Evaluation of Gavi's Contribution to Reaching ZD and missed communities

Country Case Study: Pakistan

February 2024

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List of acronyms

BCG	Bacillus Calmette-Guérin
BMGF	Bill & Melinda Gates Foundation
CCE	Cold-chain equipment
CCEOP	Cold-Chain Equipment Optimisation Platform
CSO	Civil society organisation
DTP1	Diphtheria-tetanus-pertussis
EAF	Equity Accelerator Fund
EP	Expanded partner
EPI	Expanded Programme on Immunisation
FDI	Federal Directorate of Immunisation
FPP	Full Portfolio Planning
HSS	Health System Strengthening
IA2030	Immunisation Agenda 2030
IRC	Internal Review Committee
IRMMA	Identify, respond, measure, monitor, advocacy
KP	Khyber Pakhtunkhwa
NHSP	National Health Support Programme
NICC	National Inter-Agency Coordination Committee
NISP	National Immunisation Support Programme
PBF	Performance-Based Funding
PEI	Polio Eradication Initiative
PM	Programme Manager
RI	Routine immunisation
SCM	Senior Country Manager
SDG	Sustainable Development Goal
TCA	Targeted Country Assistance
ToC	Theory of Change
UNICEF	United Nations Children’s Fund
USD	United States Dollar
WHO	World Health Organization
WUENIC	WHO/UNICEF estimates of national immunisation coverage
ZD	Zero-Dose

1 Context

Pakistan's health system

The Government of Pakistan has been providing routine immunisation (RI) services under the Expanded Programme on Immunisation (EPI) (now called the Federal Directorate of Immunisation) since 1978. The EPI provides free immunisation to almost seven million children aged 0–23 months annually, protecting against 12 vaccine-preventable diseases.[1] While there have been improvements in child and maternal mortality since the launch of the EPI, Pakistan still has some of the highest child mortality rates in the world[2], and the continued incidence of endemic polio transmission and periodic measles outbreaks.

The health system in Pakistan is characterised by a devolved system of governance. Since the ratification of the 18th Amendment of the Constitution in 2011, health sector governance has been devolved to the provincial level, with provinces exercising absolute financial and administrative responsibilities for health sector provision.[3] Meanwhile, the Federal Directorate of Immunisation (FDI) is responsible for policy and regulation, strategic guidance, coordination, and oversight at the national level.[4] The decentralised approach to health governance, and Pakistan's varied geography, demography, and security landscape, have led to large inequities in vaccine coverage across provinces. The country's unique challenges have raised the need for tailored yet flexible approaches to reaching underserved pockets of zero-dose (ZD) children and missed communities.

Gavi support

Pakistan is categorised by Gavi as a 'high impact' country[5], and has received the largest amount of Gavi funds of any country under the 4.0 and 5.0 strategic periods, with a total volume of United States Dollars (USD) 218,979,101 and USD 200,625,648 (planned), respectively. Under Gavi 4.0, Pakistan received the following funds:

- **Health Systems Strengthening (HSS2)**: USD 84 million, approved for the period 2016–2019. In 2018, funding was renewed and an additional USD 16 million approved. Under the Gavi performance-based funding (PBF) mechanism, Pakistan received an additional USD 13.4 million in 2018; a further USD 1.9 million were granted in 2022 under a PBF Amendment.[6] During this period, all HSS2 funds were administered to the World Bank, to be distributed through its Multi-Donor Trust Fund mechanism as part of the National Immunisation Support Programme (NISP). Additional HSS2 funds were applied for and approved in 2019 for a sum of USD 25 million, which were distributed directly to core partners (World Health Organization - WHO, United Nations Children's Fund - UNICEF). As part of the COVID-19 pandemic response, USD 8.85 million in HSS2 funds and USD 9.6 million in PBF funds were reprogrammed for COVID-19 relief.
- **Cold-Chain Equipment Optimisation Platform (CCEOP):** USD 46,219,264 to UNICEF.

[1] Childhood Tuberculosis, Polio, Diarrhoea, Pneumonia, Pertussis, Tetanus, Hepatitis-B, Meningitis, Diphtheria, Measles, Typhoid, Rubella.
[2] Pakistan has an under-five mortality rate of 65 per 1000 live births (2020). Source: Gavi. (2023). Pakistan. www.gavi.org. https://www.gavi.org/programmes-impact/country-hub/eastern-mediterranean/pakistan.
[3] There are four provincial EPIs, one of each of the four provinces of Sindh, Balochistan, Khyber Pakhtunkhwa (KP), and Punjab. The Federating Areas of Gilgit-Baltistan (GB), Azad Jammu and Kashmir (AJK), and Islamabad Capital Territory work under the umbrella of the FDI.
[4] Gavi. FPP 2022 application. *Gavi internal documentation.*
[5] High-impact countries are large, federated countries with extremely high birth cohorts. Gavi considers high impact countries as critical to reaching the ambitious goals it has set for the strategic period 2021–2025, due to the large share of ZD children in these countries.
[6] Pakistan was awarded a performance-based payment to top-up its HSS2 grant, for improving immunisation coverage. From 2015–2017, Pakistan immunised 223,327 additional children. The country was thus eligible to receive USD 13,399,620, based on a DPT3 component and an Economic Equity indicator.

- **Targeted Country Assistance (TCA):** USD 19,055,217, from 2016–2020 to core and expanded partners (EPs).[7]

Under Gavi 5.0, Pakistan has applied for the following funds:

- **Health Systems Strengthening (HSS3)**: USD 111,231,449 (inclusive of USD 25 million for the successor programme to the NISP, the National Health Support Programme–NHSP), to be administered to core partners, the World Bank, and EPs.
- **Equity Accelerator Fund (EAF)**: USD 35,470,296, to be administered to core partners, EPs and civil society organisations (CSOs).
- **CCEOP**: USD 38,923,017, to be administered to UNICEF.
- **TCA**: USD 15,000,886, to be administered to core and EPs.

For the COVID-19 response, USD 81,221,272[8] was disbursed to core partners to support acquisition of vaccine supplies, cold-chain equipment, and delivery support; another USD 14,972,350 has been approved but not yet disbursed as part of COVID Delivery Support (CDS3). A further USD 6,128,233 was disbursed to Pakistan in 2022 under the Fragilities, Emergencies, Displaced Persons (FED) fund for flood relief. As the Full Portfolio Planning (FPP) process has not yet been finalised, Pakistan is still utilising some funds under the 4.0 grant cycle and COVID-19 response for ongoing programming. A small amount of TCA bridge funding[9] was approved and disbursed mid-2022. The implementation timeline of Gavi 4.0 and 5.0 grants can be found in Figure 1.1 below.

Key stakeholders

The programme's core funding and implementation partners are UNICEF and the WHO, through which funding has traditionally flowed (under 4.0). Gavi has also contributed to the World Bank's immunisation programming, notably the NISP under 4.0 and its successor programme, the NHSP, under 5.0. All grants, apart from some TCA funds, were directed at these three multilateral partners under 4.0. These partners are responsible for disbursing funds downstream, either through their own organisational structures or through sub-contracted partners. Under 5.0, the programme will work more intentionally with a range of EPs from the private sector and civil society, meaning a share of Gavi 5.0 funds will go directly to these actors. Other actors such as the US Centres for Disease Control and the Bill & Melinda Gates Foundation (BMGF) also support programming through strategic and technical guidance but do not receive funding.

The programme works centrally through the FDI, which is responsible for strategy-setting, policy guidance, coordination, and oversight. At the provincial level, the programme engages with the four provincial Expanded Programmes on Immunisation (EPIs), which are responsible for health services implementation. Prior to 5.0, Gavi's engagement with government counterparts had been more centralised. Under 5.0, Gavi undertook a much more consultative approach to sub-national engagement, with provincial EPIs involved in the FPP design process. Nevertheless, no funds are directly disbursed to the Government of Pakistan. A stakeholder map can be found in Figure 1.2 below.

[7] USD 2,414,085 (2016), USD 3,160,545 (2017), USD 4,636,467 (2018), USD 4,779,207 (2019), and USD 4,064,913 (2020).
[8] USD 45,682,405 (COVID Vaccine Support), USD 2,538,909 (COVAX Cold-Chain Equipment Support), USD 14,999,987 (COVID Delivery Support Early Access–CDS1), USD 17,999,971 CDS Needs Based Funding (CDS2).
[9] An application for USD 2,990,068 was submitted in 2022 to bridge the gap between 4.0 TCA funds ending in mid-2022, and the finalisation of FPP. According to MPM data, USD 1,180,056 of TCA funds were disbursed in 2022.

Country ZD theory of change

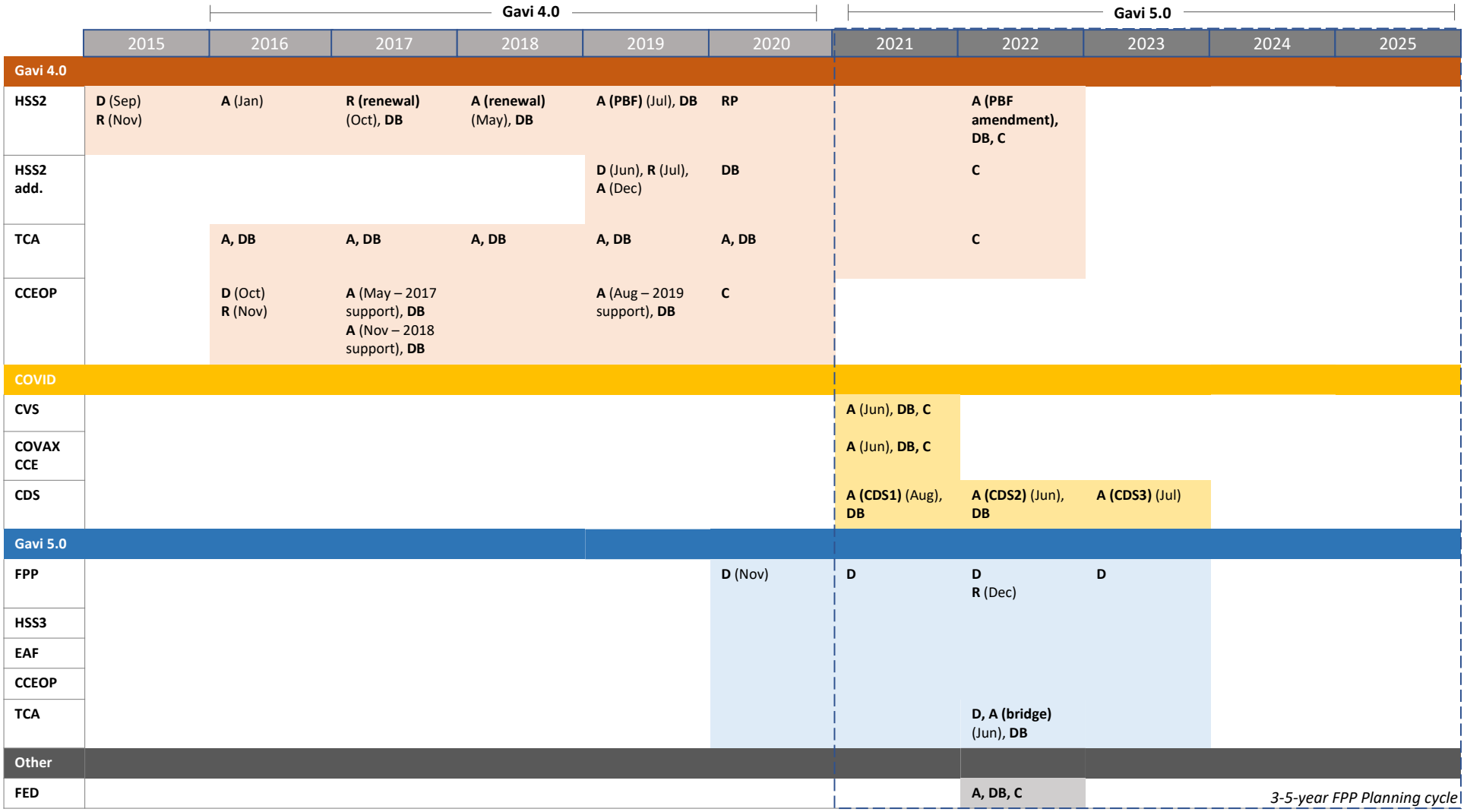
The country's 5.0 theory of change (ToC) centres on seven key intervention areas: (1) service delivery; (2) human resources for health; (3) supply chains; (4) health information systems and monitoring and learning; (5) vaccine-preventable disease surveillance; (6) demand generation and community engagement; and (7) governance, policy, strategic planning and programme management. Provincial-level ToCs have been developed for the specific needs of the four provinces and three federating areas where the programme is implemented. The broader country ToC is laid out in Figure 1.3. The 5.0 ToC is 'pro-equity' and sustainability focused, including improved identification and reach of ZD children and missed communities and tailored to context-specific strategies. This supports greater integration across government bodies, as well as CSOs, the private sector, and Polio Eradication Initiative–PEI, as well as facilitating system strengthening, for example, cold-chain, data and surveillance interoperability, community engagement, and programme performance management. The 5.0 ToC broadly retains the same intervention areas as 4.0. However, it is explicitly more pro-equity and sustainability focused.

