator and District Health Managers in planning and decision-making
- WHO and UNICEF technical guidance to plan and review immunisation activities.

Further details of performance against the 4 Health System Outputs (HSOs) are included in the report.

Efficiency – KEQ4

AIHSS organisational model

The AIHSS partnership, bringing together donors – Australian Department of Foreign Affairs and Trade (DFAT), New Zealand Ministry of Foreign Affairs and Trade (MFAT), and Gavi – and technical agencies (WHO and UNICEF), has promoted donor harmonisation and the combined resources have enabled the program to achieve substantial scale, working in 12 of 22 provinces in PNG. At the same time, the varying requirements and regulations of donors relating to grant funding, reporting, and contracting have led to some inefficiencies. Renewal of contracts with lead grantees close to the end of existing contract periods, and for relatively short periods of 6 to 12 months, created challenges for implementing partners to plan program activities. Significant staff turnover in all partner agencies resulted in a loss of historical knowledge about the program, and has had a negative impact on program efficiency more broadly. WHO and UNICEF consultants are providing important technical support at the subnational level, but the involvement of these agencies nationally has diminished over the program period, and there is now a lack of technical input and oversight of the program.

Stakeholders reported little change when the program moved from the PNG Partnership Fund (PPF) to Papua New Guinea–Australia Transition to Health (PATH); however, the support and greater integration expected from the broader PATH program has not eventuated to the extent expected. PATH oversight of the program has been directed more towards contract management rather than provision of strategically-focused support, and addressing implementation and performance challenges in a proactive manner.

Program governance

Monthly Immunisation Partner Meetings have been the principal mechanism for AIHSS program governance. These meetings have contributed to greater alignment between stakeholders, particularly in the lead-up to the COVID-19 pandemic response, but did not provide the strategic level of information sought by donors. National Department of Health (NDoH) participation in the meetings was disrupted during the COVID-19 pandemic, after which there was no flow of information about the program to key NDoH stakeholders. At the subnational level, lack of clarity regarding authority, roles and responsibilities has resulted in dissatisfaction between parties in some provinces and undermined program effectiveness, indicating the need for greater attention to ISP–PHA partnership arrangements and active partnership monitoring from PATH.

Delays in acquittals, program implementation, and expenditure

Slow acquittal of program funds by health workers has affected ISP reporting to PATH, in some cases leading to delays in quarterly disbursement of program funds, and subsequent suspension of planned outreach activities in that quarter. ISPs have withheld further funding for outreach until all health facilities (HFs) in a district have acquitted funds. Effective strategies used by ISPs to address these challenges included: conducting finance training; providing simplified reporting templates; adequate ISP staffing to process acquittals; and, critically, involving PHA personnel responsible for management of health services in all stages of decision-making. Thorough assessment of the PHA

and provincial context prior to the project start was also needed to develop a more efficient and effective implementation model and approach.

Approaches to increase program efficiency

ISPs and lead PHAs subcontracted non-government organisations (NGOs) to increase the reach of immunisation services, deliver mentoring to health workers, and outsource training activities, to increase program impact and alleviate grantee workload. Private sector support was reported by only one PHA and may be an area to explore more widely in the future. The very high costs to conduct outreach to isolated locations was a concern for both PHAs and ISPs, and strategies to ensure that both equity and efficiency are addressed within the program will be helpful.

Models of care – KEQ5

AIHSS implementation models

The 3 proposed models for AIHSS funding flows to provinces were:

- PHA-led, where the PHA receives funding directly via the HSIP TA mechanism.
- ISP–PHA partnership, where AIHSS funding is managed by an ISP and directed to the PHA and any subcontracted partners.
- A hybrid 'transition' model, where the PHA accesses funds for immunisation service delivery directly via the HSIP TA mechanism, while an ISP is engaged to deliver capacity building support.

Of the 5 PHAs that initially proposed leading grant implementation in their provinces, 2 (Western Highlands and Eastern Highlands) were selected as 'lead PHAs' based on the findings of an Ernst & Young Global Limited (EY) public financial management (PFM) capacity assessment and completion of Corrective Action Plans (CAPs) to address gaps in their financial systems. Three PHAs (Morobe, Madang and Southern Highlands), with weaker PFM capacity, were designated as 'transition' provinces. It was expected that after working through a CAP to strengthen their PFM systems, these PHAs would move towards the transition model. CAPs were also rolled out in all PATH demonstration provinces participating in the program, including ARoB, Central, West Sepik, and Western Provinces.

Slow progress in 'transition' provinces

Progress in implementing the CAPs has been slow and none of the 3 'transition' PHAs have progressed to manage program funds independently. Although PHA commitment and system bottlenecks have affected progress, there has been a lack of dedicated support from within the program to progress CAP actions. This calls into question the effectiveness of the current approach and the program's prioritisation of these objectives.

Ongoing support to lead PHAs needed

Western Highlands and Eastern Highlands PHAs have both demonstrated the financial and organisational capacity to access AIHSS funding directly through the HSIP TA, but have struggled with various aspects of AIHSS program implementation. Although the lead PHA model generally results in a lower average cost per dose than for ISP–PHA partnership models, additional support to lead PHAs may result in greater overall program efficiency and effectiveness.

Effective implementation models

Of the various models used by ISPs, those that are most effective have supported the autonomy of PHAs and employed a partnership approach. Embedding ISP staff within PHAs has also worked effectively in provinces where Save the Children (STC) is engaged as the ISP. Difficulties have arisen where the ISP program approach and procedures were not aligned with those of the PHA. Failure to adequately involve key PHA stakeholders in planning and approval of AIHSS-supported activities and

the ISP's procurement practices have disrupted immunisation outreach activities. Average cost per immunisation dose was lower in ISP-supported provinces where cost-sharing approaches were used, as well as in directly-funded districts.[4] Stakeholders in several AIHSS-supported provinces requested greater clarity and transparency concerning funding availability and decisions about how funding for outreach activities was approved.

Monitoring and evaluation – KEQ6

The AIHSS M&E system is currently not meeting the needs of key program stakeholders to provide clear, reliable and strategically-focused data for program monitoring, oversight, and decision-making, to ensure accountability of implementing partners. The Performance Reporting Framework (PRF) is the main instrument used for program monitoring and performance reporting, but does not provide an accurate way to measure progress towards the immunisation EOPO coverage target.

The program lacks a clear program logic framework that maps the causal relationships between AIHSS inputs, activities, Health System Outputs, PFM capacity building objectives, and the EOPOs. This contributes to lack of clarity about the various elements of the program. Furthermore, due to the variable quality of ISP progress reports, it is sometimes unclear how well grantees are performing against the workplan, as well as the details of activities conducted and how the activities reported are being supported by the program.

Substantial time and resources are required by grantees to collect and verify data for quarterly reporting against the PRF, and some PRF indicators may not directly relate to activities supported by AIHSS. Challenges in collecting reliable and accurate data, and inconsistency in defining how critical indicators will be measured (e.g. the definition of an 'outreach clinic'), affect the utility of this data. There is limited data related to program capacity building activities, and the effectiveness or quality of activities conducted.

Although there has been part-time support to verify the quarterly PRF data, there is currently no dedicated on-the-ground M&E technical assistance to the AIHSS program. There are currently no structured opportunities for partner information sharing and learning, particularly important for this complex program involving new ways of working. Although not within the program control, another common concern is the accuracy of official population estimates, affecting immunisation planning and bringing into question the accuracy and reliability of reported immunisation coverage in PNG.

Sustainability – KEQ7

The AIHSS program has introduced an innovative new approach to support strengthening of primary health care in PNG that aligns with GoPNG national and health sector policies, has strengthened the focus and commitment towards the immunisation program, and led to improvements in immunisation results in program provinces. However, the impact of the COVID-19 pandemic and other contextual challenges have substantially set back the AIHSS program at multiple levels. Current efforts to promote sustainability of the immunisation program are insufficient for the achievement of these objectives. AIHSS grantees have developed transition plans to outline how activities supported by the AIHSS program could be handed over or maintained by PHAs when the program ends, but some plans lack a clear path to achieving transition. Many PHA stakeholders considered that a longer period was needed to bed down the positive impacts achieved by the AIHSS program. PHA stakeholders noted that without ongoing program funding or alternative sources of support, it is

[4] These results were reached by dividing total AIHSS program delivery costs by total immunisation doses delivered in that province during the program (up to Q2 2022).

likely that the outreach and mobile clinics supported by AIHSS would either cease or be significantly scaled down.

Major challenges to PHA and health system capacity across AIHSS provinces remain. More focused and consistent capacity building support, together with PHA leadership, is needed to achieve and institutionalise the expected governance and financial management standards. Integrated service delivery approaches, rather than a single focus on immunisation, will support better alignment with GoPNG priorities[5] and support sustainable health system strengthening. Ongoing support to upgrade cold chain equipment and a sufficiently resourced maintenance program is required to strengthen and sustain the significant improvements in this area. For health workers to retain and further develop the knowledge and skills they have developed through AIHSS, the delivery of regular, high-quality training needs to be systematised. Lack of adequate human resources at all levels in the PHA is another substantial barrier that must be addressed if a sustainable immunisation program is to be developed and unintended negative effects are to be avoided in the future.

Gender equality, disability and social inclusion – KEQ8

AIHSS program equity focus

By focusing on the provinces in PNG with the lowest immunisation coverage, the AIHSS program is intended to address inequity in delivery of immunisation services in PNG. In many PHAs, the daunting cost of travel to remote locations and limited PHA budgets, meant that outreach to hard-to-reach areas was not being conducted. In most of the program provinces, AIHSS program support has enabled the conduct of outreach to these underserved communities – in some cases for the first time in many years. Large differences in coverage between districts in AIHSS provinces indicates that attention to equity issues is still needed.

GEDSI and safeguards activities

Despite this equity focus, the program does not have a GEDSI strategy, outcomes, indicators, or dedicated budget, leading to a fragmented and under-resourced approach to GEDSI. ISPs were asked to propose GEDSI-focused activities and have conducted GEDSI assessments, development of disability-inclusive training materials, and dissemination of frameworks to collect gender-disaggregated immunisation data. There has also been an explicit focus on the compliance and accountability-related aspects of GEDSI, and ISPs have been required to conduct safeguarding and child protection training, usually incorporating broader aspects of GEDSI. The response of PHA stakeholders to this training has been positive. Stakeholders have drawn attention to many opportunities to integrate aspects of GEDSI into the AIHSS program, which are yet to be addressed. Sex-disaggregated reporting is not supported by the NHIS, thus other methods, such as the gender-disaggregation survey conducted by Burnet Institute (BI), may be more effective than attempting to include this as part of health facility reporting. Environmental safeguards, particularly safe disposal of medical waste, was included in health worker training supported by the program, but no related monitoring or assessment was conducted.

Recommendations

Recommendation 1: Extend the AIHSS program

The donors, DFAT, MFAT, and Gavi, should consider extending and strengthening the support provided under the AIHSS program to enable the benefits of this program to be realised in

[5] As outlined by GoPNG in the *National Health Plan 2021–2030* (NHP); *National Immunization Strategy 2021–2025*; and *National Maternal and Newborn Health Strategy 2021–2025*.

participating provinces. Further support is also needed to address the systemic challenges to establishing a sustainable immunisation program in these provinces.

Recommendation 2: Support PHA autonomy and ownership of the AIHSS program

In the short-term, World Vision (WV) needs to work with PATH and PHAs in target provinces to identify and implement solutions that will better align AIHSS program delivery with PHA systems, address PHA stakeholder needs, and contribute to a sustainable strengthening of the immunisation program.

AIHSS donors should commission an AIHSS program redesign in which PATH, ISPs, and other technical partners, engage with PHAs to design an approach that aligns with PHA systems, prioritises a partnership approach, and aims to strengthen PHA autonomy and ownership of this program.

Recommendation 3: Revise and restructure the AIHSS M&E framework

In the short-term, PATH should undertake a review of the current M&E framework and system in place to clarify the program logic and end of investment target to be achieved, and address current gaps in data reporting, including lack of information on quality and effectiveness of program activities.

The new program design should involve an overhaul of the AIHSS program M&E framework to ensure that this system is fit for purpose and complies with relevant DFAT standards and stakeholder information needs.

Recommendation 4: Strengthen PATH's approach to managing AIHSS

PATH should refocus and substantially strengthen the way that it supports implementing partners to respond to program challenges, bottlenecks and opportunities, and adopt a strategic outlook that brings the technical expertise and the resources available to PATH and the AIHSS program to address program design and implementation challenges. Suitable technical specialists should be engaged to support PATH's Frontline Health Outcomes (FHO) Team to conduct quarterly reviews of progress in all AIHSS provinces and identify positive practices, performance challenges and risks to be addressed; and then address identified issues in a proactive manner. This includes providing opportunities for partners to adapt their approaches based on the lessons learned.

Recommendation 5: Strengthen the program approach to sustainability

AIHSS donors and PATH should ensure that the new program design incorporates a practical, evidence-based and adequately resourced strategy to achieve sustainability objectives agreed with GoPNG and PHAs. The strategy will need to consider an appropriate balance of increasing vaccination coverage with increasing immunisation access in hard-to-reach areas. It should prioritise development of a longer-term sustainable immunisation program, over rapid but ultimately unsustainable methods to increase coverage. This includes replacing overly ambitious vaccination coverage targets with achievable objectives, in line with DFAT standards and the approach proposed by the GoPNG *National Immunization Strategy 2021–2025* (NIS). Redesign of the PFM component of AIHSS and inclusion of sustainable financing objectives, governance and planning will be a critical component of this strategy.

Recommendation 6: Strengthen partner coordination and communication

PATH should work with relevant stakeholders to address the following:

- Engage with AIHSS program partners, WHO and UNICEF, to define and strengthen their role in the program.

- Develop a strategy for NDoH and broader GoPNG involvement in, and oversight of, the AIHSS program.
- Engage with church health services and relevant civil society organisations (CSOs) to identify opportunities to involve these partners in strengthening immunisation coverage in PNG.
- Restructure monthly AIHSS partner meetings to provide opportunities for more strategic discussion and decision-making, support cross-program learning, and engage partners to assist in resolving bottlenecks.
- Incorporate structured partner performance monitoring and regular partnership health checks within the program to support improved partnership effectiveness, learning, and adaptation.

Recommendation 7: Prioritise GEDSI in a revised AIHSS program design

AIHSS donors and PATH should ensure that GEDSI is effectively addressed and integrated in any future AIHSS program design.[6] The new design should include a GEDSI program strategy, a GEDSI-related outcome and indicators, a dedicated GEDSI budget and GEDSI specialist technical assistance during program implementation.

Recommendation 8: Prioritise community engagement and delivery of integrated primary health care

PATH should ensure that community engagement and strengthening delivery of immunisation as a component of primary health care are key features of a redesigned AIHSS program. This will involve addressing both of these elements in a practical manner, recognising barriers and promoting drivers present in the program implementation contexts, to strengthen each of these approaches in program provinces.

Recommendation 9: Conduct immunisation coverage surveys

Donors and technical partners should consider conducting coverage surveys to obtain an improved estimate of coverage in AIHSS program provinces.

[6] As outlined in DFAT, 2022, *Design and Monitoring and Evaluation Standards*.

1. Program Overview and Objectives

The Accelerated Immunisation and Health Systems Strengthening program was designed to be a 3-year (2019–2022), PGK51 million initiative delivered through a partnership between the Governments of Papua New Guinea, Australia, and New Zealand, and Gavi, with the objective of improving immunisation coverage in Papua New Guinea. The program commenced in July 2019 and is being implemented in 11 provinces and ARoB. Activities are undertaken by Provincial Health Authorities and the Bougainville Department of Health, with support from Immunisation Support Providers. The AIHSS program receives technical support from the World Health Organization and United Nations Children's Fund. AIHSS was initially delivered under the PNG Partnership Fund and transitioned to management under the PNG–Australia Transition to Health program in November 2020. Although initially planned to conclude in December 2022, a program extension has been granted: 6 months for Gavi-supported provinces; and 12 months for DFAT-supported provinces (with total funding increased to PGK68.5 million).

The **End of Program Outcome** for AIHSS is increased vaccination coverage of the beneficiary population[7] in program provinces, with a target of at least 80% immunisation coverage in each province.[8] Additional measures of success are maternal and child health services delivered alongside immunisation. The **Intermediate Outcome** is increased capacity of Provincial Health Authorities, from district to health centre level, and church and government health centres to plan and deliver sustainable routine immunisation services.[9]

To achieve these objectives, AIHSS provides resources to directly support health service delivery, as well as service planning, management, monitoring, reporting, and supervision. It provides support for provincial and district-level capacity building to lead and manage a multi-stakeholder immunisation program, including financial management training to ensure effective use of the Health Services Improvement Program Trust Account. Where possible, the program is implemented through GoPNG national and provincial health systems, including financial management systems. Additionally, the program intends to promote stakeholder collaboration and delivery of integrated primary health care services. A program logic framework developed for the purposes of the evaluation is included in **Annex 1**.

It is intended that the program will contribute to PATH's 2 End of Investment Outcomes:

1. PHAs are more able to lead provincial health reform and manage effective, efficient, equitable and quality, essential health services in selected provinces.
2. DFAT-funded health services are demonstrating efficient and effective models of service delivery, influencing PHA performance; and building sustainability by transitioning to PHA-led management in selected priority provinces.

[7] The AIHSS concept note states that the key beneficiary population is children under 5 years of age, particularly children under 1 year of age. Additional beneficiaries primarily include mothers and children receiving other primary health care delivered alongside vaccination.

[8] The immunisation package includes Pentavalent 3, Hepatitis B at birth, Oral Polio Vaccine (OPV), Inactivated Poliovirus Vaccine (IPV), Pneumococcal Conjugate Vaccine (PCV), Measles-Rubella (MR), and Bacillus Calmette-Guérin (BCG).

[9] The EOPO and Intermediate Outcomes are outlined in the DFAT AIHSS Investment Concept Note.

2. Methodology

2.1. Evaluation Approach and Key Evaluation Questions

The evaluation assessed how well the AIHSS program has been implemented over its implementation period, from commencement in June 2019 to June 2022. It broadly covered all 11 provinces, and ARoB, where AIHSS is implemented in PNG. The review considered the relevance, coherence (or engagement with the program context), effectiveness, efficiency, and sustainability, as well as the adequacy of the program's approach to M&E and GEDSI. Key Evaluation Questions and sub-questions are included in **Annex 2**. These questions align with DFAT[10] and Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) evaluation criteria[11] and were developed in consultation with the Australian High Commission (AHC), Gavi, MFAT, and AIHSS technical partners, to address issues of interest.

2.2. Data Collection Methods

The evaluation used a mixed methods approach that included:

- **Document review:** A rapid review of relevant policy documents, reports and AIHSS program documentation was conducted to understand the project design and the national and subnational implementation context. Qualitative and quantitative data related to activities, outputs and outcomes was sourced from AIHSS partner program reports. Over 150 documents were reviewed.
- **Analysis of immunisation service and coverage:** NHIS data was analysed to assess trends in immunisation services delivered and immunisation coverage in AIHSS program provinces over the project period. Immunisation outcomes in AIHSS program provinces were compared with non-AIHSS program provinces.
- **Key Informant Interviews (KIIs):** KIIs with ISPs and relevant AIHSS and PATH stakeholders were conducted to map AIHSS implementation models and approaches, and to investigate strategic and operational issues related to program performance. Interviews were conducted with 75 key stakeholders, some face-to-face and some remotely via Zoom, Microsoft Teams, and WhatsApp.
- **Surveys:** An email survey was distributed to PHAs in all AIHSS implementation provinces, followed by telephone calls with staff of those PHAs who were available and willing to talk to the Evaluation Team. A survey of WHO consultants based in AIHSS and non-AIHSS provinces was conducted with the support of the WHO PNG national office. Selection of survey and interview participants was purposive, to ensure that the evaluation was adequately informed by the perspectives and experiences of key program stakeholders.
- **Field visits:** Field visits were made to 4 AIHSS provinces between 10 and 28 October 2022 (Madang, Eastern Highlands, Central, and ARoB) to conduct in-depth interviews with key stakeholders and structured observations at project delivery locations. Provinces were selected by the Evaluation Team in consultation with the AHC to include a mix of regions, provinces with varying ISPs, AIHSS implementation models, PHA maturity, and contexts for delivery of immunisation services (e.g. geography, and population size). The Evaluation Team was accompanied by AHC and GoPNG representatives for some of the field visits.

[10] DFAT, 2022, *Design and Monitoring and Evaluation Standards*.
[11] OECD DAC Network on Development Evaluation (EvalNet) evaluation criteria are outlined at https://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

2.3. Data Analysis, Synthesis, and Reporting

Evidence was mapped against KEQs and the AIHSS program logic to identify key themes and assess program performance against objectives. Triangulation between different data sources was conducted to ensure rigour, verify findings, provide multiple perspectives, and reduce the potential for bias. Following the field visits, preliminary findings and recommendations were presented to the AHC, Gavi and MFAT in an Aide Memoire workshop, and a second workshop with program stakeholders was conducted to seek feedback on initial evaluation findings and recommendations.

2.4. Limitations

There are several limitations to be considered when assessing the evaluation findings. The AIHSS program is funded by 3 donors and implemented across 12 provinces by 6 ISPs and 2 lead PHAs, in partnership with the NDoH, technical partners WHO and UNICEF, and PHAs, and church and NGO health providers across all provinces. The depth of the examination conducted was limited by the time and resources available to the Evaluation Team. Although the Evaluation Team has endeavoured to use valid and reliable sources of data for this evaluation, GoPNG and ISP stakeholders note that under-reporting may have affected completeness of health service data reported via the NHIS/eNHIS. The majority of interviews were conducted remotely and this may have influenced the quality of the information gathered during interviews. The Evaluation Team had limited access to PFM specialist inputs for much of the data collection period.

2.5. Ethics

Data collection was conducted in accordance with DFAT ethical guidelines. Informed consent was sought from all participants prior to commencing the interview, with the interviewer explaining the purpose of the evaluation and the interview, and confirming that data would be securely managed and de-identified in the final report. Specific permission was requested to record any interviews.

2.6. Evaluation Team

The Evaluation Team was composed of Mary Larkin (the Evaluation Lead), an externally-engaged international Public Health Specialist and M&E Consultant; Christopher Maher, an international Immunisation Specialist; Judith Flowers, an international Public Financial Management Adviser; Cynthia Nanareng and Monika Kolkia, Human Development Monitoring and Evaluation Services (HDMES) Policy and Research Officers based in Port Moresby; and Liesel Seehofer, HDMES M&E and PNG Public Health Specialist. The HDMES team also provided logistical and technical support throughout the evaluation.

3. Findings

3.1. Relevance (KEQ1)

To what extent does the AIHSS approach align with the Government of Australia and Government of PNG development priorities?

Summary

The AIHSS program and its objectives are strongly aligned with the GoA Health Portfolio Plan objectives and GoPNG strategic development, and health sector and immunisation priorities. The AIHSS approach involving PHA leadership of subnational program delivery and direction of program funds through GoPNG systems (where PHAs demonstrate adequate PFM capacity) aligns with DFAT's intention to move towards a more sustainable manner of supporting GoPNG to achieve its objectives.

Immunisation plays a critical role in reducing child and maternal mortality and increasing life expectancy, which are linked in a bi-directional manner to improved educational and economic outcomes. The drastic deterioration of routine immunisation coverage in PNG, from 60% to 37% between 2013 and 2017[12], points to the urgency of rebuilding the immunisation program in PNG. The AIHSS program objectives of substantially increasing equitable access to immunisation are therefore closely aligned to GoPNG development objectives at the highest level, including the goals of *Papua New Guinea Vision 2050*, with a vision of 'a smart, wise, healthy and happy society by 2050', and the *Papua New Guinea Development Strategic Plan 2010–2030* goal of achieving national prosperity.

Correspondingly, the AIHSS program directly supports the GoA overall health sector development goal, promoted in the Health Portfolio Plan as: 'improved health and well-being of PNG citizens in line with the aspirations of the Government of PNG'.[13] The program objective of achieving increased immunisation coverage using a health systems strengthening (HSS) approach closely aligns with the HPP Outcome 1 aim of improved prevention of communicable disease:

> By 2023, NDoH, and selected PHAs, provincial hospitals, and primary health care centres, improve prevention, detection, and response to emerging and existing high-burden communicable diseases and health security threats.

The AIHSS program implementation approach involved PHA leadership of subnational program delivery, directing program funds through the GoPNG HSIP TA mechanism to be managed directly by PHAs where PHAs demonstrate adequate PFM capacity. While GoA is a major donor involved with the Health Services Improvement Program (HSIP), this mechanism aligns with DFAT's intention to move away from supporting direct service delivery outside government systems, towards a partnership with GoPNG and a more sustainable manner of supporting GoPNG to meet its development objectives. By supporting PHA capacity building, the program further realises DFAT's objective of using its investments to strengthen rural primary health care through 'engag[ing] directly in the decentralisation process'[14], and to improve the efficiency of domestic health resources[15], a key element of HPP Outcome 2:

[12] NDoH, 27 September 2022, *Population and Family Health Services*.
[13] DFAT, 14 May 2018, *Portfolio Plan: Health Sector Program (Draft)*
[14] DFAT, 2018, p. 30.
[15] DFAT, 2018, p. 32.

