Joint Appraisal (JA) Template

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

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

As an integrated part of Gavi's portfolio management process, the JA discussion should review **Gavi's contribution to immunisation programme performance** in 2022/early 2023, including current status of your COVID-19 programme and efforts on integration. A key feature of the JA is the joint discussion about the **promising practices, challenges met and future needs** for improving immunisation performance with a focus on reaching zero-dose children and missed communities.

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

The 2022 Joint Appraisal template is structured as follows.

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

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

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

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

Cross-cutting Questions

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

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

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

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

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

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

Background information

Sociodemographic

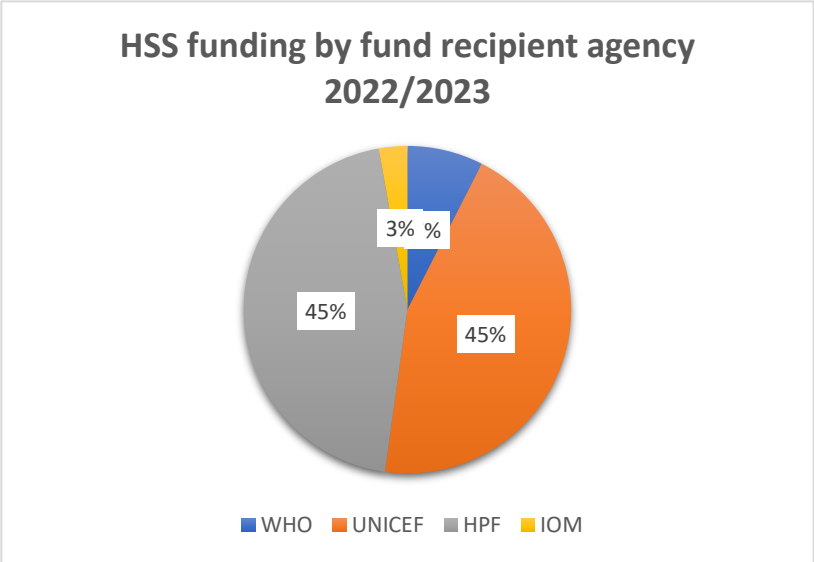
South Sudan is a republic comprising 10 states and 3 special administrative areas; within these states are 80 counties and several Payams and bomas. Based on the latest official population estimates, the population of South Sudan is currently 12,444,018, with an estimated birth cohort of 497, 760 children. The estimated number of children that survive the first year of life is 435,540.

South Sudan has experienced relative peace since the signing of a peace agreement in September 2018. However, there are reports of isolated conflict that often hamper health services delivery. While service delivery improved, especially during periods of relative peace (2020-2022), service delivery and health systems remained inadequate and continue to be driven mostly by development partners. Ongoing challenges include the continuing deterioration of health infrastructure, a substantial rural population in difficult-to-reach locations, recurrent intercommunal conflict, and significant seasonal flooding. The current health sector funding is primarily provided by the Health Pool Fund (HPF) and The World Bank. The return of approximately 2 million South Sudanese living as refugees in the neighbouring countries has been slow but increasing. However, following the armed Sudan crisis that started in April 2023, there has been an increased return of South Sudanese into the country, and this is expected to put a strain on the existing health infrastructure. The poverty rate at the national poverty line of South Sudan has been growing, highlighting the population's poor standard of living.

EPI service delivery

The EPI program is managed and implemented as an integral component of primary health care (PHC) under the stewardship of the Director General of Primary Health Care. While the management of vaccination services is spearheaded by the Ministry of Health, vaccination service delivery is outsourced to non-government agencies that are contracted by the government to implement a basic package for health and nutrition (BPHN) across the country. Currently, the program offers 4 vaccines (Pentavalent, Inactivated polio vaccine (IPV), Measles (MCV1) and BCG) against diseases known to cause morbidity and mortality among children and the Td vaccine which protects against maternal and neonatal tetanus.

To reach the ten states and three administrative areas, GAVI provides cash funding through UNICEF, WHO, IOM, and the Health Pool Fund (HPF3). However, it is important to note that two major fund managers (UNICEF and Health Pool Fund 3) deliver primary health care services and the integrated basic health policy. Seven states are supported by the multi-donor HPF3, which includes FCDO, USAID, Sweden, and Canada, as well as a contribution from GAVI, with a focus on building health systems and immunisation. HPF3 uses implementing partners that combine development, humanitarian, and health programs. UNICEF is the second fund manager for the three conflict states, with support from the World Bank and Gavi.



In 2023, vaccination services were provided through a combination of fixed, outreach, and mobile strategies. An estimated 1,088 facilities provided vaccination services (this figure often varies). Of these facilities, 791 (512, 245, and 34) provided EPI services via implementing partners supported by HPF, WB-UNICEF, and IOM, respectively. The remaining facilities receive support from either the government (orphaned) or partners not included in the UNICEF/HPF 3 funding mechanism.

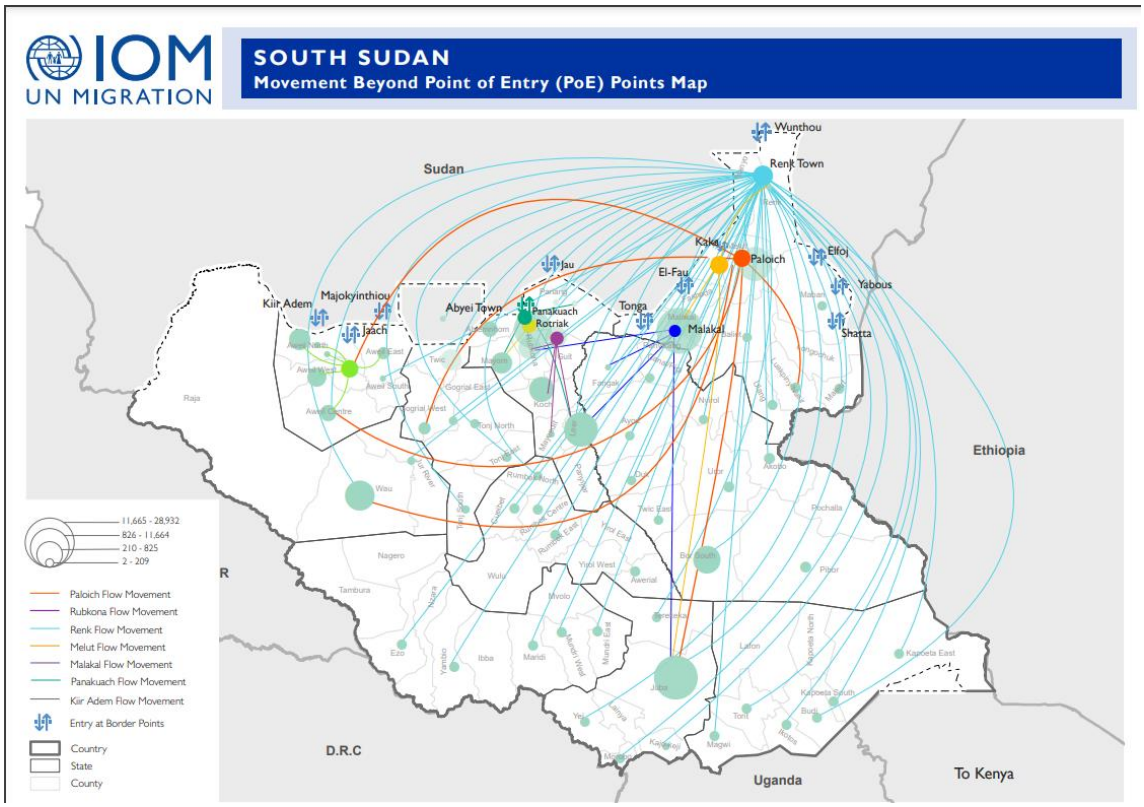
Country population and population movement

The most recent population census was carried out in 2008. Subsequently, the country has generated demographic projections that are utilized for planning and monitoring various programs, including the immunization program. It is worth noting that although the National Bureau of Statistics (NBS)publishes these population data, which makes them official, organizations frequently rely on population figures from alternative sources such as World Bank estimates, UN estimates, and so on. For example, Gavi has utilized the United Nations population estimates, which typically reflect lower figures compared to the official population estimates, in the allocation of vaccines.

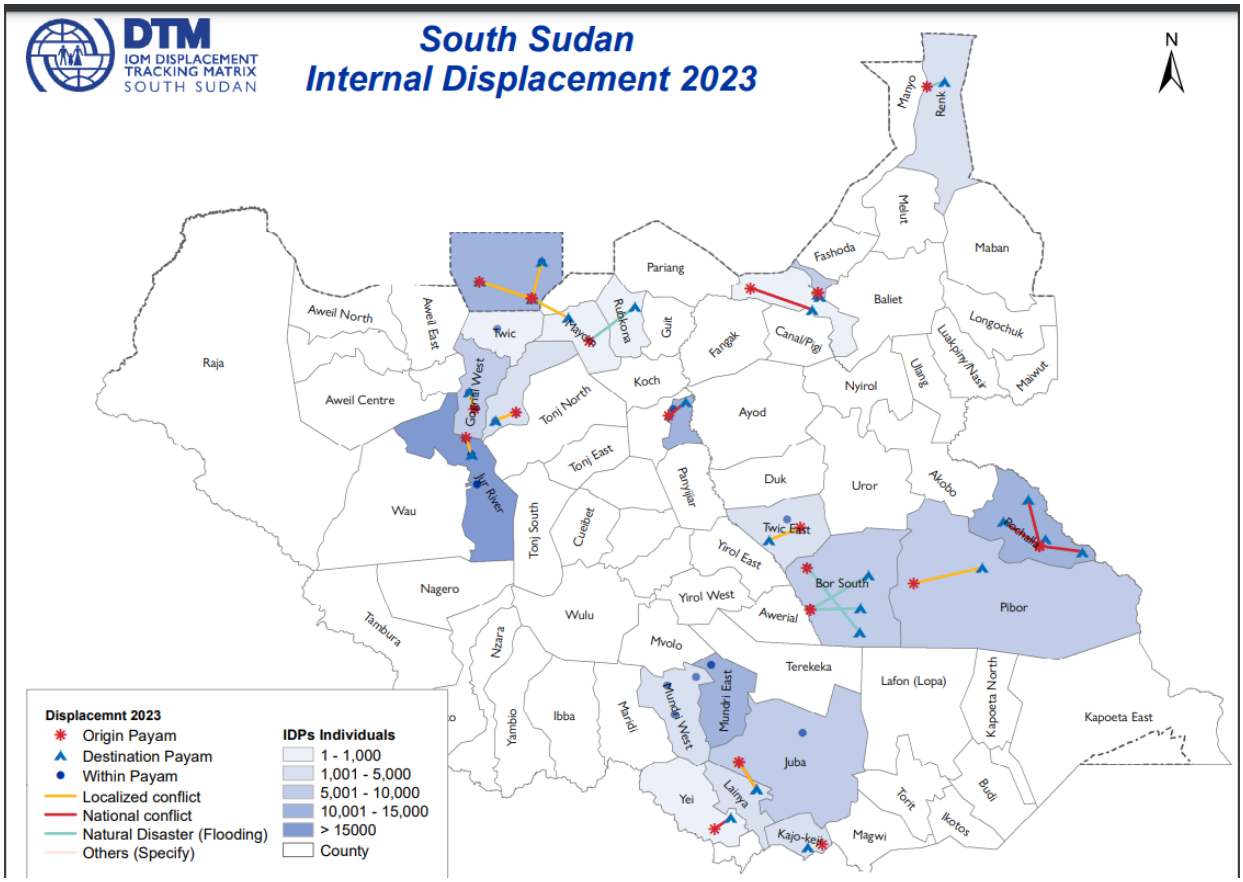
In 2022, South Sudan amended its population figures based on modelling, with the assistance of UNFPA and other relevant international agencies. The population estimated using this methodology was lower than the projected figure based on the 2008 census. In 2023, these numbers were implemented to measure the performance of the EPI, leading to a notable improvement in performance across states and counties. Certain states and counties that had low performance prior to the 2021 PES exhibited unexpectedly high performance, while others showed the opposite trend. Occasionally, this resulted in the occurrence of outliers. Due to the significant shift in performance and the lack of trust in utilizing PES 2021, the relevant department in MOH has directed programmes to revert to population projections derived from the 2008 census.

With assistance from IOM, the country tracks and monitors significant population movements, including the migration of returnees and refugees due to the Sudan crisis in 2023. The map below illustrates the migration patterns of individuals from Sudan. It is important to mention that the individuals who returned relocated to nearly every county. However, a larger number of returnees

expressed their desire to reside in the major towns and counties near the northern border, such as Renk, Maban, Juba, Wau, Malakal, Leer, Rubkona, and Paloich.



The map below shows that population migration occurs in many counties, but it is typically within the same county.



Gavi funding

The tables below illustrate the funding from Gavi by the different funding levers and Gavi grant categories.

Grant type	Budget for 5 years
HSS	15,275,382
Equity Accelerator Funds	*7,827,835
Measles Campaigns Operational costs	2,617,791
Targeted Assistance	14,678,271
Cold Chain Equipment Optimization	3,204,158
Total	43,603,437

3,585,945 was approved and released in 2023

Gavi grant category	HSS	EAF	Measles	Total
1. Service Delivery	2,460,140.00	3,378,877.00	665,315.00	6,504,332.00
2. Support human resources for health	9,429,799.50	1,349,811.00	780,368.00	11,559,978.50

3. Supply Chain Procurement and Management	1,238,655.00	-	263,132.00	1,501,787.00
4. Health Information Systems and Monitoring & Learning	1,396,815.28	834,285.98	248,419.00	2,479,520.26
5. Demand, Communities and Gender	640,780.00	1,894,692.00	456,474.00	2,991,946.00
6. Governance, Policy, and Strategic Planning	42,640.00	-	-	42,640.00
7. Health Financing	-	-	-	-
8. Program Management	66,552.00	-	45,094.02	111,646.02
9. Results-based financing	-	-	-	-
Total budget	15,275,381.78	7,457,665.98	2,458,802.02	25,191,849.78

The table below depicts the Gavi HSS funding by year.

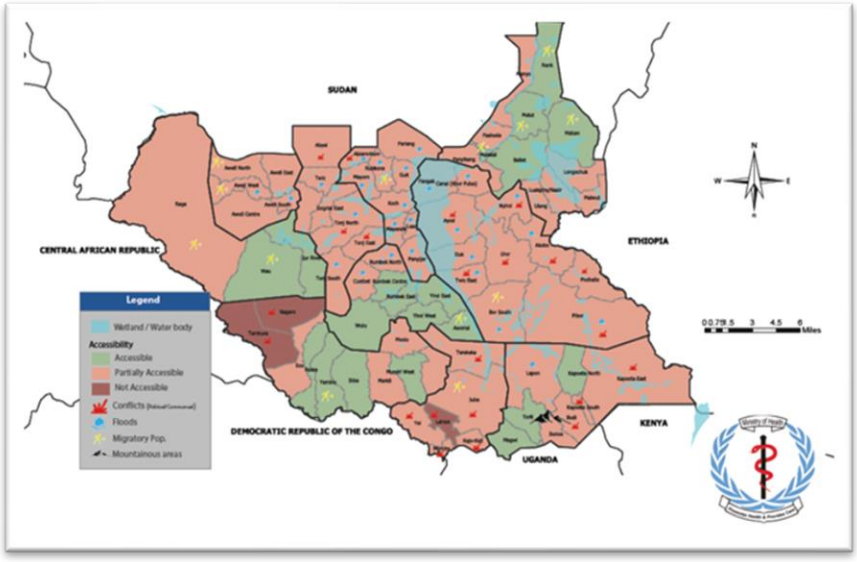
Gavi grant category	**2021/2022**	**2022/2023**	**2023/2024**	**2024/2025**	**Total**
1. Service Delivery	615,560.00	615,460.00	614,560.00	614,560.00	2,460,140.00
2. Support human resources for health	2,304,903.00	2,461,435.50	2,361,303.00	2,302,158.00	9,429,799.50
3. Supply Chain Procurement and Management	410,545.00	201,950.00	201,950.00	424,210.00	1,238,655.00
4. Health Information Systems and Monitoring & Learning	477,840.64	464,690.64	227,142.00	227,142.00	1,396,815.28
5. Demand, Communities and Gender	354,960.00	60,410.00	188,936.00	36,474.00	640,780.00
6. Governance, Policy, and Strategic Planning	29,050.00	-	13,590.00	-	42,640.00
7. Health Financing	-	-	-	-	-
8. Program Management	-	22,184.00	22,184.00	22,184.00	66,552.00
9. Results-based financing	-	-	-	-	-
Total budget	4,192,858.64	3,826,130.14	3,629,665.00	3,626,728.00	15,275,381.78

Bottlenecks in EPI service delivery by state and planned activities

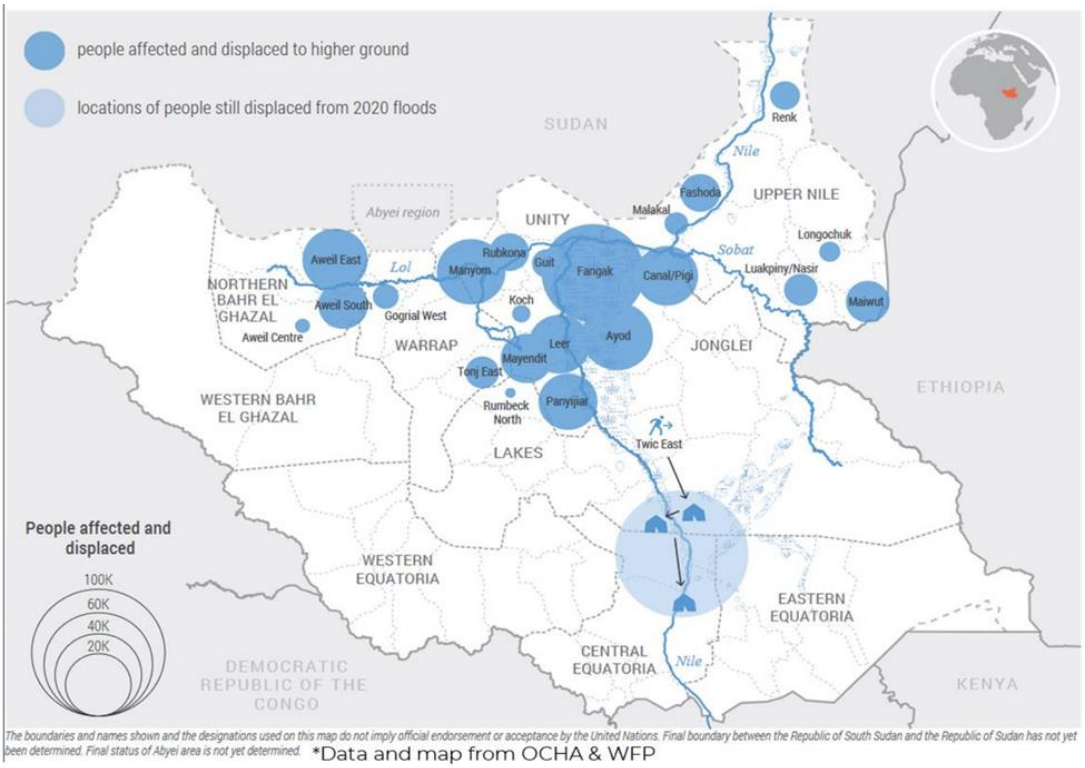
The main barriers affecting the implementation of EPI services are:

- Conflict, whether politically motivated or resulting from community strife, leads to the displacement of populations and restricts access to essential services, including healthcare.