Data collection timeline

Data collection activities for this case study were as follows:

- **Initial introductory call** with the Pakistan senior country manager (SCM) and programme manager (PM) (April 2023)
- **Document review** (July 2023) (list of documents in Annex 3.1)
- **Semi-structured interviews** with nine key stakeholders (August–September 2023) (list of stakeholders interviewed in Annex 3.2)
- **Validation call** with the Pakistan SCM and PM (September 2023).

Figure 1.1: Timeline of Gavi 4.0 and 5.0 grants in Pakistan (excluding vaccine introduction grants)



NB: This diagram has not been validated by the Pakistan Gavi SCM or PM.

D: design; R: review; A: approval; DB: disbursement; I: implementation; C: closure

Figure 1.2: Key actors in Pakistan under Gavi 4.0 and Gavi 5.0

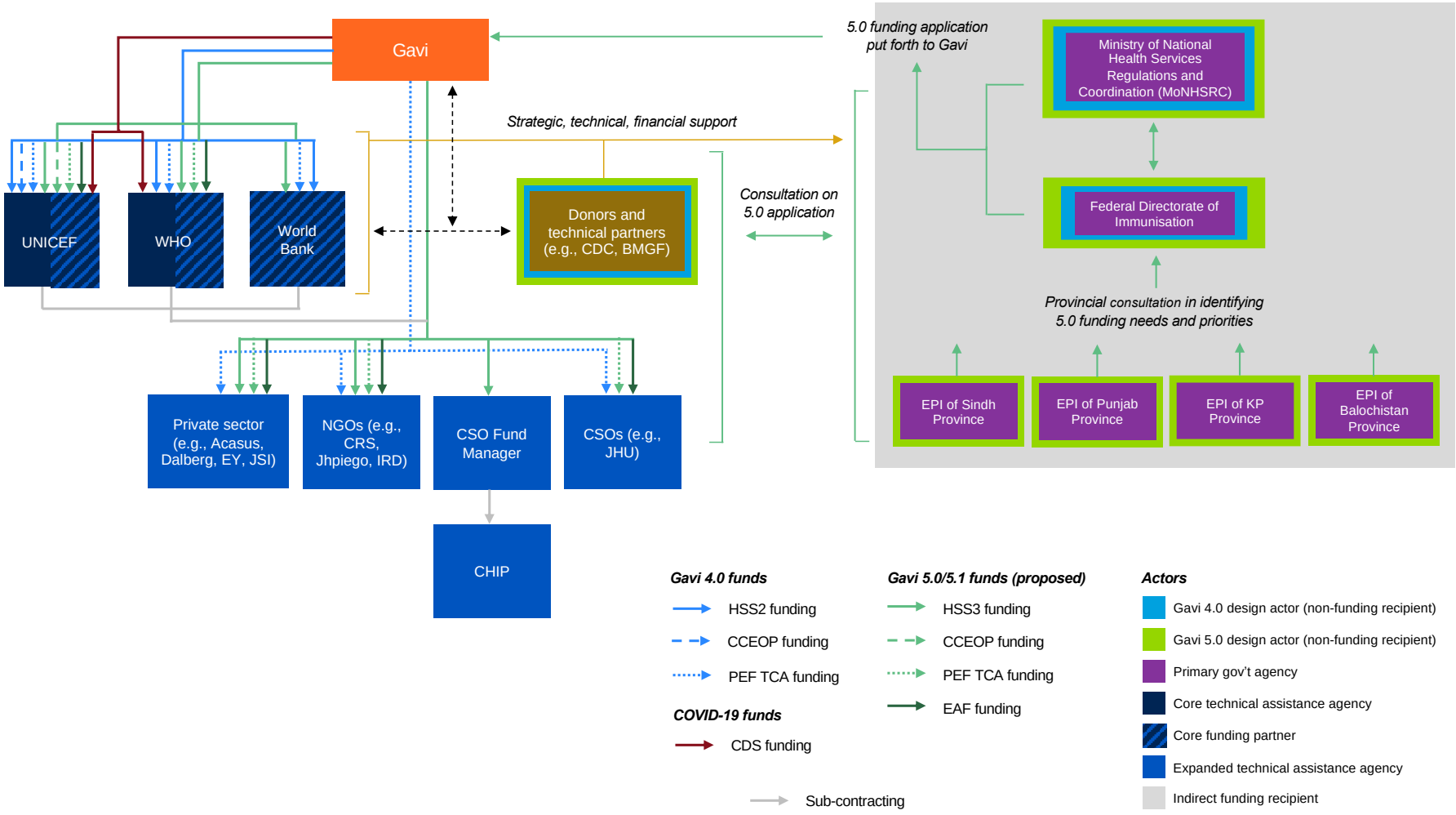
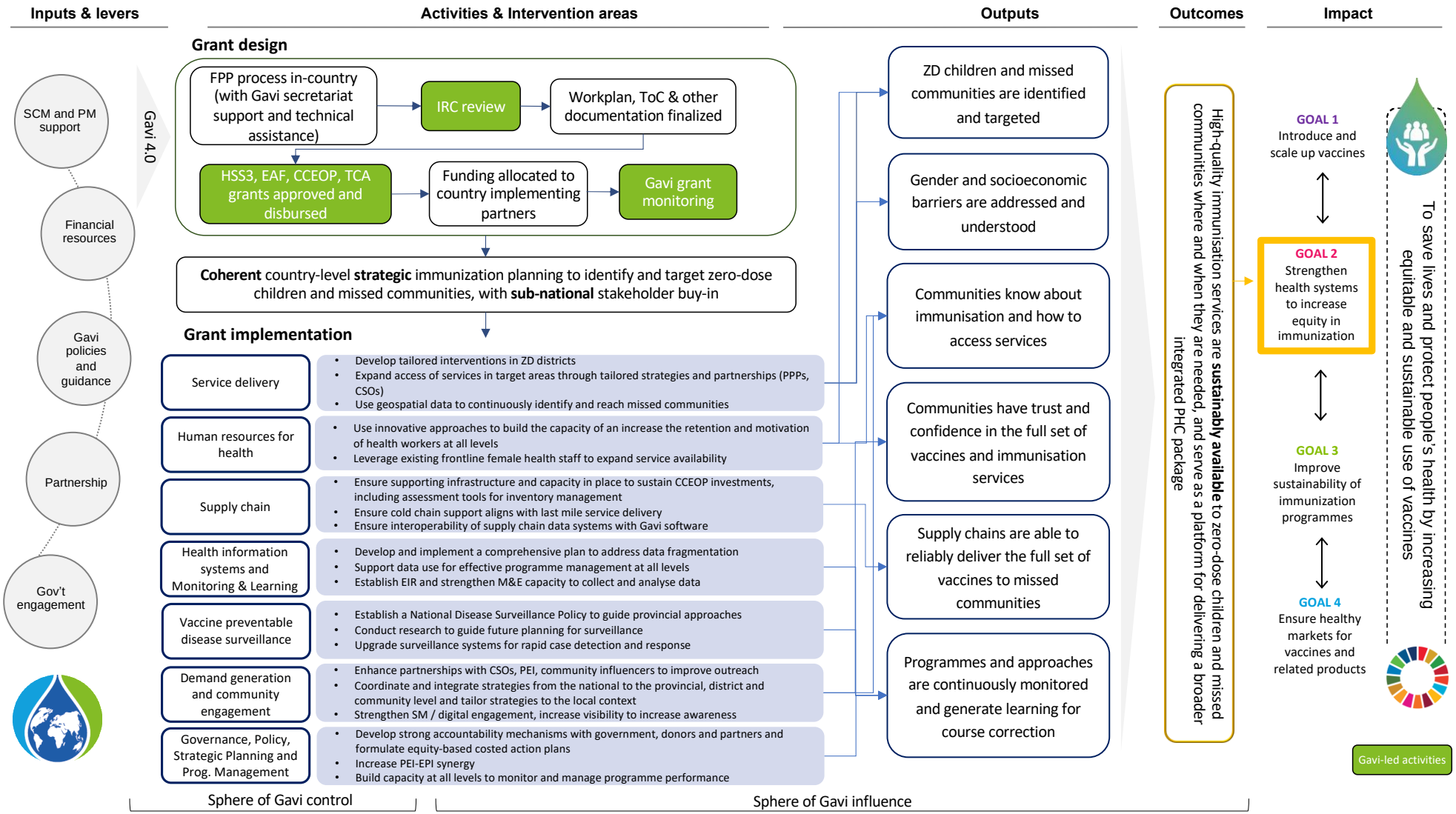


Figure 1.3: Pakistan theory of change for Gavi 5.0



2 Findings

Objective 1: Relevance and coherence of Gavi's ZD agenda

EQ1. How relevant is Gavi 5.0/5.1's focus on ZD children and missed communities to countries' needs?

Summary of findings	• The ZD agenda is highly relevant to Pakistan's wider health and immunisation-specific challenges, including maternal and infant mortality and the prevalence of communicable diseases that disproportionately affect the poor. Targeting ZD children was also highly relevant in the context of COVID-19, where routine immunisation services were affected. • Pakistan's National Health Vision identifies health system strengthening and addressing cross-cutting principles such as good governance, equity and pro-poor approaches, and integration as foundational for the country to achieve its national health aims, which are aligned to Gavi's ZD agenda. • Pakistan's high birth cohort, significant numbers of ZD children, and ongoing efforts to eradicate polio make the ZD agenda relevant for the EPI. • There are notable disparities in immunisation coverage between provinces, largely due to the devolved system of health governance and high inter-provincial variation in geography, security, and socioeconomics. This makes the ZD agenda important for understanding and addressing the unique challenges at the sub-national level effectively. The FPP process has been a useful tool for improving the visibility of ZD children and missed communities to address coverage inequities. • Identify, respond, measure, monitor, advocacy (IRMMA)[10] is not known among strategic and operational stakeholders, though it is being implicitly used as an analytical framework in 5.0 planning.			
Strength of the evidence	**1**	**2**	**3**	**4**
Rationale for this judgement	Evidence comprises multiple data sources, both primary and secondary, quantitative and qualitative, that are of good quality. Good triangulation.			