> By 2023, PHAs, DDAs [District Development Authorities], NDoH, and other national ministries and selected PHAs and DDAs improve utilisation of government finance and improve health worker recruitment and retention so that rural primary health care centres are delivering primary health care, in particular antenatal care and integrated child care.

In addition to a strong immunisation focus, AIHSS aims to promote integrated health care delivery more broadly, including antenatal care (ANC), and indirectly addresses HPP Outcome 3:

> By 2023, in selected provinces and districts, selected government, church and NGO clinics delivering improved quality client-centred, integrated HIV, reproductive health, and voluntary family planning services.

The AIHSS program was specifically intended to be 'fully aligned with the framework, strategic objectives and targets' of the *Papua New Guinea Comprehensive EPI Multi-Year Plan for National Immunization Program 2016–2020*[16] (cMYP), the primary strategic document guiding implementation of the Expanded Programme on Immunization (EPI) in PNG at the time. This includes the program adopting an ambitious (although slightly reduced) target of 80% vaccination coverage.[17]

The program continues to align with GoPNG immunisation program objectives outlined in the newly released NDoH National Immunization Strategy, which focuses on improved prioritisation, coordination, service delivery, system strengthening and financing for immunisation. Points of difference between the AIHSS program and this strategy include the NIS aim to achieve a more gradual increase in immunisation coverage and establishing national and provincial 'Immunisation Essential Teams'[18] to bring a strong focus to achieving these objectives.

Despite preceding the development of the *National Health Plan 2021–2030* (NHP), the AIHSS and its approach embody the principles, values and 5 Key Results Areas that form the pillars of the NHP, as outlined in Annex 3. In addition to being essential to disease prevention and global health security, immunisation can provide the foundation of a sustainable primary health care system. It can therefore function as 'a key driver' towards universal health coverage, which is considered to underpin a sustainable approach to achieving national health targets and development goals.[19]

Importantly, the AIHSS program covers 5 of the 6 provinces in PNG that have the highest number of 'zero-dose' children, or children not immunised with a single dose of Diphtheria, Tetanus, Pertussis (DTP) vaccine, in PNG. The objective of reaching zero-dose children is increasingly being recognised – specifically by Gavi and in global strategies such as the Immunisation Agenda 2030 – as an essential objective, alongside improved vaccination coverage, to achieve equitable vaccination outcomes and global health goals.

[16] DFAT, n.d., *Accelerated Immunisation and Health Systems Strengthening Investment Concept Note*, p. 3.
[17] This was considered a more realistic target to achieve within the program timeframe than the cMYP target of 90% (Key Informant Interview).
[18] NDoH, 2022, *PNG National Immunization Agenda 2021–2025*, p. 21.
[19] WHO, 2022, *Immunization Agenda 2030: A Global Strategy to Leave No One Behind*, available at: https://www.who.int/teams/immunization-vaccines-and-biologicals/strategies/ia2030

3.2. Context (KEQ2)

What contextual changes have impacted on AIHSS delivery?

Summary

- The immunisation program across PNG was severely impacted by the COVID-19 pandemic. Particularly in 2021, it caused major disruption to program implementation and progress towards AIHSS program goals.
- Security restrictions and local unrest during the national elections further affected AIHSS program delivery in 2022. Local conflict in some provinces also limited access to affected communities.
- Uneven progress towards establishing PHAs and the lack of 'readiness' in some provinces is another key factor influencing PHA capacity to manage and deliver immunisation services and sustainable achievement of program goals.

COVID-19 impact on AIHSS delivery

The COVID-19 pandemic has been the single most significant contextual change impacting on the delivery of AIHSS since its inception. PHA stakeholders reported that they were excited by the support provided by AIHSS and the opportunity to improve immunisation results in their provinces. However, the impact of the pandemic undermined the momentum that had been built during the initial stages of the program. This disruption to immunisation services affected immunisation results in 2020 and, more severely, in 2021.

During the early stages of the pandemic, the State of Emergency and associated domestic travel restrictions prevented PNG-based AIHSS staff from travelling to project provinces, and restrictions on international travel prevented international advisers from coming to PNG to provide planned technical assistance. In provinces with stable internet, Immunisation Support Providers and PHA partners were able to maintain communication, but these restrictions increased the complexity of planned activities.[20] Widespread COVID-19 vaccine hesitancy and substantial, sometimes aggressive, community opposition to routine immunisation activities was most severe in 2021, at the time of the COVID-19 vaccine rollout.

PHA organisational focus, personnel and resources were diverted to supporting the COVID-19 response and this resulted in substantially less attention given to routine immunisation at the provincial level. At health facility level, if the only health care worker responsible for conducting vaccinations in a health facility catchment area was engaged in COVID-19 vaccination activities, routine immunisation in that location did not take place. Illness and deaths of health workers and PHA personnel further affected the capacity of PHAs to deliver health services. The NDoH-led EPI Technical Working Group, whose key participants were EPI program leaders from all PHAs, UNICEF and WHO, was suspended. As a result, there was limited NDoH-led coordination of the immunisation program throughout the pandemic period, although NDoH issued directives to conduct catch-up rounds of immunisation at the end of 2021 and early 2022 as a way of refocusing PHA attention on the immunisation program.

[20] For example, in Southern Highlands, the AIHSS program inception was conducted remotely; however, remote implementation was not always an option. Burnet Institute reported online training delivery was not considered an effective approach by their PHA partner; thus, a number of planned training activities were not undertaken.

National election and conflict

AIHSS activities were further affected by security concerns and disturbances related to the PNG National Election in mid-2022, with outreach activities in many provinces suspended for up to 3 months due to expected unrest. This occurred just as immunisation activities in some provinces were recovering following the challenges of the COVID-19 pandemic. In Southern Highlands Province, election-related tensions led to widespread displacement, looting and destruction of the Provincial Vaccine Stores. Intermittent communal and political conflicts have also affected the delivery of health services during 2022 in other provinces, including some regions of the Eastern Highlands, Western Highlands, Southern Highlands, and ARoB.

PHA readiness

The establishment of PHAs in PNG, and the major restructuring of PFM and administrative systems that this involves, has progressed at an irregular pace across PHAs. An Ernst & Young 2019 assessment[21] of PHA PFM capacity commissioned by PPF found that health administrations in only 4 of 8 provinces assessed were operating organisationally as PHAs: Eastern Highlands, Western Highlands, Southern Highlands, and East Sepik. The more established Western Highlands and Eastern Highlands provinces were 'pilot' provinces set up in 2009.[22] Jiwaka PHA was still transitioning from a Public Health Office (PHO) to a PHA, and both Madang and Morobe PHAs were mostly still operating as PHOs. None of the 4 PHAs assessed achieved an overall score of over 55%, and substantial weaknesses were impacting the effectiveness of these organisations in the areas of organisational governance, staff capacity and capability, PHA planning, accounting systems, information and communications technology, and infrastructure.[23]

The necessary support from national agencies to address some of the most pressing issues is not always available. For example, in Morobe Province alone, the PHA has 900 vacancies and was unable to recruit staff due to a Department of Personnel Management freeze on recruitment. The presence of dual PHA administrations, incomplete Boards, turnover of key personnel and gaps in staffing from CEO to health facility levels within some PHAs, deepen the challenge of coordinating effective service delivery, and achieving the substantial organisational change intended under the AIHSS program.

3.3. Effectiveness (KEQ3)

To what extent is AIHSS making progress towards the expected End of Program Outcomes and Outputs?

Summary

The AIHSS program has clearly strengthened the focus and commitment to the immunisation program in many of the AIHSS target provinces. The positive outcomes that the AIHSS program has contributed to, although varying in extent across program provinces, include:

- Increased reach of immunisation services to rural and remote underserved areas.
- An increase in the immunisation coverage for key antigens.
- Strengthened reporting and analysis of immunisation and related program data.

[21] Ernst & Young, 29 May 2019, *Accelerating Immunisation and Health Systems Strengthening Program Grants: Public Financial Management (PFM) Capacity Assessments (Extension)*, p. 6.
[22] Asian Development Bank, June 2019, *Line of Sight: How Improved Information, Transparency, and Accountability Would Promote the Adequate Resourcing of Health Facilities Across Papua New Guinea*, p.11.
[23] Ernst & Young, 10 September 2019, *Accelerating Immunisation and Health Systems Strengthening Program Grants: Public Financial Management (PFM) Capacity Assessments (Extension)*, p. 14.

- Improved skills and updated knowledge of health workers to plan and deliver immunisation activities.
- Strengthened volunteer networks.
- Support for the upgrade of cold chain equipment in remote areas.

Progress towards achieving End of Program Outputs

There was an overall increase in immunisation doses delivered in AIHSS provinces (33% for Penta3 and 64% for MR1), with some substantial gains, but increases have not been consistent across provinces. In contrast, there has been a decline or slight increase in immunisations delivered in non-AIHSS program provinces over the same period (−6% for Penta3 and +4% for MR1). This indicates that the AIHSS program has, overall, been influential in increasing immunisation activity in program provinces.

As of Q2 2022:

- Almost half of AIHSS Health System Output indicators were on track to achieve end of program (EOP) targets, including for micro-planning, staff training, number of outreach patrols and community engagement activities, eNHIS reporting, and cold chain.
- Progress against one-third of HSO indicators is not on track. This includes conduct of regular supervisory visits, cold room temperature monitoring, surveillance reporting, vaccine supply, and presence of a volunteer network.
- There is insufficient or unreliable data to measure progress for 21% of indicators, most of which are related to financial resourcing to PHAs for immunisation.

Progress towards the End of Program Outcome

The AIHSS End of Program Outcome is increased vaccination coverage of direct beneficiary population in target provinces. The EOP target, or 'key measure of success' is 80% coverage of Pentavalent 3 in target provinces by the end of the program period (originally 3 years, from 2019 to 2022).

To assess the impact of the AIHSS program on immunisation outcomes in participating provinces, the evaluation compared:

1. Estimated immunisation coverage of the population in AIHSS provinces in the program implementation and pre-program periods compared to non-AIHSS provinces for the same periods (see **Figure 1**).
2. The number of vaccination doses delivered in each AIHSS province during the program implementation period compared to the 2 years before the program start (see **Figure 2**).[24].

The 'pre-program period' was defined as the 2 years prior to the program startup in the majority of AIHSS provinces[25] (2017, 2018, and 2019) and the 'program period' defined as 2020, 2021, and 2022. Three vaccine doses – the first and third doses of Pentavalent vaccine (Penta1 and Penta3) and the Measles-Rubella dose at 17 months (MR1) – provide a proxy for overall program activity and coverage. A more detailed description of these assessments is provided in **Annex 4**.

[24] Given some stakeholder concerns about validity of coverage data, this analysis compared the number of vaccinations for Penta1, Penta3 and MR1, rather than coverage.
[25] Gulf and West Sepik Provinces commenced program implementation in Q4 2019.

Comparing performance in AIHSS and non-AIHSS provinces

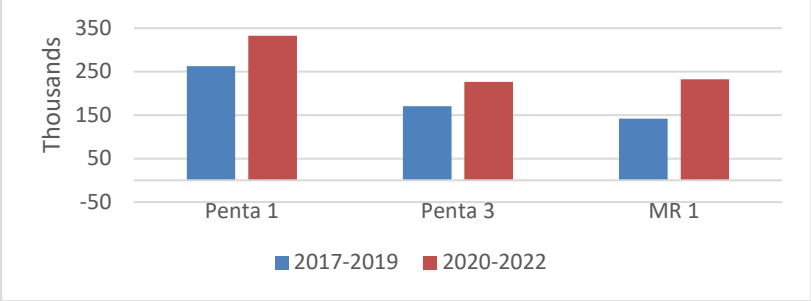
Prior to the program, AIHSS provinces collectively had considerably lower levels of immunisation coverage than non-project provinces; one of the reasons they were selected for AIHSS support. There was a significant impact due to the COVID-19 pandemic on immunisation activity in both AIHSS and non-AIHSS provinces, in particular in 2021 when community concerns over the safety of COVID-19 vaccines and COVID-19 infections were at their height. Despite this, as shown in **Figure 1**, AIHSS provinces show a substantial increase in the number of immunisations for all 3 marker antigens and doses during the program period: a 27% increase in the number of vaccinations for Penta1; a 33% increase for Penta3; and a 64% increase for MR1. In contrast, estimated coverage in non-AIHSS provinces declined for Pentavalent vaccination (Penta1 and Penta3) and slightly increased for MR1 over the same period, as shown in **Figure 2**. There was a 3% reduction in Penta1, a 6% decrease for Penta3, and a 4% increase in MR1 doses delivered.

Comparing pre-program with program performance in AIHSS provinces

A comparison of the number of immunisation doses delivered in all AIHSS program provinces during the program period with the 3 'pre-program' years shows uneven performance across the provinces. Those achieving very substantial relative increases in Penta3 vaccination numbers in the program period compared to the 2017–2019 period included East Sepik (195% increase), Jiwaka (141% increase), Gulf (110%) and West Sepik (63% increase). These tend to be provinces with the lowest levels of activity prior to becoming engaged with the project and the lowest coverage.

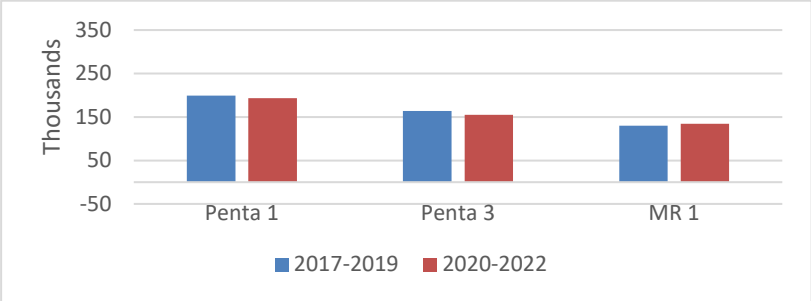
During this time, several larger population provinces achieved modest increases in Penta3 vaccination numbers in the program period. They include Eastern Highlands and Morobe (3% increase) and Western Highlands (2%).

Figure 1: Number of Penta1, Penta3 and MR1 vaccinations in AIHSS provinces: pre-program period and program period



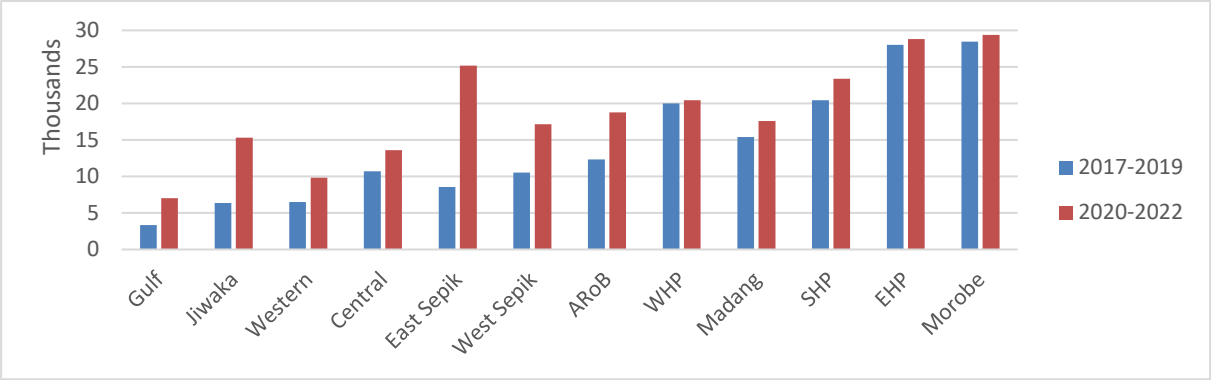
Source: NHIS data (accessed 3 June 2023)

Figure 2: Number of Penta1, Penta3 and MR1 vaccinations in non-AIHSS provinces: pre-program period and program period



Source: NHIS data (accessed 3 June 2023)

Figure 3: Number of Penta3 doses provided in AIHSS provinces pre-program (2017–2019) and program (2020–2022) periods[26]



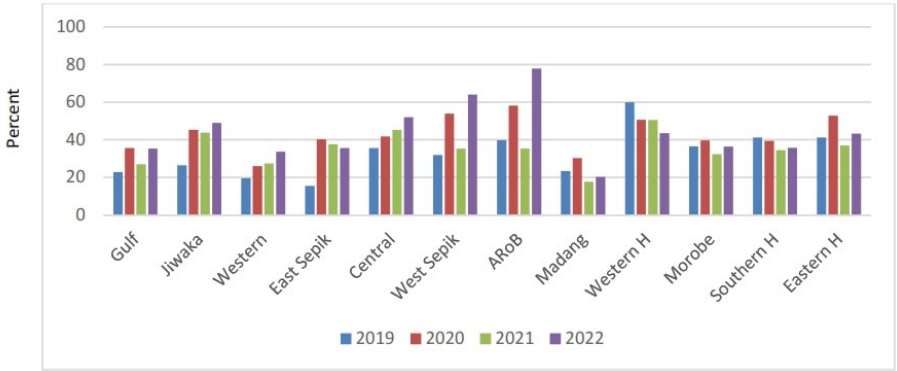
Source: NHIS data (accessed 3 June 2023)

Progress towards the EOPO key measure of success: Penta3 vaccination coverage 2019–2022

Further detail concerning progress towards the EOP 'key measure of success' 80% Penta3 coverage is provided in **Figure 4**, which shows reported immunisation coverage in all AIHSS provinces 2019 to 2022. This confirms that substantial improvement in coverage was achieved in the majority of program provinces in 2020. Even though immunisation was heavily disrupted by the COVID-19 pandemic in 2021, half of the 12 AIHSS program provinces remained above 2019 coverage levels. In 2022, Penta3 coverage increased in the majority of program provinces, as catch-up activities, routine outreach patrols and mobile clinics resumed. Dramatic increases from 2021 to 2022 were reported in ARoB and West Sepik Province (121% and 82% respectively) and substantial increases were seen in Gulf (31%), Western (23%), and Eastern Highlands Provinces (17%).

Considerable variation in reported vaccination coverage at the district level is also apparent; indicating that equity issues, in addition to coverage, still need to be addressed (see **Figure A4-9, Annex 4**)[27].

Figure 4: Penta3 vaccination coverage in AIHSS provinces 2019–2022



Source: NHIS data (accessed 20 February 2023)

[26] For the purposes of clarity, some abbreviations have been used for province names, i.e. Eastern Highlands Province (EHP), Southern Highlands Province (SHP), and Western Highlands Province (WHP).

[27] This is evident in districts such as Middle Ramu, Madang Province, and Goilala in Central Province, with reported Penta3 coverage of 3.2% and 7.4% per respectively. Large variations are also present in high-performing provinces, such as West Sepik, where Penta3 coverage ranges from 90.2% in Nuku District to 46.5% in Telefomin District.

Table 1: Maternal health and additional child health indicator performance

Indicator	Q2 2022	EOP target	EOP target achieved (%)
9. Children receiving Hepatitis B within 24 hours of birth	51,779	207,787	24.9
11. Pregnant women receiving 2nd dose of Tetanus Toxoid	44,046	154,371	28.5
13. Pregnant women who attended 1st ANC visit	150,034	145,572	103
14. Pregnant women who attended 4th ANC visit	64,678	127,726	50.6
17. Children 6–11 months receiving Vitamin A	123,597	163,072	76

Source: AIHSS Performance Reporting Framework Q2 2022 Results

Maternal and child health[28]

The AIHSS program aims to deliver integrated primary health care; and reproductive health services, Vitamin A, and neonatal health, are additional measures of program success.[29] PRF data shows that performance against EOP targets (up to Q2 2022) is low for the majority of these indicators, with the exception of ANC1. A targeted focus on the performance against these indicators is required to deliver on targets. Results are shown in **Table 1**.

AIHSS program contribution to strengthening immunisation in AIHSS provinces

The program Intermediate Outcome (IO) is 'Increased capacity of PHAs, respective District Health Authorities, health centres, community health posts, and church and non-government health centres to plan and deliver sustainable routine immunisation services' (see Logic Diagram, **Annex 1**). While there have clearly been gains achieved as a result of program support, there has not been any consistent measurement of quality and effectiveness of the outputs produced against HSO indicators.[30] Furthermore, in a challenging organisational context, gains that have been made are fragile, and can fluctuate by quarter. It has therefore been difficult to determine the extent of progress towards building PHA capacity, and the extent to which AIHSS program activities other than outreach have contributed to achieving the EOPO.

Similarly, the evaluation has not been able to determine the extent to which the program has contributed to the first PATH End of Investment Outcomes (EOIO) 1 for strengthened PHA capacity.

One of the most important inputs provided by AIHSS has been an injection of funds to the immunisation program in the 12 participating PHAs. This has enabled the conduct of multi-day outreach patrols, mobile clinics and catch-up immunisation in both high population and hard-to-reach areas; health worker training on immunisation, information management and financial reporting; provision of training and allowances to community mobilisers; and support to PHAs to strengthen supervision and reporting, and conduct regular planning and review workshops. PHA stakeholders reported that the AIHSS program overall, in addition to the dedicated funding provided, brought a strong focus to immunisation as a priority for the province; although this was disrupted during the COVID-19 period.

Evidence shows that AIHSS-supported outreach clinics have contributed to improved immunisation outcomes; for example, approximately 10% of the increase in 2020 immunisation coverage was

[28] eNHIS data for MCH indicators in 2022 (Tetanus Toxoid and antenatal care coverage) is incomplete, so this section refers to data reported in the AIHSS Performance Reporting Framework.
[29] As stated in the AIHSS Concept Note.
[30] For example, micro-plans should be produced at the health facility level and feed into successive levels of immunisation and health service planning, up to the Annual Implementation Plan level. It is difficult to say to what extent capacity has been improved.

attributed to the AIHSS 'catch-up initiative'.[31] At the same time, the number of outreach clinics conducted does not necessarily equate to an increase in vaccination numbers[32] (for a snapshot of outreach clinics see **Annex 5**).

Interestingly, some of the greatest improvements in vaccination numbers were achieved in PHAs with generally weaker PFM capacity; e.g. ARoB and East Sepik Provinces.[33] Meanwhile, PHAs assessed as having greater PFM capacity, such as Western Highlands[34] and Southern Highlands, were among the provinces that achieved the lowest increases in number of children immunised with Penta1, Penta3, and MR1. This supports the program rationale that despite health system weaknesses, targeted operational resources and associated support can lead to improved immunisation outcomes.

Factors contributing to stronger immunisation outcomes

Although the evaluation has not been able to conclusively identify the factors that have contributed to greater increases in immunisation coverage in provinces reporting significantly improved outcomes, some common factors (in addition to outreach) identified through document reviews and interviews with stakeholders include:

- an effective Provincial Emergency Operations Committee or Technical Working Group
- targeted and comprehensive micro-plans to guide outreach activities
- proactive monitoring and supervision of RI implementation
- a strong focus on community engagement and effective VHV networks
- involvement of the Family Health Services Coordinator in planning and decision-making[35]
- WHO and UNICEF technical guidance to plan and review immunisation activities.

Other key supportive factors, such as availability of vaccines and improved reporting, which have been addressed throughout the program with a combination of operational, logistics and capacity building support, are recognised as essential to a successful immunisation program.

Grantees in provinces that achieved improvements against additional maternal and child health indicators reported that efforts to integrate maternal and child health programming during routine immunisation outreach and upgrading cold chain equipment in health facilities had contributed to improved outcomes. A major factor resulting in very low Hepatitis B vaccination outcomes (**Indicator 9**) is the low number of women delivering at health facilities. In Morobe Province, a sharp increase in the reported number of Hepatitis B doses given within 24 hours of birth was partly attributed to previously captured data being submitted via the NHIS at provincial level.

Health System Output indicators – progress towards achieving EOP targets

A summary of the status of program outputs against the 4 AIHSS Health System Output indicators (Q2 2022) shows that:

[31] Dr Dessie Mekonnen, WHO,28 May 2021.
[32] As noted by Bougainville Catholic Health Services (AIHSS Annual Report 2022), a large amount of AIHSS resources were expended in 2021 but with little result.
[33] As assessed by Ernst & Young, 29 May 2019, p14.
[34] Ernst & Young, 29 May 2019, p14.
[35] Other ISPs have highlighted the importance of involving District Health Managers in immunisation planning and decision-making.

- Almost half of all indicators are on track to achieve EOP targets, including for micro-planning, staff training, number of outreach patrols and community engagement activities conducted, eNHIS reporting, and cold chain.
- Progress against a third of indicators is not on track, including conduct of regular supervisory visits, cold room temperature monitoring, surveillance reporting, vaccine supply, and presence of a volunteer network.
- There is insufficient or unreliable data to measure progress for 21% of indicators – mostly related to financial resourcing for immunisation activities.

A breakdown of results by indicator for the program overall and by province is shown in **Annex 6**. Further examination is outlined below of how and to what extent the program has been able to achieve against service delivery, capacity building and health system strengthening objectives, and AIHSS HSOs progress towards objectives and associated indicator targets.