Although there was a significant drop in political conflicts during the reviewed year, it is important to note that there were instances of unforeseen intertribal violence in certain states, as indicated in the map below.



- Service availability is restricted. The two fund managers collectively support 791 health facilities. The distribution of these facilities is uneven, with certain counties, like Kajokeji, having a minimal number of supported facilities. For instance, out of about 50 operational facilities, Kajokeji only has two supported facilities. The discontinuation of support for 220 health institutions by HPF had a substantial impact on the availability of EPI services.
- Geographical inaccessibility refers to the condition of being difficult or impossible to reach due to the physical features or location of a place. Flooding that lasts for about six months in 33 counties (map below), as well as populations living in mountainous areas in Eastern Equatoria State and fishing communities on islands in Jonglei and Upper Nile states, all impede the uptake of EPI services.
- Inadequate understanding of the significance of vaccination services and the prioritisation of survival-related needs, such as searching for food, lead to a decrease in the utilisation of vaccination services.
- Nomadism in the states of Jonglei, CES, and Lakes restricts access to health services, including EPI services, particularly for parents who relocate with their children.



In 2023, the following activities by objective were to be implemented.

Objective 1. Increase the availability of a well-functioning cold chain for improved vaccine storage based on needs for reaching zero dose, under-vaccinated, and missed populations.

- Procurement of additional cold chain equipment
- Maintenance of existing cold-chain equipment
- Conduct a cold chain inventory.

Objective 2. Design and build a resilient and efficient supply chain that can ensure reliable and predictable supply at all levels of the health system.

- Transportation of vaccines from the national level to the subnational level, including last-mile delivery

Objective 3. Strengthen program performance monitoring and management at national and subnational levels.

- Conduct quarterly county performance review meetings, biannual state performance review meetings, and annual national review meetings.
- Reinvigorate the functioning of the data quality teams at all levels.

Objective 4: Scale up and strengthen the logistics management information system to ensure real-time monitoring of vaccines and other related supplies at all levels.

- Scale up the use of eSMT and Viva to subnational levels for monitoring vaccine use.
- Partner with a local training institution to train cold chain assistants to support counties in vaccine monitoring and preventive maintenance of cold chain equipment.

Objective 5: Enhance data quality and use, especially at the sub-national level, through integrated data sources and targeted decision-making tools.

- Conduct a clean-up of the DHIS to remove duplicate, non-functioning facilities as well as add new facilities to the database.
- Procurement and distribution of data tools and cabinets for the archiving of reports
- Develop dashboards and scorecards as easy-to-use tools that will encourage the use of data for decision-making.
- Conduct a data quality assessment and subsequently develop data improvement plans.
- Conduct an EPI coverage survey.

Objective 6. Improve the availability and retention of human resources for health based on equity consideration to increase the availability of immunisation services among special groups and areas with high numbers of zero-dose children.

- Provide incentives for frontline healthcare workers and mid-level EPI officers, especially in remote areas, to reduce the attrition rate.

Objective 7. Enhance the technical and managerial capacity of health workers to identify, reach, and monitor progress towards reaching zero-dose, missed, and under-immunised populations.

- Conduct technical and managerial capacity building through mentorship and on-the-job training of health workers at state, county, and health facilities.
- LMC training for the EPI director and his deputy, and the Director General for primary health care

Objective 8. Expand the social mobilisation networks in a harmonised and evidence-based manner.

- Expansion of the boma health initiative, especially in the areas with larger numbers of ZDC
- Identify and build the capacity of key community influencers among the different disadvantaged communities to support social behaviour change.

Objective 9. Design and implement strategies that address the identified barriers to reaching zero-dose missed, and under-vaccinated populations.

- Conduct outreach and mobile services in 30 counties with large numbers of zero-dose children.
- Recruit an additional 4 county-based vaccinators in the 30 counties to support the conduct of mobile and outreach services.
- Conduct dry-season vaccinations as catch-up opportunities for children in the flood-prone counties.
- Conduct integration of EPI services with other high-impact childhood interventions, such as nutrition services, and, when possible, with animal vaccination services.
- Introduce vaccination services in private high-volume facilities in Juba and Wau cities.
- Scale up the use of tickler files for identification of defaulters and linkage with BHW for defaulter tracking.

A detailed list of activities carried out in 2023, together with the status of their implementation is described in subsequent sections of this report.

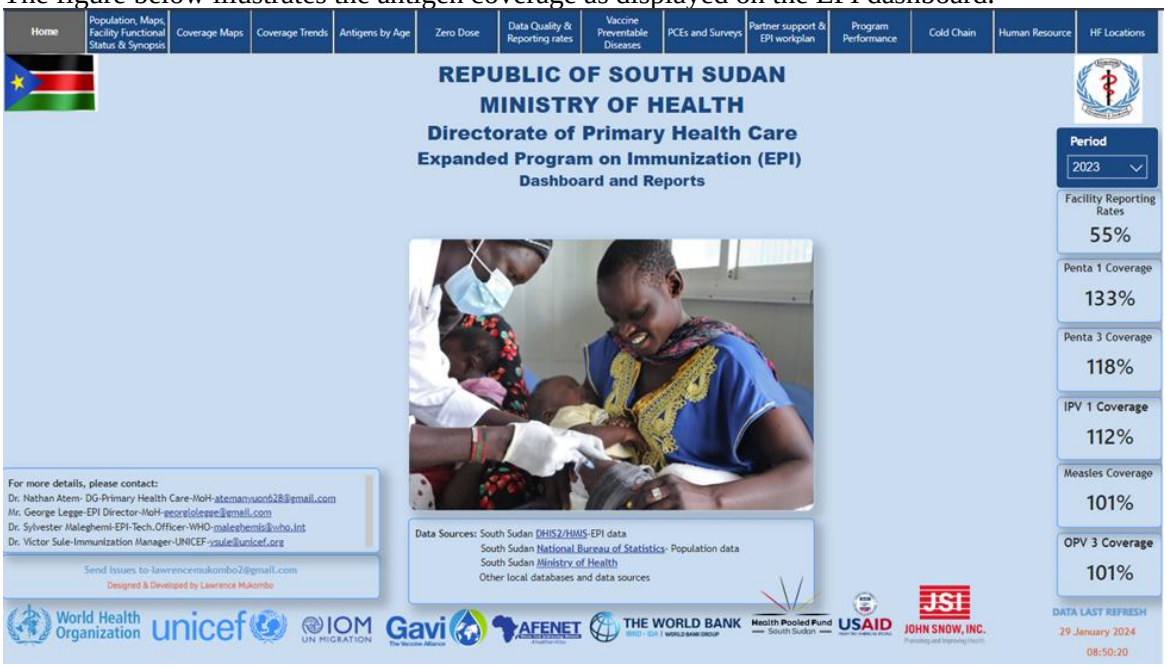
1. Learning Question: What progress has been made to reach zero-dose and under-immunised children with vaccinations?

- How does progress or regression affect different states and counties, notably based on support from different sources (priority or non-priority status), political, and environment challenges?
- Comment specifically on the situation in humanitarian contexts (and the ZIP contribution as applicable)
- What strategies have made the most difference in reaching zero-dose children and providing children with complete immunization? And which still need to prove their effectiveness?

EPI performance

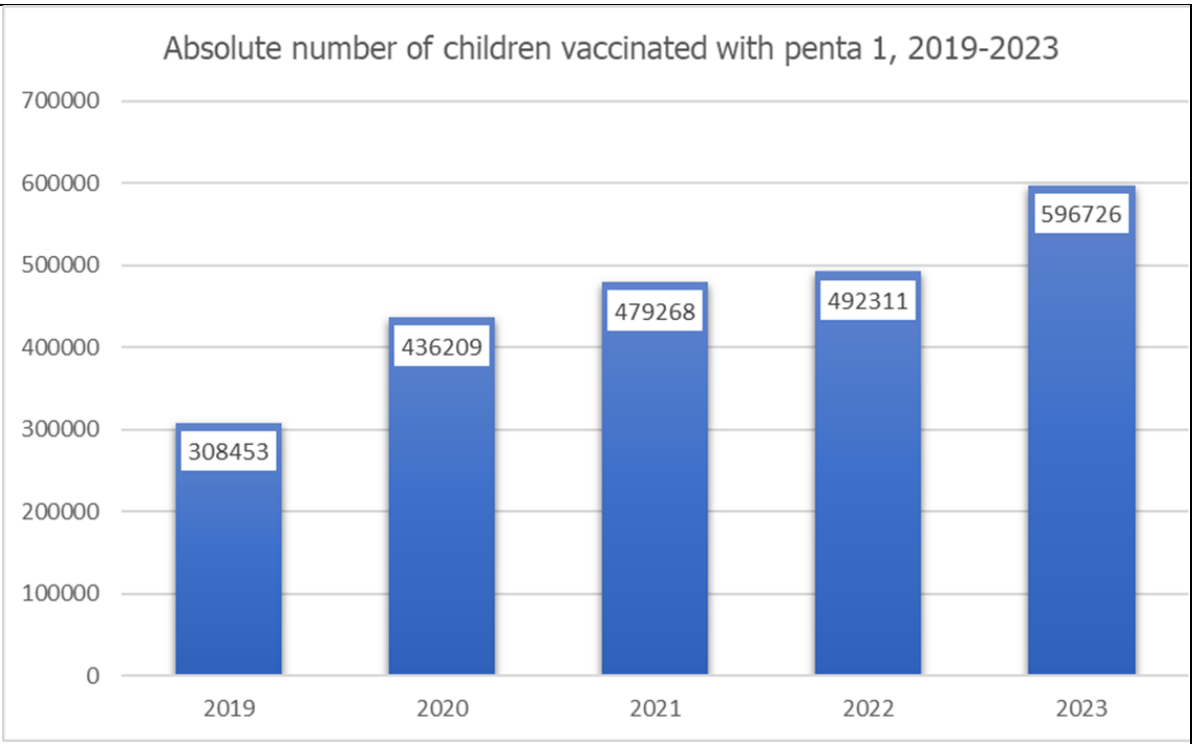
National performance

According to DHIS2 administrative data, the percentages of children in South Sudan that received one dose of penta vaccine, three doses of penta vaccine, and measles vaccine were as follows: 133%, 118%, and 101%, respectively. The 2023 performance is an improvement over previous years, with coverage for the same vaccinations at 98%, 85%, and 66% in 2022 and 98%, 84%, and 70% in 2021. The figure below illustrates the antigen coverage as displayed on the EPI dashboard.



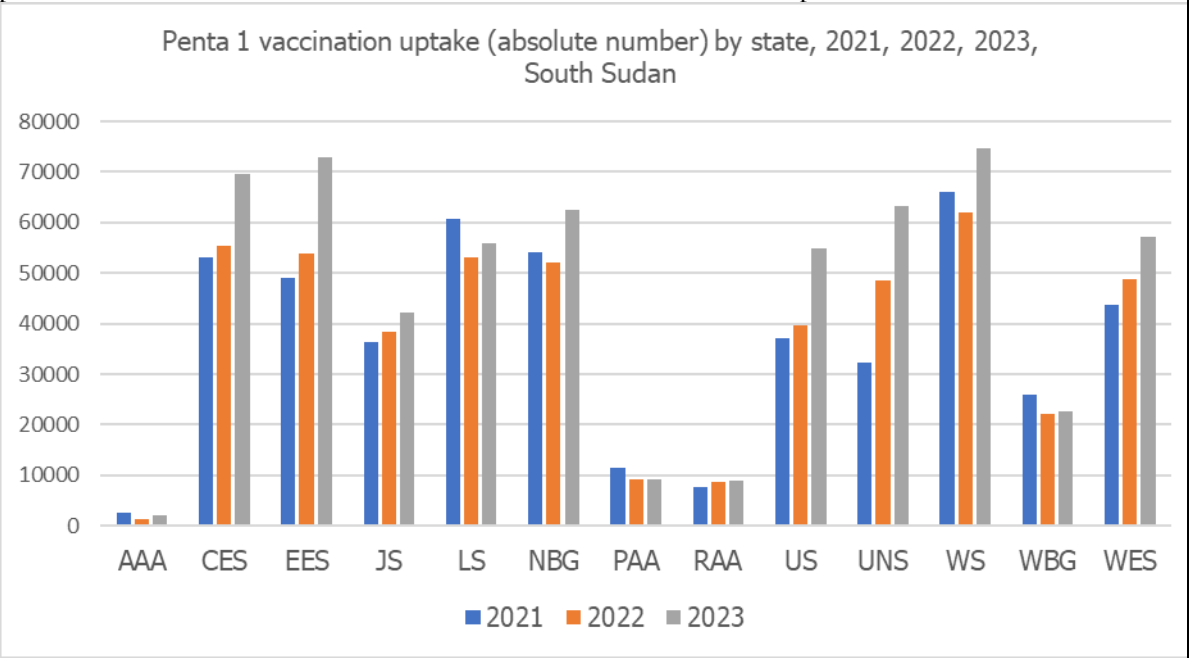
The atypically high levels of coverage in 2023 may be attributable to a confluence of factors: a decline in the overall population of South Sudan (attached population figures 2019-2024) and an influx of returnees and refugees from adjacent Sudan in the year 2023. Using a national population projection from the 2008 census, the performance drops to 113%, 100%, and 85% for penta 1, penta 3, and measles.

Of note is that the absolute number of children that received at least one dose of Penta vaccine in 2023 increased as compared to 2022. The increment (20%) is greater than the average population growth rate and the number of children from Sudan (about 26,500 under one children), indicating a true improvement in vaccination reach. It is noteworthy to mention that the DHIS database does not contain vaccination data at the points of entry. While there are estimates that more than 70% of the returnees have successfully incorporated into their communities, the precise percentage that is currently utilising routine immunisation services remains uncertain.



Subnational coverage

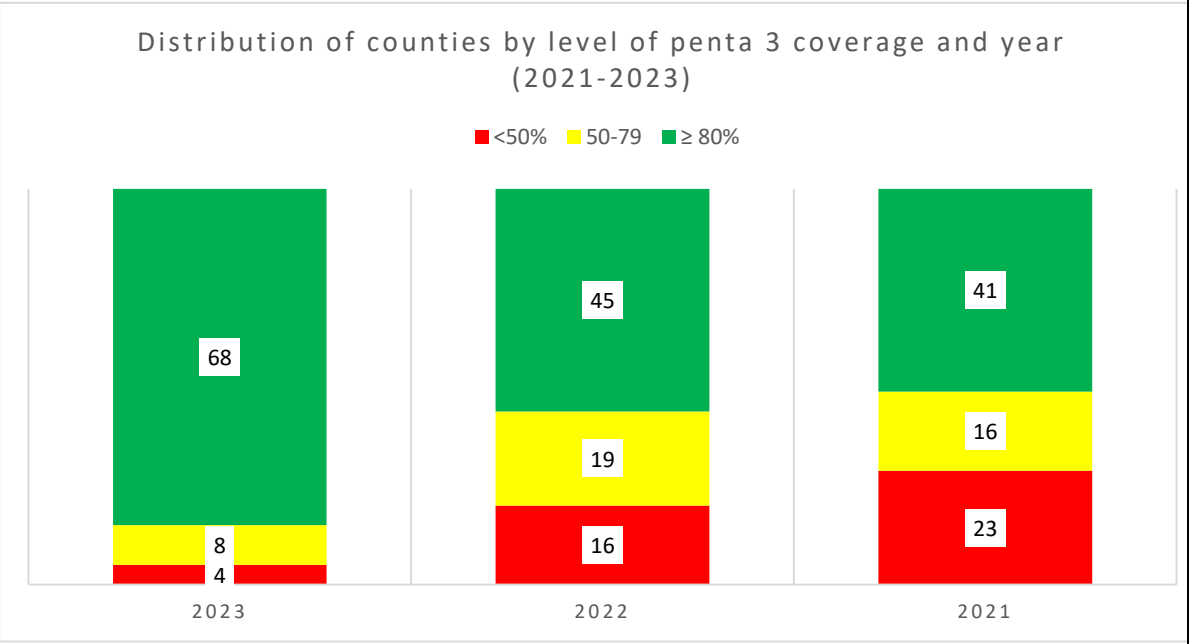
The national average vaccination uptake masks disparities at the sub-national level. Sub-national coverage shows disparities across the different states in the country. The figure below shows the performance of the 10 states and three administrative areas over the period 2021-2023.



Pibor administrative area, Ruweng administrative area, Lakes and Western Bahr el Ghazal states vaccinated a smaller or almost equal number of children in 2023 as compared to 2022 and 2021. Over the past three years, the Upper Nile states, three Equatoria states, and Unity State have all experienced consistent progress.

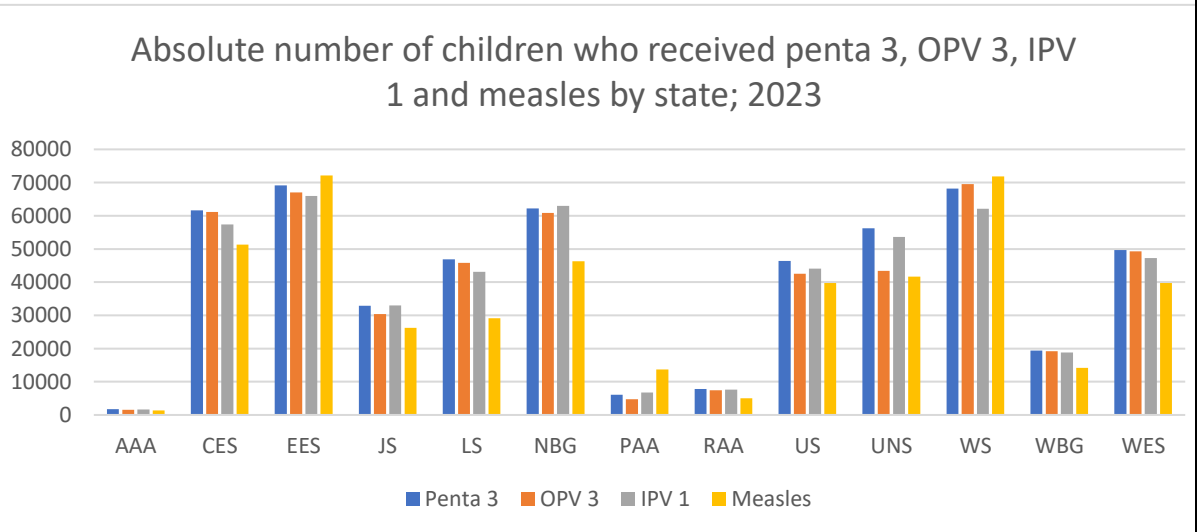
It is noteworthy that in 2023, there was relative stability compared to previous years, except for the conflict in four counties of CES, intertribal clashes impacting Abyei, Jonglei, and Warrap, and the migration of returnees and refugees from Sudan to all counties in South Sudan, with a higher concentration in CES, WBG, UNS, US, and NBG states.