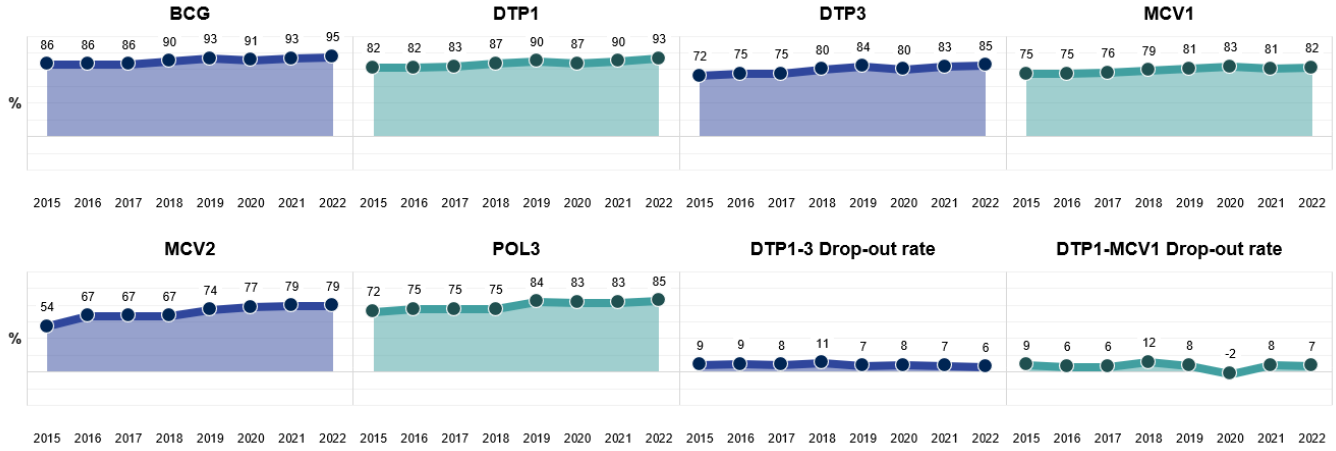
Pakistan faces an array of health issues including maternal and infant mortality as well as a range of communicable diseases like polio, HPV and measles, which disproportionately affect the poor.[11] As such, Pakistan's National Health Vision 2016–2025 sets out the goal to "*improve the health of all Pakistanis, particularly women and children, through universal access to quality essential health services and ensuring financial protection, with a focus on vulnerable groups, and delivered through resilient and responsive health systems.*" According to the National Health Vision, health system strengthening and addressing cross-cutting principles such as good governance, equity, having pro-poor approaches, and integration are foundational for the country to achieve its national health objectives. Gavi's 5.0 immunisation agenda is thus highly relevant to the broader health needs of Pakistan.

[10] Identify, respond, measure, monitor, advocacy.
[11] Government of Pakistan. (2016). Pakistan's national health vision 2016–2025.

Gavi's ZD agenda is highly relevant to Pakistan's context, needs and immunisation aims, particularly given the country's volume of cases and sub-national inequities. Pakistan is the fifth most populous country in the world and has an extremely high birth cohort (6.42 million in 2022).[12] As of 2019, Pakistan was one of five countries that housed over two-thirds of the world's ZD children.[13] Alongside Afghanistan, Pakistan is also one of the last two countries in the world to eradicate polio, so there is a clear national interest in strengthening the immunisation coverage and capacity of the EPI.

The country has made significant improvements in immunisation coverage over the last few years; however, gaps remain. The proportion of ZD children in Pakistan declined from 21.2% in 2011 to 9.6% in 2019, and the country also increased its full immunisation coverage by 11% from 2018–2022 despite the COVID-19 pandemic.[14] However, there are significant differences in coverage between provinces, with Punjab reporting the highest coverage of fully immunised children at 89% and Balochistan reporting the lowest coverage at 37.9%.[15] Coverage across under-immunised and ZD children shows similar inter-provincial variation (see Table 2.1).

Figure 2.1: Select vaccine coverage and drop-out rates (WHO/UNICEF estimates of national immunisation coverage - WUENIC) in Pakistan: 2015–2022



[12] Gavi. (2023). Pakistan. Retrieved from www.gavi.org website: https://www.gavi.org/programmes-impact/country-hub/eastern-mediterranean/pakistan.
[13] Gavi. (2021). The Zero-Dose Child: Explained. Retrieved from www.gavi.org website: https://www.gavi.org/vaccineswork/zero-dose-child-explained.
[14] Gavi. FPP 2022 application. *Gavi internal documentation.*
[15] The Aga Khan University. (2021). Third-Party Verification Immunization Coverage Survey (TPVICS) Survey Report.

Table 2.1: Provincial population and breakdown of under-immunised and ZD children (2021)[16]

Province	Population	UI children count	UI children %	ZD children count	ZD children %
Punjab	119.6 million	328,152	8%	59,901	2%
Sindh	54 million	548,323	32%	136,096	7%
Khyber Pakhtunkhwa (KP)	37.1 million	81,453	20%	201,341	11%
Balochistan	12.4 million	147,977	26%	104,050	36%

The country's inherent diversities and health governance structures have meant that pockets of ZD children have continued to be missed, despite overall gains in immunisation coverage at the national level. Pakistan is characterised by high degrees of geographic, socioeconomic, cultural and security-level variation. This, paired with a devolved health system, means that traditional, more generic approaches to coverage have not addressed provincial and district-specific profiles, challenges and needs. While immunisation progress has improved over time, there remain high levels of inequity around coverage and uptake at the sub-national level, and persistent pockets of children missed through immunisation services.[17] This makes the need to identify and reach these missed sub-groups through contextualised, differentiated approaches that address structural barriers even more critical, and Gavi's 5.0 strategy highly appropriate to the country's needs and immunisation priorities.

> "ZD children have specific needs. The immunisation strategy was previously not differentiated, which is why we kept missing them. Having a differentiated approach helps address the specific needs of ZD and missed communities, which is critical to reaching the last pockets."
> Operational respondent, interview

The FPP process has improved the visibility and understanding of ZD children and missed communities through prolonged provincial consultations that helped identify the locations, numbers and drivers of ZD children, as well as structural challenges around delivery. The FPP situational analyses found that Pakistan's ZD children are largely the urban poor, rural poor, remote and mobile populations, and those in security-compromised areas. A prioritisation exercise was also undertaken to focus 5.0 interventions in lagging areas; 83 priority districts with high concentrations of ZD children, chosen utilising ZD indices, will be targeted as will a further 20 districts with the least access to health and nutrition services.[18,19] Specifically, the proposed interventions under Gavi 5.0 will target the following communities:[20]

- **Punjab**: urban slums and rural and mobile populations
- **Sindh**: agricultural settlements, coastal and riverine communities and border and remote areas
- **Balochistan**: security-compromised, internal migrant populations, and external (Afghan) border migrant populations
- **KP**: mobile and high-risk communities, urban slums, and southern areas of the province.

[16] TPVIC 2020; EPI 2021 population estimate. Figures estimated on the basis of annual surviving infants in 2021. UI = under-immunised.
[17] Most zero-dose children reside in urban slums and hard-to-reach areas. There are also high degrees of variation in provincial performance. The Third-Party Verification Immunization Coverage Survey (TPVICS 2021) found the concentration of ZD children by province to be: 2% in Punjab, 7% in Sindh, 11% in KP, and 36% in Balochistan.
[18] Gavi. FPP 2022 application. *Gavi internal documentation.*
[19] Under the World Bank's NHSP, which Gavi also contributes to, provinces have further identified low-performing areas using the UHC Service Coverage Index (SCI) of Zero Dose Children to ensure that 20% of each disbursement-linked result is achieved in a 'lagging area'.
[20] Gavi. IRC FPP Review. *Gavi internal documentation.*

The various access and operational barriers that have perpetuated the existence of these ZD populations are detailed further in the section on EQ2.

Gavi's pro-equity focus and situational analyses under the FPP have led to a shift in resources to the areas of greatest need, which is commensurate to Pakistan's vast differences in provincial performance. While 4.0 funding focused on health systems strengthening more broadly, 5.0 will focus more explicitly on purposive targeting and pro-equity prioritisation, which will help reach marginalised communities. This is also supported more explicitly through the HSS/EAF lever, which will target at least 86% of all identified ZD and under-immunised children across all four provinces through a combination of fixed site service delivery and community-based approaches.[21] Moreover, Gavi's 5.0 focus on strengthening engagement at the provincial and community level further supports Pakistan's needs around providing last mile health services to vulnerable and marginalised populations.

Relevance and utility of IRMMA

Under 5.0, the Gavi Secretariat introduced the IRMMA[22] framework as a means to support more holistic and comprehensive planning under the FPP process.

In Pakistan, the IRMMA framework is not known among strategic and operational stakeholders[23] and is considered to have limited utility by programme management staff. IRMMA was not deemed appropriate for the Pakistan context, and seen by programme management as a *"top-down"* instrument developed by Gavi HQ that does not effectively translate into a usable tool in practice. The framework was seen as too complex and *"not useful for this point in time"* for governmental counterparts and partners. While the principles were something that could be further socialised and counterparts could be capacitated towards, it was still considered unnecessarily complicated and a tool that should be simplified for future usability on the ground.

FPP documentation suggests that as an analytical framework, IRMMA's principles are being used implicitly under Gavi 5.0 planning. Although IRMMA is not being explicitly operationalised in the grant application process, FPP documentation illustrates that the fundamental principles of IRMMA are being implicitly deployed to support Gavi 5.0 planning, through the focus on more tailored and sustainability-focused interventions. The Internal Review Committee (IRC) Report on the FPP 2022 application also highlights strengths in the application, organised along the Identify, Reach, and Monitor & Measurement components. This indicates that Pakistan's 5.0 approach is largely consistent with the tool and aligned with central Gavi assessments, though it is not deemed to have utility in name by in-country stakeholders. This finding was also supported by the view of the one stakeholder interviewed who was familiar with the framework.

> "Even if it's not very explicit, if you look at the [FPP] and IRMMA framework, most of the things Gavi has been steering have been derived from the IRMMA framework…Most of the framework components are being utilised as part of the design process".
> Operational respondent, interview

Gavi 5.0 and COVID-19

Gavi's ZD agenda was highly significant during the pandemic, as many children were missed due to the disruption of COVID-19. COVID-19 lockdowns created a significant disruption to ZD activities due to the closure of facilities, movement restrictions, fear in communities, and the divergence of resources to the pandemic response. Federal EPI data shows that for the first 3 months of the pandemic,

[21] Ibid.
[22] Identify, reach, monitor and measure, advocacy.
[23] Only one of the nine stakeholders interviewed was familiar with IRMMA. This individual was not a core partner nor from government.

coverage waned significantly. From January to June 2020, roughly 700,000 children missed their dose of Bacillus Calmette-Guérin (BCG), 1 million missed Diphtheria-tetanus-pertussis (DTP1), 1.3 million missed DTP3, and 900,000 missed Measles-1.[24] A research study conducted by Chandir et al. (2020) found that during the lockdown, one out of two children missed their routine immunisations and that the lockdowns disproportionately affected coverage rates in rural areas, urban slums, and already struggling provinces (e.g. Balochistan, KP).[25]

However, the effective repurposing of Gavi funds and additional grants led to a quick recovery that catalysed the ZD agenda in Pakistan. At the start of the pandemic, Gavi funds were effectively repurposed through administrative fast-tracking and activities reprogrammed to support a national Recovery Plan,[26] comprised of a 3-month Immediate Recovery Plan, a 6-month Catch-Up Plan, and a further 6-month Continuation Plan. A total of USD 8.85 million of the HSS2 grant and USD 9.6 million of already approved PBF funds were diverted to the Recovery Plan.[27] An additional USD 63,221,301 in COVID-specific grants were also issued.[28] The mobilisation of resources for cold-chain infrastructure and logistics, human resourcing, community mobilisation and enhanced outreach activities (EOAs) helped secure COVID vaccine coverage while maintaining RI. All interviewees agreed that the country's COVID-19 response was effective due to COVID-19-specific support as well as the reprogramming of existing 4.0 grants. By June 2020, national immunisation coverage returned to pre-pandemic levels.[29]

> "Pakistan did a really good job at ensuring that RI stayed in line with the COVID agenda…These investments were instrumental and really helped the government and partners ensure additional capacity in the system to take over COVID-19 and ensure RI delivery was not impacted…COVID-19 had a positive externality – now, we have excess resources in the system to focus on accelerating the efforts for ZD – excess storage, cold-chain capacity, vaccinators, technical resources available. These can be used to fast-track the ZD agenda."
> Operational respondent, interview

[24] Source: Federal EPI data (Referenced in the Gavi Multi-Stakeholder Dialogue 2020).
[25] Gavi. (2020). Multi-Stakeholder Dialogue 2020. *Gavi internal documentation.*
[26] With the national lockdown lifted in May 2020, the Recovery Plan focused on activities such as: the gradual opening of fixed immunisation sites, reinstating outreach activities, resource mobilisation to replenish vaccine stores, the deployment of CCEOP funding to expand storage capacity and supplies, the refurbishment of EPI facilities, engaging in partnerships with CSOs and the private sector for service delivery, strengthening data analysis and use of data for decision-making, strengthening of surveillance systems, community mobilisation through mass and social media, enhancing the mobility of vaccinators through the provision of over 1200 motorbikes, and advocacy to sensitise provincial governments.
[27] Ibid.
[28] These included USD 45,682,405 in COVID-19 Vaccine Support, USD 2,538,909 for COVAX Cold Chain Equipment, and USD 14,999,987 in COVID-19 Delivery Support (CDS).
[29] Ibid.