Health System Output 1: Improved PHA Governance, Financial Management and Support to Routine Immunisation

PHA governance: Immunisation planning and supervision

There has been only a modest increase in the number of health facilities with immunisation micro-plans (from 89% for Q1 2021 to 97% for Q2 2022 – **Indicator 1.1**); however, existing micro-plans have been updated with AIHSS support. AIHSS funded the multi-week Immunization in Practice (IIP) training[36], that was facilitated by WHO and UNICEF Provincial Consultants, in the majority of program provinces, delivering fundamental guidance for immunisation providers, including modules dedicated to developing micro-plans. It was the first such training delivered in some AIHSS provinces for many years, and feedback concerning the training and its impact on health workers' knowledge of these key competencies was highly positive. Other support has included funding for PHA meetings to review and coordinate micro-plans. In Central Province, where micro-plans were not in place, AIHSS provided technical and financial assistance to roll out micro-plans in all health facilities. Despite this support, a sample of micro-plans viewed by the Evaluation Team indicated that the quality of plans varies across program provinces, as does the extent to which health facility micro-plans are linked to district and PHA-level planning.

The number of health facilities receiving at least one supervisory visit each quarter has doubled (from 110 health facilities in Q1 2021 to 210 health facilities in Q2 2022 – **Indicator 1.4**); however, only 45% of the EOPO target for this indicator has been reached. AIHSS contributed to this increase by providing financial and logistical support to conduct supervision in program provinces, often to monitor implementation of routine immunisation activities, but also to provide coaching and support to health facility staff. Stronger supervision has been highlighted by both ISPs and PHAs as a reason for improved immunisation outcomes, more timely reporting, and better understanding of health facility needs by PHAs. Continuing challenges include limited availability of vehicles and funding for supervisory visits, competing PHA priorities, and high workload. In several PHAs that have been unable to conduct regular physical visits to health facilities, the Family Health Services Coordinator reports engaging regularly with District Health Managers and health facility Officers-in-Charge (OICs) via WhatsApp.

36 A description of the World Health Organization Immunization in Practice training is available at: https://www.who.int/publications/i/item/immunization-in-practice-a-practical-guide-for-health-staff.

Financial management – limited data available and key financial resourcing challenges not yet addressed

Increased access to sustainable financing for immunisation is intended to be a key objective of the AIHSS program, reflected in 5 of the 24 PRF Health System Output indicators (**Indicators 1.3, 1.5 to 1.8**). AIHSS has expanded the number of provinces covered by PFM Corrective Action Plans, outlining priority actions to strengthen internal PHA financial management, but has neglected efforts to increase access to and use of GoPNG funding for immunisation. There was no evidence of AIHSS having a program strategy or making concrete efforts to support PHAs to address these issues. Progress against financial indicators is not being tracked for the majority of AIHSS PHAs, reportedly because ISPs have been unable to access this 'sensitive' information, or the PHAs themselves have struggled to provide these details. East Sepik and Jiwaka PHAs were the only provinces receiving 100% of the Health Function Grant (HFG) in the first 2 quarters of 2022 (**Indicator 1.5**) and delayed transfer of the HFG remains a critical barrier to both planning and delivery of primary health care services. Several PHA and church health stakeholders reported receiving District Services Improvement Program (DSIP) funding for minor infrastructure improvements or vehicle purchases but the majority of PHAs did not receive either provincial government or DSIP funding, despite their efforts.

Health System Output 2: Improved Cold Chain and Vaccine Management and Procedures

Major improvements in cold chain but some gaps remain

There have been substantial improvements in cold chain capacity across AIHSS provinces, with functioning cold chain equipment reported in 94% of health facilities (Q2 2022, **Indicator 2.2**). These improvements are primarily due to the Gavi Cold Chain Equipment Optimization Platform (CCEOP) program being rolled out with the support of UNICEF across PNG.[37] AIHSS support has nevertheless been instrumental in transporting refrigerators to health facilities to remote locations in several provinces.[38] IIP training delivered to PHA technical staff, District Health Managers, and selected health facility OICs, includes cold chain management, maintenance, and temperature monitoring.

While these are major achievements, gaps remain. AIHSS monitoring data (Q2 2022, **Indicator 2.1**,) shows that 23% of health facilities in ARoB and 12% of health facilities in Madang, Western Highlands and Western Provinces do not yet have functioning cold chain equipment. Health workers at several facilities explained that they have insufficient or very worn vaccine carriers and cold boxes, and are relying on domestic refrigeration equipment to freeze ice packs. Some PHAs requested cold chain equipment for Community Health Posts and Aid Posts, as immunisation services are being delivered through these facilities.

Vaccine utilisation, use of vaccine stock registers, and vaccine supply

The number of days of Pentavalent vaccine stock out at provincial medical stores has fluctuated during the program: from a minimum of 16 days per quarter in Q3 2021 to 45 days in Q1 2022 (**Indicator 2.6**). Extended stock outs of EPI vaccines at the health facility level (**Indicator 2.7**) have also occurred intermittently in the majority of provinces. In Q2 2022, these stock outs occurred in Madang (45 health facilities reporting stock out), ARoB (18 health facilities), and Eastern Highlands (13 health facilities). Strengthening vaccine management has not been a major focus of the AIHSS program and was largely limited to providing guidance on calculation of the Pentavalent vaccine

[37] UNICEF. 13 February 2020. *Government receives essential cold chain equipment to help strengthen national immunization programme* [Press Release].

[38] For example, in Central Province, AIHSS assisted in airlifting and installation of 4 vaccine fridges to Fane and Tororo Health Centres in Goilala District and Efogi and Manari Health Sub-centres in Hiri Koiari Districts.

utilisation rate (**Indicator 2.1**); and support to distribute WHO vaccine stock registers (**Indictor 2.5**). Exceptions to this were in Central Province, where Child Fund AIHSS officers directly assisted in transporting vaccines to health facilities; and Madang Province, where World Vision provides phone credit to the PHA's Cold Chain Officer to follow up on delayed delivery of vaccines from the Area Medical Stores.

Health System Output 3: Effective Monitoring and Reporting Mechanisms to Health Information Systems (NHIS/eNHIS)

Improvements in NHIS reporting and more regular review meetings, but stronger accountability lens needed

Substantial improvements in timely and complete reporting to eNHIS across AIHSS provinces over the program period were reported by PHAs and ISPs in program provinces. This was largely attributed to the roll out of eNHIS tablets (which was not directly supported by AIHSS), although the AIHSS program has funded or directly delivered training in data management and reporting that may have also contributed to this improvement. AIHSS data shows an increase in all health facilities submitting complete and timely reports to eNHIS (**Indicator 3.1**) from 80% against the indicator target in Q1 2021 to 88% in Q2 2022. By Q2 2022, the program had exceeded the target for the 'Number of people trained in strategic information (includes M&E, surveillance, HMIS [Health Management Information System], data analysis and/or reporting' (**Indicator 3.2**) by 450%, with 1,561 people in AIHSS provinces trained. This included refresher training where health workers were not yet competent in use of eNHIS tablets or, in ARoB, conducting the first eNHIS training since tablets were rolled out in the region in 2018. ISPs also report working closely with Provincial Health Information Officers to provide advice and mentoring on data quality and analysis. In West Sepik Province, AIHSS supported installation of radio frequency communications equipment in 3 remote health facilities that did not have telephone coverage or access to the internet. Despite these improvements, reporting in some provinces remains weak[39] and ISPs emphasised the need for ongoing training to ensure both timely and complete submission of monthly NHIS data, and verify the quality of reporting. More regular provincial quarterly reviews to discuss strategic information, including data quality, surveillance, M&E, HMIS, surveillance and reporting (**Indicator 3.3**) are being held; however, the frequency, format and topics covered in these meetings varies across PHAs.[40]

Health System Output 4: Effective Outreach Service within the Target Province

Outreach clinics conducted in AIHSS program provinces have exceeded targets and are reaching remote areas

A total of 26,765 'outreach clinics' (mobile clinics and outreach patrols) were conducted with the support of AIHSS by Q2 2022 (**Indicator 4.2**). AIHSS provinces achieved between 114% (Eastern Highlands Province) to 1,330% (Western Highlands Province) of their EOPO targets for this indicator. Substantial concerns about the usefulness of these indicators to measure this key program output, as well as great variation in how outreach patrols and mobile clinics are measured and reported, and the targets set by different AIHSS provinces, is discussed further in the response to **KEQ6: Monitoring and Evaluation**. AIHSS funding supported vehicle rental, fuel, health worker and volunteer allowances, and communications costs for outreach and mobile clinics, but the scale and extent of AIHSS operational support or funding to outreach patrols and mobile clinics (compared to PHA funding or other donor support) was not reported by the program.

[39] In Q2 2022, only 40% of health facilities in Morobe Province, 53% in West Sepik Province, and 76% in Western Province, submitted timely and complete reports.

[40] Burnet Institute explained that review meetings held by West Sepik PHA involved partners from across the province in 5 to 6 days of planning and discussions, while others were more focused on a review of program progress.

Effectiveness of AIHSS-supported outreach activities

It is difficult to gain an understanding of the effectiveness of outreach activities conducted, due to the lack of consistent performance data. There is great variation in the way that 'outreach clinics' are defined and measured across PHAs.[41]The number of beneficiaries reached through AIHSS-supported immunisation activities is not reported in the PRF (only overall immunisation figures for the province are reported). Effectiveness of outreach activities is sometimes reported in grantee narrative reports, but this is not done in a consistent manner.

Factors that have negatively affected the successful implementation of outreach activities include:

- Lack of vaccines and inadequate health staff to implement outreach and mobile activities.
- Delayed arrival of vehicles and fuel for outreach, disrupting planned activities; and inadequate periods of time allowed to conduct immunisation activities covering the catchment area.
- Late departure of health workers to clinic sites (e.g. late morning when beneficiaries are already working), and inadequate supervision of staff conducting outreach.
- Reductions in the requested amount of funding provided to districts/OICs for mobile clinics and outreach patrols, thus limiting the planned scope of these activities.

In several provinces, to address the lack of health staff to conduct outreach, AIHSS supported the establishment of roving outreach teams consisting of trainee and retired health workers, or additional clinical staff.

Save the Children and Oil Search Foundation (OSF) described efforts to conduct integrated outreach, but there was no consistent approach across program provinces.[42] The main reported barriers to delivering integrated services were inadequate health facility staffing and lack of equipment. One NGO reported that, although they usually provided integrated outreach services, when delivering AIHSS-supported outreach they sometimes focused on immunisation alone, due to the strong focus on achieving immunisation results. This underlines the risk that a singular focus on immunisation can undermine delivery of integrated primary health care.

Community outreach and engagement activities – uneven progress but key to community acceptance

As of Q2 2022, a total of 3,101 community outreach or awareness sessions had been conducted (109% of the program target for **Indicator 4.3**) and 8 of 12 AIHSS PHAs are on track to meet EOP targets for this indicator.[43] The number of health facilities with an established Village Health Volunteer network (**Indicator 4.4**) more than doubled over the project period (from 101 in Q4 2020 to 233 in Q2 2022), but 5 of 12 had achieved less than half of their target.[44] Community engagement activities supported by AIHSS partners include: printing and distributing flyers and posters; mounting billboards; developing and airing radio jingles to promote immunisation; and training community volunteers. AIHSS funds have supported community awareness sessions at churches, schools, markets, and with village elders.

[41] For example, the number of reported outreach clinics conducted in Q2 2022 ranges from 1 in East Sepik Province to 1,284 in Southern Highlands Province. This is discussed further in the report under KEQ6: Monitoring and Evaluation.

[42] In some instances, immunisation was combined with health promotion and nutrition screening, while other grantees reported delivering more comprehensive health promotion, preventative and curative services, together with immunisation.

[43] The remaining 3 PHAs are Jiwaka (75% achieved), Southern Highlands (60% achieved), and Western Highlands (9% achieved).

[44] PHAs in Central, Eastern Highlands, Gulf, Morobe and Western Provinces.

The evaluation did not find evidence of any assessment of the effectiveness of these activities or inputs supported by the AIHSS program. Nevertheless, both ISP and PHA stakeholders emphasised the importance of further strengthening locally-appropriate community engagement and awareness-raising activities to promote acceptance and awareness of the benefits of child immunisation, considered key to expanding immunisation coverage. For example, World Vision recommended that more active engagement with community and church leaders should be strengthened to mobilise communities in local areas. Others pointed to the waning influence of community leaders in their area and the need to use different approaches for generating community acceptance and uptake of immunisation. Eastern Highlands PHA (EHPHA), recognising that traditional health communication approaches used[45] were achieving limited impact, has implemented a more interactive approach to engage community members – for example, through film nights and focus group discussions – which it links to large increases in immunisation numbers in 2022.

3.4. Efficiency (KEQ4)

To what extent have outputs been delivered in an efficient and cost-effective way?

Summary

- The AIHSS partnership approach has enabled this innovative program to go to scale, working in 12 of 22 provinces in PNG, and has contributed to donor harmonisation.
- High staff turnover in all partner agencies, partly related to the COVID-19 pandemic, resulted in a loss of historical knowledge about the program, with a negative impact on program efficiency more broadly.
- Monthly program meetings have supported information sharing, but lack opportunities for strategic discussion. NDoH attendance at these meetings was disrupted during the COVID-19 pandemic and renewing NDoH oversight needs to be a priority for the program.
- WHO and UNICEF consultants provide technical support at the subnational level, but involvement of these agencies nationally lapsed due to staff turnover, leaving the program with lack of technical oversight.
- Lack of clarity regarding the respective authority, roles and responsibilities of ISPs, and PHAs, has resulted in dissatisfaction between parties in some provinces and undermined program effectiveness.
- Greater integration between AIHSS and other Frontline Health Outcomes programs expected from the broader PATH program has not eventuated, and there is a lack of strategic direction from management.
- Slow acquittal of program funds has been a major obstacle to planning and disbursement of program funds. It required substantial additional effort from ISPs to follow up on outstanding acquittals, and led to the suspension or delay of planned outreach activities.
- A strategy to balance equity and efficiency is needed to guide outreach planning, particularly to hard-to-reach areas.

Effectiveness and efficiency of partnership model

The AIHSS program is a multi-donor and agency effort, bringing together the donors, DFAT, MFAT, and Gavi, and technical agencies, WHO and UNICEF, to deliver this program in partnership with

[45] 'Traditional approaches' include using loud hailers and distributing flyers to disseminate health messages to community members to 'push' health messaging to communities.

GoPNG. This partnership has promoted donor harmonisation, with aligned program objectives, common delivery procedures, and the use of local systems. The combined donor resources have enabled the program to achieve substantial scale: working with 12 of 22 provinces in PNG that, combined, cover approximately two-thirds of the population. This provides the potential to achieve national-level health impact, not only by improving immunisation performance but through strengthening health systems underpinning the delivery of effective integrated primary health care.

Despite this common approach, the varying requirements and regulations of donors' grant funding, reporting and contracting have required donor inputs to be managed as 2 distinct components; i.e. MFAT/DFAT, and Gavi. The use of 3 different currencies – PGK to disburse funds to grantees; AUD to report to DFAT; and USD to report to Gavi – and different reporting templates, has resulted in currency inefficiencies and has complicated financial reporting. The time required to secure donor contract extensions has resulted in renewal of contracts with lead grantees close to the end of existing contract periods, and for relatively short periods of 6 to 12 months. This has created challenges for implementing partners to plan program activities and retain program staff. The condensed timeframe for developing the head contract between PATH and Gavi reportedly led to an agreement that lacks some detail about respective responsibilities. Exacerbated by staff turnover in both agencies, this has led to an ongoing lack of clarity between PATH and Gavi concerning these issues, requiring time and effort to resolve.

Involvement of WHO and UNICEF at national and subnational levels

Significant turnover in all partner agencies, mostly in 2021, resulted in a loss of historical knowledge about the program and had a negative impact on program efficiency more broadly. The central role of WHO and UNICEF technical specialists, in both the development of the program strategy and program oversight at the national level[46], was disrupted with their departure in 2021. While WHO and UNICEF consultants are providing important technical support at the subnational level, the involvement of these agencies nationally has diminished and there is now a lack of technical input and oversight of the program. Both WHO and UNICEF advisers have expressed interest in playing such a role, but require clarification of the inputs required.

AIHSS program transition from PPF to PATH

Management of the AIHSS program transitioned from the PPF to PATH program in October 2020. The program was to contribute to 2 PATH End of Investment Outcomes: 'EOIO 1 Strengthened PHA capacity'; and 'EOIO 2 DFAT-funded health services are demonstrating efficient models of service delivery'. It was intended that the PPF-funded health programs under PATH would operate in a more integrated way: for example, that immunisation could be linked with 'other services including maternal and child health'; and that AIHSS would complement and reinforce PATH's focus on health security and communicable disease control.

Among those interviewed[47], the move to PATH was seen as having negligible impact on the implementation of AIHSS, except that the M&E unit providing support to the AIHSS program under the PPF was not continued (despite PATH having a similar unit under its structure). Overall, the expectation of support and greater integration from the broader PATH program has not eventuated; although there were some exceptions, which provide positive examples for further development. The PATH GEDSI Team worked with Eastern Highlands and Western Highlands Provinces on

[46] For example, the UNICEF technical specialist reported quite extensive involvement in the program, participating in joint monitoring visits, reviewing reports, and developing training materials and monitoring indicators.
[47] As half of the AIHSS program provinces commenced after or shortly before PATH began in October 2020, few of the current AIHSS stakeholders were able to compare the support to the AIHSS program provided by PPF and PATH.

safeguards, preventing sexual exploitation, abuse and harassment (PSEAH), and child protection training and policy development. In Eastern Highlands Province, PHA stakeholders explained that the PATH AIHSS Program Managers were always available to assist in troubleshooting. The PATH FHO Team has also facilitated subnational 'induction' workshops to introduce new PFM policies developed under the PHA Corrective Action Plans.

Effectiveness of AIHSS governance mechanisms

AIHSS Monthly Immunisation Partner Meetings, for which PATH provides the secretariat, are the primary program governance mechanism at the grant level and intended to involve the AIHSS core group of donors, technical agencies, and GoPNG. These meetings were held regularly (moving online during the COVID-19 pandemic) and provided updates to partners throughout the program period. In the absence of regular meetings of the national Interagency Coordinating Committee, to which the program was intended to report, monthly partner meetings provided an opportunity for information sharing between donors. This reportedly contributed to greater alignment between stakeholders, particularly in the lead-up to the COVID-19 pandemic response. Nevertheless, AIHSS partner meetings did not provide the strategic overview and insight into critical barriers to program progress that donors required for strategic decision-making, nor did they identify issues for potential national-level advocacy. Participation of NDoH, which is intended to chair these meetings, was disrupted during the COVID-19 pandemic and subsequently there was no flow of information about the program to key NDoH stakeholders. Progress reports and the rate of expenditure of donor contributions to the AIHSS program were not routinely provided to all donors, and program documents are not always at a suitably developed stage when shared. DFAT recently announced a new coordination arrangement to address some of these issues.

At the subnational level, ISP–PHA engagement is governed by a Memorandum of Understanding (MOU) between the 2 parties; or for PHAs directly managing funds, an MOU between the lead PHA, NDoH, and Abt Associates. Extensive variation in the format and content of the ISP–PHA MOUs was found, with some agreements lacking clear definition of the responsibilities of respective parties, methods for regular communication, and dispute resolution. Although perhaps not related to the MOU alone, lack of clarity regarding the authority, roles and responsibilities has resulted in dissatisfaction between parties in some provinces and undermined program effectiveness. Some of these issues have been addressed with the support of PATH but others have lingered, suggesting a need for greater clarity concerning ISP–PHA partnership arrangements, and active partnership monitoring from PATH with specific attention to partnership development within the program.

Coordinating with subnational partners and complementing other immunisation and HSS activities

There have been a range of approaches used to coordinate with church and NGO partners in AIHSS provinces, largely dependent on existing approaches in the province. In some provinces, church health services had access to AIHSS funding support for outreach, supervision, training and awareness sessions using the same process as the PHA (WV and STC provinces). In Eastern Highlands Province, funding was disbursed to the Christian Health Services (CHS) coordinating agency in the province to distribute to church health facilities; however, CHS staff were not included in AIHSS training and planning activities. There is the opportunity to further strengthen PHA–CHS coordination through Service Level Agreements and establishing partnership committees.

The AIHSS program has supported a limited range of health service delivery and HSS activities implemented in AIHSS provinces; for example:

- The program funded and supported catch-up immunisation activities intended to ameliorate the impact of COVID-19, alongside WHO and UNICEF funding for these NDoH-directed activities.[48]
- PHAs in Gulf, Morobe, Jiwaka and East Sepik Provinces are integrating COVID-19 immunisation with primary health care activities.[49] In Western Province, where AIHSS funding has been exhausted, unspent DFAT COVID-19 funding is being used to continue implementation of integrated outreach.

In some cases, greater clarity about how this coordination should take place is needed; for example:

- Although AIHSS supported transport of cold chain equipment rolled out under the Gavi-funded CCEOP to some hard-to-reach areas (as described under KEQ3), there is lack of clarity about the extent this is within the AIHSS program scope or remains the responsibility of CCEOP. This resulted in cold chain equipment sitting for months at provincial centres.
- Coordination between AIHSS and PATH Provincial Consultants to support shared PFM capacity building objectives has been variable. In Eastern Highlands and Western Highlands Provinces, PHAs acknowledged the regular support from the PATH FHO Team and PATH Provincial Consultants. In other PATH priority provinces, there was no contact between the ISP and the PATH Provincial Consultant.

Increasing program efficiency and cost savings

Approaches reported by grantees to increase program efficiency included:

- Subcontracting NGOs to: increase reach of immunisation services (WV, Clinton Health Access Initiative (CHAI)); deliver mentoring to health workers (WV); and outsource training activities (EHPHA). Many of these NGOs, such as Youth With A Mission (YWAM), Child Fund PNG, and STC, have extensive experience delivering these activities in target provinces, including in difficult-to-reach areas, and were able to increase program impact and alleviate grantee workload.
- In West Sepik Province, local businesses provided in-kind support for outreach activities.
- In some WV-supported provinces, due to the challenging terrain and very high costs to reach remote areas, support was focused on more accessible provinces, where a greater number of children could be reached with health services. This approach, of course, could result in a trade-off between efficiency and equity.

Efficiency of processes for disbursement, procurement and acquittal of donor funds to PHAs

An overview of the different approaches to disbursement, procurement and acquittal of donor funds, and related strengths and weaknesses, is provided in **Annex 8**. Factors that have supported effective disbursement and procurement processes include conducting in-depth assessment of PHA resourcing and the implementation context prior to commencing (CHAI and STC); appointing preferred providers (CHAI); and establishing a provincial bank account to minimise delays in transferring funds (STC and Bougainville Catholic Health Services). Embedding staff and using PHA systems and practices to promote PHA autonomy have also led to more efficient delivery of AIHSS support to PHAs (STC). Failure to apply PHA per diem rates and follow PHA systems has not been acceptable to PHAs.

[48] PHAs were directed by NDoH to conduct catch-up rounds in 2021 and early 2022 as a way to address the impact of COVID-19 on routine immunisation. PHAs have not necessarily been able to conduct the number of rounds of catch-up activities directed by NDoH due to inadequate resources.

[49] Continued strong community opposition to COVID-19 vaccination is still a major factor preventing this in other provinces.

The 'reimbursement' approach used by OSF encouraged ownership and reduced risks associated with late acquittals to the ISP, but outreach activities can still be delayed if timely recurrent funding is unavailable to the ISP.

Siloed decision-making and poor information flow within both lead PHAs, and PHAs partnering with ISPs, has had a negative impact on efficiency of decision-making and sometimes led to extended delays in disbursal and reporting. To address this, an AIHSS working group was established in STC provinces to improve information flow. Stakeholders in both ISP-supported and directly-funded PHAs in AIHSS provinces asked for greater clarity concerning availability of funding and how funding decisions are made. It was noted that sometimes the requested amount of funding is not approved and, particularly with rising fuel costs, this means that approved funding may not be sufficient to conduct planned outreach activities.

Although independently managing funding delivered via the HSIP TA provides lead PHAs with autonomy, they have faced challenges due to delayed executive approval of expenditure, lack of financial management capacity, and the additional workload related to management of the donor funding.

Acquittals

Late acquittal of AIHSS funds slowed financial reporting in all provinces, disrupted disbursement of funds, and affected the delivery of outreach. Substantial additional effort was required from ISPs in almost all provinces to follow up on outstanding acquittals. This led to suspension or delays in planning outreach activities for whole quarters when ISPs were unable to acquit funding to PATH, and did not receive the next scheduled tranche of funding.[50] Furthermore, in Morobe and Madang, rounds of planned immunisation outreach activity were suspended, sometimes for an extended period, due to slow acquittals from a health facility in that province (WV).

ISPs have demonstrated some success in improving program-related acquittals. When combined, these factors led to more effective processing of acquittals. They included: finance training to health workers; introducing streamlined reporting templates; adequate ISP staffing to efficiently process acquittals; and involving PHA personnel responsible for management of health services – particularly the Family Health Services Coordinator – in all stages of decision-making. Payment of allowances directly into staff and volunteer bank accounts (rather than by cash) was another successful way to limit reporting requirements, although this is not feasible in more remote provinces, due to poor communications infrastructure and lack of banking services.

3.5. Models of Care (KEQ5)

What are the strengths and weaknesses of the different implementation models adopted in AIHSS provinces?

Summary

- Progress in PFM capacity building, intended to support PHAs to transition to some level of independent management of funds, has been slow and support provided has been inconsistent. The program needs to clarify its intentions and objectives regarding this area.
- Although the lead PHA model generally results in a lower average cost per dose than for ISP–PHA partnership models, additional support to lead PHAs may result in greater overall program efficiency and effectiveness.