The figure below depicts the performance of Penta 3 over the past three years. As an increasing number of counties report coverage of 80% or greater, the number of counties reporting coverage below 50% has declined over time. Despite this, it is critical to acknowledge that the issues of inaccurate denominators and deficiencies in data integrity continue to exist.



Performance of vaccines given at the same visit

The figure below depicts the uptake by various antigens some of which are provided at the same visit. Measles uptake continue to trail the penta and OPV uptake. There is a need to further study this disparity to understand the actual problem and design an appropriate remedial action. Save for Warrap, Pibor, and Eastern Equatoria states, measles uptake is the lowest among the different antigens, with a wide dropout between penta 1 and measles in the affected states. Notably, the BCG uptake is lower than penta 1 in all states (not depicted in the graph), which can only be explained by the frequent stockout of BCG due to its high wastage rate. It is also possible that vaccinators do not remember to provide BCG to children when providing penta 1 or the subsequent vaccines to children under one year.



As showed in the graph above, significant variations in uptake are observed across all states for the IPV 1, Penta 3, and OPV 3 vaccines. Because these vaccines are administered in a single visit, uptake does not need to vary significantly. This could indicate gaps in vaccinators' ability to manage data, vaccine scheduling knowledge gaps, or an unresolved vaccine stockout. While the disparity between IPV 2 and measles has persisted, IPV2 uptake has improved significantly in 2023 when compared to 2021 and 2022 as seen in the table below.

	2021		**2022**		**2023**	
	IPV 2	Measles	IPV 2	Measles	IPV 2	Measles
AAA	25	1260	928	914	1350	1315
CES	3875	43718	33229	43589	45675	51328
EES	6700	44919	29222	44691	63762	72130
JS	4487	26316	9861	26421	16330	26201
LS	4340	31995	14248	24921	19812	29129
NBG	9403	34035	23252	31828	45110	46330
PAA	75	9921	3498	5782	3821	13727
RAA	1700	4913	4649	4862	5621	4999
US	3058	25835	17225	26544	33716	39766
UNS	1569	30028	13694	40766	26122	41665
WS	5958	43023	19222	36888	38739	71867
WBG	2363	16547	11492	14285	12516	14198
WES	10161	31896	22106	29811	33315	39702
	53714	344406	202626	331302	345889	452357

However, noting that IPV is a significant tool for the polio end-game strategy, its inadequate uptake is cause for concern. Therefore, concerted effort is required to improve IPV 2 uptake in 2024.

In 2023, the following counties vaccinated more children with the penta 1 vaccine than they did in 2022. The increase in the absolute number of children attained in 2023 exceeds the 3.5% increase that could be accounted for by the annual population growth rate. Notably, Maban, Koch, Aweil West, Malakal, Juba, Leer, and Rubkona counties experienced a higher number of returnees from Sudan, which may have impacted their performance. Undocumented rural-to-urban migration may have altered the composition of the population in Juba County, potentially influencing the county's performance.

County	**Penta 1 2022**	**Penta 1 2023**	**Deviation**	**% deviation**
Maban County	4018	12341	8323	207
Koch County	3223	8442	5219	162
Pigi County	864	2199	1335	155
Mayendit County	1787	4032	2245	126
Manyo County	667	1490	823	123
Nagero County	1448	3227	1779	123
Twic East County	762	1685	923	121
Kapoeta South County	4525	8328	3803	84
Aweil West County	9458	15915	6457	68
Abyei County	1309	2190	881	67
Kapoeta North County	8813	14608	5795	66
Magwi County	5535	8424	2889	52
Gogrial East County	8136	11940	3804	47
Mayom County	9296	13431	4135	44
Tonj South County	7815	11038	3223	41

Aweil North County	8770	12345	3575	41
Malakal County	2857	3977	1120	39
Luakpiny/Nasir County	10527	14562	4035	38
Ezo County	10345	14137	3792	37
Aweil South County	5958	8094	2136	36
Baliet County	505	686	181	36
Juba County	34571	46862	12291	36
Yei County	5192	7000	1808	35
Tonj North County	8882	11849	2967	33
Uror County	3687	4828	1141	31
Kajo-Keji County	2448	3171	723	30
Budi County	5097	6551	1454	29
Akobo County	5673	7268	1595	28
Lafon County	8437	10784	2347	28
Kapoeta East County	9169	10958	1789	20
Mvolo County	3799	4459	660	17
Rubkona County	13556	15861	2305	17
Twic County	11860	13829	1969	17
Rumbek Centre County	9169	10684	1515	17
Guit County	2772	3206	434	16
Mundri East County	3568	4112	544	15
Leer County	3490	3992	502	14
Cueibet County	11684	13325	1641	14
Raga County	1411	1607	196	14
Tonj East County	11680	13220	1540	13
Ibba County	2684	3008	324	12
Pibor County	6035	6712	677	11
Tambura County	6174	6862	688	11
Longochuk County	5606	6222	616	11

On the contrary, the following counties reported a smaller number of children who received the penta 1 vaccine in 2023 as compared to the same period in 2022. It is worth mentioning that counties with a higher number of returnees, such as Fashoda, Renk, and Melut, performed lower in 2023 than in 2022. This is significant because unvaccinated returnees could add to the overall population of unvaccinated children in the counties.

County	**Penta 1 2022**	**Penta 1 2023**	**Deviation**	**% deviation**
Fangak County	5106	3149	-1957	-38.3
Aweil Centre County	10395	7659	-2736	-26.3
Rumbek North County	2670	1999	-671	-25.1
Fashoda County	2047	1674	-373	-18.2
Pochalla County	3071	2562	-509	-16.6
Wulu County	3633	3119	-514	-14.1
Panyikang County	845	732	-113	-13.4
Melut County	2328	2166	-162	-7.0
Gogrial West County	13669	12856	-813	-5.9

Lainya County	1820	1714	-106	-5.8
Terekeka County	9883	9451	-432	-4.4
Nzara County	4300	4137	-163	-3.8
Abiemnhom County	2319	2244	-75	-3.2
Renk County	5747	5591	-156	-2.7
Duk County	1448	1428	-20	-1.4
Yirol East County	5437	5381	-56	-1.0
Jur River County	10000	9978	-22	-0.2
Ayod County	7813	7807	-6	-0.1

Zero-dose children by county

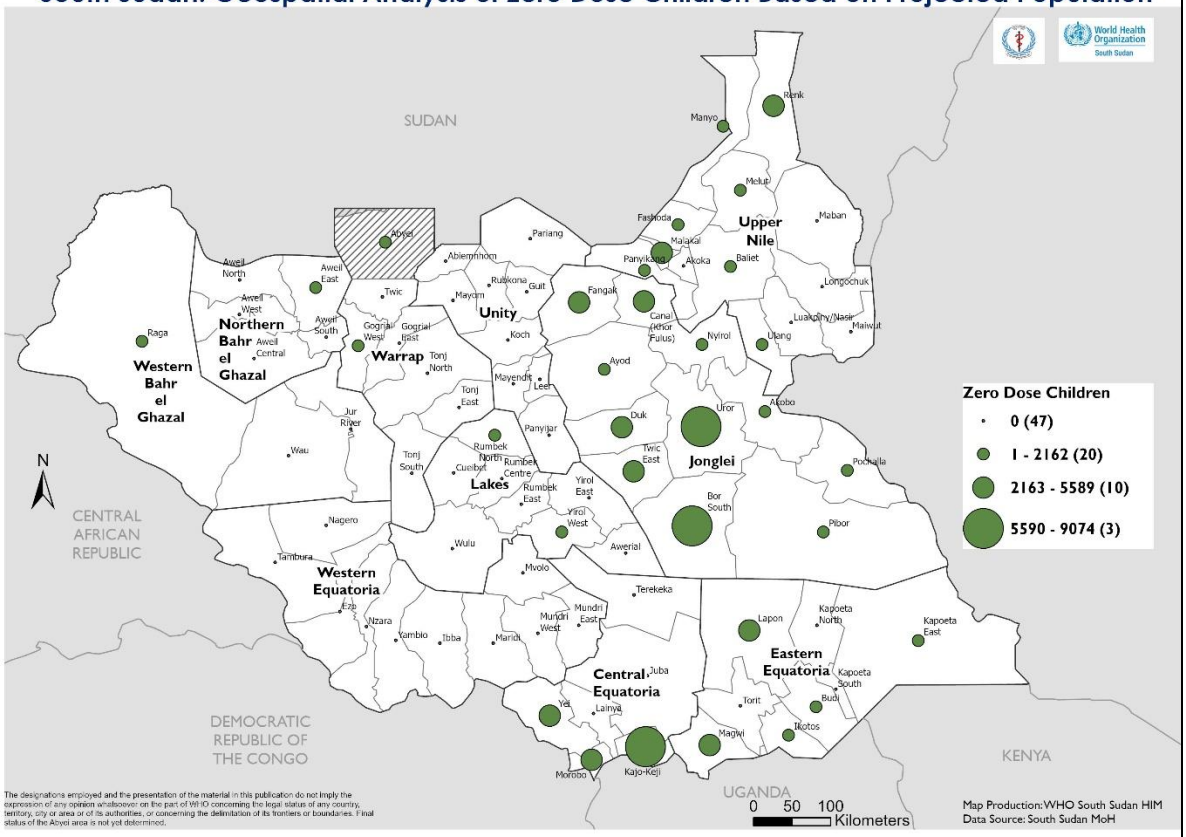
The number of zero-dose children (12-59 months) reached in 2023 (34,852) remained the same from 2022 (34,826). While South Sudan's immunisation policy recommends that children aged up to 23 months receive vaccines, most health facilities do not prioritize vaccination for children aged 12 to 23 months. This is primarily due to the EPI team's inadequate monitoring and the vaccinators' lack of technical knowledge in this regard. Improvement is required in this regard in 2024. The following 19 counties vaccinated less than 5 children (12–59 months) with penta 1 vaccine in 2023.

Abiemnhom County	**Wulu County**
Duk County	Lainya County
Ezo County	Abyei County
Kapoeta North County	Aweil West County
Lafon County	Yambio County
Maban County	Baliet County
Mundri East County	Nzara County
Mvolo County	Akoka County
Nagero County	Malakal County
Terekeka County	

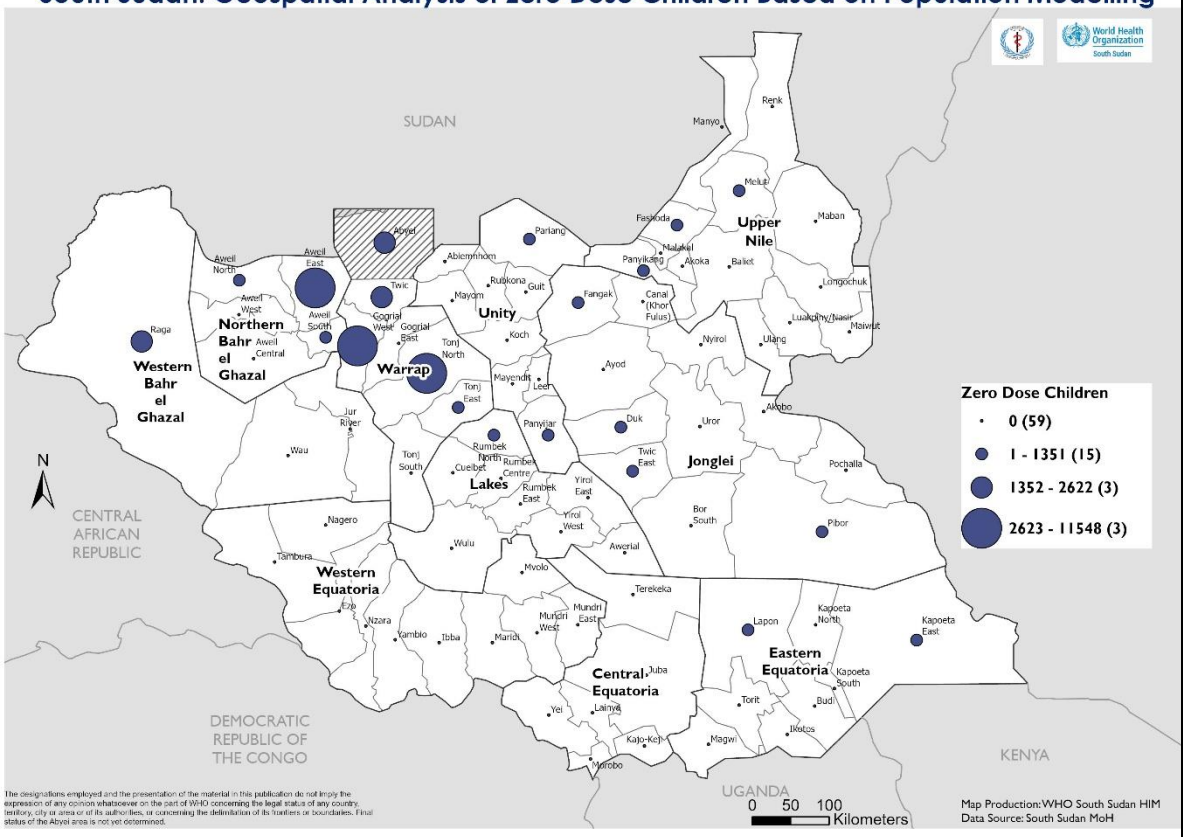
Notably, the Gavi funded ZIP project, which operates in 15 counties with the highest number of zero-dose children, administered the first dose of penta vaccine to 12,442 zero-dose children accounting for about 30% of children reached in the country. During the measles campaign, 1983 children (12-59 months) were reached in the equatorial region.

By the end of 2023, based on PES 2021, the following counties reported the highest number of zero dose children (*it is important to interpret the data with caution because of the changes made to the total and county population figures*). However, based on population projections, the list of counties with large numbers of ZDC varies. Notably, that 14 counties are included in both reports as shown in table below. It is noteworthy that these counties are located close to either the northern or southern borders, with several serving as entrance points for Sudanese returnees and refugees, implying that the population surge did not affect vaccine uptake as expected. Indeed, certain counties, such as Renk, Melut, and Fashoda, had a drop in performance when compared to previous years. Special focus on these areas in 2024 is necessary, since anecdotal data suggests that returnees may not have been utilising EPI services in Sudan, potentially leading to a rise in the number of children who have not received any doses of vaccines in the counties where they have resettled.

South Sudan: Geospatial Analysis of Zero Dose Children Based on Projected Population



South Sudan: Geospatial Analysis of Zero Dose Children Based on Population Modelling

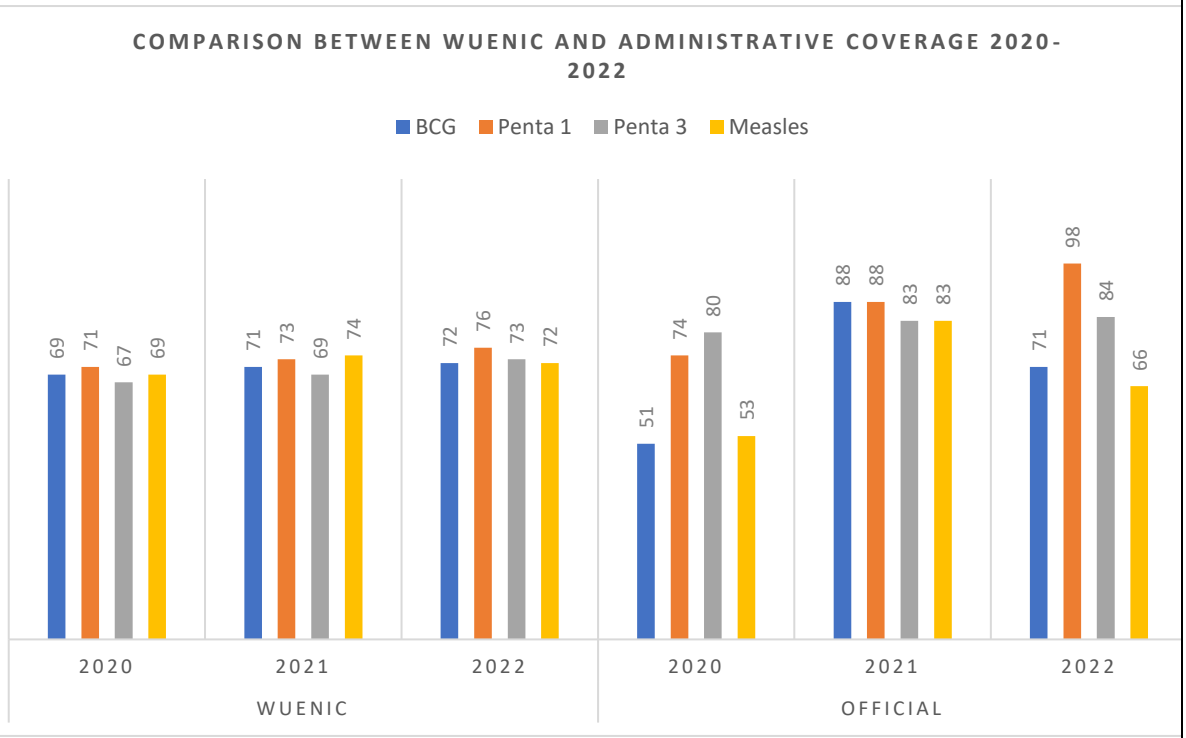


The following counties that appear in both accounts are.

Abyei County
Aweil East County
Duk County
Fangak County
Fashoda County
Gogrial West County
Kapoeta East County
Lainya County
Melut County
Panyikang County
Pibor County
Raga County
Rumbek North County
Twic East County

Comparison of administrative coverage and WUENIC

In comparison with WUENIC, the administrative data indicate higher values for all antigens except for BCG and measles. This may be the consequence of difficulties with the denominator and data quality concerns. It is crucial to acknowledge, nevertheless, that the revised WUENIC estimates (released in July 2023) are considerably greater than the previous estimates. This increase is likely a result of the concerted effort to enhance performance that has been underway since 2019.