EQ3. How coherent is Gavi's ZD agenda with other international and national actors' focus?

Summary of findings	• There is a high level of coherence with the government's strategy, as Gavi's 4.0 and 5.0 initiatives have been built on Pakistan's National Immunisation Strategy and National Comprehensive Multi-Year Plans (cMYPs), which aim to reach every child equitably. • There is scope for greater coherence with the Polio Eradication Initiative, given the geographic and thematic overlap. Opportunities for greater integration exist, especially in terms of resource- and data-sharing, particularly in poorer-performing provinces like Balochistan and KP. • The ZD agenda is highly coherent with core partners' strategies, which are anchored in the Immunisation Agenda 2030. It is also complementary to the World Bank's National Health Support Programme, though Gavi 5.0 will retain a specific focus on pro-equity immunisation. • Gavi's definition of ZD is aligned with partners' and the EPI's, though some stakeholders feel that other definitions may be more relevant for the context. • There is less coherence in implementation due to weak coordination structures at the central level, insufficient tracking mechanisms, and limited collaboration between core partners. It is envisioned that the FPP will support improved coordination under 5.0. • All respondents recognise Gavi's financial support as essential for addressing gaps that the government could not fund independently, highlighting Gavi's value in supporting Pakistan's immunisation goals.
Strength of the evidence	**1** (selected) / 2 / 3 / 4
Rationale for this judgement	Evidence comprises multiple data sources, both primary and secondary, that are of good quality. Good triangulation.

There is a high degree of coherence between Gavi's ZD agenda and the Government of Pakistan's immunisation strategy. Gavi's 4.0 and 5.0 initiatives have been built on Pakistan's National Immunisation Strategy and National Comprehensive Multi-year Plans (cMYPs), which aim to reach every child equitably. Simultaneously, Gavi and partners have had a high degree of influence in shaping Pakistan's immunisation agenda.[30] At both the federal and provincial levels, there is a particular emphasis on *'reaching the unreached'* and aligning with wider global visions to contribute to Sustainable Development Goal (SDG) 3 and Immunisation Agenda 2030 (IA2030)[31], resulting in a high degree of strategic alignment with the Gavi's ZD agenda.[32]

[30] IDI, Operational partner.
[31] Pakistan EPI. (2022). National Immunisation Policy of Pakistan 2022. Retrieved from https://epi.gov.pk/wp-content/uploads/2023/01/NationalImmunizationPolicy2022-compressed.pdf.
[32] World Bank. (2020). National Immunisation Support Project: Mid-term Review. Retrieved from https://documents1.worldbank.org/curated/en/715151472866429807/text/Pakistan-National-Immunization-Support-Project-P132308-Implementation-Status-Results-Report-Sequence-01.txt.; Provincial EPI IDIs.

There is a high degree of coherence between Gavi's ZD agenda and core partners' strategies, which are anchored in the IA2030. Both core partners agreed that there is full alignment between Gavi's 5.0 strategy and their immunisation strategies, which are guided by IA2030[33] (Leave No One Behind).[34] This coherence is due to strong strategic alliances at the global level, which is then cascaded down to country programming. This view of alignment between core partners and Gavi's ZD agenda was reinforced by all stakeholders interviewed.

> "Reaching the unreached is the utmost priority for everyone. It's not just a standalone slogan, it's something aligned with the SDGs and with the Immunisation Agenda 2030. The prioritisation that Gavi has done has created a wide degree of acceptance. This is a good thing as every partner who really matters is talking the same language." Strategic respondent, interview

Gavi funding also contributes directly to World Bank-funded health programming, which supports EPI strengthening and helps operationalise the country's vision outlined in its National Immunisation Strategy. The World Bank has been a core historical funder to the Government of Pakistan for health systems interventions, first through the NISP (2016–2021) and then through its subsequent NHSP (2022–2026). Under Gavi 4.0, all funds were distributed to the World Bank, which were then administered through the Multi-Donor Trust Fund mechanism. Under Gavi 5.0, funds still contribute to the NHSP, though proportionately less so given a change in focus of NHSP away from immunisation to broader healthcare system outcomes.

> "The PEI has helped in immunisation because polio has a greater number of staff and they usually go to the field, so they can bring the data on ZD children. The next project should be focused on a greater coordinated effort between the PEI and EPI. The polio programme gives us generic information about ZD children, but they don't give us exact details, which they can easily do. We should build greater synergies." (Strategic respondent, Provincial government)

> …the World Bank is not focusing on immunisation…However, they …n the government to certain priorities and certain interventions … Gavi has a small portion of their investment in NHSP, compared … out because it thought that its priorities wouldn't be catered to …n the government and work out in detail [the specific funding … you become a part of something big, and the World Bank …hat Gavi wanted through the FPP. However, the World Bank also …orld Bank is involved, the finance and planning divisions of the …ld Bank has greater connections and networks. They are not just …e to push changes much more than Gavi. Gavi thus needs to … shifts, while retaining the focus on making sure that …n and coherent with their own agenda."
> Operational respondent, interview

Gavi has retained a specific pro-equity immunisation focus, despite an evolution in World Bank prioritisation over time. Gavi's 4.0 funding was administered directly to NISP, which had the explicit aim to capacitate the country's EPI by focusing on increasing the equitable coverage and delivery of services for immunisation for children between 0–23 months.[35] However, under NHSP, the World Bank's health priorities expanded in scope to broader primary healthcare and Universal Health Coverage.[36] Only one of the NHSP disbursement linked indicators (results indicators that dictate fund disbursements) is linked to immunisation. Moreover, NHSP is only being implemented in three provinces, excluding Balochistan, which is where the highest concentration of ZD children reside. Gavi is therefore contributing a lower share of funds to NHSP through the 5.0 levers, and proportionately more through core and EPs.[37] There is an awareness of the synergies with NHSP, specifically around health systems strengthening and the push towards sustainability; for example, a Gavi 2022 Mission Report identified

[33] IA2030. IA2030 Ownership and Accountability (Q&A): A Global-Level Partnership Model. Retrieved from: http://www.immunizationagenda2030.org/images/documents/Frame_for_Action_Annex_2_1.pdf.
[34] Core partner IDIs.
[35] World Bank. (2020). National Immunisation Support Project: Mid-term Review. Retrieved from: https://documents1.worldbank.org/curated/en/715151472866429807/text/Pakistan-National-Immunization-Support-Project-P132308-Implementation-Status-Results-Report-Sequence-01.txt.
[36] World Bank. (2023). Development Projects: National Health Support Program - P172615. Retrieved from World Bank website: https://projects.worldbank.org/en/projects-operations/project-detail/P172615.
[37] According to the FPP 2022 proposal, just under 22% of the HSS grant (USD 25m of USD 114.9m) is ringfenced for the World Bank.

that the NHSP contributes directly to Gavi 5.0's Strategic Goals 2 and 3.[38] Gavi is also aware of the immense influence of the Bank as a convener and strategic influencer to support coherent programming.

Gavi's financial support is deemed by all stakeholders as valuable and necessary for plugging gaps that the government does not have the capacity to fund itself.

While there was a high degree of overall coherence with other governmental and partner initiatives, it was noted that greater integration could be achieved between the EPI and the PEI.[39] The PEI is a public-private partnership (PPP)-funded programme that seeks to *"reach every last child with vaccines, strengthening surveillance and maintaining political commitment, financial resources and technical support at all levels."*[40] It was acknowledged by many strategic and operational stakeholders that there are clear synergies between both programmes, given the geographic and thematic overlap. There have also been some examples of recent collaboration to improve ZD immunisation coverage. For example, in Lahore, the PEI programme supported the EPI to increase coverage by 17% in one year through data-sharing on ZD children and defaulters in urban slums.[41] Similarly, in southern KP, the EPI programme supported the PEI to reach the most difficult, security-compromised Union Councils (UC) through outreach. However, there is also anecdotal evidence of polio initiatives detracting from EPI activities due to the overlapping of resources (e.g. vaccinators) which, given the greater political will behind polio, means that resources as easily diverted for polio activities.[42] Nevertheless, these examples of the programmes coming together and leveraging each other's tools, frameworks, and resources to supplement each other demonstrates the immense potential in bringing these two programmes together, particularly in poorer-performing provinces like Balochistan and KP. This potential and the importance of greater collaboration are increasingly being recognised at both the federal and provincial levels.

> "In the last 12 months, there has been a mind shift in the polio programme. The PEI has realised that they need the immunisation programme to eradicate polio. They now see a lot of coherence between what Gavi and the PEI want. Both programmes have realised that they're trying to reach the same children at the end of the day. ZD children are the most difficult for the PEI to reach in the most difficult regions."
> Operational stakeholder, interview

Gavi's definition of ZD is aligned with partners' and the EPI's definition;[43] while most respondents agree on its value, some questioned whether it should have a different scope. There are two formal definitions of ZD children in Pakistan; one is the definition the federal and provincial EPIs use, which is Gavi's definition of those who have not received the DTP1 vaccine. However, for polio immunisation, ZD children are defined as those who have not received any vaccines at birth.[44] Some interviewees, particularly at the provincial level, believe that the DTP1 definition of ZD should be revised back to BCG, as BCG-immunised children will be in the system and can be followed up for RI.

> "In the six weeks after birth, we administer three vaccines, so the child should not be labelled as ZD because once the child has been registered, we follow up based on a given schedule. So I think the definition of ZD should be reviewed and the definition maybe revised accordingly."
> Strategic respondent, interview

[38] Gavi. (2022). Gavi Support to Pakistan's National Health Support Programme (2022 Mission Report). *Gavi internal documentation.*
[39] Pakistan Polio Eradication Programme. (2023). Partners & Donors | End Polio Pakistan. Retrieved from www.endpolio.com.pk website: https://www.endpolio.com.pk/polioin-pakistan/partners-and-donors.
[40] Global Polio Eradication Initiative. (2023). GPEI-Pakistan. Retrieved from https://polioeradication.org/ website: https://polioeradication.org/where-we-work/pakistan/.
[41] IDIs: Strategic stakeholder, Provincial government; Operational partner; Programme management.
[42] IDI, Operational stakeholder, Provincial level.
[43] Pakistan EPI. (2022). National Immunisation Policy of Pakistan 2022. Retrieved from https://epi.gov.pk/wp-content/uploads/2023/01/NationalImmunizationPolicy2022-compressed.pdf.
[44] The BCG vaccine is typically administered at birth. The Penta-1 vaccine is then administered six weeks later.

However, partners see virtue in the DTP1 definition as it has more of an equity and access lens by capturing drop-outs as well as children who have not been captured by the formal health system.

> "If we define ZD as those not having BCG, then there won't be any ZD children [as coverage is so high]. But when we consider DTP1, we capture those who received a birth dose but haven't come for their first RI shot. We capture defaulters."
> Operational respondent, interview

> "For me, DTP1 is better because it is broader and gives you a larger scope of ZD children to work with than the 'no BCG' definition. Especially in areas like Balochistan and KP, immunisation coverage in these provinces is lagging significantly due to access. DTP1 is really good for categorising children through the access framework, which is useful."
> Operational respondent, interview

Coherence around delivery has been sub-optimal; while coordination structures at the central level are in place, they are not fully functional, and therefore coordination and collaboration among implementing actors has been weak. The main federal mechanism, the National Inter-Agency Coordination Committee (NICC), includes partners, CSOs and provincial EPI managers and has a central coordination and oversight mandate. However, it is considered by some partners and programme management to be relatively weak. This view was reinforced by a 2019 IRC report, which found that the NICC had not been functional, and planning and implementation had not been adequately monitored.[45]

Other coordination and tracking mechanisms such as quarterly review meetings and annual reviews also exist, but these systems are not frequent enough or fit-for-purpose to support real-time coordination. Some performance management systems have been developed by EPs, but these are not yet being deployed to support enhanced coordination. In terms of the coordination of core partners, programme management reflected that there is insufficient collaboration at both the strategic guidance and implementation level, given the fact that both partners typically compete for funds, and have delineated buckets of support that have not explicitly overlapped.