[50] This resulted in suspension of all of the planned AIHSS-supported outreach and supervision activities in ARoB in Q1 2022.

- The most effective ISP–PHA partnership models, and most acceptable to PHAs, are those that support the autonomy of PHAs and provide additional support needed for efficient program implementation.
- ISPs are implementing various models of capacity building; e.g. the Burnet Institute and CHAI model of providing technical assistance; STC model of embedded ISP staff; and OSF partnership approach.
- Each approach has benefits, but success depends on tailoring the approach to the PHA context and needs. PHA engagement and adequate level of capacity are also required.
- Without measurement of results from these models it is difficult to assess their relative merits.

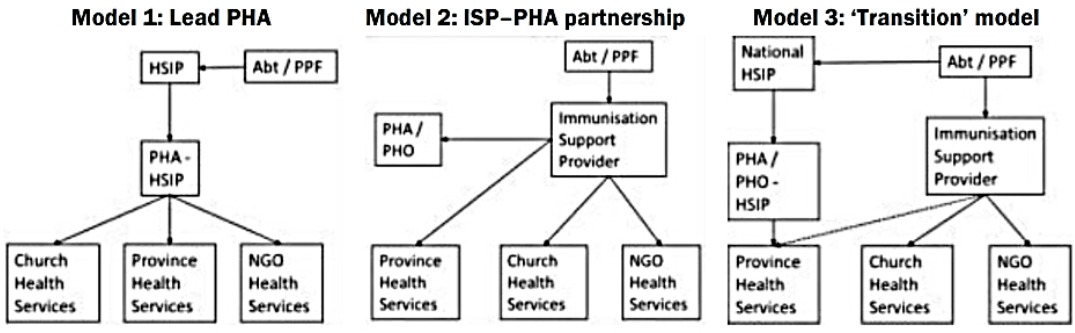
AIHSS implementation models

The 3 proposed models for AIHSS funding flows to provinces were:

- PHA-led, where the PHA receives funding directly via the HSIP TA mechanism (used in Western Highlands and Eastern Highlands Provinces).
- ISP–PHA partnership, where AIHSS funding is managed by an ISP and directed to the PHA, provincial health services, and any subcontracted partners (used in the remaining 10 AIHSS provinces/ARoB).
- A hybrid 'transition' model in which the PHA accesses funds for immunisation service delivery directly via the HSIP TA mechanism, while an ISP is engaged to deliver capacity building support and manage any subcontracts with church and NGO health service providers (not used in any AIHSS provinces).

An overview of these 3 management models is shown in **Figure 5**.

Figure 5: AIHSS management models



Source: Ernst & Young (May 2019) AIHSS Program Grants – Public Financial Capacity Assessments

Of the PHAs that initially proposed leading grant implementation in their provinces, Western Highlands and Eastern Highlands were selected as 'lead PHAs'. This was based on the findings of an initial Ernst & Young PFM capacity assessment and required successful completion of Corrective Action Plans to address identified gaps in their financial systems. In the remaining AIHSS provinces, PHAs were advised to find a suitable ISP with which to partner. Morobe, Madang and Southern Highlands PHAs expressed interest in independent management of the program, and were provided with a CAP, to be implemented with the support of the ISP and PATH. It was expected that after bringing their PFM systems to the standard required to independently manage program funds via the HSIP TA, these PHAs would move towards the 'transition model'. CAPs were subsequently rolled out

in all PATH demonstration provinces participating in the program: ARoB, Central, West Sepik and Western Provinces.

Progress in implementing CAPs

Progress in implementing the CAPs for both transition and PATH demonstration provinces has been slow. Only 1 of the 3 transition provinces have completed their CAP and none of the 3 'transition' PHAs have yet met the standards required to manage program funds independently via the HSIP TA. PHA commitment to implement these changes has not been consistent, particularly during the COVID-19 pandemic period, and system bottlenecks affected progress, such as the Department of Personnel Management freeze on recruitment.[51] A further factor, which is under the control of the program, is the lack of dedicated support from the program to progress CAP actions in many of the provinces. In contrast with the lead PHA model approach, where Deloitte was contracted to provide assistance, this responsibility was given to ISPs and PATH. This support has not always been proactive and many of the deadlines for CAPs are being progressively extended with no clear commitment as to when those provinces can move to the transition PHA model (Model 3). This calls into question the effectiveness of the current approach and program's prioritisation of these objectives.

Strengths and weaknesses of implementation models used in AIHSS provinces

Key features of the arrangements used by lead grantees in each province are summarised in **Annex 9**, which lists the lead agencies, the funding flow to the PHA, average cost per vaccine dose, ISP office arrangements, effective delivery elements, and some of the bottlenecks experienced.

Lead grantees, Western Highlands and Eastern Highlands PHAs, have both demonstrated the financial and organisational capacity to access AIHSS funding directly through the HSIP TA, but they have struggled with various aspects of program implementation. This underlines ongoing needs in these PHAs to address organisational challenges, the unfamiliarity of some PHAs with donor reporting and program management requirements, and the extra burden that managing a large program places on already under-resourced PHAs. Although the lead PHA model generally results in a lower average cost per dose than for ISP–PHA partnership models, additional support to lead PHAs may result in greater overall program efficiency and effectiveness.

As shown in **Annex 9**, ISP approaches have ranged from grant management alone (e.g. Bougainville Catholic Health Services (BCHS)) to including a strong component of technical assistance (e.g. BI, and CHAI). In West Sepik, BI was unable to deliver the level of planned technical assistance, largely related to the impact of the COVID-19 pandemic, which included challenges in securing PHA engagement in these activities. Planned technical assistance from CHAI, working in a more accessible province, has been implemented with greater success. It appears to successfully focus on health system strengthening aspects of the program, and reported coverage in Central Province demonstrates progressive increases each year. OSF has drawn on its strong technical resources and existing relationships to promote PFM capacity building in partner PHAs, but is reconsidering the remuneration approach to provide operational support to PHAs, partly to minimise risks of PHAs working in cash.

Of the various models used by ISPs, the most effective and accepted by PHA stakeholders were those that supported the autonomy of PHAs and a partnership approach. For example, STC's model involved embedding staff within the PHA, so that the ISP was able to support existing PHA processes and engage in shared decision-making regarding use of AIHSS funds. It is of note that STC-supported provinces (along with Gulf) have also achieved the highest relative increases in vaccination doses

[51] Additional finance staff needed to comply with requirements for separation of financial duties could not be recruited.

delivered.[52] Difficulties have arisen where ISP procedures and processes were not aligned with those of the PHA. For example, a core weakness in the approach used by World Vision was a failure to adequately involve key PHA stakeholders in planning and approval of AIHSS-supported activities. Concerns were also raised about delays in approval of AIHSS funding for outreach activities in WV-supported provinces, unclear decision-making, and unwieldy procurement practices that have disrupted outreach activities.

Note: A description of how the average cost per vaccine dose was calculated and the substantial considerations that need to be taken into account when looking at these estimates is provided in **Annex 10**.

3.6. Monitoring and Evaluation (KEQ6)

To what extent are AIHSS monitoring and evaluation arrangements fit for purpose for supporting program decision-making, accountability, learning and adaptation?

Summary

- The AIHSS M&E system is currently not meeting the needs of key program stakeholders to provide clear, reliable and strategically-focused data for program monitoring, oversight and decision-making, and accountability of implementing partners.
- Key elements of an M&E framework are absent and this has resulted in missed opportunities for program learning and development.

Use of Performance Reporting Framework as a monitoring tool

The Performance Reporting Framework is the main instrument used for monitoring and performance reporting for the AIHSS program. The PRF template, which generally aligns with the cMYP strategic objectives, consists of 21 Program Outcome indicators related to immunisation and MCH health service coverage, and 24 indicators to measure progress in the 4 Health System Output areas. Grantees are required to report against these indicators quarterly and submit 6-monthly and annual narrative reports, using information collected at the subnational level. An AIHSS Data Analytics consultant working part-time and based remotely has provided M&E support to the PATH AIHSS team and AIHSS grantees. This includes overseeing PRF reporting from grantees, and producing consolidated PRF reports and quarterly 'snapshot' reports of program results. Although WHO had previously assisted with review of the PRFs and grantee progress reports, this is no longer taking place.

Measuring progress towards AIHSS end of program targets

The PRF includes EOPO targets for immunisation, additional MCH service outcomes, and Health System Outcomes. Immunisation targets were initially calculated as the number of children to be immunised with priority antigens and doses by December 2021 in each province if 80% coverage was to be achieved. When the program was extended to December 2022 neither population figures nor targets were updated. Thus, the current targets for each province do not equate to achievement of 80% immunisation coverage for the overall program or in individual provinces. There is some lack of clarity among program partners as to whether the AIHSS objective is to achieve the original target for number of vaccinations or 80% coverage. A concerning outcome is that partners are reporting

[52] Although other factors are also likely to have influenced these outcomes: these provinces commenced earlier than many others, populations are smaller, and coverage was initially lower.

incorrectly calculated levels of key antigen coverage. It is of further concern that these errors were not detected and corrected by PATH before acceptance of the report. In addition, data produced in this way is not comparable with official figures from the NHIS and does not allow comparison with the period before the project began, nor with those provinces not supported by the project.

Accuracy of PNG population data and suitability for calculating immunisation coverage

In PNG, the officially-accepted population figures used to calculate immunisation coverage are projections based on 2011 Census data. Widespread stakeholder concern has been expressed that these projections either overestimate or underestimate the current population numbers across provinces or in individual catchment areas. Although this issue is outside the control of the program, stakeholders report that it makes it difficult to plan activities to boost coverage in target provinces. Furthermore, it brings into question the accuracy and reliability of the reported immunisation coverage in PNG and the achievements of AIHSS program partners.

Grantee challenges in reporting against the PRF

Substantial time and resources are required by grantees to collect and verify data for the quarterly PRF, some of which does not directly relate to activities substantially supported by the AIHSS program or is already being reported via the eNHIS. Grantees also report challenges in collecting the range of PRF indicator data required by the program. Producing data for HSO indicators such as vaccine utilisation rate, for example, requires individual health facilities to track, calculate and report data that is additional to the health data routinely reported via the NHIS. While such information can provide insights into conditions at health facility level, given the existing challenges in collecting accurate and complete routine immunisation data, it may be useful to consider alternative methods to obtain data against some of these indicators, which do not create an additional burden on health facility OICs, PHAs, and ISPs. Indeed, some PHAs have instructed ISPs to refrain from collecting data that is not already being reported to the provincial level. For such efforts to be worthwhile, it is important that all key stakeholders are clear about what data is being collected, why it is being collected and how the data will be used. This currently does not appear to be the case.

Inconsistency in reporting against key indicators

The program is not collecting consistent data on activities that are central to the objective of increasing immunisation reach and access. PHA targets for number of planned outreach clinics per quarter (**Indicator 4.1**) vary dramatically, ranging from 2 per quarter (Jiwaka Province) to 1,514 per quarter (SHP) in Q2 2022. Similar variation is seen for the number of outreach clinics conducted per quarter (**Indicator 4.2**). The Evaluation Team was unable to find a clear explanation for this apparently dramatic variation in scale of activities and what, if anything, it indicates about the different way that immunisation outreach (mobile clinics and patrols) and awareness sessions are supported across AIHSS program provinces.[53]

Grantee activity reporting unclear and little measurement of quality, effectiveness and efficiency

There is a lack of detail concerning other key activities conducted by AIHSS grantees to produce program outputs. For example, the program reports training 1,561 people in strategic information (including M&E, surveillance HMIS, data analysis or reporting) (**Indicator 3.2**) between 2019 and Q2 2022. How this training was delivered, the training topics and materials used, and who attended the

[53] Although it was agreed at an AIHSS data review workshop in November 2021 that 'WHO/UNICEF/NDoH/PATH'' would review the quarterly health facility report form to add a definition of outreach, there has been no change in the wide variation in outreach clinic and awareness session targets and reported achievements across PHAs.

training (how many people and their roles), are mostly not reported. It is sometimes unclear whether particular outputs, for example, weekly submission of surveillance reports (**Indicator 2.3**), are supported by AIHSS funding, other program inputs, or not by the program at all. This activity-level information is meant to be included in 6-monthly and annual narrative reports, and while there were some positive examples of reporting, the variable styles of reporting by the majority of grantees against annual program workplans make it challenging to identify and understand what activities have been conducted across the life of the project that have (or have not) led to the outputs reported in the PRF. In addition, there is often limited evidence available on the quality or effectiveness (not only numbers) of outputs that are delivered or supported by the AIHSS program, such as micro-plans developed, review meetings held, outreach clinics and community engagement conducted, and training and coordination delivered. Grantees are not required to routinely submit this type of information to AIHSS program staff to support an assessment of performance in these areas. Site visits, initially involving an AIHSS multi-partner team, were disrupted by the COVID-19 pandemic.

No overarching program logic or theory of change

A fundamental gap within the AIHSS M&E framework is the lack of a clearly defined program logic or theory of change specifying the role of this intervention in producing change and the relationships between AIHSS inputs and activities, the Health System Outputs, public financial management capacity building objectives, the Intermediate Outcome, and the End of Investment Outcome. Currently, the program does not deliberately measure progress towards the IO. A further concern is that the AIHSS 'key measure of success' – 80% vaccination coverage of Penta3 by 2022 – cannot realistically be achieved within the timeframe, and with the degree of resources and stakeholders involved in the program.[54] An overarching program logic could also have supported a stronger line of sight between the objectives defined in grantee proposals, outcomes specified in contracted work plans, and achievements reported in progress reports – it is challenging to identify connections in the current AIHSS work-planning and reporting products.

AIHSS program learning

A major gap raised by all ISPs is the current lack of opportunities for communication and shared learning among grantees. For a complex intervention with new ways of working, this represents a missed opportunity for the program. ISPs report that joint online meetings were discontinued after internal PATH turnover. Furthermore, structured opportunities to review and analyse program strategy, data, and outcomes – for the program overall and for individual PHAs – have been limited[55]. While ISPs and PHAs appreciate the support provided by PATH through regular fortnightly or monthly conversations, they noted that these discussions are often focused on contract management, rather than strategic issues or provision of technical support.

Technical support visits to provinces, initially scheduled to be conducted quarterly, were largely suspended during the COVID-19 pandemic, but appear to have restarted. It will be important that there is active follow-up on recommendations resulting from these visits.

[54] As specified in DFAT, October 2022, *Design and Monitoring and Evaluation Standards*, p. 23.

[55] An AIHSS-led workshop to discuss data collection issues involving the PATH AIHSS team, WHO, UNICEF, and grantees, was conducted in November 2021 and, although it was agreed to follow up issues raised, they have not yet been taken further.

3.7. Sustainability (KEQ7)

To what extent are the positive impacts of AIHSS likely to be sustained?

Summary

- The AIHSS program has introduced an innovative new approach to support strengthening of primary health care in PNG. The program aligns with GoPNG national and health sector policies, and improvements in immunisation coverage have been achieved.
- The impact of the COVID-19 pandemic and other contextual challenges have substantially set back the AIHSS program at multiple levels. Current efforts to promote sustainability of the immunisation program are insufficient to achieve these objectives.
- Major challenges remain to PHA and health system capacity across AIHSS provinces. More focused and consistent capacity building support, together with PHA leadership, is needed to achieve and institutionalise the expected governance and financial management standards.

Sustaining the positive impacts of the AIHSS program and progress in transitioning away from donor funding

The AIHSS program has clearly resulted in a renewed focus on immunisation and commitment to strengthening the immunisation program in many of the AIHSS target provinces. As noted in the report, the program's measurement of PHA capacity building is weak; thus it is challenging to assess progress in this area. Anecdotal reports nevertheless indicate that AIHSS support, particularly IIP training, has provided important knowledge and skills to health workers for planning and managing immunisation service delivery. A primary and important program focus has been providing operational support to increase outreach service and boost vaccination coverage in provinces with the lowest coverage. At the same time, an over-reliance on repeated catch-up rounds can jeopardise efforts to build a sustainable and effective immunisation program. Thus, a balance between these objectives is necessary. More effective measurement of capacity building, not only immunisation coverage, could support this. Promoting integration of health services is intended to increase the impact of health services and embed immunisation within the health system, rather than support a fragmented, inefficient and unsustainable approach to immunisation service delivery. While there have been some positive examples of AIHSS supporting integrated outreach that brought together health resources within the district[56], this is an aspect of the current program that requires strengthening.

Provincial transition plans

AIHSS grantees have been required to develop transition plans to define and track the activities needed to institutionalise the key elements of an effective routine immunisation program. This is ambitious, and likely to be more effective if incorporated into the program design, involving a realistic timeframe and agreed with ISPs at the commencement of the program. Furthermore, some of these plans either lack a clear strategy for achieving these objectives or place responsibility on the PHAs to achieve substantial systemic changes. Provinces where ISPs use approaches that are not aligned with existing PHA systems are also unlikely to have contributed to sustainability of the PHA's immunisation program.

[56] For example, Oil Search Foundation reported that services provided by outreach patrols in hard-to-reach areas in Gulf Province included routine immunisation; TB screening; family planning and antenatal services; nutrition; COVID-19 awareness and vaccinations; general health awareness and outpatient services (A*ccelerated Immunisation and Health Systems Strengthening (AIHSS) Progress Report: January to December 2022*, Gulf Provincial Health Authority and Oil Search Foundation).

Building the capacity of PHAs to transition planning, managing and delivering services independently

PHA readiness and PFM capacity remains a key barrier to sustainability. As noted above, progress in building the governance and financial management capacity of the PHAs in the 3 'transition' provinces – Morobe, Madang, and Southern Highlands – has been slow. In Madang and in Gulf Provinces, for example, turnover of key PHA staff has been a continued barrier to progress. CHAI reports that Central PHA has not yet established 'any sort of coordination system to coordinate the immunisation financing including annual activity planning and budgeting' and the only filled management positions are an acting CEO and 3 acting Directors. As many of the Central Province PHO staff have not yet transferred to the new PHA, a 'dual' administrative system is operating.

Lack of adequate human resources at all levels in the PHA, perhaps most evident at the health facility level where there is insufficient staffing in many facilities and a large proportion of health workers reaching retirement age, was frequently raised as a barrier to delivery of immunisation and primary health care services. It also led to unintended negative effects during the implementation of the program, with stakeholders reporting that health facilities were sometimes required to suspend services due to the lack of health workers when staff were involved in AIHSS-supported outreach activities. Although systemic human resources issues were not within the scope of the AIHSS program, it remains a substantial area of concern that must be addressed if a sustainable immunisation program is to be developed and unintended negative effects are to be avoided in the future. Focusing on increasing outreach effectiveness and trialling approaches that use locally-available resources to address these deficits, such as establishing roving outreach teams, may offer solutions to this issue in the shorter-term.

In most AIHSS PHAs, WHO and (to a lesser extent) UNICEF Provincial Consultants played an important role in facilitating training, reporting and planning supported by the AIHSS program. Ongoing technical support (whether through external consultants or suitably qualified PNG staff) will need to continue when AIHSS funding ends. However, if the changes supported or supplemented by the AIHSS program are to be sustained, systemic changes are required. For example, for cold chain improvements to be maintained, an active cold chain maintenance program capable of providing an effective and rapid response to health facilities across the PHA, including in remote areas, is required. While some PHAs have a Cold Chain Officer, adequate resourcing, ongoing technical support and training is required for these officers to be effective in their role. Similarly, effectiveness of the eNHIS system will require regular training of health workers, together with support for those facilities that do not have reliable telephone or internet coverage. Continued reporting on technical areas that are not included in the eNHIS, such as cold chain temperature alerts, vaccine utilisation rates, monitoring cold chain temperature alarms, and surveillance reporting, will depend on the commitment and capacity of the PHA health management team to follow up and use data. The Immunisation in Practice training supported by AIHSS was recognised as a highly effective capacity building intervention, but for health workers to retain and further develop the knowledge and skills they have developed the delivery of regular high-quality training needs to be systematised.

Transition away from donor funding

The extent to which PHAs depend on AIHSS program funding for immunisation program activities varies. Some PHAs interviewed, such as West Sepik, were conscious of not becoming reliant on AIHSS funding and used it only to address gaps, such as lack of communications equipment in health facilities in remote areas, catch-up activities, or patrols in remote areas that would otherwise be too costly to conduct. Both lead PHAs[57] explained that AIHSS funding had allowed them to maintain and

[57] Western Highlands and Eastern Highlands PHAs.

strengthen immunisation services, despite the progressive and substantial reductions in the amount of funding available via Health Function Grants in recent years. Although STC reports that a small amount of alternative funding has been secured in provinces that it currently supports, none of the PHAs interviewed are currently able to maintain the current level of immunisation activities if AIHSS funding was no longer available. It is likely that outreach patrols and mobile clinics would either cease or be significantly scaled down. This was illustrated recently in the suspension of all planned outreach and mobile activities in Madang Province when AIHSS funding in this province was exhausted earlier than expected.

3.8. GEDSI (KEQ8)

To what extent has AIHSS considered and addressed the needs of women, men, girls and boys, people with a disability, and other disadvantaged groups such as people living in rural and remote areas and urban poor?

Summary

- The AIHSS program is addressing inequity in delivery of immunisation services in PNG by focusing on low coverage provinces and enabling outreach to remote areas; however, large disparities in coverage remain.
- The program does not have a GEDSI strategy, outcomes, indicators or dedicated budget, leading to a fragmented and under-resourced approach to GEDSI.
- GEDSI and safeguarding training has been well received by PHAs and research and materials developed by the program can be used to expand GEDSI activities.
- Sex-disaggregated reporting is not supported by the NHIS, thus other methods, such as the gender-disaggregation survey conducted by Burnet Institute, may be more effective than attempting to include this as part of health facility reporting.

Promoting achievement of gender equality and women's and girl's empowerment is a key priority for DFAT and its international development program in PNG. Although grantees were required to describe in their proposals how the proposed activity would address these issues during implementation, no GEDSI strategy and outcomes were included in the design of the AIHSS program. Actions to address GEDSI within the program were under-resourced and dealt with in a fragmented way.

Addressing inequity and reaching people living in rural and remote areas

By focusing on the provinces in PNG with the lowest immunisation coverage, the AIHSS program is intended to address inequity in delivery of immunisation services in PNG. In those provinces, AIHSS has provided essential support to conduct catch-up immunisation rounds, and to restart or scale up immunisation delivered through mobile clinics and outreach patrols. Even in those PHAs where mobile and outreach services were already operating, the daunting cost of travel to remote locations and limited PHA budgets meant that outreach services to hard-to-reach areas were not being conducted. The AIHSS program enabled conduct of integrated outreach to these underserved areas, although this was not a consistent approach in all provinces, partly due to efficiency considerations.

Delivery of gender-equitable services and assessments

Performance was less than 30% (Q2 2022) against vaccination targets for the program, including number of children receiving Hepatitis B vaccine at birth (**Indicator 9**), and number of pregnant women receiving second dose of Tetanus Toxoid (**Indicator 11**), which are, respectively, linked to access to facility-based delivery and antenatal care). Better integrating promotion of facility-based

delivery and antenatal care is likely to improve outcomes in these areas. While some instances of integrating family planning into outreach activities were reported, there is potential to strengthen the program's contribution to increasing access to these key reproductive health services in rural communities.

Lack of sex- or disability-disaggregated data in the NHIS is a major challenge to assessing any gender disparity or inequality related to disability in provision of immunisation services. Nevertheless, the benefit is questionable of adding to the workload of health facility OICs by requiring reports to include sex-disaggregated data, particularly when existing reporting practices are not strong. An alternative and possibly more effective approach used by Burnet Institute was a Gender Disaggregation Study, reviewing access to services at 20 health care facilities in West Sepik Province. Additional materials developed by partners that may be useful for future activities include a GEDSI analysis conducted by CHAI, which is intended to guide Central PHA in the development of more inclusive immunisation services in the future. World Vision has developed GEDSI analysis checklists to assess the extent to which these issues are accounted for in the immunisation program.

Child protection and safeguarding

There is explicit attention to the accountability-related aspects of GEDSI: key deliverables in grantee contracts include a Child Protection Implementation Plan, PSEAH Implementation narrative response, and a Safeguarding Risk Activity Plan. ISPs have also been required to obtain a signed safeguarding code of conduct from all OICs in AIHSS-supported health facilities. To meet these requirements, ISPs have conducted safeguarding and child protection training that incorporates GEDSI. In Western Highlands, the GEDSI training delivered by PATH was specifically mentioned as a highly positive contribution of the AIHSS to building the understanding and skills of PHA staff. Another Public Health Director explained that the safeguards training delivered through AIHSS was practical and informative, and encouraged the PHA to further strengthen work on reaching marginalised populations by establishing women and youth networks to promote immunisation. Stakeholders have drawn attention to many opportunities to integrate aspects of GEDSI into the AIHSS program, which are yet to be addressed. Environmental safeguards, particularly safe disposal of medical waste, was included in health worker training supported by the program, but no related monitoring or assessment was conducted.