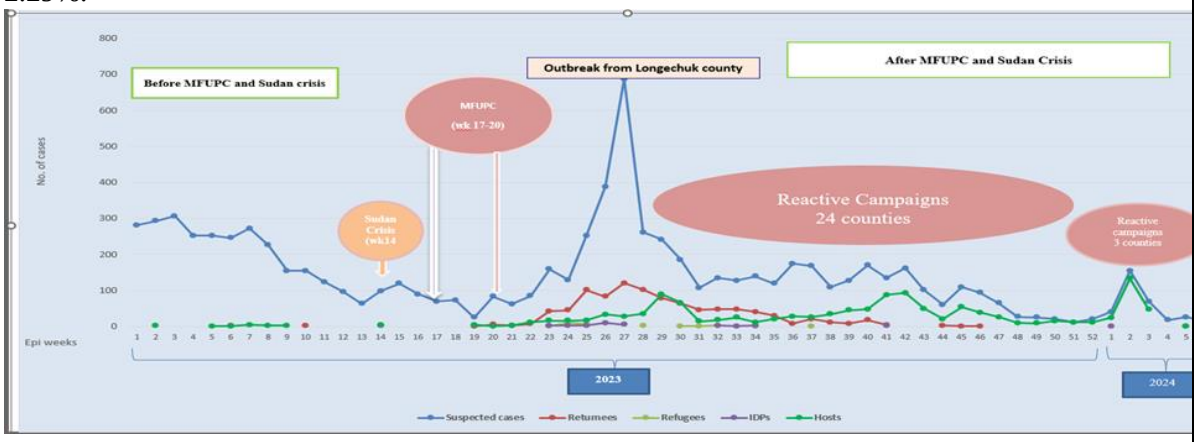


Surveillance

Measles

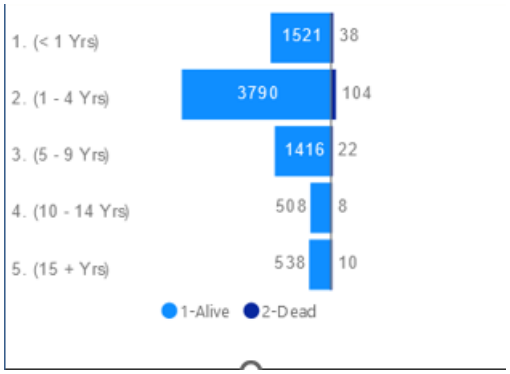
Since the last national campaign in 2020, measles vaccination rates have been suboptimal, leaving many children under five vulnerable. Despite improvements in Penta and other immunizations, measles coverage has stayed below 65% over the past two years. This has led to confirmed measles outbreaks in numerous counties throughout 2022 and 2023.

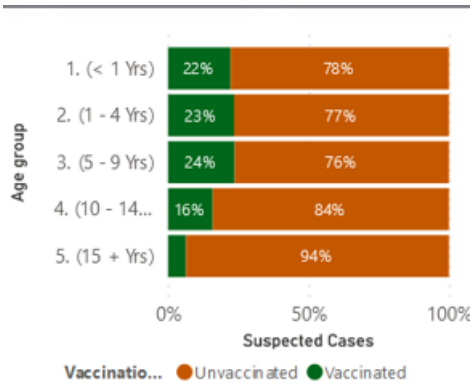
By Epidemiological Week 52 of 2023, there were 7,955 suspected measles cases, with 616 (7.4%) confirmed by laboratory tests. Measles was attributed to 182 deaths, yielding a case fatality rate of 2.29%.



Epi Curve for Measles Cases South Sudan (2023 to 2024*)

The figures below illustrate the characteristics of the suspected measles cases. A significant proportion of the cases involved children under the age of five who were either unvaccinated or had unknown measles vaccination status. Returnees are persons fleeing from the Sudan crisis.





AFP surveillance for polio eradication

South Sudan maintained a polio-free status from 2021 until December 2023, when two cases of cVDPV were identified in Yambio and Juba counties, located in the Western Equatorial and Central Equatorial states, respectively.

Before identifying two cases, the country reported 554 acute flaccid paralysis (AFP), leading to a national non-polio AFP rate of 7.98 and a stool adequacy rate of 95%. All ten states attained a minimum stool adequacy rate of 80% and an NPAFP rate of at least 3. However, two counties did not meet the criteria for one polio performance indicator. From the 76 samples collected across seven environmental surveillance sites, 2 tested positive for the Sabin virus, 32 revealed non-polio enteroviruses, and 42 were negative. Notably, only 28% of AFP cases had completed the four-dose Oral Polio Vaccine (OPV) series, highlighting gaps in national immunity levels.

Other VPDs

On December 24th, 2023, the National Public Health Laboratory confirmed a yellow fever case in Western Equatoria State. By year's end, 18 cases (17 suspected, 1 confirmed) were reported across three counties: 11 in Yambio, 4 in Nzara, and 3 in Tambura. A preventive yellow fever campaign targeting individuals aged nine months and above is planned, alongside strengthened surveillance, to

ensure comprehensive case detection. Furthermore, in 2023, there were no reported cases of Neonatal Tetanus (NNT)

Key drivers of sustainable coverage

In 2019, South Sudan utilised additional GAVI Health System Strengthening (HSS) funds given under the Fragility, Emergencies, and Refugees (FER) policy to execute activities that established a strong basis for sustainable EPI coverage. Expanding the partnership to include the Health Pooled Fund (HPF) in 8 states and the IOM in 3 counties with large populations of internally displaced persons, in addition to UNICEF's efforts in two states, was a positive change in the South Sudan EPI program. This made sure that the EPI program implementation was aligned with South Sudan's PHC delivery model.

The specific activities that impacted positively the EPI program include:

1. Health Work Force: availability & skill set.

To reduce the acute shortage of frontline health workers for EPI, the FER additional funding was utilized to recruit, train, and remunerate additional vaccinators, increasing the number from about 500 in 2019 to 1498 in 2020. In 2023, additional vaccinators were recruited to implement EPI activities in the 26 counties not covered by the FER programme. Furthermore, at least 120 additional county-based vaccinators were recruited in 30 priority counties using the Equity Accelerator Fund. This increased the total number of vaccinators for the year 2023 to 1650. To support routine and C-19 vaccination integration, additional temporary vaccinators were recruited using CDS funds from HPF and non-Gavi funds from the core group. In order to promote the integration of EPI services with other high-impact childhood interventions, 203 nutrition staff and clinicians were trained on EPI alongside the vaccinators.

A high attrition among vaccinators continues to be a substantial obstacle to the EPI program's ability to provide adequate services. This is due to the absence of a defined system for vaccinator motivation, delayed remuneration, and a low incentive (salary), which collectively contribute to the lack of motivation. To ensure that service delivery is not interrupted due to a lack of trained vaccinators, the current HSS grant will continue to support the annual five-day IIP operational training for both new and existing vaccinators.

State and national EPI officers trained by the CDC-AFENET EPI capacity-building project continue to play an important role in the management of EPI services in South Sudan. Through the FER funding opportunity, the officers were provided with incentives and operational funding to supervise EPI services across the country. In 2023, however, the attrition rate (76%) among these officers was high due to a reduction in their remuneration, resulting in some of the states losing all the officers and therefore impacting the management of EPI services. WBG, NBG, WES, US, AAA, Pibor, and Ruweng have lost all trained EPI officers, who have been replaced by officers who require on-the-job training. To tame the exodus, it is necessary to advocate for state leadership to ensure that these officers are completely integrated into the Ministry of Health payroll. The country should monitor the impact of the attrition of these officers especially on the quality of EPI services in 2024.

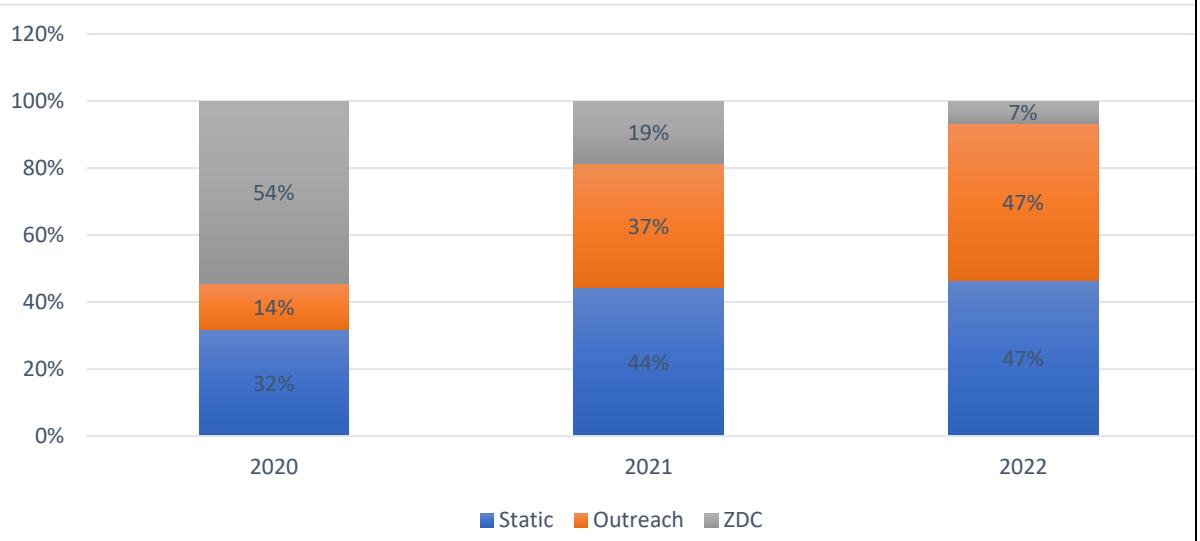
Skills gaps coupled with a high attrition rate among the county EPI officers have been identified during supportive supervision visits, and efforts to address the gaps through mentorship by the state and national supervisors have not been adequate. The mid-level training for the managers was last conducted in 2019 using FER funding. Therefore, additional investments in capacity building for these mid-level supervisors are required to supplement the mentorship they receive on the job.

2. Service delivery.

Free of charge vaccination services were provided through a combination of fixed, outreach, and mobile strategies in 2023. An estimated 1,088 facilities provided vaccination services (this figure

often varies). Of these facilities, 791 (512, 245, and 34) provided EPI services via implementing partners supported by HPF, WB-UNICEF, and IOM, respectively. The remaining facilities delivered EPI services through direct support from the South Sudan government or other implementing partners who did not receive funding from Gavi. Notably, World Vision started supporting 120 health facilities that are not supported by the other three recipients of the Gavi fund. To reach the most disadvantaged populations, Gavi supports 30 counties with large numbers of zero dose children to conduct monthly 3-days integrated mobile clinics.

Approximately 35–40% of children immunized in 2023 acquired the vaccine through outreach services, highlighting the importance of outreach in South Sudan as a key strategy for achieving vaccination equity. HPF reported the greatest increase in the number of children vaccinated through outreach efforts in 2023 compared to 2022. This could be attributable to an increase in outreach and mobile services during the fourth quarter, which combined routine immunizations with COVID-19 vaccinations.



Proportion of children reached by service delivery strategy in Eastern Equatoria state (https://pubmed.ncbi.nlm.nih.gov/38050064/)

The integration of childhood vaccination into C-19 funded outreach and mobile in 2022 by Core-group in Eastern Equatoria states, and later by HPF in 5 states contributed to reaching more children, especially in the rural areas and among the disadvantaged populations. As shown in the graph above, the contribution of outreach and mobile services to the total performance of Eastern Equatoria increased from 14% in 2020 to 49% in 2022. In 2023, 56% of children who received Penta 1 were immunized using outreach and mobile services. The increasing number of children reached through outreach and mobile services contributed to the overall increase in the number of children immunised in 2023 compared to prior years, as previously shown.

The aforementioned achievement demonstrates the importance of outreach and mobility services in reaching zero-dose children in South Sudan, where 56% of the population lives more than 5 km from the nearest clinic.

The Reach project (ZIP) in South Sudan, which implements EPI in 15 counties with the largest number of zero-dose children, contributed significantly to the objective of reaching zero-dose children (12–59 months) in 2023. Notably, the project vaccinated about 30% of the children between the ages of 12 and 59 who were reached in South Sudan. Strategically, the lessons learned from this project on vaccinating children outside the recommended age group will be essential for the **big catch-up vaccination** in 2024.

3. **Improved cold chain capacity.**

Since 2020, the cold chain capacity has grown from about 600 active cold chain in 2019 to 1677 in 2023. Of this equipment, 1231 are at the service delivery level. A cold chain inventory was conducted in 2023, following the previous one in 2017. The improvement in cold chain capacity, especially at the service delivery level, improved access to regular EPI services. The details of the cold chain inventory are explained in a subsequent section.

4. **Improved distribution of vaccines including last mile delivery with fewer episodes of vaccine stock outs at state and county levels**

In 2023, UNICEF supported the MOH in transporting vaccines from the national or central vaccine store to ten state vaccine stores across the country. Furthermore, 37 counties that the state stores could not serve due to logistical barriers received vaccines directly from the national store, an effort that UNICEF also assisted with. Implementation partners led by UNICEF, IOM, and HPF distributed vaccines at the last mile across the country among the Gavi supported facilities. This ensured the availability of vaccines and supplies for immunization services. The last-mile delivery strategy is contextualized and implemented collaboratively by the implementing partner and county health department. For fixed-site and outreach services, transportation options included motorbikes, motor vehicles, or boats, depending on the accessibility of the location. In 2023, UNICEF, IOM, and HPF supported 280, 30, and 512 healthcare facilities, respectively. Whereas last-mile vaccine visibility has improved, particularly at the county level, vaccine utilization monitoring in healthcare facilities remains a substantial concern.
The details of the vaccine availability at national and subnational levels are explained in a subsequent section.

5. **Leadership management and coordination**

The South Sudanese government's co-financing of the Penta vaccine and administrative backing of the EPI program reflect its political commitment to public health. Demonstrating top-level engagement, the presidency spearheaded the launch and promotion of COVID-19 and measles vaccines in response to the outbreaks. Moreover, the Minister of Health is a vocal advocate for the national vaccination strategy, underscoring strong governmental support for immunization efforts.

Efforts are needed to engage MPs and the parliamentary health committee to advocate for enhanced immunization funding and integrate immunization into key initiatives like universal health coverage (UHC) and relevant legislation. Additionally, strengthening community mobilization and engagement among leaders, health professionals, civil society, and stakeholders in immunization remains a priority.

The program faces challenges due to high turnover rates among county and state managers, leading to critical immunization decisions being made by less qualified personnel. It's crucial to advocate for specific skill set requirements for those in charge of the vaccination program at both state and county levels, especially for individuals making immunization-related decisions.

The immunization program's coordination is facilitated by the EPI technical working group, the Immunization Interagency Coordinating Committee (ICC), and the South Sudan Immunization Technical Advisory Group (SSITAG). These entities offer technical advice, support, and ensure stakeholder coordination. Chaired by the Director-General for Primary Health Care, the EPI TWG holds bi-weekly meetings to address and make strategic decisions benefiting the EPI program's implementation. Key actions deliberated and endorsed by the TWG include;

- Advancing the measles campaign's start date, thereby accelerating the preparation process. The timeframe to the campaign's launch was under six months, a departure from past phased approaches, targeting all 80 counties simultaneously.
- Conducting a multi-antigen campaign alongside the measles SIA in the equatorial region.

- To allow for preparations for the measles campaign, two C-19 vaccination campaigns were conducted in February and March.
- The IRC-managed ZIP project conducted catch-up vaccinations for children between 12 and 59 months in 15 counties using the available vaccine stocks. Instead of a two-stage cluster survey based on probability proportionate sampling methodology, a LQAS post-campaign assessment will be conducted following the measles campaign to identify low coverage areas for timely intervention.
- Determining the optimal vaccination schedule for the malaria vaccine and identifying initial implementation areas.
- Announcing a Polio outbreak and deciding on a nationwide campaign response, rather than a sub-national one.
- Selecting a preferred malaria vaccine and prioritizing counties for distribution based on malaria epidemiology.
- Offering technical guidance for the Rota-PCV application to Gavi.

One ICC meeting was conducted that reviewed the EPI performance for 2022, endorsed the malaria vaccine application, and approved the annual operational plan for the EPI program. The country did not conduct ICC meetings as planned due to competing activities in the MOH. The immunization technical advisory group (SSITAG) conducted one meeting, which approved the malaria vaccine introduction in South Sudan childhood immunization schedule and the related vaccine introductory grant application to Gavi.

JSI supported monthly subnational-level coordination meetings that discussed EPI services in seven states. AFH is yet to reinvigorate coordination meetings in the three remaining states. Even though reports indicate that counties conducted coordination meetings, it is unclear whether EPI was discussed during these meetings. In 2024, the linkages between the national TWG and the subnational coordination forums could be further strengthened by appointing national champions (from among the national EPI staff) for each state, who would represent the state at national forums and provide feedback to the state monthly.

Supportive supervision visits offer opportunities to provide on-the-job mentorship to subnational health workers including the vaccinators. The significance of this activity in South Sudan is crucial due to the limited capability of HRH and the substantial turnover rate among them. Although the country intended to visit each site every quarter, the objective was not accomplished owing to several factors, including conflicting activities in the EPI calendar. The impact was most pronounced on supportive supervision at the national level to the states, as supervisors were preoccupied with overseeing many campaigns. Nevertheless, it is crucial to acknowledge that the campaigns offered a chance to oversee regular immunization services in conjunction with the campaign. During the year 2023, the national supervisors visited each state at least once in 2023. To ensure the effectiveness of the visits, a team comprising senior and mid-level personnel from MoH was deployed to the selected states. This diverse team brought a wealth of expertise, enabling a comprehensive assessment of the RI activities. The state team conducted at least one visit to each county in 2023, with 66 counties receiving a minimum of two visits. A total of 481 (66%) facilities were visited at least once in 2023. This failed to meet the planned annual frequency of four visits per facility per year. The county and

state visits were focused on facilities with catchment areas containing a significant number of unvaccinated children and data quality issues.

Supportive Supervision in Warawar 26 Oct 2023

County and state review meetings, attended by frontline healthcare workers from the Ministry of Health (MOH), partners, and supervisors, serve as a platform to appraise the EPI programme at the subnational level. These meetings also allow supervisors to offer feedback and updates to the frontline health workers, counties to exchange ideas with their peers and facilitate collaboration between the state and county teams.

In 2023, the county review meetings were held twice, and the state review meetings were held once, which is less often than the suggested quarterly and biannual frequency for the county and state review meetings, respectively. The meetings were held in all the 80 counties, 10 states and 3 administrative regions. These sessions were attended by stakeholders involved in the Expanded Programme on Immunization (EPI), including a member of parliament from Northern Bahr el Ghazal who participated in the state review meeting.

The common issues in the meetings were:

- Implementation partners (IPs) are required to fund the microplans. Historically, although these plans were developed, financial backing was not secured due to disagreements between the IPs and AFENET, which offers Technical Assistance for creating the microplans.
- The high turnover of vaccinators underscores the need to include them in the Ministry of Health's (MoH) payroll to ensure stability.
- The absence of certain facilities from the DHIS 2 platform compromises the completeness and accuracy of EPI data reporting.
- IPs are falling short of providing transportation and meal allowances for outreach and mobile activities at the pre-agreed rates, impacting operational efficiency.
- Discrepancies between the population estimates published by the MoH for 2023 and the actual target populations in counties have led to reported coverage rates exceeding 100% in some areas, indicating a need for revised data accuracy.

There is room for improvement in the manner in which business is conducted during the review meetings in 2024. The utilization of the EPI dashboard and scorecards to guide the conversations was inconsistent, which was opposite to what was anticipated. More capacity building, especially on-site mentorship during the performance review meetings will be needed in 2024 to encourage correct use of the dashboard. The participation of community representatives, such as health facility management

committees and Boma health workers, in the review meetings would enable the community to have a say in the deliberations.

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

2. Learning Question: How well are vaccine stocks being managed?

- How is CCE availability progressing?
- How and how fast is the country progressing toward real-time management of the supply chain for vaccines? Discuss notably, how progress will be made toward one unified eLMIS solution with the new funding mechanisms, based on the experience and recommendations of the MOH, HPF, UNICEF, and other partners?