The FPP process will in principle support improved coordination under 5.0. According to the IRC review, the ToC developed under the FPP application has identified the strengthening of the NICC as a key programme outcome. Under this, the NICC will play an enhanced role in the review of EPI programme activities, provide guidance for EPI coverage, advocate with key policymakers, and in doing so improve the allocation of financial resources for the EPI programme.[46]

EQ2. How relevant are the Gavi funding levers to the needs of countries with regard to reaching ZD children and missed communities?

Summary of findings	
	• Gavi funding levers are relevant for supporting the delivery of the ZD agenda in Pakistan, as individually and collectively they address key barriers faced in immunising ZD children. The proposed activities under the 5.0 levers are largely appropriate for Pakistan's ZD objectives. • However, operationalisation issues limit the utility of individual levers. In practice, core partners do not differentiate between levers, rather seeing Gavi grants as fungible and part of a singular pot. • Lack of financial monitoring mechanisms and insufficient human resourcing from Gavi have raised concerns around low fund absorption and transparency. 4.0 funding structures have contributed to this, with all grants

[45] Gavi. IRC FPP Review. *Gavi internal documentation.*
[46] Ibid.

	(aside from TCA) being channelled through core partners, who while acknowledging the utility of individual levers do not keep them distinct. • There is agreement on the value of CSOs and expanded partners for delivery, though it is still unclear to what extent they will be included under 5.0 as fund recipient and/or implementation actors. Diversifying recipients could help address challenges related to fund absorption and transparency. • Programme management believe that Gavi levers should be streamlined due to the complexity of the environment in Pakistan and added administrative hurdles associated with having multiple funding streams.
Strength of the evidence	**1** | **2** | **3** | **4** (2 circled)
Rationale for this judgement	Evidence comprises fewer data sources which are of decent quality, but that are more perception-based than factual.

Pakistan faces a multitude of access and operational barriers to immunisation, which have perpetuated the existence of ZD populations. These barriers, while cutting across all provinces, differ in their nuances and implications on ZD strategies. They include:

- **Physical barriers:** Inadequate infrastructure to reach all citizens, namely remote rural, urban poor, nomadic populations, and security-compromised areas.[47] In these geographies, there are inadequate linkages with healthcare facilities (i.e. limited number of fixed sites and vaccinators), making it extremely challenging to mobilise and reach ZD children and their families.
- **Socioeconomic barriers:** There are significant disparities in health coverage and outcomes based on wealth quintile.[48] Poverty and low maternal education are key variables determining whether a child is ZD or not. There are also notable gendered inequities around immunisation, with the prioritisation of boys' health needs over girls' and point of service barriers including the gender dynamics of healthcare providers.[49] Growing internal migration has also contributed to the rise of urban slums and unauthorised settlements, where many ZD children reside.
- **Health system capacity:** The main bottlenecks for achieving immunisation outcomes include both broad health system and specific immunisation system challenges, including weak human resources and the diversion of EPI staff to COVID-19; poor service quality and the limited involvement of private health facilities in EPI; logistics issues and cold-chain shortages; poor monitoring and accountability mechanisms; costing and finance issues; health data and information gaps (including, prominently, the inability to register all births[50]); poor surveillance systems; and demand generation issues.
- **Demand-side barriers:** Low demand is considered one of the greatest barriers to reaching ZD children and missed communities in Pakistan. Barriers include limited knowledge, misinformation,

[47] IDI Strategic stakeholder, Federal Government.
[48] Wealth index quintiles segment the population into five equally large groups, based on their wealth rank.
[49] Gavi. IRC FPP Review. *Gavi internal documentation.*
[50] A significant barrier to reaching ZD children is the inability to register all births. This is due to low capacity of the National Database and Registration Authority (NADRA), the department that oversees registrations, as well as the low number of institutional deliveries. According to the latest Pakistan Demographic Health Survey (2017–2018) (https://dhsprogram.com/pubs/pdf/FR354/FR354.pdf), only 66% of deliveries occurred in institutional health facilities. This figure varied greatly by urban-rural and wealth, with 81% of urban births taking place in a health facility, compared to only 59% of rural births. Ninety-two percent of births by women in the highest wealth quintile were in health facilities, as opposed to only 42% by women in the lowest wealth quintile. This also varied greatly by district. Registration was deemed by all governmental stakeholders interviewed as critical so support follow-up and coverage.

and poor communication around the benefits and side effects of immunisation. Compounding this, many households, particularly lower-income, find the opportunity cost of immunisation too high relative to their livelihoods responsibilities, so do not take their children to get immunised.

- **Extraneous shocks:** Increased migration, especially from bordering conflict zones (e.g. Afghanistan), extreme weather events such as floods and earthquakes, and the socioeconomic impact of COVID-19 have further complicated the availability of and access to health services.

All Gavi funding levers are deemed by stakeholders interviewed as relevant and appropriate for supporting the ZD agenda in Pakistan, as individually and collectively they address key barriers faced in immunising ZD children. In theory, the range and complementarity of funding levers aim to bridge the aforementioned barriers and enable a more integrated approach to reforms to support wider health system strengthening across the country. This is outlined in Table 2.2 below.

Table 2.2: Mapping of alignment between Gavi 5.0 funding levers and Pakistan ZD challenges

Lever	Purpose of funding lever	Key barriers addressed through lever	5.0 Intervention Area[51]	5.0 Grant ceiling (USD)
HSS	Improve coordination and planning, human resource capacity and management, and surveillance capabilities	Poor service delivery (inadequate access); low government capacity (human resources, training); weak supply chains; inadequate information systems, data, and monitoring (including accountability oversight); poor surveillance; inadequate demand for immunisation (low community awareness and engagement); weak EPI governance, strategic planning, and programme management	All	$118,697,088
EAF	Accelerate efforts to reach ZD children and missed communities sustainably	Poor service delivery (inadequate access); weak supply chains; inadequate information systems, data, and monitoring (including accountability oversight); inadequate demand for immunisation (low community awareness and engagement); weak EPI governance, strategic planning, and programme management	All except for human resources and vaccine-preventable disease surveillance	$45,686,028
CCEOP	Expand cold-chain capacity and logistics, including at the sub-national level	Cold-chain equipment, infrastructure, and logistics gaps (e.g. storage, inadequate equipment in facilities, insufficient facilities)	Supply chains	$18,712,989
TCA	Support the Vaccine Alliance and extended in-country partners	*Aforementioned barriers (filling technical assistance gaps at the federal and provincial levels)*	All	$25,000,000

[51] The key 5.0 proposed intervention areas include: service delivery; human resources for health; supply chains; health information systems and monitoring and learning; vaccine-preventable disease surveillance; demand generation and community engagement; and governance, policy, strategic planning and programme management.

In practice, core partners do not appear to differentiate operationally between the funding levers. Core partners reported seeing Gavi funds as complementary and part of a singular pot within which they need to respect each given funding ceiling, but not as meaningfully distinct streams.[52] This view was reinforced by programme management, who conceded that this was the messaging coming out of the Secretariat – i.e. that the programme should plan for activities under a singular funding envelope.

> "It is very difficult to differentiate between the different funding levers. What is useful is the complementarity; we use the different funds available in each lever… [For example, the EAF] is not different from HSS; they are complementary. It's about respecting the ceiling in each grant, but we do not have a differentiated approach. We bring them together and respect each ceiling."
> Operational respondent, interview

Some stakeholders felt that specific grants like CCEOP were particularly important, given the gains made around cold-chain capacity and the need to continue growing and sustaining cold-chain infrastructure for the future. However, while this is a distinct grant for cold-chain capacity, other funding mechanisms such as HSS allow for capacity building in this area, further reinforcing the idea that individual funding streams can be merged.

There is a perception from programme management that funding sources should be streamlined, as having distinct levers is not as meaningful in the Pakistan context and creates unnecessary administrative hoops. Programme management felt that large funding levers like HSS and EAF are often merged given the complexity of the environment in Pakistan, and that having specific levers creates additional bureaucratic and administrative steps that detract from meaningful operational efforts like accountability and impact monitoring. While in the future having multiple funding streams leveraged effectively could be beneficial, programme management felt that stakeholders in Pakistan do not have adequate capacity to pursue this approach at present.

Programme management see a key contributor to this as the lack of transparency and accountability of the use of funds by partners. Inadequate financial monitoring and an understaffed programme team mean that there are insufficient checks and balances in place to monitor the specific deployment of funds vis-à-vis agreed activities. Funds are thus seen as highly fungible by partners, and therefore the levers are not considered meaningfully distinct in practice, though their specific utility is appreciated by partners.

This is largely due to current funding structures, as Gavi grants are channelled through core partners, who then fund activities downstream either through their own apparatus or through sub-contracted entities. There is very little transparency, however, around how funding flows onward from disbursement to implementation. This was reinforced by programme management and the lack of available documentation to verify grant financial flows.

Current funding structures have also led to a low absorption rate of funds. According to Multidimensional Poverty Measure data, as of 2021, only 72% of HSS funds that were disbursed had been used. In 2022, this figure went up to 84%. According to programme management, this was due in part to the payment-by-results funding structure of the Multi-Donor Trust Fund, where the World Bank disbursed funds (USD 84 million) only at the end of the NISP in accordance with performance. Another reason cited by programme management was delays in core partners to finalise payments, and the tendency for partners to over-inflate their budgets. The issue of implementing partner absorption issues was has been flagged by Gavi at multiple levels and in numerous forums.

[52] Core partner IDIs.

Programming under the 5.0 levers nonetheless appears to be largely appropriate to meet Gavi's ZD objectives. The IRC review found that all 5.0 funding levers will contribute to ZD objectives, though there are some areas for improvement.

- **HSS3/EAF**: "Starting with a root cause analysis, an intense consultative process across all provinces and federating areas was held, supported by provincial deep dive review exercises into the current EPI programme. This resulted in a robust ToC document, workplans and tailored activities for identified geographies and sub-populations. The ToC clearly outlines the logical connections between gaps / challenges, learning questions, proposed interventions/key activities, expected outcomes plus risks and assumptions underpinning this."
- **CCEOP**: "The three-year CCEOP application aligns with the inventory and deployment plan aiming to address cold-chain equipment (CCE) gaps in the prioritised 83 districts where high numbers of ZD children live. It also follows on from the previous CCEOP where the third phase (2020/2022) ensured some equity gaps were addressed through CCE placement."
- **TCA**: "The TCA Plan is largely in line with the technical assistance (TA) needs of the country at the federal and provincial levels with a focus on helping the country address its key immunisation challenges as identified. However, a revision of the budget shows some duplicated costs within the HSS budgets, and also TA costs that need to be realigned in terms of value for money."

There is broad agreement on the importance of CSOs and EPs for delivery, though there are still concerns about the degree to which they will be included under 5.0. CSOs and EPs were noted by non-core partners and the government as being critical actors for immunisation, particularly in the areas of social mobilisation, institutional reach, data gathering, and advocacy. At the time of writing, the FPP application has allocated a total of 11% of the budget to CSOs; however, the only explicitly budgeted CSO involvement is in the EAF, of which CSOs are allocated 28%.[53] The HSS budget shows no allocation of funds to CSOs. According to the Gavi 5.0 key shifts mapping, only 3% of CSO funds are allocated to local CSOs. As a finalised CSO strategy was not submitted with the FPP application, it is still unclear precisely how and to what extent these actors will be involved under 5.0, especially as some of the allocations in the budget for 'Expanded Partners' could include budget allocation for CSOs.

Programme management believe that there is great potential for enhanced programme performance by involving more EPs. Programme management also see a larger role for grassroots organisations to play in the areas of service delivery and demand generation in hard-to-reach areas, as well as at the higher strategic level in terms of planning and management. Under 5.0 and beyond, EPs should include both community-based organisations as well as for-profit entities, as the latter *"are naturally paid for performance, so deliver."*

"The most effective partner we have identified at the provincial level are family physician associations and medical associations for PPPs. They have offered health facilities, private clinics, and hospitals to establish new centres in their premises which will help increase access for immunisation services. Communities trust these institutions so would bring their children for treatment here. These are some of the new partnerships that will really help us reach the unreached with quality services."
Strategic respondent, interview

"The new policy of working with EPs helps us reach ZD children. Government systems are limited, government mobility is limited. Core partners are still unable to reach some of the areas that are in critical need. Gavi's new Board mandate of giving at least 10% to local actors and civil society actors gives us a lot of bandwidth to expand and support service delivery issues and demand generation. This will be a gamechanger."
Operational respondent, interview

[53] Gavi. FPP 2022 application. *Gavi internal documentation.*

Objective 2: Operationalisation of the ZD agenda

EQ4. To what extent have Gavi 5.0/5.1 funding levers, processes and guidance enabled countries to focus their Gavi support towards reaching ZD children and missed communities?