Disability and social inclusion

Save the Children (in East Sepik and Jiwaka) reported that parents tend not to bring children with special needs to static clinics for immunisation, but these children are usually identified by staff or VHVs during mobile and outreach immunisation services. This underlines the importance of having a clear strategy to reach vulnerable children and people with disabilities as part of mobile and outreach planning and training activities. Disability-inclusive training in West Sepik was delayed due to COVID-19 restrictions; however, the Disability Training Guide designed by ISP, Burnet Institute, will likely be useful for future activities.

Policy development and recruitment of GEDSI officers

Although Eastern Highlands PHA did not conduct GEDSI or safeguarding training, it did create 2 GEDSI positions in the PHA structure with responsibility to support the roll out of related activities within the PHA. A policy on PSEAH was developed and endorsed by the PHA Board.

4. Recommendations

Recommendation 1: Extend the AIHSS program

Access to essential immunisation remains a critical need and right for the PNG population. The AIHSS program has provided vital support to PHAs in a way that has strengthened the reach of these services to underserved communities and has the potential to contribute to sustainable health system strengthening.

Recognising the many challenges in implementing the AIHSS program since its commencement, the donors, DFAT, MFAT, and Gavi, should consider extending and strengthening the support provided under the AIHSS program to enable the benefits of this program to be realised in participating provinces. Further ongoing donor support is also needed to address the substantial systemic challenges to establishing a sustainable immunisation program in AIHSS provinces and varying levels of PHA readiness.

Recommendation 2: Support PHA autonomy and ownership of the AIHSS program

The AIHSS program model and approaches implemented have not always aligned with PHA systems and, in World Vision-supported provinces, the approaches used by the ISP are undermining PHA autonomy and effectiveness of DFAT support to the PHA immunisation program.

In the short-term, WV needs to work together with PATH and PHAs in target provinces, to identify and implement solutions that will better align AIHSS program delivery with PHA systems, address PHA stakeholder needs, and contribute to a sustainable strengthening of the immunisation program.

AIHSS donors should commission an AIHSS program redesign in which PATH, ISPs, and other technical partners, engage closely with PHAs to design an approach that aligns with PHA systems, prioritises a partnership approach, and aims to strengthen PHA autonomy and ownership of this program.

Recommendation 3: Revise and restructure the AIHSS M&E framework

The AIHSS M&E system is currently not meeting the needs of key program stakeholders to provide clear, reliable and strategically-focused data for program monitoring, oversight and decision-making, and to ensure accountability of implementing partners.

In the short-term, PATH should undertake a review of the current M&E framework and system in place. This includes clarification of the program logic and end of investment target to be achieved. PATH should work with relevant stakeholders to address current gaps in data reporting, including lack of information on quality and effectiveness of key activities such as micro-plans, outreach activities, capacity building activities, and quarterly review meetings; secure on-the-ground support to analyse, interpret and advise the PATH FHO Team on data being collected and reported; and use this data to drive improved program outcomes.

The new program design should involve a comprehensive overhaul of the program's M&E framework to ensure that this system is fit for purpose and complies with relevant DFAT standards and stakeholder information needs. This would include an integrated program logic and comprehensive M&E Plan, to ensure that data is generated and used for program monitoring, accountability, learning and adaptive management in an efficient and effective way.

Recommendation 4: Strengthen PATH's approach to managing AIHSS

PATH support to the AIHSS program primarily addressed contract management rather than provision of strategic and outcomes-focused support. Many substantial implementation challenges in AIHSS provinces have not been identified and addressed in a proactive manner. Currently, lead PHAs and ISPs are contracted to deliver workplans, the quarterly PRF, program narrative reports, and associated documents and plans, but the quality of these documents varies considerably.

PATH should refocus and substantially strengthen the way it supports implementing partners to respond to program challenges, bottlenecks and opportunities, and adopt a strategic outlook that brings the technical expertise and resources available to PATH and the AIHSS program to address program design and implementation challenges.

In both the short-term and in a redesigned program, this includes engaging suitable technical specialists to support the PATH FHO Team to conduct quarterly reviews of progress in all AIHSS provinces and identify positive practices, and performance challenges and risks to be addressed. PATH should ensure that AIHSS Program Officers are supported to work with grantees to address identified risks and challenges in a proactive manner.

Reporting templates should be standardised and stronger quality assurance conducted to ensure that program reports, plans and strategies are fit for purpose.

PATH should consider refocusing contracts with implementing partners to involve program performance rather than only report-based deliverables.

Recommendation 5: Strengthen the program approach to sustainability

The AIHSS program has introduced an innovative new approach to support strengthening of primary health care in PNG that aligns with GoPNG national and health sector policies; however, current efforts to promote sustainability of the immunisation program are insufficient for the achievement of these objectives.

AIHSS donors and PATH should ensure that the new program design incorporates a practical, evidence-based and adequately resourced strategy to achieve sustainability objectives agreed with the GoPNG and PHAs. The strategy will need to consider an appropriate balance of increasing vaccination coverage with increasing immunisation access in hard-to-reach areas. It should prioritise development of a sustainable immunisation program over rapid but unsustainable methods to increase coverage. This includes replacing overly ambitious vaccination coverage targets with achievable objectives, in line with DFAT standards and the approach proposed by the GoPNG National Immunization Strategy. Redesign of the PFM component and inclusion of sustainable financing objectives and attention to PHA governance and planning will be a critical component of this strategy.

Recommendation 6: Strengthen partner coordination and communication

Partnership with key immunisation stakeholders is an important element of the AIHSS program. Partly due to substantial turnover of program partners in PNG, the role of technical partners, UNICEF and WHO, and the involvement of NDoH in the AIHSS program have declined. There is also a lack of clarity about the roles of PATH, ISPs, and PHAs, particularly related to PFM objectives and activities, and currently no opportunities for shared learning among participating PHAs and ISPs.

In the short-term, PATH should restart a structured forum for grantee communication, coordination, and learning.

PATH should work with relevant stakeholders to address the following:

- Engage with AIHSS program partners to clearly define and strengthen their role in the program.
- Develop a strategy for NDoH and broader GoPNG involvement in and oversight of AIHSS program.
- Restructure monthly AIHSS partner meetings to provide opportunities for more strategic discussion and management decisions – this approach could also support cross-program learning and be used to engage key national-level partners to assist in resolving bottlenecks.
- Incorporate structured partner performance monitoring and regular partnership health checks within the program to support improved partnership effectiveness, learning, and adaptation.
- Provide opportunities for partners to adapt their approaches based on the lessons learned.

Recommendation 7: Prioritise GEDSI in a revised AIHSS program design

The current AIHSS program design does not have a GEDSI strategy, and GEDSI is under-resourced and addressed in a fragmented way. A number of the GEDSI activities conducted have been welcomed by PHA stakeholders who wish to further strengthen how they address GEDSI in their programs.

AIHSS donors and PATH should ensure that DFAT GEDSI standards are comprehensively addressed in any future AIHSS program design. The new design should include a GEDSI program strategy; a GEDSI-related outcome and indicators, a dedicated GEDSI budget, and GEDSI specialist technical assistance to provide necessary guidance throughout program implementation.

Recommendation 8: Prioritise community engagement and integrated primary health care

Effective community engagement is key to increasing community acceptance of immunisation, leading to increased immunisation coverage. This is still weak in many provinces in PNG. The AIHSS program is ideally placed to support PHAs to strengthen community engagement and to share lessons on successful approaches to working with communities.

Similarly, the program has an opportunity to substantially strengthen integrated health care delivery through outreach and mobile clinics. Despite the potential of this NDoH-endorsed approach to promote equity and efficiency of primary health care service delivery, in practice integrated outreach frequently does not occur or is conducted in an ad hoc manner.

PATH should ensure that community engagement and integrated primary health care are key components of a redesigned AIHSS program. This will involve addressing both of these elements in a practical manner, recognising barriers and promoting drivers present in the program implementation contexts, to strengthen application of each of these approaches in program provinces.

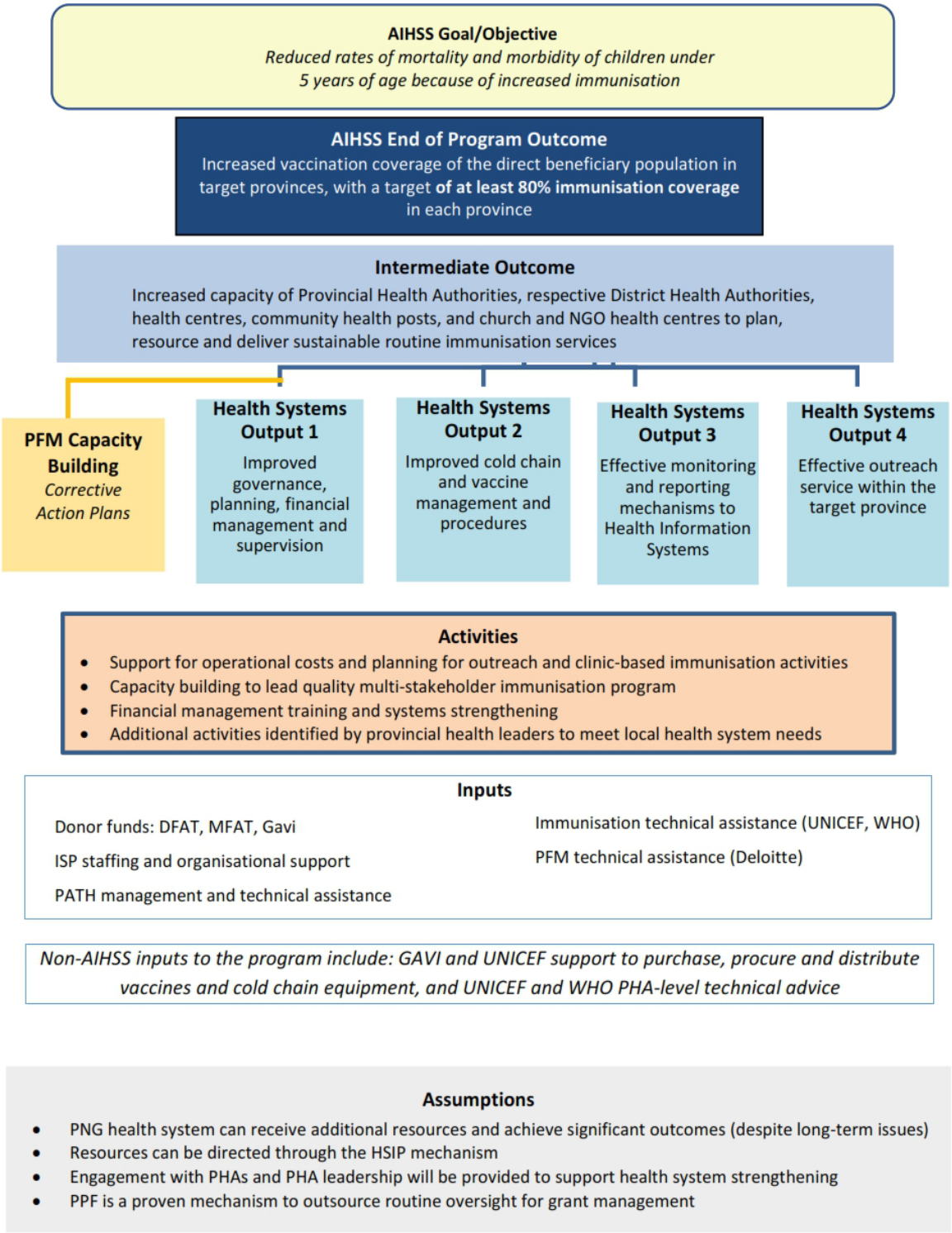
Recommendation 9: Conduct immunisation coverage surveys

The acknowledged weaknesses in PNG population data give rise to widespread concerns regarding the reliability of immunisation coverage in PNG.

Donors and technical partners should consider conducting coverage surveys to provide an improved estimate of coverage in AIHSS program provinces.

Annexes

Annex 1: AIHSS Program Logic Model (Adapted)



The adapted logic model is based on the objectives, outputs and activities, inputs and assumptions outlined in the DFAT AIHSS Concept Note. PFM capacity building activities guided by Corrective Action Plans are included as an additional output.

Annex 2: Key Evaluation Questions

Key Evaluation Question	Indicative Sub-questions
KEQ1 Relevance: To what extent does the AIHSS approach align with Government of Australia and Government of PNG development priorities?	–
KEQ2 Context: What contextual changes have impacted on AIHSS delivery?	**2a.** How has AIHSS aligned with and adapted to the changing GoPNG policy context (including the Comprehensive Multi-Year Plan (2016–2020) and new National Immunization Strategy)? **2b.** Has PHA readiness and capability, as well as PFM systems and processes, impacted on implementation? **2c.** How has COVID-19 impacted AIHSS delivery? **2d.** How has the transition of AIHSS from PPF to PATH impacted on AIHSS management and delivery? **2e.** To what extent has AIHSS benefited from the broader PATH program structure, and is it contributing to PATH's End of Investment Outcomes?
KEQ3 Effectiveness: To what extent is AIHSS making progress towards the expected End of Program Outcome and Outputs?	**3a.** To what extent has AIHSS increased vaccination coverage of the direct beneficiary population in target provinces (EOPO)? **3b.** To what extent has AIHSS improved PHA governance, planning, financial management and supervision to support routine immunisation (Output 1)? **3c.** To what extent has AIHSS improved cold chain, and vaccine management and procedures (Output 2)? **3d.** To what extent has AIHSS strengthened monitoring and reporting mechanisms and Health Information Systems (Output 3)? **3e.** To what extent has AIHSS supported delivery of effective outreach services within the target provinces (Output 4)? **3f.** To what extent has AIHSS supported strengthened coordination and harmonisation between donors, national stakeholders and subnational stakeholders?
KEQ4 Efficiency: To what extent have outputs been delivered in an efficient and cost-effective way.	**4a.** To what extent is the AIHSS organisational model (e.g. resource allocation, team structure, management structures, process for selection of partners) effective and efficient? **4b.** To what extent are AIHSS governance mechanisms (e.g. donor coordination, decision-making, and mechanisms for GoPNG and PHA engagement) effective and efficient? **4c.** To what extent does AIHSS coordinate with and complement other immunisation and health systems strengthening activities (e.g. other technical assistance and capacity building activities implemented by WHO, UNICEF, and PATH in AIHSS-supported provinces)? **4d.** How has the program adapted to be more efficient and demonstrate cost savings over time? **4e.** What is the process for disbursement, expenditure and acquittal of donor funds to PHAs and compliance with donor grant/financial management requirements? Is this process timely and efficient?
KEQ5 Models of care: What are the strengths and weaknesses of the different implementation models adopted in AIHSS provinces?	**5a.** How, and why, has the AIHSS implementation model varied between provinces? **5b.** To what extent have the different models varied in terms of effectiveness, efficiency and equity?

Key Evaluation Question	Indicative Sub-questions
	5c. What is the cost per vaccine dose administered in each province, and why has this varied between provinces?
KEQ6 Monitoring and evaluation: To what extent are AIHSS monitoring and evaluation arrangements fit for purpose for supporting program decision-making, accountability, learning and adaptation?	–
KEQ7 Sustainability: To what extent are the positive impacts of AIHSS likely to be sustained?	**7a.** What evidence is there that the program has strengthened PHA ability to transition to planning and managing grants directly? **7b.** To what extent do participating provinces have a clear transition plan that has been agreed to by all stakeholders? **7c.** In provinces implementing the PHA/ISP-led model, what evidence is there that immunisation service providers have built the capacity of PHAs to transition to planning, managing and delivering services independently? **7d.** What progress has been made in identifying options for transitioning away from reliance on donor funding?
KEQ8 GEDSI: To what extent has AIHSS considered and addressed the needs of women and girls, men and boys, people with a disability, and other disadvantaged groups, such as people living in rural and remote areas and urban poor?	–

Annex 3: Alignment between PNG *National Health Plan 2021–2030* and AIHSS Program

National Health Plan 2021–2030	Areas of Alignment – AIHSS
Key Result Area (KRA) 1: Healthier Communities through Effective Engagement Principles and values: People-centred healthcare.	Strengthen community engagement in planning and implementing health services – AIHSS supports community engagement to increase acceptability, reach and impact of immunisation services.
KRA 2: Working Together in Partnership Principles and values: Working with all partners across all levels of the health system.	AIHSS brings together key donors (DFAT, MFAT, and Gavi) and UN agencies (WHO and UNICEF) with NDoH, PHAs, NGOs/CSOs, and church health providers, to strengthen immunisation services.
KRA 3: Increase Access to Quality and Affordable Health Services Principles and values: Accessible, quality, integrated services adapted to community needs.	Increase access to health care services for all with greater focus on disadvantaged communities – AIHSS supports mobile and outreach services that increase immunisation service reach to remote areas.
KRA 4: Address Targeted Disease Burden and Health Priorities Principles and values: A focus on disease prevention and health promotion.	Reduce burden of communicable diseases to achieve global obligations – AIHSS aims to increase coverage of essential immunisation.
KRA 5: Strengthen Health Systems Principles and values: PHAs take carriage of their communities' service needs.	Focus AIHSS on PHA capacity building to improve health leadership, governance, and management.

Annex 4: Assessing Progress in Achieving the Program Outcome of Vaccinating More Children in AIHSS-Supported Provinces

Approach to the assessment

Particular considerations in assessing AIHSS program performance

The AIHSS program is supporting immunisation program activities in 12 provinces of PNG, accounting for approximately two-thirds of the national population. Program activities in provinces did not necessarily start at the commencement of any calendar year, and they did not start at the same time in each province; 2 activities commenced in Q4 2019, 3 in Q1 2020, 1 in Q2 2020, 3 in Q3 2020, 1 in Q4 2020, and 2 in Q1 2021. Originally, program management tried to address this by using calculations of eligible target populations for each of the vaccine antigens and doses over the life of the program (i.e. from whenever it started in a particular province until December 2022, when the program was slated to come to an end). While potentially there is value in this approach, data produced in this way is not comparable with official figures from the National Health Information System, and it does not allow for comparison with the period before the program began, or with those provinces not supported by the program.

Methodology adopted for assessing progress

The Evaluation Team has used the reported figures provided by the NHIS, which are the officially-accepted data on immunisation available to the Government of Papua New Guinea, and to partner agencies. Using these figures allows comparison with the period before the program commenced, and with the situation in those provinces not supported by the program.

For the purposes of this evaluation, the analysis has concentrated on a selected set of vaccination figures, for the doses of Pentavalent 1, Pentavalent 3, and Measles-Rubella 1 given to children in the target age range for those vaccines. These 3 vaccine doses essentially provide a proxy for overall program activity, and coverage.

To assess whether or not progress has been achieved since the program began, the Evaluation Team has arbitrarily defined the years 2017, 2018, and 2019 as the ‘pre-program period’, and the years 2020, 2021, and 2022 as the ‘program period’. While accepting that program provinces commenced receiving support at different times, the Evaluation Team determined that establishing these periods was a reasonable way to view the data.

Data has been reviewed and presented in 2 ways:

- The **calculated estimated percentage coverage of the target population** for each of the selected antigens, by province and time period. This is the traditional method for assessing immunisation program performance.
- The **number of immunisations given** for each of the selected antigens, by province and by time period. This provides a measure of overall immunisation activity, which is independent of a denominator target population. While not the usual method for assessing progress, in the context of Papua New Guinea and of the AIHSS program, it provides a very useful indicator of performance.

Results

Reported vaccination coverage and what it tells us

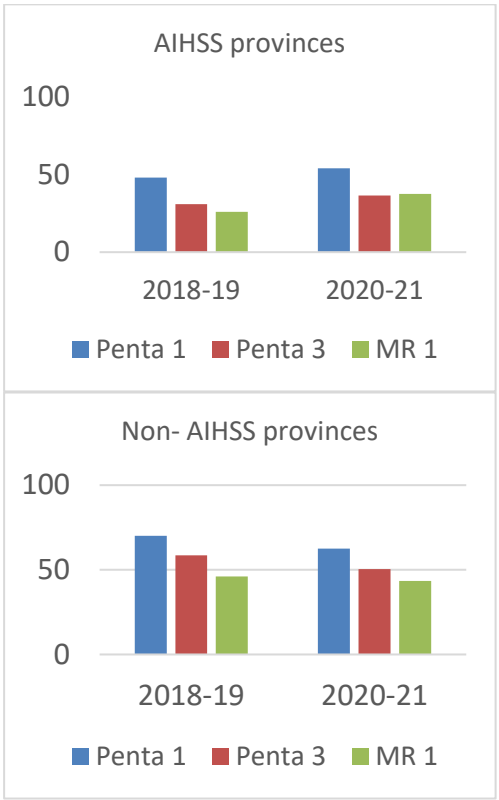
Percentage vaccination coverage of a particular vaccine and dose for a given target population is the most common form of reporting on performance of vaccination programs. In Papua New Guinea, the denominator target populations are based on projections from the 2011 Census. There are concerns widely expressed that these figures may no longer be reasonable estimates for all provinces; nonetheless, percentage coverage remains a useful indicator for assessing program performance.

At the start of the program, AIHSS provinces collectively performed considerably worse in terms of coverage than non-AIHSS provinces; this is one of the reasons they were selected for specific support.

Some key points are observable in this data:

- As noted, in pre-program years, coverage in AIHSS provinces was in general much lower than in the non-program provinces.
- Overall, program provinces saw improvements in coverage over the program period, but this was uneven. East Sepik, Jiwaka, Gulf, and West Sepik Provinces saw the biggest improvements, although all were coming from a very low base. Other provinces – notably Southern Highlands, Western Highlands, and Morobe – have seen little or no coverage increase.
- Non-program provinces overall saw a decline in coverage (from a much higher base) over the assessment period.

Figure A4-1: Percentage vaccination coverage – Penta1, Penta3, and MR1 – in 2018–19 versus program period 2020–21 in AIHSS and non-AIHSS provinces



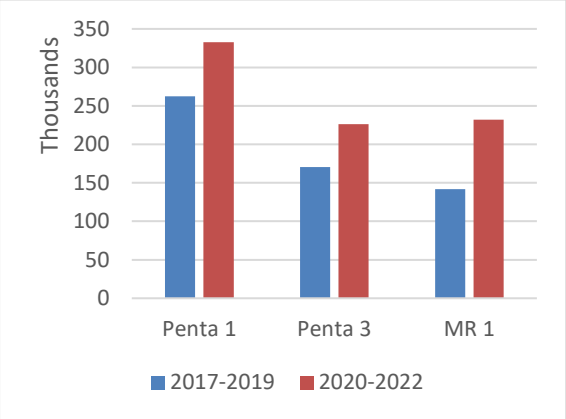
The number of immunisations given and what it tells us

The number of each vaccine dose given is a measure that can be used independently of any denominator and can help to understand and visualise relative activity and changes.

Some key points are observable in this data:

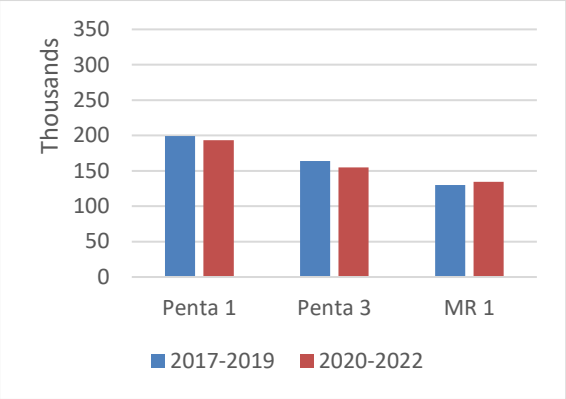
- AIHSS provinces, in general, gave more vaccinations in 2020 and 2021 than in the 2 preceding non-program years. This is in contrast to non-program provinces, which (with a couple of exceptions) mostly gave fewer vaccinations in 2020 and 2021 than they did in previous years.
- The year 2020 saw significant improvement (a greater than 10% increase) in the number of vaccinations given in 10 out of the 12 AIHSS provinces. In some provinces, such as Jiwaka, ARoB, East Sepik, West Sepik, Madang, and Morobe, that progress was dramatic. In contrast, only 3 out of 10 non-program provinces recorded significant improvement.
- The year 2021 was heavily disrupted by the COVID-19 pandemic and saw declines in performance in most provinces, both AIHSS-supported and non-program, compared to 2020. However, in 8 of the 12 AIHSS provinces, despite the declines, the numbers of vaccinations given remained above 2018 figures; this is true of only 2 of the 10 non-program provinces.
- Performance in AIHSS program provinces is uneven, with some provinces significantly raising the number of vaccinations (e.g. East Sepik, Jiwaka, and Gulf), and others struggling to maintain performance levels (Southern Highlands and Western Highlands, in particular).
- Totalling performance over the comparison period (i.e. the number of doses given 2017–19 versus 2020–22) helps to adjust somewhat for the impact of the COVID-19 pandemic, especially in the first half of 2021. The following graphs summarise the total number of Penta1, Penta3, and MR1 immunisations for those periods and program and non-program provinces.