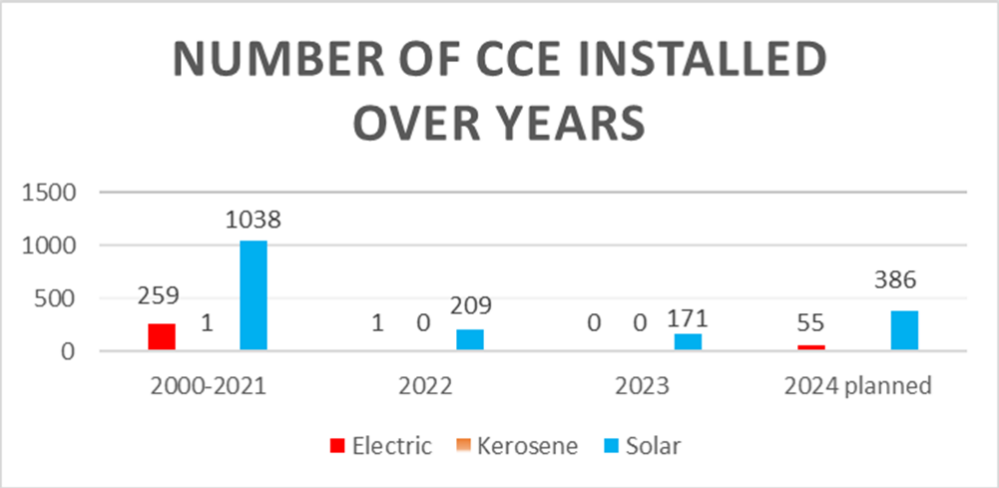
Indicator(s):

- Number of health facilities that reported no stock-outs of DTP containing vaccine.
- Number of health facilities that reported no stock-outs of Measles containing vaccine.
- Closed vial wastage of DTP-containing vaccine
- Number of CCE received/installed/ leased through third party providers.
- Equipment maintenance and/or onsite readiness.

Cumulative volume of C19 doses expired to date (and volume specific to COVAX supported doses, if the data is available)

Cold chain capacity

Expansion, replacement, and extension of cold chain equipment throughout South Sudan remains a critical strategic priority for the EPI program. In 2023, 171 active cold chain equipment units were installed, increasing the country's total number of active cold chain equipment units to 1677. The last inventory was done with fewer vaccines on schedule and most of the needs were addressed. However, the country plans to introduce new vaccines and shift from electric to solar fridges at all levels, which will create a storage capacity gap at different supply chain levels. See detailed capacity analysis annexed.



Notably, the last cold chain inventory was conducted alongside the SARA survey in 2017. Since then, new equipment has been procured, some equipment has been vandalized, some rendered obsolete due to non-conformity with standards, while others have broken down, hence the need for a comprehensive cold chain inventory.

A consultant engaged by UNICEF collaborated with the MoH at national, state, and county levels to update the cold chain inventory in December 2023. The updated list had 1,677 refrigerators located at the national, state, county, and health facility levels. Among these, 263 (16%) were powered by electricity, while 84% (1,407) were solar-powered. A total of 1,568 (93%) of the equipment was reported to be functioning. 1,047 (85%) of the 1,231 units of cold chain equipment present at the service delivery point are in the age range of 0 to 5 years. The remaining 161 (13%) fall within the age range of 5 to 10 years. 23 pieces of equipment, accounting for 2%, are between 10 and 15 years old and above, which are obsolete. A total of 1,193 (97%) of the equipment at the health facility level is powered by solar energy, while the remaining 3% is presently powered by electricity but is undergoing a phased replacement with refrigerators powered by solar energy. Additional information for analysis can be found in the Excel link that is attached.

CCE by source of funding

Gavi CCEOP	239
Africa CDC	65
CanGive	90

The country has procured 239 CCE through the CCEOP which is 88% of the planned amount to be procured, as well as an additional 65 and 90 pieces of equipment through the Africa CDC and CanGive, respectively, which will be installed in 2024.

A systematic approach for periodic updating of the CCE is yet to be agreed upon and implemented.

Equipment Maintenance

Five cold chain technicians are deployed in five out of the 10 states. One of the five technicians serves two neighbouring states. The two national technicians are responsible for repairing CCE in the remaining three states in addition to the maintenance of the national vaccine store. This has reduced on the repair down time hence improving on the cold chain functionality. In 2023, a total of 488 CCE were repaired.

The Ministry of Health (MOH), in collaboration with UNICEF and a local institution of learning, conducted a 30-day training program for 33 individuals working as cold chain assistants. The 33 trainees were selected from the 10 states and 3 administrative areas. Notably, the trainees included four (4) females and a person living with disabilities. On September 1, 2023, each of the 33 graduating assistant technicians was presented with a toolkit for use at their respective workstations. The 33 assistant technicians were deployed back to their respective states and AAs to support the maintenance of cold chain equipment. For more practical experience, these technicians would be supporting companies for the installation of solar refrigerators from different sources in the country, including the Gavi CCEOP, African CDC, Canada, and the German government (KFW). The MOH intends to document, with the support of UNICEF, the impact of this training on CCE maintenance as a potential best practice for future scale-up.

The Minister of Health issuing the certificate to one of the female participants.

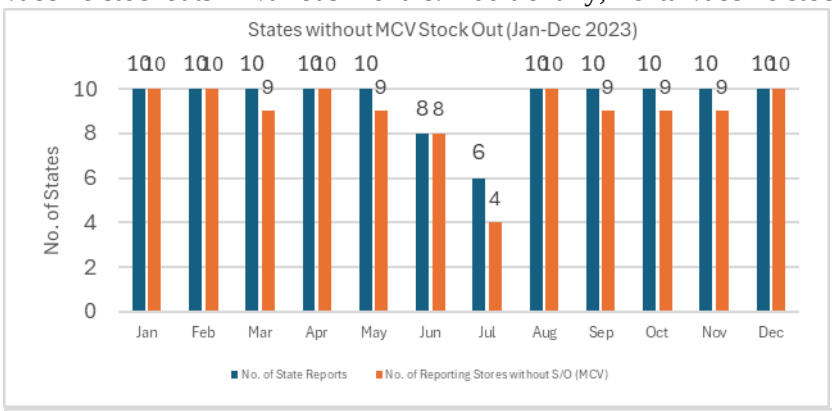
Vaccine utilization monitoring

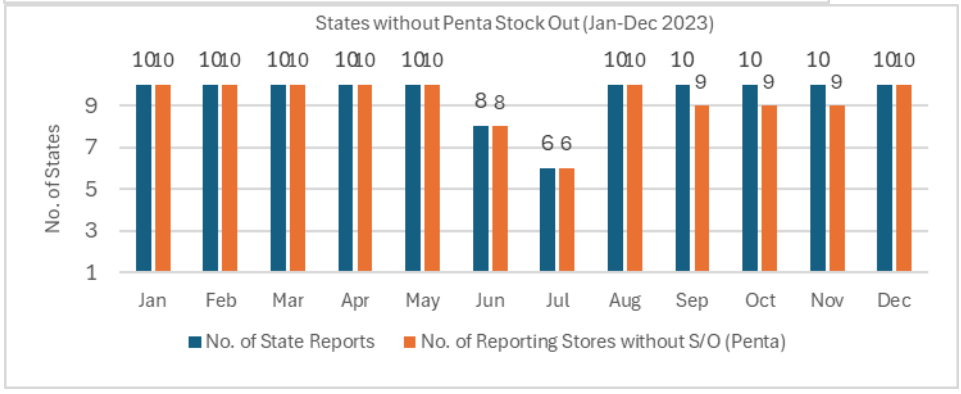
The vaccine supply chain consists of four tiers, including a central vaccine store, ten state stores and 80 county stores. Vaccine procurement is done centrally. All EPI vaccines are procured through UNICEF. UNICEF clears the vaccines at the port of entry and then delivers them to the CVS. The vaccines are then distributed to the 10 state stores on a quarterly basis. This system operates a pull system, with lower levels sending their requirements to higher levels. The counties then collect vaccines from state storage facilities every quarter, while service delivery points collect them on a

monthly basis. The implementing partners facilitate the last-mile delivery of vaccines with support from Gavi.

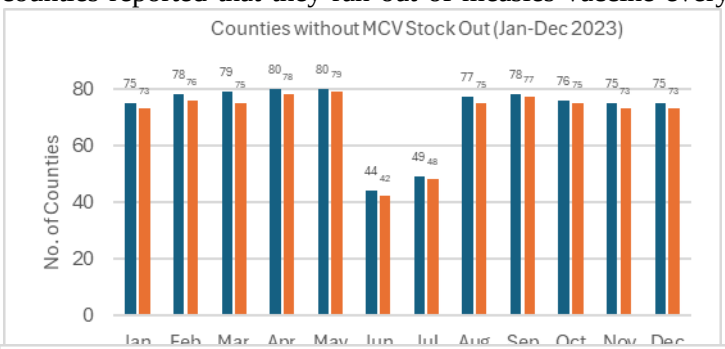
Vaccine utilization monitoring at the national level is conducted electronically using the eSMT and ViVa systems, supplemented by a paper-based system for documenting vaccination usage. In the third quarter of 2023, the eSMT was scaled up to 10 states after the training of the 13 cold chain officers in 10 states and three administrative areas. At the county store and health facility levels, an Excel-based tool is used for reporting vaccine use. Counties gradually improved their reporting of vaccination use at the county level in 2023. Currently, more than 80% of counties report vaccine stock levels monthly, giving critical vaccine visibility.

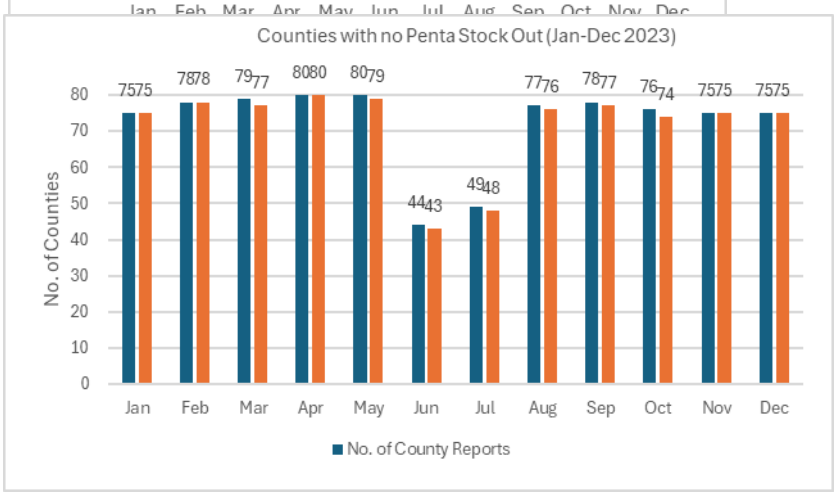
In 2023, UNICEF supported the MOH in transporting vaccines from the national or central vaccine store to ten state vaccine stores across the country. Furthermore, 37 counties that the state stores could not serve due to logistical barriers received vaccines directly from the national store, an effort that UNICEF also assisted with. The effort has resulted in fewer penta and measles stockouts in the state. As shown in the figures below, it is worth mentioning, however, that 1-2 states reported measles vaccine stockouts in various months. Additionally, Penta vaccine stockout was reported by at least one state vaccine store from September to November 2023.





Whereas last-mile vaccine visibility has improved, particularly at the county level, vaccine utilization monitoring in healthcare facilities remains a substantial concern. In 2023, at least 1-2 different counties reported that they ran out of measles vaccine every month. In comparison, counties that reported monthly had fewer stockouts of the penta vaccine.





Closed vial wastage has not been documented at national, state, or county stores.

Despite the inclusion of vaccine stock data in the DHIS 2 and the monthly reporting requirement for health care workers regarding vaccine utilization, the reporting is inconsistent and the data quality is poor.

South Sudan has approved mSupply for the electronic Logistic Management Information System (LMIS), and a UNICEF-hired digital health specialist is exploring options for using mSupply for immunization-related LMIS. In addition, integration of eLMIS to DHIS 2 is in progress to facilitate the information system.

Cumulatively, 195,540 doses of COVAX-supplied vaccines had expired and destroyed by the end of 2023

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

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

Indicator(s):

- Percentage of forecasted Annual Vaccine Requirement (AVR) consumed in prior period (by antigen)

As depicted in the table below, under-allocation of Gavi-funded vaccines contributed to stock stress and incidences of stockouts for the following two reasons:

1. Gavi allocates Penta and IPV vaccines based on United Nations demographic data. The UN population estimate is lower than the official government figure for South Sudan. Insisting

on using UN population data leads to decreased allocation, disregarding country forecasts, and stockouts of the two vaccines.

2. Gavi uses WUENIC figures to allocate penta and IPV. There has been a significant discrepancy between WUENIC figures and the official country coverage statistics for more than four years. As a result, fewer vaccines were allocated, resulting in a stockout of the two vaccines.

Vaccine	2023 forecast quantities	Gavi allocation	Sudan crisis allocation
Pentavalent	1,711,125	972,123	97100
IPV	1,069,453	999,608	123,200
Measles			1,013,000

In 2023, the Sudan conflict led to an influx of displaced individuals into South Sudan, increasing pressure on the limited vaccine supply. Fortunately, the Gavi FED's support for additional vaccines ensured that there were minimal stock-outs of vaccines in the country (table above).

The WUENIC projections were updated in 2023, narrowing the gap with official country coverage numbers. However, the issue persists since there are variances in population figures.

The country utilises the desired WHO wastage projections to forecast vaccine due to lack of local wastage figures. This is considered one of the factors contributing to the widespread stock outs of BCG. Anecdotal information from supportive supervision visits revealed that vaccines are wasted due to prolonged exposure to heat (VVM 3-4), expiration, and the need to discard doses of BCG and measles vaccines after 6 hours of opening a multidose vial or at the end of the immunisation sessions.

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

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

Indicator(s):

- Country co-financing obligation met in a timely manner.

The MOH is dedicated to meeting its co-financing responsibilities. Since 2016, except 2022, when a partial payment was made for the co-financing of the Penta vaccine, the country has been exempted due to its challenging economic circumstances. This exemption ended in 2020. South Sudan was exempted from the co-finance commitment (balance after partial payment) for 2022 and has requested a similar exemption for 2023 due to economic challenges resulting from the Sudan situation and the impact of the COVID pandemic.

			Year			
Country Code		Country: Account Name	Sum of Country Total Obligation			
SSD		South Sudan				
Grand Total						
	Column Labels					
	2024		2025		2026	
Row Labels	Sum of Gavi Contribution	Sum of South Sudan co-finance ($)	Sum of Gavi Contribution	Sum of South Sudan co-finance ($)	Sum of Gavi Contribution	Sum of South Sudan co-fina
Malaria	7,815,661.75	171,772.79	8,400,828.92	184,633.60	8,652,853.78	190,172.61
PCV			4,412,016.34	326,816.03	3,731,172.56	276,383.15
Penta	1,203,983.13	232,279.70	1,069,892.46	206,410.12	1,202,170.08	231,929.92
ROTA			980,448.08	326,816.03	829,149.46	276,383.15
Grand Total	9,019,644.88	404,052.49	14,863,185.80	1,044,675.77	14,415,345.87	974,868.83

In anticipation of the forthcoming obligations, the country has allocated $10 million as part of the health sector transformation project (HSTP) to cover co-payments for vaccines, among other international responsibilities. Additionally, savings from the World Bank health project in the greater Upper Nile region could be used to pay the balance for 2023.

Country comments:

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

Indicator(s):

- Number of routine introductions completed over number of targets set for the calendar year.
- Coverage of recently introduced vaccines.

In addition, forecasted routine introduction & campaign dates should be validated during the JA discussion.

In 2023, while there were no plans for new vaccine introductions, the country secured vaccine support and a Gavi-funded vaccine introduction grant for the malaria vaccine's rollout. The country is set to receive a substantial supply of the new R21 vaccine, targeting the initial implementation phase in 28 counties across six states. The launch, scheduled for the second quarter of 2024, will focus on children under two, adhering to vaccination schedules at 5, 6, 7, and 18 months. Gavi has conditionally approved the nationwide expansion of the malaria vaccine post-initial phase, subject to Independent Review Committee (IRC) endorsement. The initial application and vaccine allocation have been authorized.

The country drafted an application seeking financial assistance and support for the introduction of rota and pneumococcal vaccinations in 2025. This application was submitted to Gavi on January 25, 2024. Furthermore, the country is in the process of drafting the application for a measles follow-up campaign and the introduction of the second dose of measles vaccine in the third-fourth quarter of 2025. The country contemplates to introduce the second dose of the measles vaccine in the final quarter of 2025, coinciding with the children's scheduled receipt of the fourth dose of the malaria vaccine (18 months).

Yellow fever and meningitis vaccinations will continue to be given through mass campaigns based on risk assessment until the country is ready to incorporate the two vaccines into its regular vaccination schedule.

The introduction of new vaccines will require the involvement of various stakeholders, with the Ministry of Health (MOH) taking on the role of coordinating. The EPI coordination platforms will be utilised, and the existing technical assistance under the PEF TCA will be maximised to guarantee a seamless implementation of malaria, rotavirus, and pneumococcal conjugate vaccinations. In exceptional instances, the country will seek further technical assistance to facilitate the implementation of the vaccines.

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

6. Learning Question: If relevant, how effective have recent Gavi-supported vaccination campaigns been?[2] Please highlight lessons learned which are applicable for routine immunisation and upcoming campaigns (e.g., timeliness of outbreak response, quality, campaign reach, link back to strengthening routine immunisation, integration efforts (e.g. multi antigens, nutrition) during campaigns).
Specifically, comment on quality and impact of measles surveillance and campaigns.

Indicator(s):

- Number of vaccination campaigns conducted (stratified by type of campaigns, including preventive, reactive, catch-up, follow-up, sub-national and national)
- Coverage of recent Gavi-supported campaigns, compared to the target (coverage rate disaggregated by sex if collected)
- Number of reported outbreaks of vaccine-preventable diseases (for which GAVI supports with reactive campaigns)

In December 2022, the Ministry of Health declared a measles outbreak, prompting the country to initiate and fast-track the preparatory activities for a nationwide measles campaign. In the meantime, several outbreak response vaccination drives were conducted in the counties that had declared outbreaks. Despite the implementation of targeted responses in some counties, the outbreak persisted and continued to spread.

The national Integrated Measles Follow-up Campaign was carried out across all ten states and three administrative areas in April and May 2023, targeting children aged 6 to 59 months. This included measles vaccination, Vitamin A supplementation, and MUAC screening while adhering to the country's Measles Supplementary Immunization Guidelines. 2,383,771 children (92% coverage) received the Measles Containing Vaccine (MCV), with a balanced gender distribution reflecting the country's demographics. Notably, 28% of these children were vaccinated against measles for the first time during this campaign. Additionally, Vitamin A was administered to 1,549,014 children (60%

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

coverage), and MUAC screening was conducted for 1,214,564 children (47% coverage) aged 12 to 59 months. The post-campaign evaluation indicated an 85% coverage based on card presentation and recall.

The coordination between various stakeholders, including the Ministry of Health, international partners, community leaders, and health workers, was instrumental all led by MOH. This synergy facilitated efficient resource allocation, comprehensive outreach, and effective communication strategies, ultimately enhancing the campaign's reach and impact.