Summary of findings	• The FPP process has been long, taking 25 months from initiation to partial IRC approval. The application has still not been completed and FPP funds have not yet been disbursed. A very small portion (USD 1.2 million) of TCA bridge funding was disbursed mid-2022 to bridge the gap between 4.0 and FPP finalisation. Some 4.0 grants and COVID-19 funds are also being used to bridge this delivery gap. Ongoing delays are attributed to addressing IRC review feedback, with conflicting views among stakeholders. • Pakistan's FPP application aligns with ZD agenda requirements and Gavi guidance, with strengths in situational analysis, sub-national targeting, and the ToC. However, areas related to budget linkage with tailored ZD activities need strengthening. • There are differing opinions regarding the collaborative nature of the FPP design process, with core partners perceiving limited country ownership, while government, programme management, and non-core partners found it highly participatory. The process was initially outsourced to a third party, leading to divergent views on the degree of consultation and ownership. • There are tensions around the finalisation of the application, including concerns about sustainability, human resource alignment, and improving demand. These have not been fully resolved, with core partners questioning the IRC's technical advice and legitimacy. The finalisation process has been heavily centralised, limiting provincial government involvement and transparency. • Gavi grants are considered by partners to be flexible, which is reflected in the continued utilisation of funds from previous grant cycles. Programme management, however, attribute 'flexibility' to a lack of financial and programming oversight.
Strength of the evidence	1 | 2 | **3** | 4
Rationale for this judgement	Evidence comprises few data sources and is largely perception-based.

Operationalisation of 5.0

The FPP process commenced in November 2020 and received an IRC decision of partial approval 25 months later in December 2022[54]**; however, the process is still ongoing.** Pakistan is in the process of responding to comments from the IRC review, and as such the package of FPP funds have not yet been approved. All interviewees have found the FPP process to be too lengthy and believe that this is largely due to the poor management of the application as well as the highly consultative nature of

[54] Multidimensional poverty measure data.

the process (horizontally and vertically). Further delays are now due to the process around addressing IRC review feedback, to which there are conflicting views among the various stakeholders involved.

Pakistan has applied for HSS, EAF, CCEOP, and TCA grants under the FPP.[55] The planned launch date of each grant was January 2023,[56] though at the time of writing FPP workplans and budgets are not final. Only a very small portion (USD 1,180,056 million) of TCA bridge funding was disbursed mid-2022 to bridge the gap between 4.0 and FPP finalisation. Pakistan has provided a budget for the HSS and EAF components; by investment area, the HSS/EAF budgets are comprised of 41% for service delivery, 16% for results-based financing (through the World Bank's NHSP), 11% for demand generation and community engagement, 9% for health information systems and monitoring and learning, 9% for vaccine-preventable disease surveillance, and 6% for supply chains. Of this budget (HSS/EAF), only 8% is allocated to CSOs and 7% to EPs, which the IRC review noted "*seems low regarding the role that they should play in supporting the ToC objectives*."

Overall, Pakistan's FPP application largely reflects the ZD agenda requirements and priorities laid out in Gavi guidance, though certain areas need to be strengthened. The IRC review outlines the application's strengths around the situation analysis, identification of ZD population, and consideration of provincial variation. The highly consultative nature of the process was also praised.[57] However, there were sustainability concerns, particularly given certain activities, the overall volume of funds, and traditionally low absorption capacity of implementing partners.[58] The review also noted that the proposal required strengthening around linking the budget more explicitly to tailored ZD activities. In terms of following operational guidance, all mandatory documents were provided.

Intended ZD shifts are largely appearing in 5.0 grant design.[59] Pakistan's FPP application has met Gavi standards and requirements on sub-national targeting and having a singular ToC. The application largely met 5.0 requirements around CSO engagement, and somewhat met requirements on the IRMMA criteria, gender, and demand:

- **CSO engagement (largely met):** An in-depth CSO mapping was undertaken and the government plans to work closely with CSOs around service delivery and demand generation. Local CSOs are planned to lead community engagement and awareness-raising, identify ZD children, and help define local, tailored strategies around reach. At the time of writing, Pakistan has allocated 11% of the FPP budget towards CSO engagement, which meets Gavi's mandate of 10% under 5.0. However, the country will only allocate 3% towards local CSOs, which is significantly lower than the 25% minimum criterion under 5.0.
- **IRMMA criteria (somewhat met):** Pakistan's FPP application has a strong Identify component and has met the ZD criteria for the identification and quantification of ZD children, their causes, and done targeting based on clear criteria.[60] Pakistan has undertaken a comprehensive province-based ZD analysis and examined equity dimensions related to poverty and maternal education; assessed demand and gender barriers; and identified a limited number of fixed sites, growing urban slums, and unauthorised settlements as drivers of ZD children. Pakistan's Reach strategies mostly meet criteria; while they appear well-enumerated and tailored to provincial and district-

[55] The sums applied for are: HSS: USD 111,231,449; EAF: USD 35,470,296; CCEOP: USD 38,923,017; and TCA: USD 15,000,886.
[56] The HSS grant was planned to go until December 2027, with the other three levers ending in December 2025.
[57] Gavi. (2022). IRC review FPP 2022. *Gavi internal documentation.*
[58] Gavi. (2022). Gavi FPP Screening Template 2022. *Gavi internal documentation.*
[59] Gavi. (2023). Gavi HSS 5.0 Key Shifts Tracker. *Gavi internal documentation.*
[60] Eighty-three districts have been selected based on this ZD assessment. The EAF further targets 20 districts with the least access to health and nutrition services.

specific barriers, the IRC review noted that there are still gaps between identified equity barriers and the targeting and tailoring of interventions, particularly around service delivery and demand generation. The FPP application has successfully met the Monitor requirements, with a learning focus and monitoring plan, the aim to establish and/or scale the Electronic Immunisation Registry to address data fragmentation, and a focus on strengthening the capacity of M&E actors. Nonetheless, the Measure component could be strengthened, with greater integration between data collection activities and the need for third-party verification. The Advocacy component somewhat meets criteria. The IRC review found that there is greater need for social accountability through a concrete CSO strategy, as well as a need to strengthen Pakistan's transition plan and ownership beyond co-financing.

- **Gender (somewhat met):** Pakistan's FPP application was strong on certain gender elements, such as the identification of gender barriers and addressing health worker and caregiver barriers. The application somewhat addressed barriers to adolescent mothers. However, it did not disaggregate immunisation coverage by gender, nor outline specific activities targeting adolescent girls to access services for themselves.
- **Demand (somewhat met):** The FPP successfully identified the behavioural and social drivers of vaccination and proposed behaviourally informed interventions. However, it only partially addressed requirements around the engagement of influencing groups, face-to-face engagement with caregivers, and CSO engagement for demand promotion.

The stringency and thoroughness of the FPP requirements and corresponding processes have largely supported Pakistan's shifts towards operationalising the ZD agenda in its application. Extensive human-centred design workshops and consultations, centrally down to the provincial level, have led to a robust situational analysis that has informed the proposed interventions. The IRC review found that proposed interventions are based on clearly delineated ToCs and workplans, which are tailored specifically to each province.

However, there were stark and divergent opinions on the collaborative nature of the FPP design process: core partners found the process non-consultative with limited country ownership; while government, programme management, and non-core partners found the process extremely participatory. Core partners felt that a key cause of this was the lack of ownership of the process, as the application was initially outsourced to a third-party (Common Thread) rather than led by the government with the help of partners. There was consensus across stakeholders aware of Common Thread that the process was not smooth; nonetheless, there was a clear difference of opinion as to the degree of consultation and ownership of the process between core partners and other stakeholders.

Perspectives on the non-consultative nature of the application (core partners):

"From the start, the [application process] was taken from the hands of partners and government and led directly by Gavi, who hired Common Thread to lead the process. The process was lengthy and done by people with no capacity, no legitimacy, who were not representing anyone. The government was not really on board, Alliance partners were not really on board…Despite our complaints to Gavi, we were not heard several times…The people leading the process were not representing the government or core partners."
Operational respondent, interview

"Although Gavi started the process in good faith by having a bottom-up approach…somehow, the application was done through a third-party, so we weren't that involved in the initial prioritisation of activities. We received it very late. And when we did receive it, it wasn't very useful…It went through a long process of to and fro discussion with multiple actors. We didn't think the initial process was focused…There wasn't much clarity on what was proposed. As partners, we were called for discussions, we gave our opinion, but somehow, it wasn't translated into what we really wanted in specific programmatic areas…When a country is not writing its own proposal and a third-party is which isn't in-tune or aware of the country, it won't sell…There are [still] many gaps and challenges. If things drag on for so long, people lose interest. Initially [the application] was for 5 years, then 3 years, and now 1 year, so what's the point. These things have really affected Pakistan's ability to put forth a quality proposal."
Operational respondent, interview

Perspectives on the consultative nature of the application (government, other partners):

"One good thing that Pakistan adopted [when preparing the proposal] was using a participatory approach. We sat with the provinces and consulted the hotspot districts, having all partners alongside in this approach, which enabled us to build a proper consensus."
Strategic respondent, interview

"The whole process has been very collaborative and consultative…While proposal writing was centralised, all provinces and the three independent areas had their full right for consultation. Everyone was invited (CSOs, district-level actors, vaccinators, lady health workers, core partners, EPs, provincial EPIs, the federal EPI, etc.). Everyone gave their feedback. It was a bottom-up approach to really understand the challenges at the grassroots and community level…It gave a face to the mother and child that needed help, to understand the enablers and hindrances of becoming fully immunised…Previously, Gavi would share a Request for Proposals for discrete funds. But this process helped the people working in the EPI to understand what it takes to actually reach the child…We got to know the provinces well, following months of data collection, from a geographic, socioeconomic, and anthropological perspective."
Operational respondent, interview

The IRC review reinforced the participatory nature of the process, noting that the province-led development process was a first for Pakistan, as previous applications were driven by a small, centralised group at federal level. Supporting this endeavour, Gavi was considered by government respondents as being accessible and flexible throughout the process.

"[Gavi has been] very helpful. We actually had a few queries around the systems and documents, but the Secretariat was always available and supportive. They were flexible in letting us think according to our strategies; at times we requested some changes, which they accommodated."
Strategic respondent, interview

The lack of clarity around the initial design process and contracting of Common Thread indicates coordination and communication challenges among core stakeholders. According to core partners, they were neither adequately consulted nor was there much transparency around the decision to outsource the application process to Common Thread. However, other operational stakeholders expressed that the rationale was that an objective third-party was needed to pen the application, so that there would be no conflict of interest with potential grant recipients drafting the proposal. Separately, programme management shared that it was actually by request from the former FDI Director General and Technical Director that external, independent support was provided for the application. The government felt too stretched to adequately lead both the pandemic response and novel FPP application process. The evaluation was unable to examine procurement documentation as part of the desk review,

so cannot determine how procurement was undertaken and therefore how suitable it was to the needs of the country at the time.[61]

There are tensions around the finalisation of the application, with questions around the extent of country and partner ownership versus IRC recommendations. The IRC review raised fundamental comments around issues of sustainability, human resource alignment, and improving demand that have not yet been reconciled by core partners to the satisfaction of the Secretariat. Core partners continue to question the technical advice, mandate and legitimacy of the IRC, viewing it as too top-down, while Gavi and some partners perceive of the tension as the growing pains of implementing a new conceptual philosophy around a more holistic, integrated, sustainable and value-for-money approach.