Figure A4-2: Total vaccinations given – Penta1, Penta3, and MR1 – in pre-program period (2017–19) versus program period (2020–22) – AIHSS provinces, with data table



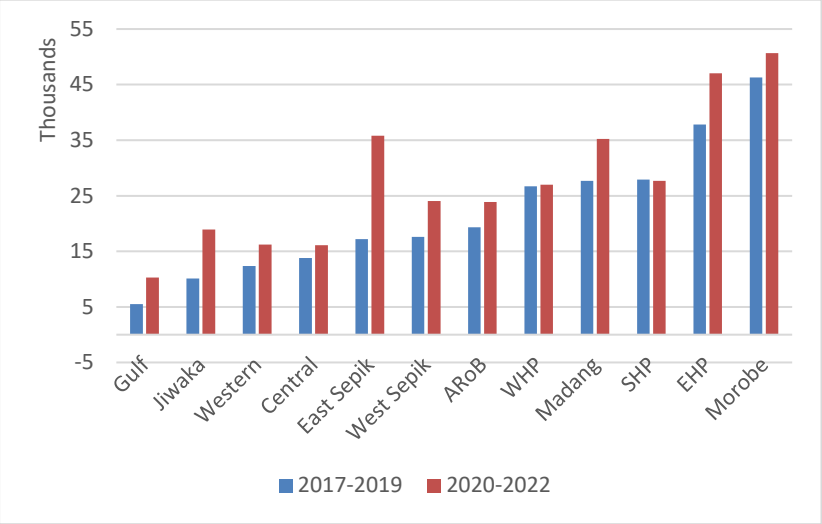
Vaccine	2017–2019	2020–2022	Change (%)
Penta1	262,288	332,738	27
Penta3	170,651	226,329	33
MR1	141,681	232,253	64

Figure A4-3: Total vaccinations given – Penta1, Penta3, and MR1 – in pre-program period (2017–19) versus program period (2020–22) – non-AIHSS provinces, with data table



Vaccine	2017–2019	2020–2022	Change (%)
Penta1	199,086	193,444	−3
Penta3	164,132	154,989	−6
MR1	129,995	134,684	4

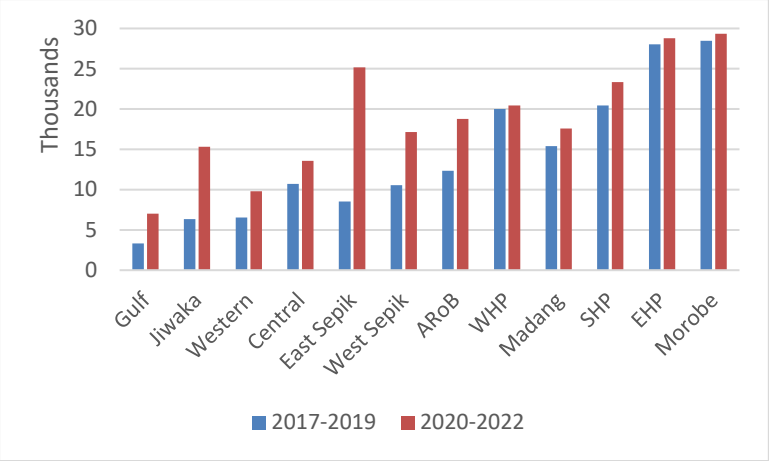
Figure A4-4: Number of Pentavalent 1 doses given to children < 1 year of age in AIHSS provinces in pre-program (2017–19) and program (2020–22) periods, with data table



Province	2017–2019	2020–2022	Change (%)
Gulf	5,507	10,258	86
Jiwaka	10,111	18,904	87
Western	12,368	16,221	31
Central	13,772	16,089	17
East Sepik	17,204	35,791	108
West Sepik	17,610	24,055	37
ARoB	19,315	23,872	24
WHP	26,673	26,961	1
Madang	27,677	35,256	27
SHP	27,939	27,676	-1

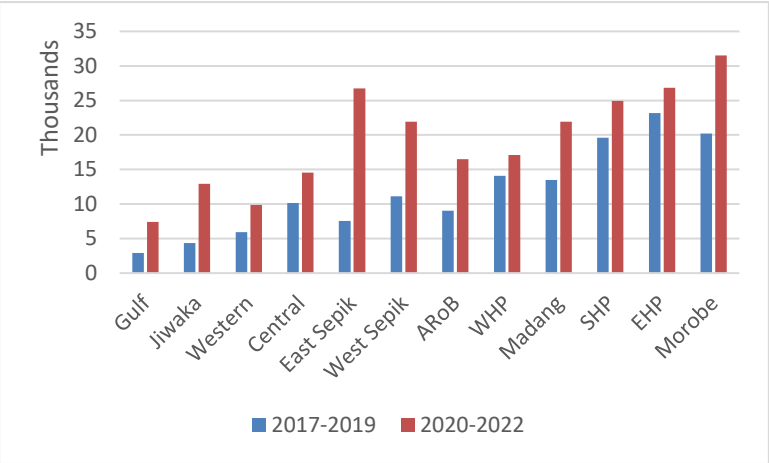
Province	2017–2019	2020–2022	Change (%)
EHP	37,829	47,014	24
Morobe	46,283	50,641	9
TOTAL	262,288	332,738	27

Figure A4-5: Number of Pentavalent 3 doses given to children < 1 year of age in AIHSS provinces in pre-program (2018–19) and program (2020–21) periods, with data table



Province	2017–2019	2020–2022	Change (%)
Gulf	3,329	7,014	111
Jiwaka	6,350	15,315	141
Western	6,519	9,812	50
Central	10,726	13,578	27
East Sepik	8,543	25,165	195
West Sepik	10,534	17,163	63
ARoB	12,329	18,790	52
WHP	20,000	20,428	2
Madang	15,411	17,567	14
SHP	20,428	23,354	14
EHP	28,028	28,784	23
Morobe	28,454	29,359	3
TOTAL	170,651	226,329	33

Figure A4-6: Number of MR1 doses given in AIHSS provinces in pre-program (2018–19) and program (2020–21) periods, with data table



Province	2017–2019	2020–2022	Change (%)
Gulf	2,938	7,391	152
Jiwaka	4,352	12,952	198
Western	5,952	9,892	66
Central	10,137	14,538	43
East Sepik	7,565	26,744	254
West Sepik	11,107	21,922	97
ARoB	9,058	16,501	82
WHP	14,097	17,093	21
Madang	13,500	21,921	62
SHP	19,584	24,935	27
EHP	23,176	26,835	16
Morobe	20,215	31,529	56
TOTAL	141,681	232,253	64

Figure A4-7: Percentage change in the total number of doses given – Penta1, Penta3, and MR1 – in AIHSS-supported provinces during program period (2020–22) compared to pre-program period (2017–19)

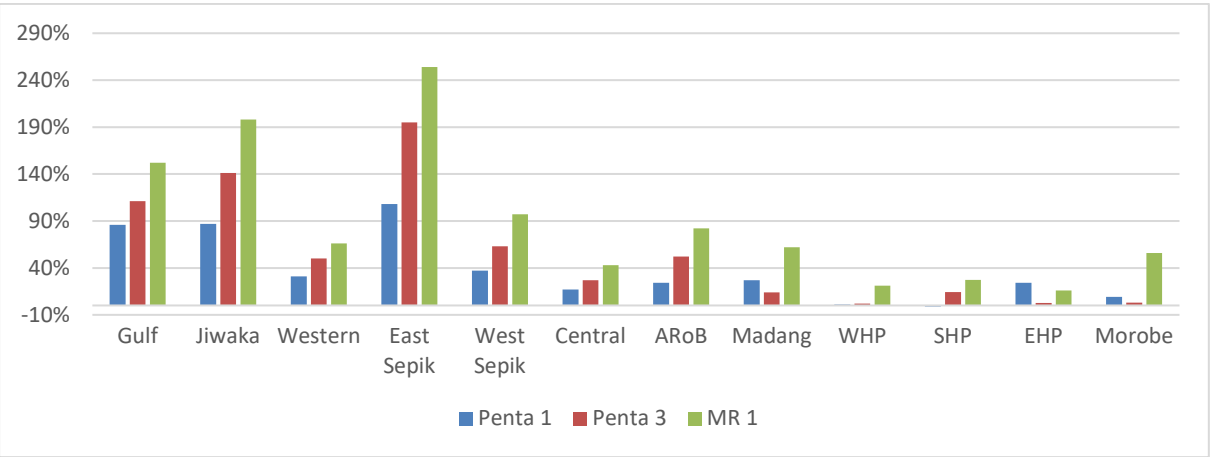


Figure A4-8: Percentage change in the total number of doses given – Penta1, Penta3, and MR1 – in non-AIHSS-supported provinces during program period (2020–22) compared to pre-program period (2017–19)

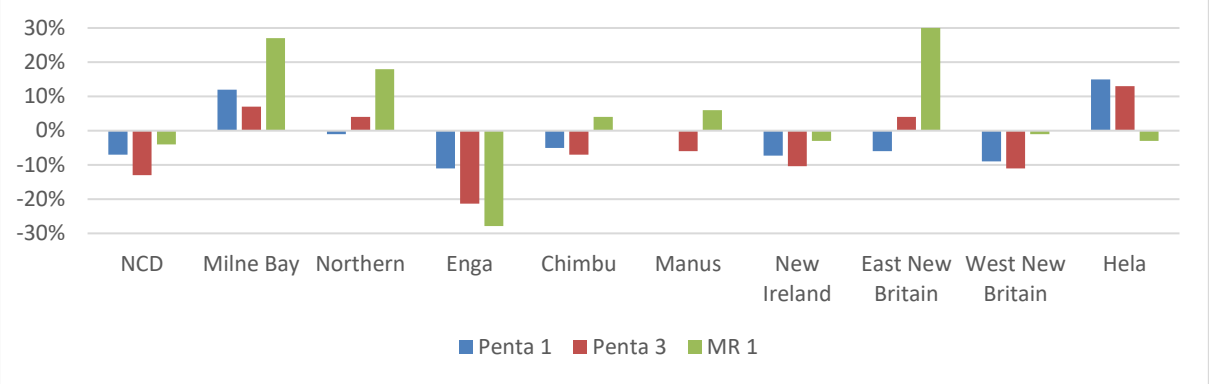
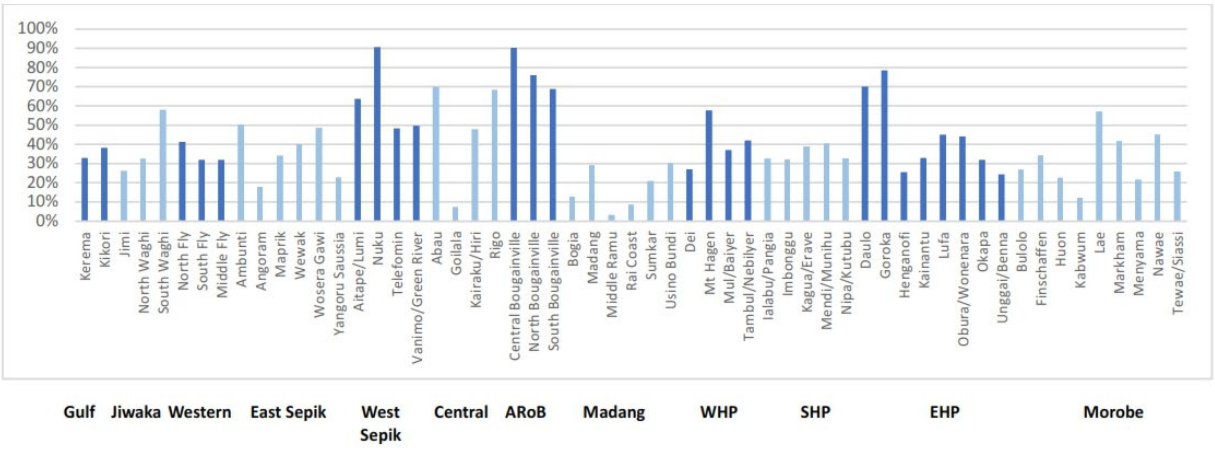


Figure A4-9: Penta3 coverage in AIHSS-supported province by district, 2022



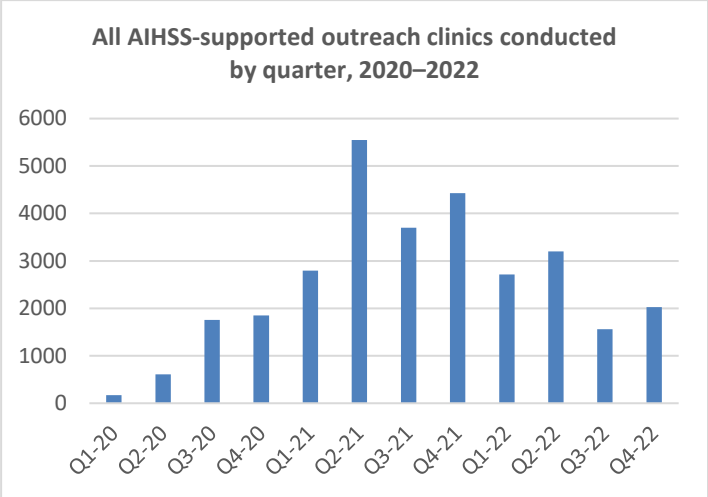
Data source: Sector Performance Annual Review (SPAR) Rankings Q4 2022 (17 March 2023)

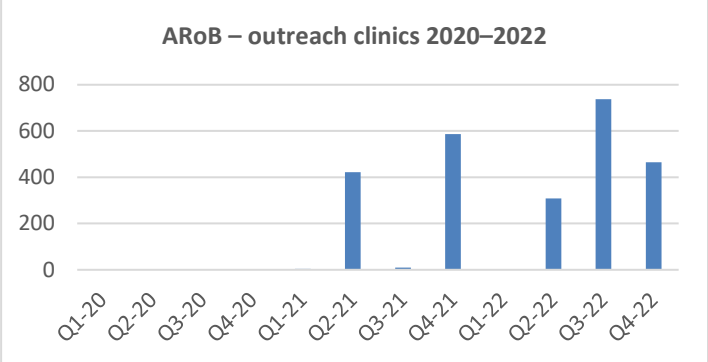
Overall conclusions and key points

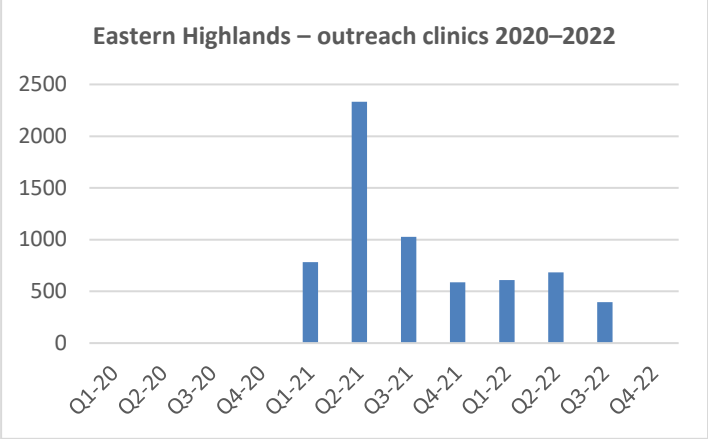
- There is clear evidence from NHIS data that there has been an overall increase in immunisation activity in AIHSS-supported provinces over the program period. This is reflected in an overall increase in the number of vaccinations given for the indicator vaccines and doses, and in an increase in reported coverage against estimated eligible target populations overall in these provinces.
- This situation contrasts with the overall situation in non-project provinces, which have seen overall declines in the numbers of vaccinations given over the same period. Similarly, non-program provinces have seen a decline in reported coverage against estimated eligible target populations, although this coverage generally remained higher overall than in program provinces.
- Evidence demonstrates that the COVID-19 pandemic had a significant impact on immunisation activity; in particular in 2021, when community concerns over the safety of COVID-19 vaccines were at their height. This led to declines in activity compared to 2020. However, in general, AIHSS program provinces managed to maintain a higher level of activity in 2021 than in the pre-program period, despite these impacts. This contrasts with non-program provinces, which overall saw activity levels decline below 2018 and 2019 levels.

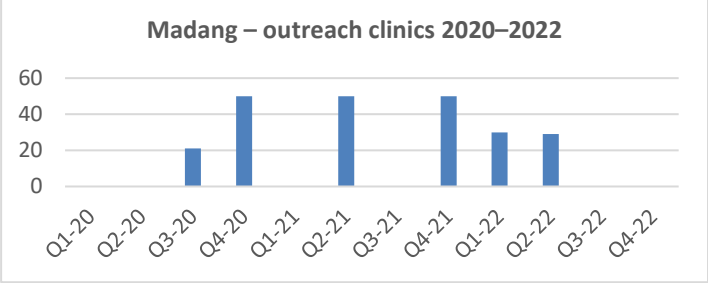
- Analysis of data from 2022 shows that, in comparison with the same period in 2021, AIHSS provinces are generally either maintaining activity at around 2021 levels, or in the case of some provinces (such as ARoB, West Sepik, and Central), greatly exceeding 2021 levels. This is a positive sign given that national elections in mid-year affected activities in several provinces for extended periods of time.
- There are significant differences in performance between AIHSS program provinces. In general, those provinces with the lowest levels of activity prior to becoming engaged with the program, and the lowest coverage, have seen the biggest relative gains. This includes East Sepik, Jiwaka, Gulf, Central, Western, and West Sepik Provinces, and in 2022 also the Autonomous Region of Bougainville. However, the larger population program provinces have not performed as strongly, and Morobe (with the exception of MR1 vaccinations) and Southern and Western Highlands, in particular, are only succeeding in maintaining activity levels over time, not increasing them.
- There are high levels of variation in Penta3 district-level coverage across all AIHSS-supported provinces, with far lower levels of coverage in more remote districts.

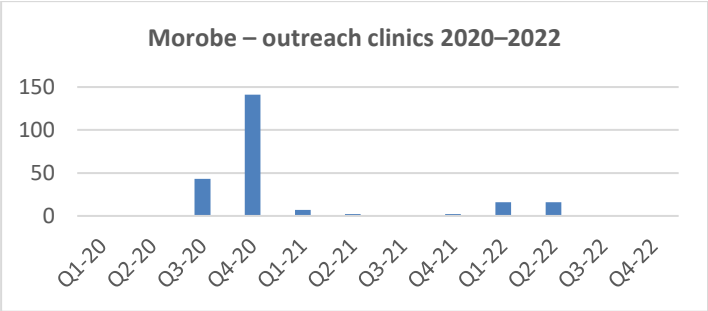
Annex 5: AIHSS-Supported Outreach Clinics Conducted by Quarter, 2020–2022*

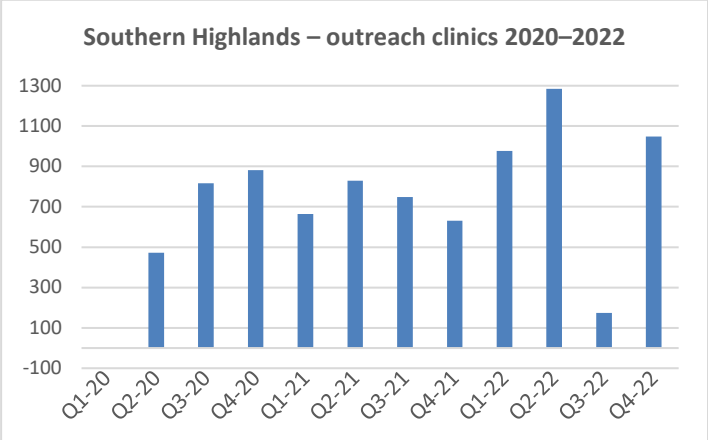


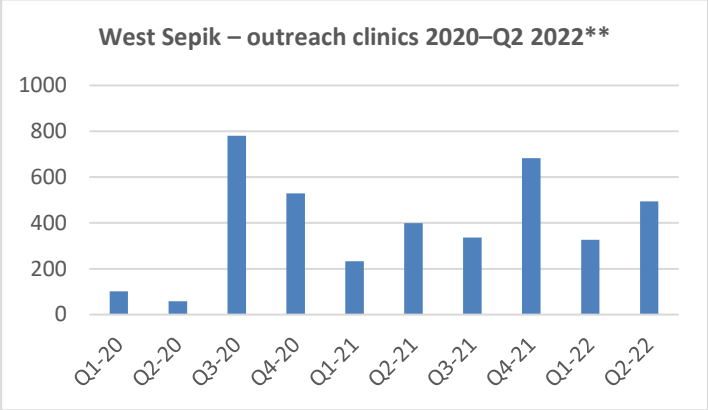


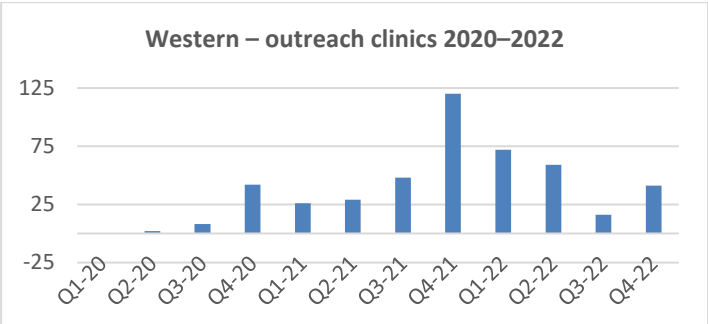












Notes:

*This annex provides a snapshot of the reported number of AIHSS-supported clinics in a selection of participating provinces.

** ISP Burnet Institute did not continue in West Sepik Province after June 2022; thus, no program support was provided after June 2022.

Source: AIHSS Performance Reporting Framework Q2 2022

Annex 6: AIHSS Health System Outputs – Results

Legend	Progress
Green = [G]	December 2022 EOPO target achieved (over 90%) or ahead of schedule
Amber = [A]	On track to meet December 2022 EOP target
Red = [R]	Underperforming (less than 85% achieved)
Purple = [P]	Data unreliable and/or poor reporting

Health System Output 1: Improved Governance, Planning, Financial Management and Supervision

Indicator	EOPO Target	Progress Q2 2022	Result	Comments[58]
1.1 Number of health facilities with developed micro-plans.	462	446 [G]	10 of 12 AIHSS program provinces have micro-plans for at least 90% of health facilities in the province.	This has increased from a total of 298 health facilities with micro-plans in Q4 2020 to 446 health facilities in Q2 2022.
1.2 Number of districts with developed micro-plans.	58	56 [G]	11 of 12 AIHSS provinces have district-level micro-plans.	Increased from a total of 38 districts in Q4 2020 with micro-plans to 56 districts in Q2 2022.
1.3 Number of provinces developing and implementing a plan (financial and institutional) for domestic sustainability of immunisation program with PHA and provincial administration.	12	10 [A]	10 of 12 provinces have a sustainability plan.	Increased from 4 PHAs with a sustainability plan in Q4 2020 to 10 PHAs with a sustainability plan in Q2 2022.
1.4 Number of health facilities receiving at least 1 supervisory visit by district/province per quarter.	462	210 [A]	No AIHSS provinces conducting at least 1 supervisory visit by district/ province per quarter.	Increased from 91 health facilities receiving a supervisory visit/quarter in Q4 2020 to 210 health facilities in Q2 20222.
1.5 Percentage of GoPNG-allocated Health Function Grant received by the province in fiscal year.	99%	72% [P]	Data unreliable.	7 of 12 provinces did not report data for this indicator in Q2 2022.

[58] By Q4 2020, 10 out of 12 PHAs had commenced implementing AIHSS activities. All PHAs had commenced program activities by Q1 2021.

1.6 Amount of province quarterly primary health care/family health/outreach including immunisation budget expended (including provincial allocation, grant through HSIP, and other grants).	–	PGK 8,332,716 [P]	ISPs experiencing difficulty obtaining data for this indicator.	9 of 12 provinces did not report data for this indicator in Q2 2022 (consistently low reporting).
1.7 Provincial government funding for primary health care/family health/outreach including immunisation service delivery.	–	PGK 9,949,717 [P]	Most ISPs have not set targets for this indicator.	9 of 12 provinces did not report data for this indicator in Q2 2022 (consistently low reporting).
1.8 Proportion of allocated immunisation sub-program funds that are spent in accordance with the Annual Implementation Plan.	–	– [P]	Not possible to calculate total as grantees reporting different units of measure (value vs percentage).	9 of 12 provinces did not report data for this indicator in Q2 2022 (consistently low reporting).

Health System Output 2: Improved Cold Chain and Vaccine Management and Procedures

Indicator	EOPO Target	Progress Q2 2022	Result	Comments [59]
2.1 Quarterly vaccine utilisation rate of Penta vaccine in the province.	92%	78% [P]	Increase from average 42% at baseline (2018/2019 data) to average78% (Q2 2022). However, data for this indicator is unreliable.	No data reported for 6 PHAs and partial data in several others.
2.2 Number of health facilities with functioning cold chain equipment.	455	429 [G]	8 of 12 PHAs have > 95% of facilities with functioning cold chain equipment (CCE).	PHAs not reaching targets are Madang, Western Highlands and Western PHAs (88% of HFs with functioning CCE); and ARoB (77% of HFs with functioning CCE).
2.3 Number of health facilities reporting weekly surveillance reports.	399	163 [R]	4 of 12 PHAs are achieving 95% of this target (ARoB, East Sepik, Jiwaka, and Western PHAs).	In 5 PHAs 0% of reports submitted.
2.4 Number of cold rooms/refrigerators at provincial store with functional pre-qualified Continuous Temperature Monitoring Devices	106	76 [R]	8 of 12 PHAs are meeting this target.	Underperforming PHAs include Central (0%), Gulf (24%), Southern Highlands (33%), and Eastern Highlands (85%).