States and Administrative Areas	Target (6- 59 months)	6 – 11 months		12 -59 months		6- 59 months children vaccinated
		Male	Female	Male	Female	
Abyei Admin Area	21,679	468	378	4,205	5,676	**10,727**
Central Equatoria	301,471	18,221	19,333	79,398	83,903	**200,855**
Eastern Equatoria	316,060	28,923	31,421	112,575	118,209	**291,128**
Jonglei	250,549	28,591	29,444	77,251	79,562	**214,848**
Lakes	263,343	21,462	21,966	126,204	123,498	**293,130**
Northern Bahr Ghazal	293,884	20,210	21,403	101,695	101,973	**245,281**
Pibor Admin Area	60,649	10,616	11,285	14,442	22,834	**59,177**
Ruweng Admin Area	64,607	6,328	6,727	23,337	26,577	**62,969**
Unity	213,064	28,445	31,457	76,272	83,774	**219,948**
Upper Nile	216,576	22,930	25,642	68,962	70,717	**188,251**
Warrap	310,262	40,657	42,860	131,360	135,008	**349,885**
Western Bahr El Ghazal	103,591	8,773	9,757	36,333	37,441	**92,304**
Western Equatoria	181,680	18,035	20,472	57,065	62,215	**157,787**
South Sudan	**2,597,415**	**253,659**	**272,145**	**909,099**	**951,387**	**2,386,290**

TP: Based on the Microplan

The countrywide coverage did not meet the recommended threshold of 95%. Counties that failed to get 80% coverage carried out mop-up campaigns. The arrival of returnees and refugees from Sudan, who had not received vaccinations in large numbers resulted in measles outbreaks in numerous counties. Reactive vaccination campaigns were required to combat outbreaks among children aged 6 months to 14 years. By end of 2023, 22 counties had implemented mop-up and reactive campaigns, successfully vaccinating 1,004,230 children (95%) with measles vaccine and 664,526 children (85%) with polio vaccine. To prevent the spread of measles from the neighbouring country, refugees and returnees were immunized at transit and border crossings. A total of 13,005 children under the age of 15 were vaccinated against measles and 11,968 received the oral polio vaccine (OPV) at 15 different locations across eight counties.

County	Measles Target population (6 months to 14 years)					Polio Target Popn (0 to 14 yea		
	Target	Host	Returnee	Total	Coverage	Target	Host	Returne
Rubkona	149,970	80,862	15,141	96,003	**64%**	156,635	88,989	16,505
Leer	22,515	20,231	4,837	25,068	**111%**	24,885	21,012	4,860
Abyei	22,761	19,276	2,242	21,518	**95%**	-	-	-

Juba	96,015	75,756	22,312	98,068	**102%**	104,851	68,742	10,471	79,213	**76**
Gogrial West	81,376	105,198	1,401	106,599	**131%**	89,942	112,685	1,216	113,901	**12**
Twic	66,070	51,765	3,702	55,467	**84%**	73,025	61,283	4,998	66,281	**91**
Ayod	42,997	35,181	433	35,614	**83%**		-	-	-	
Malakal	29,291	25,654	3,328	28,982	**99%**	30,592	25,298	3,422	28,720	**94**
Melut	30,470	28,852	652	29,504	**97%**	31,824	26,469	1,595	28,064	**88**
Longechuk	50,289	33,942	7,189	41,131	**82%**	52,524	30,331	7,496	37,827	**72**
Awerial	33,410	28,536	-	28,536	**85%**	36,927	20,072	-	20,072	**54**
Yirol East	28,049	35,423	512	35,935	**128%**	31,001	30,916	597	31,513	**10**
Fangak	29,585	25,973	911	26,884	**91%**	32,700	25,005	564	25,569	**78**
Akobo	35,531	27,469	8,328	35,797	**101%**	39,271	29,321	8,609	37,930	**97**
Maban	138,424	62,231	73,422	135,653	**98%**					
Maiwut	55,905	59,924	6,313	66,237	**118%**					
Kapoeta East	71,483	71,629	-	71,629	**100%**					
Aweil East	2,504	0	2,378	2,378	95%	2,615	0	478	478	18
Aweil North	700	0	599	599	86%	731	0	786	786	108
Aweil West	3,497	0	3,179	3,179	91%	3,652	0	2743	2743	75
Rubkona	9000	6,494	2,684	9,178	102%	9,400	3814	1461	5275	56
Renk	53,000	40,518	9,753	50,271	95%	55,356	44,163	10625	54788	99
Total	1,052,842	834,914	169,316	1,004,230	95%	775,931	588,100	76,426	664,526	86

The national measles campaign and the subsequent outbreak response vaccination have provided the following learnings.

1. In the Equatoria region, the campaign was integrated with regular immunisation efforts targeting children and pregnant women who had not received all the required immunisations according to the childhood and maternal vaccination schedules. A total of 1983 children between the ages of 12 and 23 months, who were zero dose, were administered the first dose of the penta vaccine as part of this initiative. Implementing a multi-antigen campaign in South Sudan was a novel initiative, offering valuable insights for future campaigns.
2. Collaborated with the nutrition team to create a more robust campaign with nutritional components.
3. The country sourced additional resources from partners to bridge financing gaps for the campaign.

Country comments

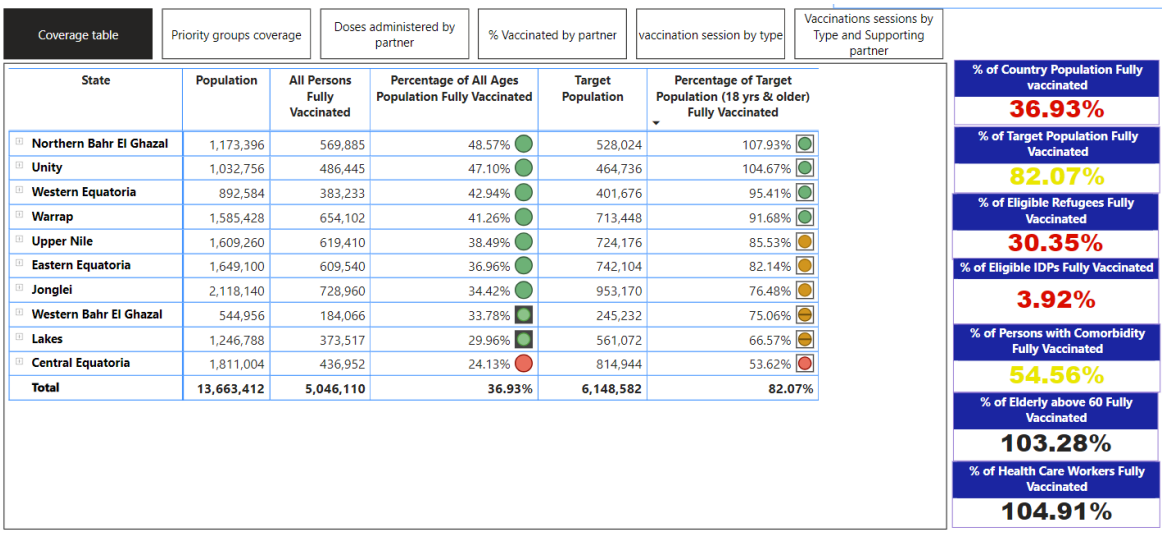
7. Learning Question: What is the current status of your COVID-19 vaccination?

Indicator(s):

- Report and reflect on progress in uptake, with particular emphasis on older adults, health workers and other high-priority population group (as defined by WHO SAGE guidance). Analyse both primary series uptake and boosting.

- Describe if and how the country is integrating delivery of COVID-19 vaccine with routine immunisation & other primary health care services, including reflecting on how Gavi CDS has been used to support these integration efforts (if applicable).
- How have CDS funds been used to strengthen broader RI efforts beyond COVID-19?

In 2023, 2,766,528 persons were vaccinated against COVID, cumulatively translating to 82.2% of South Sudan's adult population had been fully vaccinated (primary series). A total of 954,036 individuals received a booster dose of the C-19 vaccine. Compared to displaced populations and individuals with co-morbidities, health care workers and the elderly population subset had relatively good coverage. It is essential to note, however, that the coverage among IDPs is likely an underestimate, as not all integrated IDPs are recorded as such during vaccination campaigns or routine vaccination services. The lack of precise census-based population sizes for the elderly and the health workers could have contributed to the extremely high coverage in these two population subsets.



State	Population	All Persons Fully Vaccinated	Percentage of All Ages Population Fully Vaccinated	Target Population	Percentage of Target Population (18 yrs & older) Fully Vaccinated
Northern Bahr El Ghazal	1,173,396	569,885	48.57%	528,024	107.93%
Unity	1,032,756	486,445	47.10%	464,736	104.67%
Western Equatoria	892,584	383,233	42.94%	401,676	95.41%
Warrap	1,585,428	654,102	41.26%	713,448	91.68%
Upper Nile	1,609,260	619,410	38.49%	724,176	85.53%
Eastern Equatoria	1,649,100	609,540	36.96%	742,104	82.14%
Jonglei	2,118,140	728,960	34.42%	953,170	76.48%
Western Bahr El Ghazal	544,956	184,066	33.78%	245,232	75.06%
Lakes	1,246,788	373,517	29.96%	561,072	66.57%
Central Equatoria	1,811,004	436,952	24.13%	814,944	53.62%
Total	**13,663,412**	**5,046,110**	**36.93%**	**6,148,582**	**82.07%**

Three waves of national immunization campaigns were carried out in 2023, accounting for 72.5% of the total yearly performance. Routine C-19 vaccination, however introduced in specific health institutions, did not appreciably increase general national coverage. Despite the fact that vaccines are provided in high-volume facilities around the country, uptake in fixed facilities remains extremely low. However, C-19 immunization is increasingly being included in outreach and mobile programs. For example, in the fourth quarter of 2023, HPF's outreach and mobile programs successfully vaccinated 33,577 adults with C-19 vaccine and 42,961 and 52,486 children with the Penta 1 and measles vaccines, respectively. World Vision and HPF's implementation experiences provides critical lessons that will continue to shape the C-19 vaccine's integration into PHC services. To incorporate the C-19 immunization into routine PHC care, the following measures were taken:

- The coordinating platforms were combined into a single EPI TWG, which includes the C-19 vaccination.
- The C-19 supportive supervision checklist was included in the routine RI supportive supervision checklist and work plans.
- A guideline for integration of C-19 into PHC was developed.
- Integrated vaccines distribution plans developed including last mile delivery.
- Enhancing the ability of AEFI surveillance committees at all levels, IDSR surveillance officers, and clinicians to detect, report, investigate, and determine causality for both C-19 and regular vaccination.
- Using CDS3 funds to provide a hybrid IIP training that includes both routine and C-19 vaccines. The updated IIP manuals are ready for production in 2024.

- The IIP training materials were revised to incorporate information on C-19 vaccinations, malaria, rotavirus, and pneumococcal vaccines. The data recording and reporting tools were updated to incorporate the new vaccines.
- Tools for data collection for both COVID-19 and regular immunisation were purchased and supplied to all sites nationwide.

Leveraging the CDS 3 resources, the routine EPI system was strengthened as follows:

- The operational level IIP training took place in HPF and UNICEF supported counties, aiming to improve the skills of both new and current vaccinators in order to provide high-quality EPI services. Leveraged CDS funding to distribute regular and COVID-19 vaccinations efficiently, reducing vaccine shortages. Vaccine accountability monitors enhanced vaccine monitoring, especially at county and state levels. Most counties and states already provide vaccination use data every month. Cold chain equipment was procured and delivered throughout, prioritising regions with a high concentration of zero dose children Learning from the C-19 dashboard informed the development of the EPI dashboard to facilitate the use of data for decision-making at the national level. The objective is to gradually extend the use of the tool to regional levels throughout the upcoming year. The waste management at the facility has been enhanced by acquiring waste bins and utensils and allocating resources for the burn and bury technique. Seven incinerators are scheduled to be erected next year. Utilised COVID-19 resources to enhance the frequency of integrated supportive supervision, which aligned with the Health Systems Strengthening grant. The CDS facilitated risk communication and community engagement initiatives for COVID-19 vaccine acceptance as well as other immunisation services and health treatments in communities, including integrating interventions.

Integration of the EPI and C-19 dashboards, switching from daily to monthly reporting of C-19 data in the DHIS, and building strong connections between EPI clinics and regular clinics for chronic illnesses are all tasks that need to be done before C-19 can be properly integrated into primary healthcare.

As of December 31st, the country had 191,740 doses of C-19 remaining at the central vaccine store, with an expiration date of May 2024. In total, 195,540 doses of AstraZeneca and Janssen vaccines have expired in South Sudan. To continue delivering C-19 vaccine services, the country requested an additional 250,000 doses from the COVAX facility by June 2024.

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

8. Learning Question: Trajectory and progress against targets set

- **How does the progress over the past year compare with your Theory of Change or programme objectives, for the different health sub-systems? For example:**
  - Expanding the EPI dashboard experience to strengthen subnational use of data for management and decision making?
  - Driving results through collaboration between the BHWs and community groups (e.g. mothers' groups, integrated community mobilization network, nutrition advisors, others…)

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

According to the Monitoring, Evaluation, and Learning (MEL) plan for the FPP, the country has achieved the following progress, as shown in the table below.

*The data is not available at the health facility level but at the county level. ^The baseline is based on revised WUENIC

Indicator	2022	2023
% of health facilities that reported no stock-outs for the full year for DTP	*ND	ND
Coverage drops from DTP1 to last routine dose of MCV at national level (MCV1 or MCV2)	32% (JRF); 5.2% (WUENIC)	24%(JRF)
Timely fulfilment of co-financing obligations	Yes/No - Timely partial payment. Balance was delayed	No
Estimated # of zero-dose children at national level	^74,484	
Drop out from DTP1 to DTP3	13%(JRF); 3.9%(WUENIC)	11%(JRF)
# of children reached (with DTP1) in areas targeted for intervention	226,683 (JRF)	279,321(JRF)

Status of Implementation of HSS-EAF activities in 2023

1. **Partner with local training institutions to train cold chain officers/assistants on basic cold chain maintenance; recruit and deploy them at states (13) and counties (80) for vaccine and cold chain management**.

The Ministry of Health (MOH), in collaboration with UNICEF and a local institution of learning, conducted a 30-day training program for 33 individuals working as cold chain assistants. The 33 trainees were selected from the 10 states and 3 administrative areas. Notably, the trainees included four (4) females and a person living with disabilities. On September 1, 2023, each of the 33 graduating assistant technicians was presented with a toolkit for use at their respective workstations. The 33 assistant technicians were deployed back to their respective states and AAs to support the maintenance of cold chain equipment. For more practical experience, these technicians would be supporting companies for the installation of solar refrigerators from different sources in the country, including the Gavi CCEOP, African CDC, Canada, and the German government (KFW).

2. Conduct a measles follow up campaign.

In the second quarter of 2023, a schedule measles follow-up campaign that covered the entire country (80 counties) was conducted. A total of 2,386,290 children between the ages of 6 and 59 months received vaccinations, representing 92% of the targeted population. The campaign was combined with the administration of vitamin A and mebendazole. In the Equatoria region, the campaign was integrated with regular immunisation efforts targeting children and pregnant women who had not received all the required immunisations according to the childhood and maternal vaccination schedules. A total of 1983 children between the ages of 12 and 23 months, who were zero dose, were administered their first dose of the penta vaccine as part of this initiative. Implementing a multi-antigen campaign in South Sudan was a novel initiative, offering valuable insights for future campaigns.

The countrywide coverage did not meet the recommended threshold of 95%. Counties that failed to get 80% coverage carried out mop-up campaigns. The arrival of returnees from Sudan and refugees who had not received vaccinations in large numbers resulted in measles outbreaks in numerous counties. This situation prompted the need for reactive measures to address the outbreaks.

3. **Vaccine transport (NVS to States): Transport vaccines from national level to 11 state hubs and 24 county stores:**

In 2023, UNICEF supported the MOH in transporting vaccines from the national or central vaccine store to ten state vaccine stores across the country. Furthermore, 37 counties that the state stores could not serve due to logistical barriers received vaccines directly from the national store, an effort that UNICEF also assisted with. The effort has resulted in fewer penta and measles stockouts in the state. It is worth mentioning, however, that 1-2 states reported measles vaccine stockouts in various months. Additionally, Penta vaccine stockout was reported by at least one state vaccine store from September to November 2023.

4. **Last mile vaccine delivery: Monthly delivery of vaccines to 822 health facilities**

Implementation partners led by UNICEF, IOM, and HPF distributed vaccines at the last mile across the country among the Gavi supported facilities. This ensured the availability of vaccines and supplies for immunization services. The last-mile delivery strategy is contextualized and implemented collaboratively by the implementing partner and county health department. For fixed-site and outreach services, transportation options included motorbikes, motor vehicles, or boats, depending on the accessibility of the location. In 2023, UNICEF, IOM, and HPF supported 280, 30, and 512 healthcare facilities, respectively. Whereas last-mile vaccine visibility has improved, particularly at the county level, vaccine utilization monitoring in healthcare facilities remains a substantial concern. In 2023, at least 1-2 counties reported that they ran out of measles vaccine every month. In comparison, counties that reported monthly had fewer stockouts of the penta vaccine.

Despite the inclusion of vaccine stock data in the DHIS 2 and the monthly reporting requirement for health care workers regarding vaccine utilization, the reporting is inconsistent, and the data quality is poor.

5. **Deploy EVMA 2.0 at national and subnational levels and perform periodic EVMA Assessments; Implement EVMA cIP.**

The most recent EVM assessment conducted in South Sudan took place in July 2019. Using the new EVM version 2.0, the country will conduct a comprehensive EVM assessment and develop a comprehensive improvement plan (CIP) from January to March 2024

6. **Conduct a detailed cold chain inventory and create a mechanism for regular updates.**

A consultant engaged by UNICEF collaborated with the MoH at national, state, and county levels to update the cold chain inventory in December 2023. The updated list had 1,677 refrigerators located at the national, state, county, and health facility levels. Among these, 263 (16%) were powered by electricity, while 84% (1,407) were solar-powered. A total of 1,568 (93%) of the equipment was reported to be functioning. 1,047 (85%) of the 1,231 units of cold chain equipment present at the service delivery point are in the age range of 0 to 5 years. The remaining 161 (13%) fall within the age range of 5 to 10 years. 23 pieces of equipment, accounting for 2%, are between 10 and 15 years old and above, which are obsolete. A total of 1,193 (97%) of the equipment at the health facility level is powered by solar energy, while the remaining 3% is presently powered by electricity but is undergoing a phased replacement with refrigerators powered by solar energy.

Additional information for analysis can be found in the Excel link that is attached.

7. **Conduct quarterly performance review meetings at county and state respectively**

County and state review meetings, attended by frontline healthcare workers from the Ministry of Health (MOH), partners, and supervisors, serve as a platform to appraise the EPI programme at the subnational level. These meetings also allow supervisors to offer feedback and updates to the frontline health workers, counties to exchange ideas with their peers and facilitate collaboration between the state and county teams.

In 2023, the county review meetings were held twice, and the state review meetings were held once, which is less often than the suggested quarterly and biannual frequency for the county and state review meetings, respectively. The meetings were held in all the 80 counties, 10 states and 3 administrative regions. These sessions were attended by stakeholders involved in the Expanded Programme on Immunization (EPI), including a member of

parliament from Northern Bahr el Ghazal who participated in the state review meeting. During the first half of the year, the lack of meetings was caused by the delayed allocation of funding to AFENET, the organization responsible for overseeing the implementation of these activities.