> "For me, this is good for the country, because otherwise we would do things that aren't adequately sustainable. Although it hurts, this push is necessary… [The SCM] played a very strong lobbying role for ensuring these criteria were being met. When the IRC came in to review, they gave the same message: 'this isn't usual funding, this is different now'…The IRC is just another platform through which Gavi was able to hammer down the same stringent criteria. There was a very strong filtering process to ensure Gavi's criteria were being followed. There was no flexibility in this. Even if core partners wanted the activities to be included, the IRC said no…Some of the short-term needs of the government, partners, and system were taken out, not because Gavi didn't want to invest in them, but because they didn't want the FPP to invest in them. They asked the government to take more of an ownership role."
> (Operational respondent)

> "Gavi has come in again and again and changed the scope of activities multiple times. For me, this is really frustrating. We're a country that knows that's best and what's needed…The programme should take the lead in developing the proposal and not the other way around. In the last few months, we feel that the programme has been forced to address what Gavi wants, not what the programme wants."
> Operational respondent, interview

As the finalisation of the application has been heavily centralised, provincial governments are not privy to the status of the process or funds. The approach to resolving the application has involved extremely light-touch consultation with the provinces and has remained largely in the hands of core partners and the federal government. According to programme management, revisions have now met a minimum requirement for provincial needs for 12 months of funding. For 2025, there will be another province-focused exercise which will seek to find the right balance between partners, the federal government and provinces. It was acknowledged by programme management that this approach is not optimal, but that the process needs to move forward for this funding cycle.

> "We are totally aware of the FPP and have started the exercise in districts as well as in the overall province. We updated the requirements in the portfolio. Unfortunately, the original draft was changed at the federal level…We didn't know about what kind of things Gavi approved or not. The whole process was a long exercise, and we're still unaware of the process, when it will be implemented, what kind of activities will take place. Some activities were clear in meetings at the federal level, and some things we added in the portfolio are still missing…Officially, we don't know what the status of the FPP is. We don't know what kind of funds and activities have been approved…All things have been controlled from the federal level, so I would recommend that Gavi start involving provinces." Strategic respondent, interview

[61] While programme management was not familiar of the specific procurement process in contracting Common Thread, it was known that they had a track record in providing human centred design thinking for similar proposals, which was in line with the user-centred philosophy of 5.0.

Grant implementation

Due to severe delays, FPP funds have not yet been approved or disbursed in Pakistan. However, Gavi 4.0 grants, COVID-19 funds, and a small volume of TCA bridge funding are still being used to close this gap in implementation. There was not consistency among respondents as to which 4.0 grants are still being implemented. Gavi, core partners, and other operational stakeholders could not provide consistent details as to which specific funds were still ongoing. This is likely related to the lack of funding oversight mechanisms and the fungibility of grants to date, which is described in more detail below. As no FPP grants have been disbursed, the ZD agenda can only be operationalised through existing funding levers, which are partially but not fully aligned with the ZD strategy.

Gavi grants are considered by partners to be flexible, which is reflected in the continued utilisation of funds from previous grant cycles. Partners described that grants are flexible, that extensions are easy to get, and that reprogramming is done regularly to ensure grants remain fit-for-purpose. This view was also reinforced by federal and provincial government respondents.

However, programme management expressed concerns around inadequate transparency and accountability by partners in terms of how funds are utilised and linked to outcomes. In this sense, this perceived 'flexibility' of the grant-making process, while to some extent true, was largely a symptom of a lack of financial and programming oversight. This view around financial opaqueness was reinforced by provincial respondents, who claimed having no visibility on the volume or use of funds through partners. This raises questions around the ability to fully operationalise the ZD agenda downstream, given current funding flows through partners rather than government.

> "Gavi funding is mostly routed through the main implementing partners like UNICEF and the WHO. We don't know the exact volume and value of support being provided. No direct funding is given to provincial governments, so I'm not aware of what is spent through Gavi…This is an area that needs to be addressed…we don't know how much funding is coming through partners."
> Strategic respondent, interview

The combination of over-stretched programme management and lack of financial monitoring mechanisms has exacerbated this problem. Gavi is not adequately capacitated on the Pakistan portfolio, which is Gavi's largest country recipient under 4.0 and 5.0. Having only two full-time staff makes grant management extremely challenging. There are also no reported functioning monitoring systems of partners. While reporting has been done biannually and will now move to a quarterly basis, reports were deemed by programme management as extremely high-level and therefore inadequately insightful for grant monitoring. To date, there have been no further resources allocated to the Pakistan portfolio by the Gavi Secretariat. However, Gavi's segmentation approach undertaken in 2021–2022 to reorganise countries by buckets such as 'high impact' and 'FCAS'[62] could indicate that in the future, more resources will be allocated organisationally based on these categories.

As 4.0 grants have intersected the ZD design cycle, they have been utilised to some extent to support the ZD agenda. Drivers of implementation include the country's increasingly differentiated approach to sub-national needs, a strong pro-equity focus, and improved data systems under 4.0. This has enabled greater visibility and accuracy over programming inputs, outputs and process indicators. Another key enabler has been the more active role that Gavi has taken in grant management, as a full-time SCM was put in place to oversee the 4.0 portfolio. Nevertheless, there are still barriers to implementation. Many key health system capacity challenges[63] remain unresolved. Additional challenges

[62] Fragile and conflict-affected state.
[63] For example, leadership and management issues, human resourcing gaps, inadequate demand, monitoring & evaluation, and surveillance capacity.

have included insufficient coordination, collaboration and information-sharing among core actors, inadequate CSO and private sector engagement to support delivery, and extraneous shocks such as political transitions and natural disasters.[64] This combination, as well as limited bandwidth within the Gavi Pakistan team to monitor implementation (including the low absorption rate of funds), has led to certain pro-equity outcomes not being achieved (see section below).

Objective 3: Contribution of Gavi 4.0 pro-equity and ZD grants

EQ5. How have Gavi grants initiated under Gavi 4.0 with continued implementation in 5.0/5.1 contributed to the delivery of the ZD agenda at the country level?

Summary of findings	• There is evidence that 4.0 grants have supported several pro-equity achievements in Pakistan, including the expansion of cold-chain capacity, the establishment of a pooled procurement mechanism for vaccines, greater reach through fixed sites and enhanced outreach activities, improved data systems, strengthened EPI governance, and overall improved coverage. • However, challenges remain in the areas of demand generation, the sustainability of outreach activities, monitoring and accountability, and accessing hard-to-reach populations and security-compromised areas. • Evidence indicates that Gavi's support has played a central role in these changes, through the provision of significant financial resources, strategic oversight, and managerial attention. Nonetheless, Gavi worked closely with many technical partners and government actors so full attribution is implausible. All stakeholders interviewed noted that these changes would not have been possible without Gavi's support.			
Strength of the evidence	**1**	**2**	**3**	**4**
Rationale for this judgement	Evidence comprises few data sources. Where available, they are largely anecdotal/ perception-based.			

Key pro-equity achievements under Gavi 4.0 grants

- **Expansion of cold-chain capacity**: CCEOP funding was deemed to be an invaluable lever for furthering Pakistan's pro-equity agenda. The investments under Gavi 4.0 and COVID-19 helped develop expansive, robust cold-chain infrastructure across the country, which supported both COVID and RI. Pakistan is now working towards the solarisation of its cold-chain and logistics infrastructure to remain resilient against electricity issues.
- **Establishment of a pooled procurement mechanism for vaccine supplies**: Through the NISP, the country was able to implement a pooled procurement mechanism where each province determines its own vaccine demand and has flexible payment options.[65] In a country like Pakistan where procurement is highly fragmented, this change has dramatically improved procurement and reduced stockouts.

[64] Gavi. (2020). Multi-Stakeholder Dialogue 2020. *Gavi internal documentation.*
[65] World Bank. (2022). Pakistan NISP Implementation Completion Results IRC Review Workshop.

- **Increased accessibility through the establishment of more fixed sites and investment in refurbishing critical facilities**: These activities have helped improve access, utilisation and coverage, and were noted as particularly significant by provincial stakeholders. For example, respondents in Balochistan and KP shared that the establishment of 24/7 vaccination centres in labour rooms in tertiary care hospitals had the greatest contribution to reaching ZD children given the challenges around registration in the field. These facilities established trust and confidence.
- **Improved governance through the formal establishment of the Federal Directorate for Immunisation (FDI)**: During 4.0, the FDI became a formal unit under the Ministry of National Health Services Regulation and Coordination. The creation of this directorate reflects an important strengthening in the immunisation governance system and management.
- **Improved coverage, including more equitable coverage** due to the identification of targets and linked financial incentives through the World Bank DLI mechanism.[66] Coverage also improved during the COVID-19 response.
- **Strengthened data systems**: Data and performance management systems started to be developed to monitor and track performance. While these systems were strengthened, there is recognition that more still needs to be done in terms of data integration and interoperability of not only governmental systems, but of partners' systems to enhance decision-making.[67]

At the provincial level, particularly in the provinces of Balochistan and KP, local actors shared that the biggest successes around reaching ZD children were the successful deployment of outreach activities, namely EOAs and integrated outreach activities. These activities were deemed essential to reaching ZD children and improving immunisation coverage that would otherwise not be possible through traditional facilities.[68] However, partners and programme management staff were more wary of the sustainability challenges around continuing such activities (elaborated on more below).

Another promising intervention that was started but that still needs further improvement is a digital immunisation registry system. Under this system, a child is registered at birth and tracked, so the programme has access to real-time data on immunisation coverage. The project has been piloted in a few areas but there are plans to scale it given its importance.[69]

> "The most common reason for ZD children is that every birth is not recorded immediately in our system. We have to depend on parents going to fixed sites or to outreach sessions. But once the child is registered in the national database system, we then follow-up…This can then be accessible and visible to everyone. If this is implemented and integrated, then it will be helpful for minimising ZD children…Otherwise, there's no system to get information on new births. This needs to be done at the national level. Gavi and partners need to interact with the Interior Ministry to support this and make it a legal requirement for parents. Some legislation is required."
> Strategic respondent, interview

All respondents noted that these changes would not have been possible without Gavi's support.

[66] IDIs: Core partners; ibid.
[67] IDIs: Strategic stakeholder, Federal Government; Operational partner.
[68] FHI 360 IDIs: LHW Supervisor, KP; Operational core partner, Provincial level, Balochistan; Operational partner, Provincial level, Balochistan; Strategic stakeholder, Provincial Government, Balochistan; Operational partner, Provincial level, KP.
[69] IDIs: EPI Technical Officer; Strategic stakeholder, Federal Government; BMGF EPI Technical Focal Person, Balochistan.

Pro-equity outcomes that require further improvement

- **Demand generation**: All interviewees noted that demand generation activities need to be strengthened. This included the need to engage in more differentiated strategies and leveraging grassroots actors such as CSOs to enhance community engagement, rather than relying solely on traditional demand generation actors like UNICEF. Provincial-level respondents further noted the importance of segmenting the ZD population when designing demand generation strategies. Sub-groups include: (1) those who have misconceptions about immunisation and do not want their children vaccinated; (2) those who have awareness but for whom accessibility is an issue; (3) nomadic people, refugees and displaced groups that the government cannot track.[70]
- **A sustainable shift away from outreach activities**: Operational respondents felt that in the future, there needs to be a sustainable shift away from outreach activities. While these interventions were utilised intensively and effectively under 4.0, it was noted that they are extremely resource-intensive and do not sustainably address structural issues to coverage. Moreover, one core partner shared that the EOAs had created perverse incentives to the regular EPI programme as frontline workers received greater compensation under the EOAs, so would wait for these activities and neglect routine EPI activities. This was reinforced by the IRC review.
- **Monitoring and accountability**: Data, monitoring and accountability mechanisms at the federal and sub-national level need to be strengthened and made more routine.[71] Tracking systems that provide in-depth analysis of grant management and compliance need to be developed so that all stakeholders are being held to account. Furthermore, aligned targets that are outcome-focused rather than activity-focused should be established. This applies to Gavi's own internal systems, too. There is no data in the Grant Performance Framework data for 4.0 implementation.[72, 73]
- **Accessing hard-to-reach populations and security-compromised areas** remains a challenge for the EPI, especially in provinces like Balochistan and KP.

Plausible Gavi contribution

Anecdotal evidence indicates that Gavi played an important role in contributing to these changes due to the significant resources allocated as well as its strategic advisory. Since 4.0, Gavi has provided significant financial resources (over USD 300 billion) as well as managerial resources through the hiring of a full-time SCM, which further supported pro-equity programming. The specific funding towards overall health system strengthening (systems, processes, infrastructure, governance), a pro-equity focus, and the coherence of Gavi's activities with initiatives like the NISP also supported the above outcomes. However, while Gavi was a key enabler of the strategic framework and played a critical gatekeeper role through funds, it has worked in close collaboration with technical partners and government actors that have also contributed to the operationalisation and realisation of the broader ZD outputs. Gavi's significant financial and strategic contributions to ZD immunisation changes has been expressed by all respondents.