[59] By Q4 2020, 10 out of 12 PHAs had commenced implementing AIHSS activities. All PHAs had commenced program activities by Q1 2021.

Indicator	EOPO Target	Progress Q2 2022	Result	Comments [59]
(TMD) this includes 30-Day Temperature Recorder (30DTR) (fridge tag 2).				
2.5 Number of health facilities using vaccine stock registers issued by NDoH	425	360 [G]	8 of 12 PHAs with 100% of HFs using NDoH vaccine stock registers	–
2.6 Number of stock out days of essential Penta vaccines at provincial medical store per quarter.	< 5 days stock out per quarter	21 days stock out [R]	11 of 12 PHAs are meeting the target of no more than 5 stock out days per quarter in Q2 2022.	Madang PHA reports 21 days stock out in Q2 2022. No other PHAs reporting stock out.
2.7 Number of health facilities with vaccine stock out of any EPI vaccine during month.	31	77 [R]	8 of 12 PHAs with no stock out in HFs in Q2 2022.	Remaining PHAs reporting in Q2 2022 report: Madang (45 HFs with stock out); ARoB (18 HFs with stock out); Eastern Highlands (13 HFs with stock out); Morobe (1 HF with stock out).
2.8 Proportion of health facilities with temperature excursion/alarm in the last 30 days.	< 5% HFs report alarm	2% [G]	10 of 12 PHAs meeting EOPO target (< 5%) in Q2 2022.	Remaining PHAs report in Q2 2022: Eastern Highlands (5%) and ARoB (14%).
2.9 Number of health facilities providing immunisation services.	461	431 [G]	10 of 12 PHAs on track – at least 90% of HFs delivering immunisation services in Q2 2022.	Remaining PHAs include: Gulf (86% HFs providing immunisation services) and Morobe (64% providing immunisation services).

Health System Output 3: Effective Monitoring and Reporting Mechanisms to Health Information Systems (should define each entity under the health information system (HIS))

Indicator	EOPO Target	Progress Q2 2022	Result	Comments [60]
3.1 Number of health facilities submitting complete monthly reports on time to NHIS/eNHIS.	402	351 [A]	8 of 12 PHAs submitting reports on time in Q2 2022. Number of HFs submitting reports increased from 237 HFs in Q4 2020 to 351 HFs in Q2 2022.	PHAs with less than 90% of NHIS reports submitted on time: Morobe (40%); West Sepik (53%); Western (76%); & Madang (87%).
3.2 Number of people trained in strategic information (includes M&E, surveillance, HMIS, data analysis and/or reporting).	280	1,561 [G]	1,561 people training over program period as of Q2 2022.	All PHAs except Central (80%) exceeding target.
3.3 Number of provincial quarterly review meetings conducted to discuss strategic information (includes data quality, M&E, surveillance, HMIS, data analysis and/or reporting).	82	77 [R]	5 of 12 PHAs conducted more than 1 quarterly review meeting in the first half of 2022.	Overall increase in regular conduct of quarterly review meetings, but some PHAs conducting multiple meetings per quarter (questionable data), and others conducting only 1 per year.

Health System Output 4: Effective Outreach Service within the Target Province

Indicator	EOPO Target	Progress Q2 2022	Result	Comments [61]
4.1 Number of outreach clinics planned during the quarter (mobile and outreach sessions).	15,855	49,831 [G]	Greatly exceeding target. Increase from 2,713 in Q4 2020 to 8,604 in Q4 2021, then declining to 5,1754 in Q2 2022.	Very large variation across PHAs in target set for this indicator (from 1 clinic per quarter in Jiwaka to 6,630 clinics per quarter in Eastern Highlands).
4.2 Number of outreach clinics conducted during the quarter (mobile and outreach sessions).	13,792 Approx. 85% of planned clinics	26,785 [G]	Number greatly exceeding target. Increase from 1,851 clinics in Q4 2020 to 5,548 in Q2 2021, then declining to 3,198 in Q2 2022. Proportion of planned vs conducted clinics = 54%.	As above – large variation in target and achievements for number of clinics across PHAs. Between 68% (Q4 2020) to 62% (Q4 2022) of planned clinics conducted.

[60] By Q4 2020, 10 out of 12 PHAs had commenced implementing AIHSS activities. All PHAs had commenced program activities by Q1 2021.
[61] By Q4 2020, 10 out of 12 PHAs had commenced implementing AIHSS activities. All PHAs had commenced program activities by Q1 2021.

Indicator	EOPO Target	Progress Q2 2022	Result	Comments [61]
4.3 Number of community outreach awareness/sensitisation sessions (church sessions, school sessions, market sessions, village elders sessions) on the importance of child immunisation planned and conducted in the month/quarter.	2,847	3,101 [G]	Number of sessions fluctuates, but total number per year is increasing: 573 (2020), 1,541 (2021); and 987 (Q1 and Q2 2022).	Western Highlands, Southern Highlands and Jiwaka PHAs are achieving 75% or less of their target for this indicator.
4.4 Number of health facilities within the target province that have an established Village Health Volunteer network.	419	233 [R]	5 of 12 PHAs meeting target, but total number of VHV networks has doubled.	Total number of HFs with VHV network increased from 101 (Q4 2020) to 233 (Q2 2022).

Annex 7: AIHSS Health System Outputs – Results Achieved by Province

Legend	Progress
Green = [G]	December 2022 EOPO target achieved (over 90%) or ahead of schedule
Amber = [A]	On track to meet December 2022 EOP target
Red = [R]	Underperforming (less than 85% achieved)
Purple = [P]	Data unreliable and/or poor reporting

Health System Output 1: Improved Governance, Planning, Financial Management and Supervision

Indicator/Unit of Measure	ARoB	Central	East Sepik	EHP	Gulf	Jiwaka	Madang	Morobe	SHP	WHP	Western	West Sepik
1.1 Number of HFs with developed micro-plans.	[R]	[R]	[R]	[R]	[R]	[R]	[R]	[R]	[R]	[R]	[R]	[R]
1.2 Number of districts with developed micro-plans.	[A]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]
1.3 Number of provinces developing and implementing a plan for sustainability of immunisation program.	[G]	[G]	[G]	[G]	[R]	[G]	[G]	[G]	[G]	[G]	[G]	[G]
1.4 Number of HFs receiving at least 1 supervisory visit by district/province per quarter.	[R]	[R]	[R]	[R]	[R]	[R]	[R]	[R]	[R]	[A]	[R]	[R]
1.5 Percentage of GoPNG-allocated Health Function Grant received by the province in fiscal year.	[R]	[P]	[G]	[R]	[P]	[G]	[P]	[P]	[R]	[P]	[P]	[P]
1.6 Amount of province quarterly primary health care/family health/outreach including immunisation budget expended.	[R]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]
1.7 Provincial government funding for primary health care/family	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[R]

Indicator/Unit of Measure	ARoB	Central	East Sepik	EHP	Gulf	Jiwaka	Madang	Morobe	SHP	WHP	Western	West Sepik
health/outreach including immunisation service delivery.												
1.8 Proportion of allocated immunisation sub-program funds spent in line with Annual Implementation Plan.	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]	[P]

Health System Output 2: Improved Cold Chain and Vaccine Management and Procedures

Indicator/Unit of Measure	ARoB	Central	East Sepik	EHP	Gulf	Jiwaka	Madang	Morobe	SHP	WHP	Western	West Sepik
2.1 Quarterly vaccine utilisation rate of Penta vaccine in the province.	[G]	[P]	[R]	[R]	[R]	[G]	[P]	[P]	[G]	[P]	[P]	[P]
2.2 Number of HFs with functioning cold chain equipment.	[R]	[G]	[G]	[G]	[G]	[G]	[A]	[G]	[G]	[A]	[A]	[G]
2.3 Number of HFs reporting weekly surveillance reports.	[G]	[R]	[G]	[R]	[R]	[G]	[R]	[R]	[R]	[R]	[G]	[R]
2.4 Number of cold rooms/refrigerators at provincial store with functional pre-qualified Continuous Temperature Monitoring Devices.	[G]	[R]	[G]	[A]	[R]	[G]	[G]	[G]	[G]	[G]	[G]	[R]
2.5 Number of HFs using vaccine stock registers issued by NDoH.	[R]	[G]	[G]	[R]	[G]	[G]	[R]	[G]	[G]	[G]	[G]	[R]
2.6 Number of stock out days of essential Penta vaccines at provincial medical store per quarter.	[G]	[G]	[G]	[G]	[G]	[G]	[R]	[G]	[G]	[G]	[G]	[G]
2.7 Number of HFs with vaccine stock out of any EPI vaccine during month.	[R]	[G]	[G]	[R]	[G]	[G]	[R]	[R]	[G]	[G]	[G]	[G]

Indicator/Unit of Measure	ARoB	Central	East Sepik	EHP	Gulf	Jiwaka	Madang	Morobe	SHP	WHP	Western	West Sepik
2.8 Proportion of HFs with temperature excursion/alarm in the last 30 days.	[R]	[G]	[G]	[R]	[G]	[G]	[R]	[G]	[G]	[G]	[G]	[G]
2.9 Number of HFs providing immunisation services.	[G]	[G]	[G]	[G]	[A]	[G]	[G]	[R]	[G]	[G]	[G]	[G]

Health System Output 3: Effective Monitoring and Reporting Mechanisms to Health Information Systems (should define each entity under HIS)

Indicator/Unit of Measure	ARoB	Central	East Sepik	EHP	Gulf	Jiwaka	Madang	Morobe	SHP	WHP	Western	West Sepik
3.1 Number of HFs submitting complete monthly reports on time to NHIS/eNHIS.	[G]	[G]	[G]	[G]	[G]	[G]	[A]	[R]	[G]	[G]	[R]	[R]
3.2 Number of people trained in strategic information (includes M&E, surveillance, HMIS, data analysis and/or reporting).	[G]	[R]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]
3.3 Number of provincial quarterly review meetings conducted to discuss strategic information.	[R]	[G]	[R]	[G]	[G]	[R]	[A]	[R]	[G]	[R]	[A]	[R]

Health System Output 4: Effective Outreach Service within the Target Province

Indicator/Unit of Measure	ARoB	Central	East Sepik	EHP	Gulf	Jiwaka	Madang	Morobe	SHP	WHP	Western	West Sepik
4.1 Number of outreach clinics planned during the quarter (mobile and outreach sessions).	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]
4.2 Number of outreach clinics conducted during the quarter (mobile and outreach sessions).	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]	[G]

Indicator/Unit of Measure	ARoB	Central	East Sepik	EHP	Gulf	Jiwaka	Madang	Morobe	SHP	WHP	Western	West Sepik
4.3 Number of community outreach awareness/sensitisation sessions (church sessions, school sessions, market sessions, village elders sessions) on the importance of child immunisation planned and conducted in the month/quarter.	[G]	[G]	[G]	[G]	[G]	[R]	[G]	[G]	[R]	[R]	[G]	[G]
4.4 Number of HFs within the target province that have an established Village Health Volunteer network.	[G]	[R]	[G]	[R]	[R]	[G]	[R]	[R]	[G]	[R]	[R]	[G]

Annex 8: AIHSS Disbursement, Expenditure and Acquittal Process

Aspect	WHP and EHP	OSF	CHAI, WV, BI, BCHS	Save the Children
Approach to funding, procurement, paying allowances to support approved micro-plans	Quarterly tranches of AIHSS funds transferred via HSIP. **Payment of allowances** Cash transfer of funds to District Health Managers, who distribute funds to health facility OICs and volunteers.	PHA uses Health Function Grant to conduct outreach. OSF reimburses agreed percentage of costs. **Payment of allowances** Allowances covered by PHA.	ISP procures transport and fuel for mobile and outreach activities, pays allowances for healthcare workers* and volunteers, communication costs**. **Payment of allowances** WV, BCHS: Cash transfer to District Health Managers, who distribute funds to health facility OICs and volunteers. BI: West Sepik PHA pays allowances. CHAI: transfers funds to OIC and volunteer bank accounts.	STC transfers tranches of funds to AIHSS subnational account (2 STC and 2 PHA signatories). **Payment of allowances** Cash transfer of funds to District Health Managers, who distribute funds to health facility OICs and volunteers.
Working well	PHA has autonomy to determine use of funds. WHPHA financial reporting strong.	Builds on existing OSF–PHA relationship. *Wok Bung Wantaim* approach supports PHA governance. Lower risk for NGO than direct procurement model.	CHAI uses pre-qualified suppliers and pays allowances to bank accounts – simplifies acquittal process. Financial training for district managers and OICs (all ISPs). WV acquittal pack and training well received. WS PHA pays health worker allowances (retains ownership).	PHA has autonomy; e.g. to hire vehicles and top up fuel. Simplified reporting template introduced. Additional staff recruited to support acquittal processing. Limited delays now reported for funds transfer and acquittal.
Challenges	Approval can be slow and sometimes only partial budget approved. Slow expenditure rate (although increased in Q4 2022). Siloed decision-making and communication within PHA. Managing donor program places additional burden on PHA – finance manager needs extra support/capacity building.	Delay in HFG transfer leads to delay in implementing outreach activities. Some delays in acquittals from providers experienced. PHA still managing cash – a PFM risk.	1–2 ISP staff members per province not sufficient to manage workload (WV, BI). Problems emerge when AIHSS processes not aligned with PHA, e.g. per diem rate (BCHS, WV). Failure to involve Family Health Services Coordinator, parallel decision-making and slow processing of payments not acceptable to PHA (WV). Approval and disbursement of funding for outreach very slow (WV). Additional difficulties in procurement, cash transfer and recruiting ISP staff when working in remote areas (BI).	ISP has limited visibility of funding mechanisms/finds it difficult to separate routine immunisation activities funding by PHA and AIHSS. Information flow across PHA departments poor – AIHSS working committee established to improve information sharing.

Annex 9: Key Features, Strengths and Weaknesses of AIHSS Implementation Models

Features	Lead PHA Model Direct funding via HSIP	Lead ISP Model ISP pays agreed costs – direct procurement	Lead ISP Model Reimbursement and cost sharing
Lead agency	Eastern Highlands PHA, Western Highlands PHA	Bougainville Catholic Health Services (BCHS), Burnet Institute (BI), Clinton Health Access Initiative (CHAI), Save the Children (STC), & World Vision (WV).	Oil Search Foundation.
Funding flow to PHA	AIHSS funding received directly from PATH via HSIP Trust Account	BCHS and STC transfer funding to provincial bank account – reduces need for national transfers. BI, CHAI, WV procure goods/services and pay allowances directly.	OSF reimburses PHAs for agreed percentage of activities.
Average cost per vaccine dose	Relatively low cost per vaccine dose: PGK10.79 (EHP), PGK10.84 (WHP)	Wide variation in cost per vaccine dose: from PGK15.34 (BI – West Sepik Province) to PGK51.13 (WV – Western Province).	Low to average cost per vaccine dose PGK10.51 (SHP) and PGK24.75 (Gulf Province).
ISP office arrangement	N/A	ISP co-located with PHA: BI (West Sepik), STC (Jiwaka), WV (Morobe). STC staff embedded within PHA. Standalone ISP office: BCHS (ARoB), CHAI (Central – no PHA office), STC (East Sepik – no PHA office); WV (Madang, Western).	SHP: OSF located in PHA office. Gulf Province: OSF travels regularly to Gulf Province and has recently established a team there.
PHA autonomy and PHA capacity building[62]	High level of autonomy	STC model offers high autonomy PHA mentoring support provided by embedded staff. BCHS model (revised) offers high autonomy but focus is limited to grant management. BI and CHAI model combines operational support with technical assistance – prioritises and supports PHA ownership. WV using top-down approach offers low autonomy. Decision-making does not adequately involve PHA; can be slow and unclear. PFM capacity building support not consistent.	Cost sharing intended to contribute to PHA ownership and sustainability. AIHSS support aligned with existing OSF–PHA partnership/ HSS approach – *Wok Bung Wantaim*.

[62] This is additional to the finance, planning and immunisation training activities funded by AIHSS.

Features	Lead PHA Model Direct funding via HSIP	Lead ISP Model ISP pays agreed costs – direct procurement	Lead ISP Model Reimbursement and cost sharing
Bottlenecks and risks	Delays in reporting and approving expenditure affect continuity of immunisation activities (East Sepik PHA)	Problems arise when AIHSS support not aligned to PHA requirements e.g. per diem rates in ARoB; procurement of vehicles & fuel in WV provinces. Slow acquittals in all provinces except (now) STC-led provinces – can affect continuity of funding and support to PHA. PHA commitment/capacity to engage needed for TA model to be effective. Lack of staff in key positions in PHA, and/or PHA focus on COVID-19 rollout limit opportunities for engagement/obstacles to capacity building. BI had no office or experience working in West Sepik.	Delays in Health Function Grant funding to PHA result in implementation delays. Lower risk to ISP than direct procurement model, but PHA still working in cash. OSF considering new approach to avoid this risk.

Annex 10: Average Expenditure per Vaccination in AIHSS Provinces

Data on the number of vaccinations conducted with AIHSS support was not available and information on the number of AIHSS-supported outreach activities conducted in each province is not comparable across different grantees. Without this information, it is not possible to make a reasonably accurate comparison of the cost of delivering vaccination across different provinces. Nevertheless, a comparison of AIHSS expenditure across program provinces has been made using the total number of vaccinations conducted per province over the AIHSS program period as an alternative measure of program activity – assuming that this is representative of the number of AIHSS-supported immunisation services delivered. The total AIHSS expenditure in each province per vaccination conducted over the same period was then calculated.

Table A10-1: Average AIHSS expenditure per vaccination by province

Province	Donor	Grantee	Vaccinations Delivered per Province*	AIHSS Expenditure (to June 2022) (PGK)	AIHSS Spend per Vaccination (PGK)	Comments
Southern Highlands	Gavi	OSF/Santos	260,027	2,733,650	10.51	OSF covers large proportion of AIHSS program overheads and has cost-sharing arrangement with PHA.
Eastern Highlands	Gavi	PHA	162,808	1,755,914	10.79	Relatively low expenditure compared to ISPs.
Western Highlands	DFAT/MFAT	PHA	130,421	1,413,895	10.84	Relatively low expenditure and no staffing and support costs charged to AIHSS.
West Sepik	Gavi	BI	251,257	3,853,742	15.34	WSP PHA covers cost of health worker allowances for outreach.
Madang	DFAT/MFAT	WV	232,143	3,641,016	15.68	WV ceased funding outreach in remote districts to reduce costs.
ARoB	DFAT/MFAT	BCHS	80,330	1,386,442	17.26	Low overhead and staffing costs.
Morobe	DFAT/MFAT	WV	320,967	5,800,014	18.07	–
Gulf	Gavi	OSF/Santos	100,922	2,497,441	24.75	Number of vaccinations delivered in Gulf Province is approximately 40% of SHP vaccinations (another OSF province with similar overall expenditure), resulting in relatively high cost per vaccination.
East Sepik	DFAT/MFAT	STC	144,650	3,865,701	26.72	STC has contributed an additional PGK65,697 to the program delivery costs (over-expenditure)[63].

[63] Save the Children PNG, *AIHSS Progress Report: January–June 2022*, p. 17.

Province	Donor	Grantee	Vaccinations Delivered per Province*	AIHSS Expenditure (to June 2022) (PGK)	AIHSS Spend per Vaccination (PGK)	Comments
Central	Gavi	CHAI	116,037	3,736,737	32.20	–
Jiwaka	DFAT/MFAT	STC	108,927	3,607,696	33.12	–
Western	DFAT/MFAT	WV	107,799	5,511,626	51.13	Western Province has notoriously difficult geography resulting in very high costs for transport. Costs for inception workshops in other WV provinces charged to Western PHA budget.
TOTAL	–	–	2,016,288	39,803,874	19.74	–

Notes:

* Number of vaccinations sourced from AIHSS Performance Reporting Framework Q2 2022.

** AIHSS expenditure data by province and ISP provided by PATH, Combine AIHSS Finance Report_June 2022.

*** Comments use data gathered from AIHSS grantee progress reports, Combine AIHSS Finance Report_June 2022 and stakeholder interviews.

Provinces are listed in **Table A10-1** above from the lowest AIHSS spend per vaccination (PGK10.51 in Western Highlands Province) to the highest AIHSS spend per vaccination (PGK51.13 in Western Province). Where possible, additional comments have been provided to explain factors that may influence the results calculated for each province.

Calculations shown in this table are made with the understanding that the AIHSS expenditure covers a wide range of activities, such as inception meetings, training, quarterly review meetings, purchase of equipment, project staffing and overhead costs. Furthermore, the cost of delivering the number of vaccinations is only partially covered (and for a large proportion of vaccinations likely to be only minimally covered) by AIHSS expenditure. The resulting AIHSS spend per vaccination can therefore be seen as only indicative of the efficiency of AIHSS support for vaccination across AIHSS-supported provinces.

The calculations also do not take into account the many confounding factors, such as remoteness of vaccination delivery sites, which may contribute to far higher vaccination delivery costs in certain provinces, but could at the same time. Similarly, a lower AIHSS spend per vaccination cost does not necessarily equate to more efficient, effective and equitable delivery of the AIHSS program for that province.

Annex 11: References

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Annex 12: Data Collection Tools

Data Collection Tool 1: AIHSS Project and Activity Mapping

Interviewer name:

Interviewee Name, title, organisation:

Date

Location:

Introduction

Introduce yourself and your role in the Evaluation Team/with HDMES.

Provide overview of evaluation.

With the AIHSS program coming to an end in June 2023, DFAT has commissioned an evaluation of AIHSS, to inform future donor support to immunisation in Papua New Guinea (PNG).

The evaluation will assess how well the program has been implemented over the program implementation period, from June 2019 to the present. It will inform ongoing implementation as well as future support beyond December 2023.

Describe purpose of process mapping exercise and how long it will take.

The aim of the project model and activity mapping is to understand how each of the projects work and how they are implemented in the respective provinces – as a starting point for the evaluation. It should take around 30 minutes.

Consent (limited version).

If you do not feel comfortable answering a question, please feel free to tell me and/or suggest someone else that I could contact to access this information.

Questions

1. Can you provide a copy of the project design for each province that you are working in?
2. Do you have a copy of the program logic model and explanation of the theory of change (i.e. how activities will produce outputs and outcomes and contribute to the EOPO)?
3. What is the management model (i.e. PHA-led and ISP/PHA-led) in each province?
4. Can you describe the implementation model/model of care that you are using?
5. What was the start date for the project?
6. Are project activities integrated with the PHA-managed services? If yes, how?
   Do you have a diagram/document/graphic showing how this works?
7. Can you describe the activities conducted by the project to contribute to the following Health System Outputs?
   - Health System Output 1: Improved Governance, Planning, Financial Management and Supervision
   - Health System Output 2: Improved Cold Chain and Vaccine Management and Procedures
   - Health System Output 3: Effective Monitoring and Reporting Mechanisms to Health Information Systems (should define each entity under HIS)
   - Health System Output 4: Effective Outreach Service Within the Target Province.
8. Where are the activities conducted and how are they intended to contribute to the specific health systems outputs?
9. Who does the project work with (e.g. which implementing partners, NDoH, PHA personnel and below, UNICEF, WHO, GEDSI-related organisations, other) and what is their role?
10. Are there other, non-AIHSS partners working on immunisation in the same province/district (or had they been earlier in the project)? If yes, what are/were they doing, in which locations?
11. Have there been any changes in the project design and approach since the start of the project?
12. What changed when you moved from PPF to PATH, e.g. program structure, activities, funding arrangements, and support?
13. Can you describe the AIHSS M&E arrangements? For example, what data is collected and reports produced, such as project reports, finance reports, and health service data?
14. Are you using PHA systems for monitoring and reporting?
15. What data are you using to measure immunisation coverage and progress towards the End of Program Outcome: 80% vaccination coverage of direct beneficiary population in the target provinces?
16. Do you have a GEDSI policy or strategy?

Data Collection Tool 2: Key Informant Interviews – Areas of Inquiry

Stakeholder Organisation	KII Areas of inquiry
DFAT	• Can you tell us about how the program was established and the program start up period? • What does DFAT see as the successes achieved/challenges faced by the program? • What are governance systems/structures for immunisation (in general) and AIHSS (in particular), and how does DFAT/AIHSS participate in them? • What program data is made available to DFAT? What information would DFAT like to see? • How was the EOPO target of 80% coverage developed? • Confirm DFAT expectations regarding sustainability; e.g. PHA ability to deliver/manage delivery of immunisation services effectively; PHA ability to manage grants effectively; GoPNG and PHA independence from donor funding to support immunisation.
PATH/Frontline Health Outcomes Team	• How does the PATH–AIHSS relationship work; e.g. respective responsibilities, accountability, and reporting? What sort of support does PATH provide to AIHSS and how do AIHSS and PATH/the FHO team interact? • What are the key successes and challenges from the PATH perspective, for AIHSS program overall and for various ISPs/implementation contexts? • Please describe any strengths and weaknesses of various organisational and operating models (ISP vs PHA-led; different models of care). • Where has AIHSS been most effective? • What are the main efficiency issues that have emerged – have partners made changes to increase efficiency, which organisational model is most efficient (consider resource allocation, team and management structure, and process for selection of partners)? • What are the changes in context (if any) that have affected AIHSS performance (including impact of COVID, PHA readiness on performance)? • How have AIHSS and PATH/the FHO team contributed to strengthening PHA ability to plan and manage grants directly. How do you work with other donors/partners to do this? • How would you assess PHA progress towards sustainability (including ability to plan and manage grants independently, and transition away from reliance on donor funding)? Any highlights; any assessments that PATH has conducted or other evidence of change? What are the key priorities for the future/constraints that need to be addressed? • What are the areas that you think AIHSS should develop in the future/future directions?
Gavi, MFAT, WHO, UNICEF (national level)	• Can you tell us about your agency's contribution to the immunisation program in PNG– what are the inputs and where/how they been delivered? • What is your knowledge of AIHSS and experience/interaction with the program? • What do you consider to be priorities for strengthening EPI in PNG (consider aspects of coordination, financing, strategy, health system, implementation) and why?