The common issues in the meetings were:

- The implementation partners (IPs) must provide funding for the micro plans. In the past, these plans were developed but not financially supported due to a lack of agreement between the IPs and the AFENET, which provides assistance in developing the micro plans.
- The significant turnover of vaccinators and the necessity of including them in the Ministry of Health's payroll.
- The absence of some facilities on the DHIS 2 platform is affecting the completeness of reporting of EPI data.
- The IPs are not providing transportation and meal allowances for outreach and mobile activities according to the agreed-upon rates.
- The population estimates published by the Ministry of Health (MOH) for 2023 do not align with the actual target population of counties, leading to certain counties claiming coverages that exceed 100%.

There is room for improvement in the manner in which business is conducted during the review meetings in 2024. The utilization of the EPI dashboard and scorecards to guide the conversations was inconsistent, which was opposite to what was anticipated. The participation of community representatives, such as health facility management committees and Boma health workers, in the review meetings would enable the community to have a say in the discussions.

8. **Revitalization of NLWG/SLWG meetings**.

UNICEF supported the MOH to revitalise the South Sudan National Logistics Working Group (NLWG). However, the group did not convene biweekly as required. The group consists of the MoH, UNICEF, WHO, and JSI, with the Deputy EPI Manager leading the group and UNICEF serving as the secretariat. While the Terms of Reference (ToRs) for both national and subnational logistics group meetings are available, the subnational logistics working groups have not yet been established and put into operation.

The NLWG meeting in 2023 deliberated on the vaccine forecast for 2024, along with other matters.

9. Procurement of one incinerator

The tendering process for the eight incinerators (one in the HSS and seven in the CDS budgets) began in 2023, and the items should arrive in the country by the end of the first quarter of 2024 for installation.

10. Continue the phased rollout of automated SMT and viva to improve vaccine visibility and availability in 13 states/administrative areas and 40 counties; Deployment of stock management module of DHIS2 at the health facility level which will be integrated with the county Web SMT

In July 2023, the MoH, in partnership with UNICEF, provided refresher training on the electronic stock management tool (eSMT) to 13 cold chain officers from 10 states and three administrative areas. During the workshop, the preliminary Gavi audit findings for stock management were discussed and recommendations for action were made. Since then, seven of the 10 states have consistently reported increased visibility of vaccine use at the state level. The deployment at the state level provided insights for scaling up to the county level.

At the county store and health facility levels, an Excel-based tool is used for reporting vaccine use. Counties gradually improved their reporting of vaccination use at the county level in 2023. Currently, more than 80% of counties report vaccine stock levels on a monthly basis, giving critical vaccine visibility. Vaccine utilization at the health facility level via the DHIS 2 remains low.

South Sudan has approved mSupply for the electronic Logistic Management Information System (LMIS), and a UNICEF-hired digital health specialist is exploring options for using mSupply for immunization-related LMIS.

11. **Review of Infection prevention guidelines (Waste management) –** A similar activity was funded by WHO and therefore this fund is to be reallocated.

12. **Procurement and distribution of data recording and reporting tools (including A3 size registers for outreach and mobile services)**
    The World Health Organization was allocated funds from the CDS budget to provide tools for a duration of two years (2023-2024). Nevertheless, the funding for this initiative expired, leaving a shortage of printed tools to meet the demands of the entire year 2023. In November, UNICEF produced child health cards to address stockout of existing data tools.
    The printing of a large quantity of data tools containing information including the new vaccines (malaria, rota, PCV, and COVID-19) will take place in the first quarter of 2024.
13. **Procurement of cabinet/trunks for safe storage of data collection tools**
    Cabinets were procured awaiting distribution in the first quarter of 2024.
14. **Refresher training on Immunization in practice (IIP) for vaccinators and HCWs**
    This activity included both the county-based vaccinators in 30 priority counties and the vaccinators in the 788 Gavi-supported facilities. A total of 132 (20 females and 112 males) were recruited and trained by HPF, while 56 (9 females and 47 males) county-based vaccinators were recruited and trained by UNICEF to support EPI activities in unsupported facilities. HPF and UNICEF conducted a five-day refresher training for 1180 (176 females and 1004 males) and 522 vaccinators based in the supported facilities, respectively. Vaccinators in the HPF-led counties were trained on both C-19 and routine immunization, enabling the integration of C-19 into routine vaccination services.

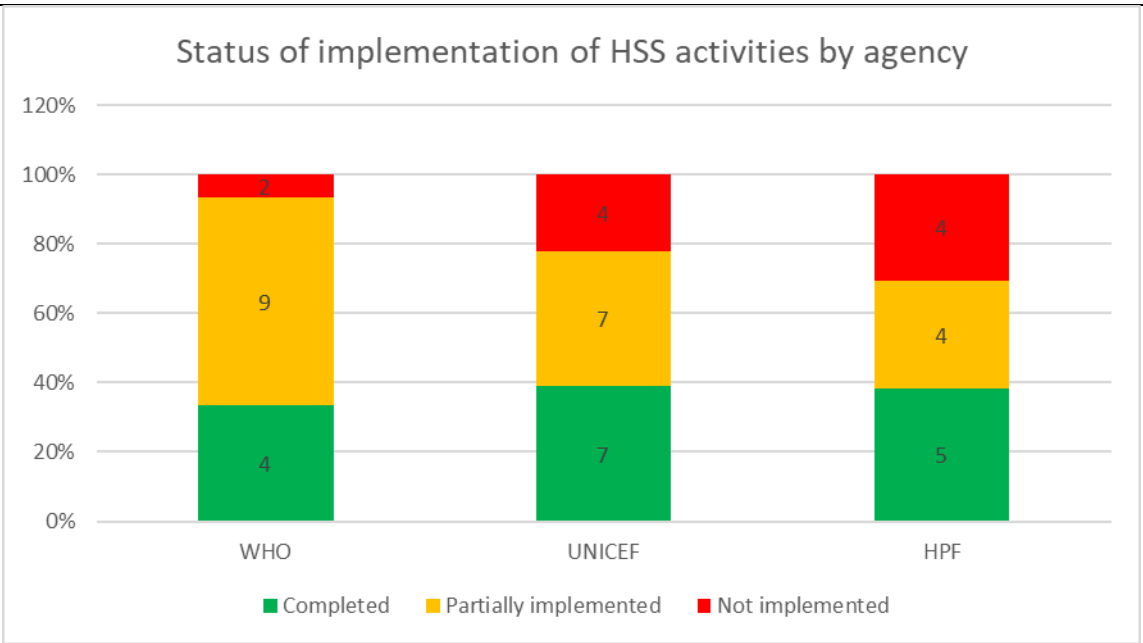
15. **Conduct and intensify dry season vaccination in the 33 counties prone to flooding**
    This activity did not happen as the EAF funds were disbursed after the dry season was over.
16. **Tailor immunization services in Juba and Wau targeting 15 private health facilities with the largest paediatric attendance.**
    Not implemented
17. **Targeted joint integrated monthly supportive supervision to health facilities (prioritizing the poor performing counties/facilities with less than 50% vaccination coverage) using revised ODK tools by MOH and partners.**
    The national supervisors visited each state at least once in 2023. To ensure the effectiveness of the visits, a team comprising senior and mid-level personnel from MoH was deployed to the selected states. This diverse team brought a wealth of expertise, enabling a comprehensive assessment of the RI activities. The state team conducted at least one visit to each county in 2023, with 66 counties receiving a minimum of two visits. A total of 480 (66%) facilities were visited at least once in 2023. This failed to meet the planned annual frequency of four visits per year. The county and state visits were focused on facilities with catchment areas containing a significant number of unvaccinated children and data quality issues.

    Issues addressed during supportive supervision include:
    a. Correct use of the data tools and reporting to the national level.
    b. Optimizing patient flow within healthcare facilities to enable cross-referral and consequently reduce the occurrence of missed vaccination opportunities.
    c. Use of data to identify where zero-dose children are situated.
    d. Provision of C-19 vaccines in fixed health facilities and outreach clinics.
    e. Proper storage of vaccines, VVM interpretation, and preventive maintenance of cold chain equipment.
    f. On-the-job training of BHWs on the correct interpretation of the child and maternal vaccination home records for referrals.
    g. Reporting of AEFIs and VPDs

Follow-up and implementation of action points at the health facility level remain weak links in supportive supervision. Use of ODK for reporting supportive supervision findings could be improved in 2024.

18. **Building on the HSS experience, conduct at least one outreach per week to inaccessible areas as guided by facility-level micro plans.**
    Facility-level micro plans were prepared by 302 (59%) and 191 (73%) of the facilities supported by HPF and UNICEF, respectively.
    Approximately 35-40% of children who were immunized in 2023 received the vaccine through outreach services, underscoring the significance of outreach in South Sudan as a vital approach to ensure equity in vaccination. HPF experienced the greatest increase in the number of children receiving vaccinations through outreach services in 2023 as compared to 2022. This may be attributed to the expansion of outreach and mobile services during the fourth quarter, which integrated routine vaccines with COVID-19 vaccinations.
19. **Procurement of phone for GIS mapping/accountability**
    The acquisition of these phones was halted due to the World Health Organization's procuring of 1000 tablets for the C-19 project, which can be allocated to the facilities and counties to ensure accountability of outreaches and immunization data.
20. **Phased revitalization of use of tickler system for defaulters tracing in 80 counties;** The use of a tickler system for defaulter tracking was piloted successfully by HPF and was proven to be useful in improving the rates of return for immunization services The scale up in UNICEF counties was halted due to a budgetary constraint. On the other hand, HPF distributed the tickler files to all 512 supported facilities and provided training to frontline health care workers (incorporated in the IIP training) and boma health care workers on how to use the tickler file. According to findings from supportive supervision, the utilization of the tickler file remains low across the country. There is potential for enhancement in 2024.
21. **Supported the enhancement of the Health Management Information System (HMIS).**
    a) Update of Standard Operating Procedures (SOPs) for Data Management:
       The SOPs for data management were revised and enhanced. The updates incorporated best practices, standardized data collection and reporting processes, and improved quality assurance measures.
    b) Review of Data Tools: The data tools were refined and updated based on the assessment findings. This involved streamlining data entry fields, improving data validation processes, and incorporating user feedback to ensure user-friendliness and efficiency. The RI data tools have been shared with UNICEF for printing and distribution.
    c) DHIS update and finalization not done as bureaucracy within the M & E is stalled progress; however, follow-up up to be continued.
    d) Data Quality Assessments (DQA) could not be done as the country continued to grapple with different outbreaks and other priorities.
22. **EPI Coverage Survey**
    Collaborating with the MoH, developed and endorsed the Expanded Program on Immunization (EPI) Survey for 2024. However, it is imperative to note that a funding gap persists despite the achievement of protocol finalization and endorsement. This financial shortfall poses a challenge to the timely execution of the EPI Survey 2024. Recognizing the pivotal role this survey plays in assessing immunization coverage and identifying areas for improvement, urgent attention is required to secure the necessary resources.

Summary of status implementation status of HSS-EAF activities by agencies



Acceleration plan for delayed activities

Agency	Activity	Acceleration plan
WHO	Conduct regular data quality self-assessment and develop county specific data improvement plans after assessment	Plan to conduct this in Q2 of 2024
	Conducting EPI coverage survey	Plan to conduct this in Q3 of 2024 subject to on-going discussions on value for this vs MICS
UNICEF	Phased revitalization of use of tickler system for defaulters tracing	Plan to conduct in Q2 subject to availability of funds
	Conduct and intensify dry season vaccination (PIRI) in the 33 counties prone to flooding	Plan to conduct in Q1 and Q2
	Expansion of the BHI	Plan to conduct as soon as EAF funds are disbursed
	Quarterly feedback/meeting with leaders in 20 counties	Plan to conduct as soon as EAF funds are disbursed
HPF	Tailor immunization services in Juba and Wau targeting 15 private health facilities with the largest paediatric attendance	Plan to conduct in Q2 2024 subject to finalisation of policy on engagement with private sector for EPI services
	Conduct and intensify dry season vaccination (PIRI) in the 33 counties prone to flooding to reach 117,032 zero dose children between January - May of each year and as the season changes.	Plan to conduct in Q1 and Q2
	Expansion of the BHI	Dropped the activity - to be implemented under HSTP
	Quarterly feedback/meeting with leaders in 20 counties	Dropped the activity - to be implemented under HSTP

Lessons learned

a. Service delivery

1. A tickler system is an effective approach for tracking defaulters in South Sudan. Based on pilot implementation in Juba and Kapoeta counties, effective communication between vaccinators and BHWs in defaulter tracing resulted in significant decreases in vaccination defaulter rates.
2. Strategic community engagement in micro plan formulation creates strong and meaningful linkages between EPI services and the community, which promotes immunization uptake, particularly in outreach and mobile services.
3. The integration of C-19 with childhood immunization in outreach and mobile services increased access to vaccination services for eligible people in South Sudan. Notably, C-19 vaccinations were administered to a larger number of patients in mobile and outreach sessions than in fixed services.
4. Catch-up vaccination, as supported by the IRC, is a successful strategy for reducing the number of zero-dose children. In 2023, the effort in 15 counties accounted for more than half of zero-dose vaccinations for children aged 12 to 59 months. This experience should inform the national strategy to increase the age range for vaccination from 0-23 months to 0-59 months.

b. Supply chain

1. Community involvement in last mile delivery of EPI supplies & CCE deployment, increased efficiency & community ownership.
2. Climate sensitive programming, taking advantage of the dry season to preposition supplies ensures supplies availability even during flood season when access is limited.
3. Adjusting min-max inventory levels of supplies for stores cut off by rains/at risk of flooding.
4. Use of standard (spreadsheets) & non-standard platforms (WhatsApp, Phone calls, leveraging on IP presence) for data retrieval.

c. SIA

1. Integration of other vaccines via the PIRI strategy in 3 states.
2. Additional Resources from partners mobilized by the country.
3. Collaborate with the nutrition team for a more robust campaign with nutritional components.

Challenges

1. Under allocation of the Gavi funded vaccines leading to stock stress & incidences of stock out.
2. Total reliance on humanitarian logistics for vaccine delivery often increases lead time for vaccine resupply.
3. Poor infrastructure & flooding often cause access constraints for vaccine delivery & CCE deployment. In addition, this increases cost of CCE deployment, installation & commissioning.
4. Numerous measles outbreaks have depleted MCV & bOPV stock, the RI antigens often used for the measles outbreak.
5. The Sudan crisis & corresponding influx of refugees into South Sudan has led to increased vaccine utilization beyond forecasted quantities in frontline counties.
6. High iSC workforce turnover at county & HF level and attendant requirement for capacity building.

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

8. Learning Question: Anticipating opportunities and challenges with new program support

- Given the strengths and challenges of the immunization program discussed above, as the MDTF project is coming online soon, what are the top 5-10 opportunities to accelerate through MDTF, the top 5 risks that EPI will need to watch for through MDTF implementation?
- What essential activities should be supported by Gavi, which would not fit the MDTF mandate?

Background of MDTF

Based on the below key challenges with the health sector in South Sudan, the future of Health in South Sudan was conceptualized to be Health Sector Transformation Project which is a to be funded by multi-donor Trust funds (MDTF).

- **Context Complexity**: Ongoing conflict, Seasonal flooding, Limited health facility infrastructure and Low transportation and communication infrastructure
- **Government Stewardship**: Low baseline government capacity, Leadership dynamics at MOH and Irregular Payment of Salaries
- **Fragmentation**: Fragmentation within the Government, Fragmentation of donor and partner programming, Fragmentation of monitoring and evaluation
- **Service Delivery Functions:** Serious gaps in Human resources, Low Management Capacity at subnational levels, Lagging Health Information Systems and Vague, unrealistic policies, and strategies.

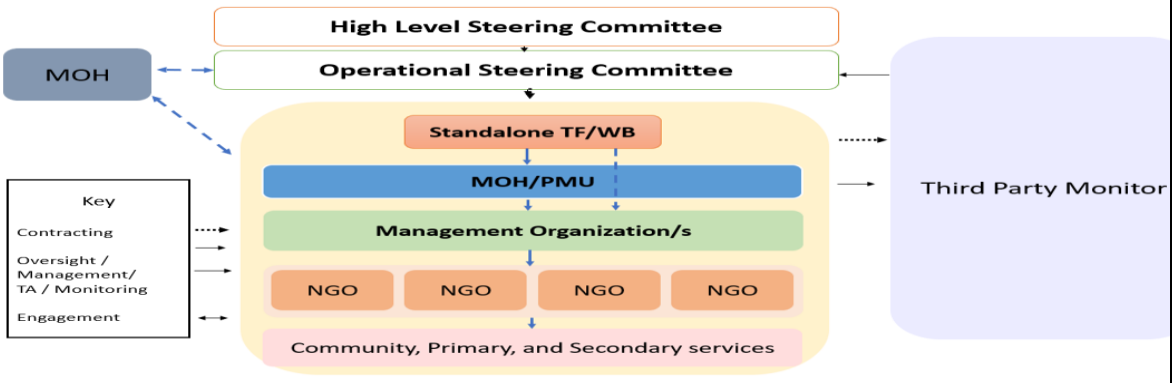
Rationale and Objective of the new approach

- Rise of a unique opportunity to integrate health financing and harmonizing health service delivery nationwide in South Sudan
- The pressing resource needs in the sector
- Harmonized funding cycles of the largest health sector development donors complementing national financing.
- Strengthened leadership in the Ministry of Health

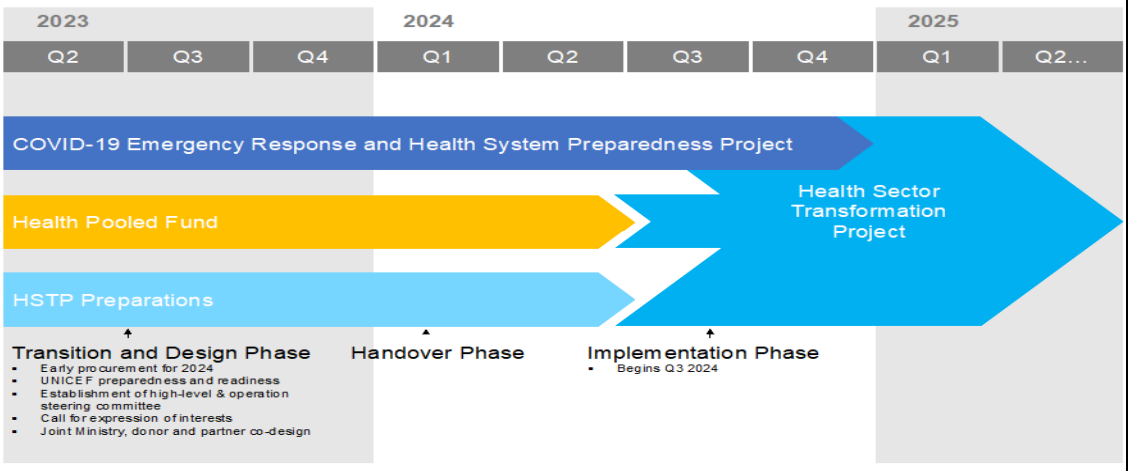
Objectives:

- Improve efficient use of limited available resources.
- Reduce fragmentation and simplify the Government's coordination with health sector partners.
- Transitioning towards better governance of the sector through strong accountability mechanisms and bigger role of the government
- Ensure a streamlined package of services is delivered in a consistent manner.
- Allow for lessons learned through current and previous health service delivery modalities.