[70] FHI 360 IDIs: Strategic stakeholder, Government of Balochistan; Operational core partner, Balochistan; Operational partner, Balochistan.
[71] FHI 360 IDIs: Strategic stakeholder, Government of Balochistan; Operational core partner, Balochistan; Operational partner.
[72] There is no data on targets or actuals from the period of 2016–2020 for the following grant implementation indicators: Cumulative HSS grant expenditure reported as % of cumulative HSS grant commitment; Cumulative HSS grant expenditure reported as % of cumulative HSS grant approved; Cumulative HSS grant expenditure reported as % of cumulative HSS grant disbursed; Percent of work plan activities executed.
[73] Gavi. (2021). Gavi Pakistan Grant Performance Framework (2016–2020). *Gavi internal documentation.*

Table 2.3: Mapping ZD related outputs to pro-equity interventions implemented under Gavi 4.0

ZD related outputs	Indicators	Pro-equity interventions programmed / implemented
ZD children and missed communities are identified and targeted	**DTP drop-out**: The country met its targets across the 4.0 period, with the rate decreasing overall from 9% to 7%.[74] (Source: WUENIC) *It should be noted that there are inconsistencies in data between JRF[75] and WUENIC, both of which are official UNICEF/WHO sources.* **Percentage of districts or equivalent administrative area with Penta3 coverage greater than 80%**: Pakistan exceeded its targets for each year across the 4.0 period,[76] though there was not an upward trend during this time. (Source: JRF) *There is no data on many relevant indicators[77]*	**Identify**: • Development and implementation (via GIS mapping) of a strategy to identify and target urban slums with immunisation services, including through partnerships with the private sector (identification, mapping of populations and/or health facilities and immunisation centres, bottleneck and gap analyses). **Reach**: • Implementation of reaching-every-district (RED) strategies in 23 districts. • Equity-focused planning and micro-planning inclusive of urban slums and other marginalised communities, through activities such as: redistributing staff to low coverage areas; enlisting and targeting of refusal schools; prioritising hard-to-reach, difficult-to-access areas; community-centred approach and communication plan; engaging with education departments; reaching out of school children through mobile teams. • Recovery Plan to counter the adverse impact of COVID-19 on RI.
Gender and socioeconomic barriers are understood and addressed	*There is no data on relevant indicators[78]*	**Reach**: • Having specific strategies to reach out of school children, including mobile teams, utilising CSOs, developing microplans, having flexible vaccination hours (e.g. for working parents), and engaging in demand generation.
Communities know about immunisation and how to access services	*There is no data on relevant indicators[79]*	**Reach**: • Demand generation activities (e.g. EOAs); tailored location of service delivery and partnerships for service delivery.

[74] 2016: Target: 12%, Actual: 9%; 2017: Target: 10%, Actual: 10%; 2018: Target: 9%, Actual: 8%; 2019: Target: 9%, Actual: 7%; 2020: Target: 8%, Actual: 7%.
[75] Joint Reporting Form on Immunisation.
[76] 2016: Target: 35%, Actual: 64%; 2017: Target: 45%, Actual: 62%; 2018: Target: 52%, Actual: 55%; 2019: Target: 55%, Actual: 65%; 2020: Target: N/A, Actual: 58%.
[77] DTP dropout in targeted areas; DTP1 coverage in targeted areas; Geographic equity (DTP3 coverage); No. of ZD children; Difference in Penta3 coverage between the highest and lowest wealth quintiles; Penta3 coverage difference between the children of educated and uneducated mothers / care-takers; Difference in Penta3 coverage between children of urban and rural residences; Percent of districts with updated microplans that include activities to raise immunisation coverage.
[78] Country addressing gender-related barriers support; Percent of gender work plan activities executed.
[79] Percent of health facilities providing routine immunisation services; Percent of demand work plan activities executed; Country implementing tailored plans to overcome demand barriers.

ZD related outputs	Indicators	Pro-equity interventions programmed / implemented
Supply chains are able to reliably deliver the full set of vaccines to missed communities	*Where CCE indicators are reported, there is only data from 2018–2020. The Physical CCE inventory data used for reporting noted actuals of 0% for the following indicators in 2019. It is not clear whether this is due to programming challenges or poor data quality.* **CCE expansion in existing equipped sites**: The country did not meet its 2020 target, under-performing by roughly half.[80] **CCE replacement / rehabilitation in existing equipped sites**: The country met its 2018 and 2020 targets, effectively reducing the number of existing sites with non-functional equipment by over 60%.[81] **CCE expansion in existing equipped sites**: Pakistan overperformed on this indicator, increasing CCE extension over time and relative to its 2020 target.[82] *There is no data on other relevant indicators*[83]	**Reach**: • Supply cold-chain equipment in 65 districts identified with cold-chain gaps; construction of health facilities in areas without to ensure equitable coverage, as well as equipping those facilities with CCE.
Programmes and approaches are continuously monitored and generate learning for course correction	*There is no data on relevant indicators*[84]	**Monitor and measure**: • Systematic tracking of ZD, defaulter, and refusal children through effective utilisation of EPI/PEI synergies. Specific criterion developed to identify the high-risk population using the previous experience of measles, TCV and polio. • Profiling and targeting of poorly performing urban slums with immunisation services; model pretested in seven main cities and rolled out in other areas alongside other assessments of the private sector and EPI facilities, and in conjunction with a bottleneck analysis.

[80] 2018: Target: 86%, Actual: 86%; 2019: Target: 85%, Actual: 0%; 2020: Target: 80%, Actual: 44%.
[81] 2018: Target: 13%, Actual: 13%; 2019: Target: 7%, Actual: 0%; 2020: Target: 7%, Actual: 5%.
[82] 2018: Target: 46%, Actual: 46%; 2019: Target: 8%, Actual: 0%; 2020: Target: 8%, Actual: 51%.
[83] Closed Vial Wastage (DTPcv); Stock availability at health facility levels; Effective Vaccine Management Score (composite score).
[84] EPI management capacity.

3 Annex

Table 3.1: Desk review documents

Source	Document title	Year
Gavi	Gavi HSS Grant Application (2016 – 2019)	2015
Gavi	IRC Country Report Pakistan (Nov 2015)	2015
Gavi	IRC Country Report Pakistan – CCEOP 2016	2016
Gavi	Equity-Focused Integrated Immunisation Initiative for Marginalised Communities in Pakistan Request for Additional HSS Funds 2019	2019
Gavi	IRC Country Report Pakistan – Additional HSS Funds	2019
Gavi	Pakistan Screening of Full Portfolio Planning Application 2022	2022
Gavi	FPP Narrative 6 11 2022	2022
Gavi	FPP Budget 6 11 2022 (for IRC)	2022
Gavi	FPP Workplan 6 11 2022 (for IRC)	2022
Gavi	IRC Country Report Pakistan (Dec 2022)	2022
Gavi	PEF Targeted Country Assistance (TCA) Narrative for 2022–2025 Multi-Year Planning	2022
Gavi	Pakistan Cover Note – Gavi Secretariat 2022 TCA Bridge Funding Application for IRC Review	2022
WHO	Lessons Learnt HSS2	2019
World Bank	Immunisation Financing Assessment 2020	2020
World Bank	National Immunisation Support Project: Mid-term Review	2020
World Bank	Pakistan National Immunisation Support Project Implementation Completion Results – IRC Review Workshop	2022
Aga Khan University	Third-Party Verification Immunisation Coverage Survey Survey Report (Round Two)	2021
KFW	Ex-Post Evaluation Vaccination Programme Funding, Pakistan (KfW)	2022
Gavi	Gavi Support to Pakistan's National Health Support Programme, Mission Report	2022
Gavi	Overview of Gavi Support to Pakistan, FPP 2022 Annex	2022
Gavi	Joint Appraisal Report 2019	2019
Gavi	Gavi 2020 Pakistan Multi-Stakeholder Dialogue: Immunisation planning in light of COVID-19	2020
Gavi	Pakistan Grant Performance Framework (2016–2020)	2021
Gavi	Pakistan Grant Performance Framework (2021–2025)	2021
Gavi	Country-specific results from pro-equity mappings (HSS and other levers)	
FHI 360	Pro-Equity Intervention Mapping	
FHI 360	Mapping of existing pro-equity interventions within Gavi-supported countries	
Pakistan Government	National Health Vision Pakistan 2016–2025	2016
Pakistan EPI	National Immunisation Policy of Pakistan 2022	2022
Gavi	Gavi, the Vaccine Alliance Strategy 2021–2025	2021
Gavi	Gavi Application Process Guidelines 2021	2021
Gavi	Zero-Dose Funding Guidelines 2021	2021

Gavi	Decision Letter: Pakistan Proposal to Gavi for HSS Support 2016	2016
Gavi	Decision Letter: Pakistan Proposal to Gavi for HSS Support 2018 Renewal Request	2018
Gavi	Decision Letter: Pakistan Proposal to Gavi for HSS Support 2019	2019
Gavi	Decision Letter: Pakistan Proposal to Gavi for HSS Support 2019 Additional Funds	2019
Gavi	Decision Letter: Pakistan Request for CCEOP Support 2017	2019
Gavi	Decision Letter: Pakistan Request for CCEOP Support 2018	2019
Gavi	Decision Letter: Pakistan Request for CCEOP Support 2019	2019
Gavi	Decision Letter: Pakistan COVID-19 Vaccine Support 2021	2019
Gavi	Decision Letter: Pakistan COVAX Cold-Chain Equipment Support 2021	2021
Gavi	Decision Latter: Pakistan COVID-19 Vaccine Delivery Support 2021	2021
IA2030	IA2030 Ownership and Accountability (Q&A): A Global-Level Partnership Model	
Gavi	Gavi FPP Screening Template	2022
Gavi	Gavi HSS 5.0 Key Shifts Tracker.	2023
Gavi	IRC review FPP 2022	2022

Table 3.2: List of academic sources

Source	Document title	Year
Gavi	The Zero-Dose Child: Explained. [online] www.gavi.org. Available at: https://www.gavi.org/vaccineswork/zero-dose-child-explained.	2021
Gavi	Pakistan. [online] www.gavi.org. Available at: https://www.gavi.org/programmes-impact/country-hub/eastern-mediterranean/pakistan.	2023
Global Polio Eradication Initiative	GPEI-Pakistan. [online] https://polioeradication.org/. Available at: https://polioeradication.org/where-we-work/pakistan/.	2023
Pakistan Polio Eradication Programme	Partners & Donors | End Polio Pakistan. [online] www.endpolio.com.pk. Available at: https://www.endpolio.com.pk/polioin-pakistan/partners-and-donors.	2023
World Bank	Development Projects: National Health Support Program - P172615. [online] World Bank. Available at: https://projects.worldbank.org/en/projects-operations/project-detail/P172615.	2023

Table 3.3: List of stakeholders

ID	Position	Organisation	Categorisation	Remote vs in-person
1	EPI Team Lead	UNICEF	Operational	Remote
2	National programme manager	UNICEF	Operational	Remote
3	Immunisation officer	WHO	Operational	Remote
4	Consultant	PHC Global	Operational	Remote
5	Principal	Acasus	Operational	Remote
6	Director General	Federal Directorate of Immunisation	Strategic	In-person
7	Lead strategic advisor	US Centres for Disease Control (former Director General of the Ministry of National Health Services, Regulation and Coordination)	Strategic	In-person
8	Director	EPI Punjab	Strategic	Remote
9	Director	EPI Khyber Pakhtunkhwa	Strategic	Remote
10	Senior country manager	Gavi	Strategic	Remote
11	Programme manager	Gavi	Strategic	Remote

The team supplemented primary data collection with data collected by FHI 360 at the sub-national level. Stakeholders included:

- BMGF Technical Focal Person for the EPI, Balochistan
- National Professional Officer, WHO EPI Lead, Balochistan
- Director General of Preventable Diseases, Balochistan Health Office (previously Provincial Deputy Director, EPI of Balochistan)
- BMFG Technical Focal Person for the EPI, Khyber Pakhtunkhwa
- EPI Technical Officer, Khyber Pakhtunkhwa
- Lady Health Supervisor, Khazana, Khyber Pakhtunkhwa.

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ISO 27001

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