Stakeholder Organisation	KII Areas of inquiry
	• What are some of the key barriers/enablers – for the immunisation program in general and for financing and sustainability? • What do you consider to be the strengths and weaknesses of the AIHSS program? Has it been effective? Is it addressing the right things? • Where do you think that GoPNG and donor efforts should be focused (short to long term)? Where will your organisation focus in the future? • Is there anyone else that you think we should talk to?
NDoH	• Can you tell us about national-level coordination for immunisation – what is your involvement, how does the coordination operate? • Can you tell us about your knowledge of the AIHSS program and interaction with the program? • How well is AIHSS aligned to NDoH priorities and systems – and with other partners? • What do you consider to be the strengths and weaknesses of the AIHSS program – from your perspective? How could the program be strengthened? • Can you tell us about the impact of COVID-19 on the work of NDoH and immunisation in PNG? • What do you consider to be priorities for strengthening the EPI program? • Do you have any recommendations for future engagement to strengthen immunisation in PNG?
Immunisation support providers and lead PHAs	**Initial scoping** • Can you tell us about the project management/implementation model, activities, where the ISP worked (e.g. province, district), who you work with? • Can you describe the activities conducted by the ISP to contribute to the 4 Health System Outputs? • Have there been any changes in the project design and approach since the start of the project? • What was the process for disbursements, expenditure and acquittal of donor funds to PHAs? • What were the coordination mechanisms at provincial and sub-provincial level – and how were AIHSS and ISPs involved? What other partners worked in the province – how did AIHSS work with them? • Can you tell us about AIHSS M&E arrangements? For example, what data is collected and reports produced, e.g. project reports, finance reports, and health service data? • Does the program have a GEDSI strategy? **Main interview questions** • What were the key success and challenges, barriers and enablers to achieving program objectives and greater sustainability in the program (at PHA to health facility level). Explore impact of challenges identified on project implementation. • In the project period, were there any changes in immunisation coverage; PHA capacity in governance, management, planning and supervision; cold chain and vaccine management; outreach; M&E and effective use of eNHIS?

Stakeholder Organisation	KII Areas of inquiry

	• If yes, what is the evidence of these changes, where and when did they happen, what has contributed to these changes/how has the project contributed to these changes, and who has been involved?
	  ▪ Investigate any program performance issues, i.e. indicators not met/exceeded.
	  ▪ Explore PHA readiness issues and effect of COVID on the program.
	• How did the move from PPF to PATH affect the program/project? How have you/the program worked with PATH at national and subnational level? What support has PATH provided to the project – from national and provincial level (if relevant)?
	• Review efficiency issues, e.g. project expenditure, operational models, measures that the program has taken to improve efficiency. Investigate any issues, e.g. timeliness of implementation, variations in budget vs expenditure. Follow up any data needed, conformation of contextual factors affecting cost/efficiency.
	• Was the PHA able to secure any alternative sources of funding for immunisation?
	• What are the priorities for the future – from your perspective?

Non-lead PHAs	**Introduction**
	• Confirm interviewee(s) role(s), and experience of working with the AIHSS program.
	• Confirm how PHA has worked with AIHSS and knowledge of AIHSS activities in the province.
	• In your province, how did AIHSS support:
	  ▪ PHA governance, planning and financial management?
	  ▪ Cold chain and vaccine management?
	  ▪ Strengthening outreach services?
	  ▪ Strengthening health information systems/NHIS – especially monitoring and reporting immunisation data?
	  ▪ Communication and coordination of immunisation activities?
	
	Key successes and challenges
	• What were the key success and challenges, barriers and enablers to achieving program objectives and greater sustainability in the program (at PHA to health facility level).
	  ▪ Explore impact of challenges identified on project implementation (including COVID and any other contextual issues).
	• What has worked well and not so well? Did AIHSS address the right issues? Is there anything that AIHSS could do better/differently?
	• In the project period, have there been any changes in governance, planning, financial management; cold chain; outreach; immunisation coverage; M&E related to immunisation; or stakeholder coordination?
	• How has AIHSS contributed to these changes (if at all)?
	
	Project operations

Stakeholder Organisation	KII Areas of inquiry
	• Confirm process for engaging with AIHSS, program disbursements, expenditure and acquittal of donor funds to PHAs. **Engaging with PATH** • What support has PATH provided to the project? **Sources of finance** • Was the PHA able to secure any alternative sources of funding for immunisation? • Was AIHSS able to assist with roll over of Health Function Grants? ▪ What are the key issues that need to be addressed to improve immunisation outcomes in the province (including governance, financing, management, outreach, cold chain, and M&E). What are their priorities for the future? • What are the equity issues related to immunisation in the province? How are they addressing them?

Data Collection Tool 3: AIHSS Evaluation – PHA Survey

Introduction

Human Development Monitoring and Evaluation Services (HDMES) is conducting an evaluation of the Accelerated Immunisation and Health Systems Strengthening program on behalf of the Australian High Commission.

To ensure that we collect sufficient and appropriate data for the evaluation, we will be conducting a review of program reports and speaking to a wide range of stakeholders, including all PHAs where the AIHSS program is implemented. We aim to understand how the AIHSS program was implemented by your PHA and how it contributed to strengthening the immunisation program in your province.

Your participation in this survey will be valued, as the results from the evaluation will be used to inform the outcomes of the support provided through this partnership to improve immunisation coverage in PNG and priorities for strengthening the immunisation program in the future.

Any information that you give us in the interview will be confidential (not shared outside the Evaluation Team). All evaluation data will be securely stored to ensure that it remains private. You will not be identified by name and all identifying information will be removed before reporting the data – although we will be listing the people that we have interviewed at the end of the report.

Questions

1. Name and role/position?
2. Can you tell us how the AIHSS program operated in your province?
   For example, who was/were the implementing partner(s), who did they work with, where, and what were the main activities?
3. What sort of support (e.g. financial support, training, technical advice, equipment, other), if any, did AIHSS provide in the follow areas:
   3a. PHA governance, planning and financial management?
   3b. Cold chain and vaccine management?
   3c. Strengthening outreach services?
   3d. Health information systems – especially monitoring and reporting immunisation data?
   3e. Communication and coordination of immunisation activities?
4. Was the support from the AIHSS program aligned with PHA systems and the needs for strengthening immunisation coverage in the province?
5. Where did it work well and not as well?
6. What changes, if any, have you seen since, as a result of the AIHSS program in your province?
   For example, have there been improvements in PHA financial systems, health worker capacity, or in the delivery of immunisation services in the province?
7. Do you have any recommendations for how the AIHSS program could be more effective in working with PHAs and strengthening immunisation results in your province?

Do you have any further comments?

If you have any questions or concerns, please feel free to contact HDMES.

Data Collection Tool 4: AIHSS Evaluation – WHO Consultants

Thank you for agreeing to participate in the AIHSS Evaluation Survey. The purpose of this survey is to gain an understanding of the extent to which the AIHSS program has been contributing to strengthening the immunisation program in your province, and if it has been contributing, how the program has been having a positive impact.

Please enter your responses in the box underneath each question. Your frank response is greatly appreciated, as it will help us understand how to improve the AIHSS program in the future. Please take as much space as needed to answer the question.

Q1: When did you commence working in your current role supporting your province?

Q2: Are you aware of the AIHSS program and what the program is trying to achieve?

Q3: Are you involved in any province-level coordination with the PHA and AIHSS partners?

Q4: Have you been involved in supporting micro-planning for outreach immunisation activities funded under the AIHSS?

Q5: Have you been involved in any training on immunisation in your province during your deployment?

Q6: Have you been involved in supporting data management, surveillance and reporting in your province?

Q7: Are there any other areas of work in which you have supported the AIHSS program or the activities the program funds?

Q8: Do you think the AIHSS program has been useful in supporting immunisation activities in your province?

Q9: What do you think are potential areas for improving the AIHSS-supported activities in your province?

Do you have any other general suggestions to make regarding the program?

End

Thank you for your participation in this survey.

Data Collection Tool 5: GEDSI Rubric

How to use: Checklist to be used during document review to assess each project and evidence to be recorded against each criterion. Gaps and missing information to be followed up in interviews.

GEDSI Criteria	Performed well across all GEDSI aspects	Some evidence	Performed poorly/ No evidence
1. Gender, disability and inclusion analysis conducted, barriers to GEDSI identified and addressed in the investment			
2. GEDSI risks identified and managed by program			
3. Investment making (measurable) progress to promote GEDSI, women's empowerment			
4. M&E system includes sex and disability disaggregated data and indicators to measure GEDSI outcomes and is monitoring equality and accessibility for disadvantaged groups.			
5. Sufficient expertise and budget to achieve gender and disability equality related outputs			
6. Investment encourages partners to prioritise GEDSI in their own policies and processes			
7. Women's organisations, people with disabilities and/or disabled peoples' organisations are actively involved in planning, implementation and monitoring and evaluation			
8. Barriers to inclusion and opportunities for participation for women. people with disabilities and other disadvantaged groups are identified and addressed (to enable them to benefit equally from the aid investment)			
8a. Access to information, resources and services			
8b. Leadership and representation, policies and practices			
8c. Skills and capacity			
8d. Agency and decision-making			
8e. Social norms			
9. The investment has sufficient expertise and budget to achieve GEDSI related outputs			

Annex 13: List of Interviewees

Organisation	Name/position
Abt Associates	Joshua Nicol, Director of Global Risk, Compliance & Assurance Sendy Hasudungan, Brisbane Financial Accountant Gary Boyle, Corporate Accounting Lead Cornel Mirciov, Grants and Operations Manager
Australian High Commission	Anna Gilchrist, First Secretary Theresa Reu, Assistant Program Manager
Bougainville Catholic Church Health Services	Michaeline Pau, Health Manager Calixtus Patits, Finance Officer Tehila Pema, Project Technical Officer
Bougainville Department of Health	Mr Clement Tutavun, Health Secretary Jessica Hopping, Family Health Services Coordinator Clement Monei, Deputy Director – Corporate Services
Burnet Institute	Stephanie Levy, Program Manager Lisa Davidson, Sexual and Reproductive Health Specialist Thalia Wat, Coordinator (Supported West Sepik PHA)
Care International ARoB	Christopher Hershey, Program Director
Catholic Church Health Services (CCHS)	Graham Apian, Projects Director
Catholic Church Health Services – Madang Province	Sr Nola Marita, Manager
Central PHA	Dr William Lagani, Director – Public Health Sr Rhoda Selapui, District Family Health Services Coordinator – Rigo District
Clinton Health Access Initiative (CHAI)	Dr Mobumo Kiromat, Country Director Judith Ame, Project Coordinator
Child Fund PNG	Olive Oa, Program Manager
Eastern Highlands PHA	Dr Max Manaper, Director Public Health Philip Wanua, Deputy Director Public Health Amon Joshua, Program Officer Julie Goiye, Finance Manager Francessca Wanua, Provincial HIS Officer Penny Dick, District Health Manager, Asaro District Officer-in-Charge Kum, Asaro District Hospital Sr Terra, District Family Health Services Coordinator
East Sepik PHA	Mr Stanley Masi, Direct Health Manager – Wosera Gawi District
Gavi	Ricard Lacort Monte, Senior Country Manager Maryse Dugue, Consultant
Gulf PHA	Mr Peter Memafu, Acting Director – Public Health
Jiwaka PHA	Kolly Bang, Director – Public Health
Madang PHA	Dr Martin Daimen, Director Public Health Sr Jennifer Simon, Provincial Family Health Services Coordinator Sr Judy, Sister In Charge – Madang Urban Sr Martina, Sister In Charge – Malala CCHS Health Centre HEO Naure, Officer-in-Charge – Malala CCHS Health Centre Sr Sarah Mondo, Officer-in-Charge – Gusap Health Centre

Organisation	Name/position
Ministry of Foreign Affairs and Trade	Megan Levers, Second Secretary (Development)
Morobe PHA	Sr Patricia Mitiel, Family Health Service Coordinator
National Department of Health	Dr Edward Waramin, Manager – Family Health Services Branch Martha Pogo, Acting EPI Program Manager, Population & Family Health Services Branch, Public Health Division
Oil Search Foundation	Ruby Kenny, AIHSS Program Manager (supporting Gulf and Southern Highlands PHAs) Elizabeth Morgan, Performance Team Lead
PATH	Matthew Moylan, Team Lead, Essential Services Danny Beiyo, AIHSS Senior Program Manager Maryanne Kehalie, AIHSS Program Manager Anjelique Giranah, AIHSS Program Manager Geoff Miller, Interim PATH Program Lead Elizabeth Boyd, HSIP Public Financial Management Adviser Ayesha Lutschini, Gender Equality, Disability, Social Inclusion & Safeguarding Dr Stella Jimi, Health Security Lead Luke Elich, former Senior Manager of RMNCH Milena Dalton, former AIHSS Program Manager Stella Rumbam, Program Delivery Lead
Save the Children	Ronny Inaha, AIHSS Project Coordinator Lydia Seta, AIHSS Program Manager
Southern Highlands PHA	George Epei, Director Public Health
UNICEF	Dr Garba Safianu, Health Specialist Nay Muo Thu, Immunisation Specialist Ban Khalid Al-Dhayi, Communication Specialist Paula Kongua, Health Officer Shaikh Humayun Kabir, former Immunisation Specialist, UNICEF PNG
Western Highlands PHA	Mr Dannax Kupamu, Acting Director Public Health
West Sepik PHA	Dr Kelebi, Director Public Health
World Health Organization	Masamitsu Takamatsu, VDI Consultant (WHO) Dr Don Ananda Chandralal, Technical Lead VDI (WHO PNG)
World Vision	Albert Gigmai, AIHSS Project Manager (supporting Madang, Western and Morobe PHA) Clement Chipokolo, Operations Manager Lucy Jaro, AIHSS Provincial Project Coordinator, Madang
Youth With A Mission	Dr Sarah Dunn, General Manager

*Note: The list of stakeholders interviewed is in alphabetical order by organisation.

Annex 14: List of Documents Reviewed

Document Category	Document Name
PNG Health Portfolio Plan	Portfolio Plan: PNG Health Sector Program 2018–2023 (Health Portfolio Plan)
National Strategic Development Plans	PNG-Medium-Term-Development-Plan-iii-2018-2022-volume-
PNG Health Sector Plan/ Strategies	PNG National Health Plan 2021–2030 PNG Child Health Plan 2008–2015 Comprehensive Multi-Year Plan for Immunisation. 2011–2015 NDoH – 2010–2020 PNG National Health Plan Vol 2A – NDoH – FINAL NDoH – 2010–2020 PNG National Health Plan Vol 2B – NDoH – FINAL NDoH – 2010–2020 PNG National Health Plan Vol 1 – NDoH – FINAL NIS presentation on New Immunisation Plan- final draft_ 2022_02_27 PNG Comprehensive EPI Multi-Year Plan FOR NATIONAL IMMUNISATION PROGRAMME. 2016–2020 MNH Taskforce Recommendation Brief_FINAL UPDATED_2013052021 MCH Report National Strategy_NHB approved version
International health sector strategies	Immunisation Agenda 2030: A global strategy to leave no one behind Implementing the Immunisation Agenda 2030: A Framework for Action through Coordinated Planning, Monitoring & Evaluation, Ownership & Accountability, and Communications & Advocacy
PNG Health Sector Reviews/ Assessments	NDoH – 2018 – Sector Performance Annual Review – NDoH – FINAL NDoH – 2019 – Sector Performance Annual Review – NDoH – FINAL NDoH – 2020 – Sector Performance Annual Review – NDoH – FINAL NDoH, Analysis on Zero-Dose Children and Missed Communities in Papua New Guinea: Summary Findings, September 2022 Morgan C. et al. 2020. Strengthening Routine Immunisation in Papua New Guinea: A cross-sectional provincial assessment of front-line services. UNICEF Addressing Inequities to Strengthen Immunisation in PNG WHO PNG EPI Update
PATH Design and Program Reports	2020 PATH Inception Report 2021 PATH Annual Report 2020. Jan–Dec. Frontline Health Services Progress Report 2021 Jan–June. Frontline Health Services Progress Report. Narrative 2021 PATH Annual Report AIHSS Partners Lessons Learnt Session, Friday 28 May 2021 AIHSS Database Results_Q2 2022_Locked_Final ARoB AIHSS Immunisation PR Framework_Q1-Q4 2022 Q2 2022. AIHSS Immunisation PR Framework_updated format_EH 2022 Quarter 2. AIHSS Immunisation ESP_PR Framework 2022 Jan–June. Gulf AIHSS PHA Performance Framework 2022 Quarter 2. AIHSS Immunisation Jiwaka_PR Framework 2022 Quarter 2. AIHSS Immunisation Madang_PR Framework 2022 Quarter 2. AIHSS Immunisation Morobe_PR Framework 2022 Jan–June. SHP AIHSS PHA Performance Framework 2022 Quarter 2. AIHSS Immunisation Western_PR Framework WHPHA AIHSS Performance Framework – January to June 20 AIHSS Immunisation PR Framework Q1_Q2 2022 WSP

Document Category	Document Name
AIHSS Quarterly Snapshot Reports	AIHSS Snapshot Q2 2020 AIHSS Snapshot Q4 2020 AIHSS Snapshot Q1 2021 AIHSS Snapshot Q3 2021 AIHSS Snapshot Q4 2021 AIHSS Snapshot Q1 2022
AIHSS 2019 Progress Report	2019 Oct–April Burnet WSP PHA
AIHSS 2020 Progress Reports	2020 Annual Report – WSP 2020 Jan–Jun Progress Report. GAVI. EHP 2020 Jan–Jun Progress Report. OSF. SHP 2020. Jul–Dec. Save the Children. ESP/Jiwaka 2020 Jul–Dec. OSF. Gulf 2020 Jul–Dec. OSF. SHP 2020 Jul–Dec. World Vision. Madang, Morobe, Western 2020 Jul–Dec. CHAI. Central 2020 Jul–Dec. Burnet. WSP
AIHSS 2021 Progress Reports	2021 Jan–Jun. Save the Children. ESP and Jiwaka. 2021 Jan–Jun. OSF. Gulf 2021 Jan–Jun. OSF. SHP 2021 Jan–Jun. World Vision. Madang, Morobe, Western 2021 Jan–Jun. CHAI. Central Province 2021 Jan–Jun. GAVI. EHP 2021 Jan–Jun. Burnet. WSP 2021 Apr–Jun. WHP PHA 2021 Jan–Jun. Bougainville CHS 2021 Jul–Dec OSF Gulf 2021 Jul–Dec OSF SHP
AIHSS Partner Forum Monthly Meetings	PPF AIHSS Partners Meeting 2020: 25 February, 8 April, 22 April, 10 June, 1 July, 15 September, 24 November PPF AIHSS Partners Meeting 2021: 27 January, 25 February, 27 May, 30 June, 30 July, 7 September, 21 December PPF AIHSS Partners Meeting 2022: 8 February
AIHSS Corrective Action Plans	Madang PHA Corrective Action Plan Updated 02.06.22 (1) (002).xlsx Morobe PHA Corrective Action Plan Final_edited DA 02082022.xlsx WH PHA Corrective Action Plan_WE 13.11.2020.xlsx Corrective Action Plan - ARoB DoH_Updated 10.12.2021.xlsx Corrective Action Plan - Central PHA_10.12.2021.xlsx Corrective Action Plan - West Sepik PHA_10.12.2021.xlsx Corrective Action Plan - Western PHA_10.12.2021.xlsx
AIHSS M&E, Training and Sustainability Plans, and PR Framework	AIHSS EHPHA M&E Plan_07.11.20 AIHSS Gulf M&E Plan Annex 2 AIHSS SHP M&E Plan Annex 2 – FINAL AIHSS West Sepik M&E Program Plan_03122019 WHPHA Training Plan 2020–2022 EHP Training Plan 2021_Updated 31.04.21 GM WHP PHA Training Plan 2020–2022 Stocktake of Facility Trainings_PPF Data – Planned Trainings

Document Category	Document Name
	AIHSS – Save the Children – Updated PNG AIHSS Sustainability Exit Strategy Final Version 30.9.2022 AIHSS World Vision Immunisation Madang_PR Framework_Q3 2022_FINAL AIHSS World Vision Immunisation Morobe_PR Framework_Q3 2022_FINAL AIHSS World Vision Immunisation Western_PR Framework_Q3 2022_FINAL
PATH and AIHSS Design Documents, Grant Agreements and MOUs	01 PATH Design Document – FINAL 20191209 2019 Immunisation Investment Concept template_Approved_Feb 2019.pdf DOV2_AIP1.6_AROB_Roman_Catholic Dioces of Bougainville Executed DoV3_AIP1.06 - AROB - Deed of Variation - Fully Executed Grant Agreement AIHSS ARoB pg 1-128 150321 - Eastern Highlands no cost extension 250920_-_MOU_Eastern_Highlands AIP1.11_EHPHA_Grant_Agreement_-signed DoV1-AIP1.13_ESPHA – Executed Grant Agreement- AIP1.13_ESPHA- Executed Jiwaka PHA -DOV1-AIP1.12_JPHA – Executed Jiwaka PHA - Grant Agreement- AIP1.12_JPHA- Executed Jiwaka PHA - Signed Agreement- first 3 pages OSF -Executed Search Foundation-Grant Agreement Deed Of Variation 2-AIP-BNTWSP-1.8 - Final-7 250321 - Western Highlands no cost extension AIP1.1.15_WHPHA Grant Agreement Fully executed DoV1-AIP1.15_-_Western_Highlands_PHA_Fully executed 2021 MoU Western Highlands PHA AIP1.1_World Vision MAD- Grant Agreement DoV1-AIP1_1_WVMAD_-_Deed_of_Variation - Fully Executed AIP1.2_WVMOR- Grant Agreement_Executed DoV1-AIP1_2_WVMOR_-_Deed_of_Variation_-Fully Executed World Vision AIP Grant Agreement signed Signed DOV for Western Province_World Vision PNG DoV3_AIP1.3_WVWSTN - Deed of Variation - Fully Executed DoV2-AIP-WVWSTN-1_3_Deed of Variation - Fully Executed
Oil Search Foundation	OSF Gulf Province Immunisation and HSS Proposal Final to PPF 18 April 2019.docx 2019 OSF SHPHA Immunisation and HSS Proposal Final to PPF.docx Gulf-AI-FINAL_ME Plan_updated Nov 25-2019.xlsx Gulf-OSF Scope of Work.pdf
World Vision various AIHSS program documents	6 MONTH REPORT – MADANG 2021 AUGUST MMR 2021 – AIHSS Project December Report 2021 October RI REPORT 2021 AIHSS Evaluation Activity Report 22 AIHSS Project IMPLEMENTATION FOR MONTH OF October 28 Alexishafen sessions 22 April Monthly Report 22 February Report 2022 January Report 2022 July Monthly Report 22 June Monthly Report 22

Document Category	Document Name
	Madang District HF R1 reporting template MARCH MMR REPORT 22 September MMR 22 MAY Monthly Report 2022 Special Program Hard to reach_Child Tally Sheet _utu hf sessions 22 Annual PPF Accelerated Immunisation Program Work - Plan_2021_Madang_Approved 17Dec2020
Save the Children various AIHSS program documents	Donor Finance Report _AIHSS Quarterly Report_Qtr _April-June 2022 Donor Finance Report_DFATMFAT monthly reporting 202201 Donor Finance Report_April GL Listng for AIHSS ESP 2020-21 & AIHSS JWK AIHSS East Sepik Q1 (Jan–Mar 2022) Financial Report AIHSS Jiwaka Q1 (Jan–Mar 2022) Financial Report PNG PPF (Abt DFAT) AIHSS Quarterly Report (Apr–Jun 2022) – Signed – 220801 PNG PPF (Abt DFAT) AIHSS JWK Quarterly Report (Apr–Jun 2022) – Signed – 220801 GL Transaction Listing_Jun 22 Jiwaka GL Transaction Listing_May 2022 AIHSS GL Transaction Listing_Jun 22 ESP GL Transaction List_AIHSS JWK_May 2022 GL Transaction List_AIHSS ESP_May 20222 Financial report_SOF2945 AIHSS JWK_Dec 21 (approved) Financial report_SOF2553 AIHSS ESP_Dec 21 (approved)
PATH AIHSS miscellaneous	AIHSS Strategy Testing Report 2021 December. Intervention Scalability Report. WHP PHA. A narrative report Accelerated Immunisation and Health Systems Strengthening Project Factsheet
AIHSS Impact Stories	AIHSS Impact Stories – PNG health systems and immunisation 10.08.21 Gulf and SHP AIHSS Impact Story_2020 West Sepik AIHSS Impact Story_2020