Structure and Governance of MDTF



Some Key Timeframe



Updates as of December 2023

A number of activities has been ongoing with the establishment of the MDTF – HSTP including the following achieved by the end of December 2023

- Through a competitive and transparent mechanism, a total of 27 implementing partners were identified for the implementation of the project in about 37 lots across the country.
- The World Bank Executive bard by the end of 2023 gave approval for the project.
- Project document (PDs) for the project implementation by implementing partners was initiated with immunization as a key component and the result framework capturing key immunization indicators.
- Procurement of supplies done and initial batch to cover four months already started.
- Inception workshop with State Ministers and governors as part of project orientation Planned by the end of December and was conducted in January under the Leadership of the MOH
- Transitioning plan and meetings between UNICEF /HPF and MoH commenced in 2023 and ongoing.
- Coordination meeting with donors, partners and MoH where technical discussion on the essential package of health services, budget, and number of health facilities to support continued to happen twice a week in 2023 and ongoing.

Opportunities to accelerate through MDTF

With the take of the MDTF – HSTP in July 2024, the following are opportunities identified that could be accelerated through the project.

- Strong government leadership of the health sector and robust coordination of partners at national, state and county levels.
- Streamlining of Health sector resources and partnership to reduce fragmentation and duplications in the system.
- Strengthening Integration of interventions including immunization services
- Harmonization of incentives across the different cadres of beneficiaries in the sectors including vaccinators and cold chain officers across the levels including the states, CHDs, and health facilities.
- Strengthening the capacities of the MoH at state and county level through the implementing partners integration approach.
- Use of the strategies of fixed site session, outreaches and mobile sessions for service delivery including immunization services in the communities, Health facilities and the hospitals.
- Streamlined operational support to the states and CHDs for the project management.

There may not be any immediate risk posed to immunization program with the HSTP that Gavi would need to look out for now. Most of the implementing partners that are implementing the HPF activities in the seven states and WB/UNICEF project in three states and two AAs including Immunization are selected to implement the HSTP in about the same locations. There is a clear transition road map for

the current program into the new project including with the implementing partners that would not allow any gap in service provision. The strategy for implementation of immunization activities including the fixed site, outreach and mobile session remains the same through the IPs working with the government structures with MoH leadership. Focus on reaching zero dose for immunization and other intervention to ensure new child is left behind is key to the project as one of the three components of the program document to be implemented by the IPs under the project is dedicated to immunization and PHC with some of key indicators focused on immunizations.
The Government of South Sudan through the HSTP is also committing domestic resources to honor co financing obligations related to supports to the country from the donors including vaccine support. However, the available resources may not be sufficient for the project period informing the need for continuous resource mobilization of domestic resources.

What essential activities should be supported by Gavi, which would not fit the MDTF mandate?

Gavi has been playing critical roles regarding immunization in the country and with the take-off of the HSTP, expectations are that Gavi would continue to play those roles including:

- Provision of support for new vaccines in the country including IPV, pentavalent, Malaria to be introduced in 2024 and Rota and PCV to be introduced in 2025. Further it would be good for Gavi to support the measles vaccines for routine immunization as already requested by the country.
- Gavi support for outbreak response as has been in the past for measles and yellow fever and any future vaccine-preventable outbreak.
- Gavi's support for cold chain equipment to ensure service delivery points are adequately equipped with functional vaccine storage equipment. Additionally, Gavi support with contribution to the construction of an ultra-modern warehouse with component of vaccine storage national level is critical.
- Gavi support through the Health System Strengthening (HSS) funding, Equity Accelerator funding (EAF) and Covid-19 vaccine Delivery support (CDS) which has supported range of activities including support for outreach, mobile sessions, capacity building, incentives, supportive supervision remain critical for the HSTP to ensure children and women are reached with essential live-saving vaccines irrespective of their location.
- Gavi has been supporting technical assistance (TA) for the implementation of the various levers of support and the continued support to fill the TA needs for the project as it relates to immunization is critical to quality implementation of the project in the country.

Country comments

B. Programme Management

Financial implementation of Gavi cash grants

Cash[3] Support Summary*

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

WHO received TCA, HSS Measles and FED grants financial utilization is as shown below.

Grant	Recipient	Period	Status as of 18 February 2024					Cash Bal	Compliance**		Remark
			Grant Value	Appr.	Disb.	Expenditure	Utilisation		Fin. Rep	Audit	
VCS S GAVI TCA 22-24_SSD	WHO	31-Dec-25			1,190,333	930,862	78	259,471			Managed by HQ
VCS S GAVI Measles SSD 23	WHO	31-Dec-23	1,861,074	1,861,074	1,830,348	1,830,085	100	263			Inclusive of an UN-to-UN agreement with UNICEF of 91,026
VCS S GAVI 22-24 FPP HSS3 SSD	WHO	30-Jun-24	860,313	860,313	574,737	405,095	70	169,642			Funds were for the EPI coverage survey need to determine the next steps
OCR S GAVI MEASLES SSD EMERG	WHO	30-Jun-24	2,641,934	2,641,934	2,469,097	1,149,492	47	1,319,605			A no-cost extension required. Renk was part of proposal accounting for over 60% of fund but currently covered by IOM with discussion ongoing to cover gaps and avoid duplications
OCR S GAVI COVID-19 CDS3 SSD	WHO	31-Dec-25	695,286	695,286	695,286	159,207	23	536,079			

UNICEF received HSS3, TCA, Measles SIAs, Sudan Crisis, EAF, and CDS 3 grants and financial utilization is as below:

Grant	Recipient	Period	Status as of 18 February 2024					Cash Bal	Compliance**	
			Grant Value	Approved	Disbursed.	Expenditure	Utilization		Fin. Rep	Audit
HSS 3	UNICEF	09.12.2022 to 30.06.2024	3,156,715	3,156,715	3,156,715	2,077,097.99	2,347,428.91	809,286.09		
PEF/TCA	UNICEF	2022 - 2024	3,796,059.859	3,796,059.859	2,496,002.68	1,059,960.93	2,204,666.50	291,336.18		
Measles SIA	UNICEF	2.02.2023 to 31.12.2023	810,216	810,216	810,216	810,215.35	810,215.35	0.65		
EAF	UNICEF	4.05.2023 to 30.06.2024	720,102	720,102	450,330	52,125.91	91,875.91	358,454.09		
Sudan Crisis	UNICEF		980,478	980,478	980,478					

NB CDS & CDS2	UNICEF	22. 10. 2021 to 21.10.2023	1,886,245	1,886,245	1,886,245	1,883,497.48	1,883,497.48	2,747.52		
CDS 3	UNICEF	31.07.2023 to 31.12.2025	7,773,250	7,773,250	2,780,625	419,046	786,188.08	1,994,436.92		

NB: Sudan crisis has $593K and CDS 3 –$ 800K and HSS3 has $689K in soft commitment of the reported balance

*All amounts are in USD

IOM received grants for HSS3, TCA, CDS 3 and financial utilization is below:

Grant	Recipient	Period	Status as of 18 February 2024					Cash Bal	Compliance**	
			Grant Value	Appr.	Disb.	Expenditure	Utilisation		Fin. Rep	Audit
HSS3	IOM		151570	151570	151570	65270	43%	86300		
TCA	IOM		155286	155286	155286	86138	55%	69148		
CDS 3	IOM		159699	159699	159699	39290	25%	120409		

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

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

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

Indicator(s):

- Percentage of grant funds utilised.
- Amount of cash balance in-country.
- Progress on the PFM Transition.

The tables above display specifics on the utilisation of the different funds by the agency. Three issues led to the partners experiencing low utilisation rates, which were below 50%.

- Delays in disbursements had an impact on timelines, which led to delays in activities and implementation.
- The frequent occurrence of vaccine-preventable diseases (VPDs) in 2023 had an impact on the scheduled activities funded by the Gavi funding.
- The implementation of HSS-EAF operations was affected by the prioritisation of measles outbreaks with high CFR (case fatality rate) and C-19 campaigns due to vaccines nearing expiration.

The country is transitioning from the health pooled fund – WB-UNICEF fund management to a multi-donor trust funding mechanism with an MOH-led project management unit for the implementation of the health sector transformation project in July 2024.

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

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

The country is transitioning from the health pooled fund – WB-UNICEF fund management to a multi-donor trust funding mechanism with an MOH-led project management unit for the implementation of the health sector transformation project in July 2024.

The progress of GMR implementation is summarised in the table below.

Review of ToRs for bodies responsible for oversight on immunisation activities	Within the first 3 months from effective date of this annex.	The TORs were formulated and disseminated. EPI TWG meetings are proceeding as scheduled. In 2023, however, the ICC convened only once as a result of the MOH's competing obligations. Due to the many coordination platforms that the Minister of Health chairs and to which the same stakeholders contribute, the country is considering merging the ICC and the HSCC (under discussion)
Appointment of a substantive EPI manager	Within the first 3 months from effective date of this annex.	EPI manager recruited in October 2019. Holds an MOH contract and currently receiving mentorship from the partners and the embedded TA.
Human Resource Challenges All new positions or consultants under Gavi HSS will only be recruited after approval by Gavi in writing.	Effective date of this annex and annually. Initial mapping within the first 2 months from effective date of this annex and thereafter every 6 months.	All MOH recruited officers hold MOH contracts but receive an incentive from the partners. Due to challenges with office space partner staff are not embedded in EPI premises except the cold chain and vaccine management officer. Mapping of officers recruited using Gavi funds is done periodically and shared. All positions are recruited upon receiving Gavi approval. Performance based management strategy is developed. However, the utilization could be improved. Long delays in receiving the incentive undermines the strategy.
Ministry of Health to submit a performance-based management strategy for all the incentives and key positions funded through Gavi HSS	Within 3 months	

Operational plan and reporting to Gavi. In line with agreements signed between Gavi and fund recipients (Section 6.2 of the Grant Agreement in case of Alliance partners), the partners and any other future recipients of Gavi funds will report to the government on planning and implementation of all Gavi-funded activities and collaborate with and empower the Government as necessary to inform and incorporate such reporting into the standard Gavi reports for onward submission to Gavi by the Government. The EPI Manager (when recruited/appointed) will ensure that reporting and accountability lines are clarified and agreed upon with the MoH and other stakeholders. MOH to submit annually to Gavi a detailed and comprehensive EPI operational plan that describes the implementation of the programme including priority activities, roles and responsibilities, timelines, targets, and outcomes across different levels.	Outline within 3 months and semi-annually going forward. Outline within 3 months and semi-annually going forward	The annual Operational plan and Biannual progress reports submitted to Gavi
Funding modalities	Ongoing	UNICEF, WHO, IOM, HPF AFENET, JSI are receiving funds directly from Gavi.
Direct financial support from Gavi to the Government of South Sudan will continue to be disbursed to the Alliance Partners, UNICEF and WHO and managed in accordance with the Partnership Framework Agreement (PFA) and respective Grant Agreements entered between the Government of South Sudan, respective Alliance Partner and Gavi. Given the nature of WHO controls around the DFC mechanism, Gavi will only disburse funds to WHO for direct implementation and direct payment by WHO and limited to areas of WHO's expertise or their competitive advantage. Funds can also be disbursed through additional strategic partners such as Health Pool Fund and an additional humanitarian agency.		
Recovery and reallocation of USD 541,000 received by MoH from WHO under DFC	Within 1 months from effective date of this annex	There is an undertaking from Government to refund the funds. However, this is a pending matter.
MoH will pay back to WHO the amount of USD 541,000 received from WHO through Direct Financial Contribution (DFC). WHO will discuss and agree with Gavi on suitable reallocation of the funds for programme activities.		

Vehicles management Gavi, together with MoH and Alliance partners shall explore efficient options for managing the Gavi-funded vehicles, for instance, through an external agent, UNICEF or WHO as per their own asset management policies and procedures. In this regard, a reasonable cost of operating these vehicles will be agreed between Gavi and the selected party. The selected partner will ensure vehicle related records are kept up to date and ensure the assets are only used for intended purpose. Periodic reports (i.e. six monthly) shall be shared with Gavi by the selected partner / MoH on the usages and current status of these assets.	Within 3 months from effective date of this annex and ongoing	Under discussion – MOH position is that the vehicles should be handed over to MOH fully.
Maintenance of Fixed Assets Register and annual verification of assets A comprehensive Fixed Asset Register (FAR) will be maintained for all assets, including but not limited to cold chain equipment, vehicles and IT equipment procured or to be procured through Gavi grants to South Sudan. This Fixed Assets Register will be maintained and updated regularly. All assets procured with Gavi funds will be tagged with unique identifiers and asset verification will be carried out at least annually, reconciling the physical assets count and condition to the FAR at all levels.	Fixed assets registers updated continuously, and verification of assets conducted annually	Reviewed every 6 months and shared
Follow up and reporting on EVM Improvement Plan MoH will work with UNICEF, to ensure that implementation of actions recommended in the latest comprehensive Effective Vaccine Management Assessment (2015) and any future improvement plan (EVM IP) is tracked and reported to the ICC and Gavi, at least on a semi-annual basis. MoH should consider assigning the role of tracking and reporting status to one of the officers working within the EPI who shall be responsible for such follow up and reporting.	Semi-annually	Done annually
Stock management and inventory control	Ongoing	

The process of vaccines last mile delivery will be documented in clear guidelines. A suitable stock management tool will be implemented for stocks management from central, state to county levels. The system will maintain an up-to-date stock level at all locations and will be able to generate various stock management related reports to help in decision making. Such system will include data for buffer stock, open vial and closed vial wastage, stock outs and temperature monitoring at all levels. All issuance and receipts of inventories will be formally approved and such approval along with all supporting documents will be documented in the UNICEF prescribed format. The issuance of stock will be strictly on a First Expiry First Out (FEFO) basis and the stock management tool will only allow the issuance of stock on this basis.		eSMT rolled to the ten states. Roll out to counties is pending
Periodical verification of vaccine stocks Periodic (ideally quarterly) physical verification of stocks will be carried out by MoH / EPI staff (including staff independent of stock management) at the NVS and the 10 distribution hubs. The physical verification team will also ensure that vaccine-related records have been adequately maintained in the system as well as hard format. Results of verification will be formally documented, and action plans agreed formally followed up. The report of physical verification will also be shared with Gavi at request.	Quarterly	Done monthly at national vaccine store and for a majority of states and counties; report shared with the EPI manager and UNICEF. No reports from facility levels.
Insurance In light of the macroeconomic situation in the country and the absence of a practice to ensure assets by the government, adequate physical safeguards will be put in place to cover any assets and vaccines against potential losses from potential disasters (such as fire, earthquakes, or floods), negligence or theft.	Ongoing	
Assurance arrangements by Alliance Partners	Ongoing	

•The default mechanism for implementation will be Direct Implementation by the Partners. • For funding channelled through direct recipients of Gavi funds, considering the high fiduciary risk in South Sudan, appropriate assurance plan(s) should be put in place based on assessments of all implementing partners before disbursing Gavi funds to those partners. • Gavi funds recipients will share with Gavi their detailed assurance measures adopted for all implementing partners at all levels of implementation based on the risk ratings contained in micro-assessment reports. These will include, but not limited to, the nature and frequency of audits, spot checks, third party monitoring, reporting and other assurance measures. • UNICEF and other direct funds recipients will seek to align and harmonize the selection of Implementing Partners with other major players in the country (for example HPF3, World Bank) program to enhance efficiency and minimize the risk of duplication. The list of IPs implementing Gavi program will be shared with Gavi and MoH on a regular basis. Further, UNICEF and other fund recipients will map out the various partners funding and/or implementing immunization and health systems strengthening activities at states and counties to ensure alignment and minimize duplication.		Partners under HPF and UNICEF are periodically reviewed and shared with MOH. The other Gavi funds recipients do not subcontract.
Gavi may agree with the Alliance partners on additional assurance safeguards necessary and associated incremental costs, to enhance fiduciary assurance for disbursements in South Sudan by the Alliance partners, including but not limited to the need for a programme and financial monitoring agent. Gavi reserves the right to conduct its additional audits of Gavi funded programmes at MoH, including audits conducted by the Gavi Programme Audit team.	Ongoing	The Gavi audit was conducted in May, but the report is yet to be finalized and published.
Training Gavi is requesting the country under MOH leadership to identify synergies and integrate training as possible, including IIP and EVM to maximize the use of limited resources. Including mapping existing training resources from HSS grants, HPF3, UNICEF and WHO among others (and reducing overlaps)	Ongoing	IIP training includes EVM, IPC and data management components. Covid vaccination training integrated into IIP.
Recruitment of an embedded Liaison officer		The liaison officer is recruited and embedded in the EPI office. He is building the capacity of the MOH officers including the EPI manager
Explore working with other partnerships under the HSS grant		Partnership extended to IOM, HPF, CA and others

Gavi led a program audit, and the country received a preliminary report with the audit teams' observations. The country continues to review the report and will respond in due course.
Som

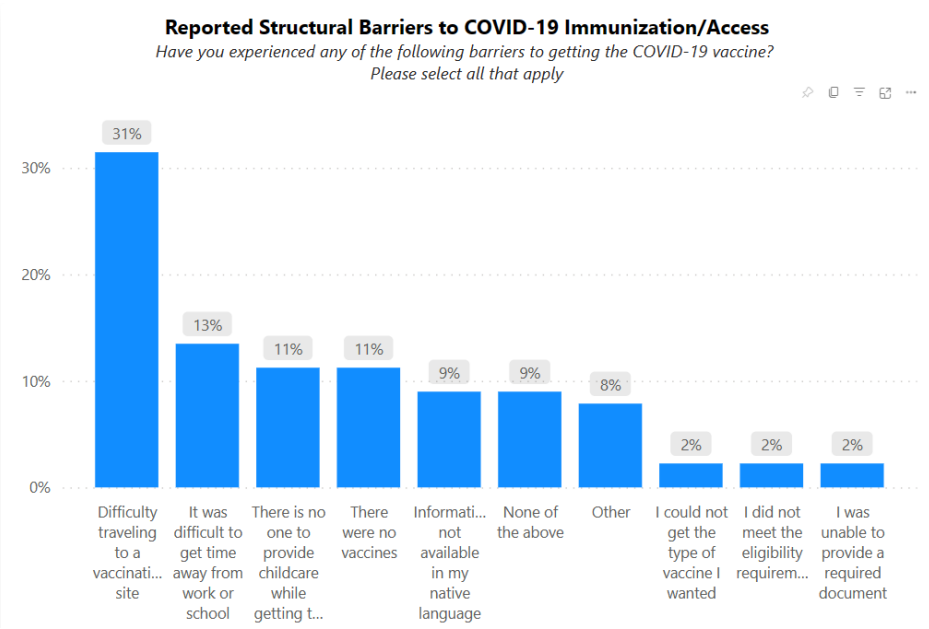
11. Learning Question: Please comment on any other Public financial management-related bottlenecks for implementation and compliance.
a) Resource Adequacy and Allocation
b) Fiscal Planning and Budgeting
c) Budget Execution and Compliance
b) Accounting and Reporting
c) External oversight and assurance

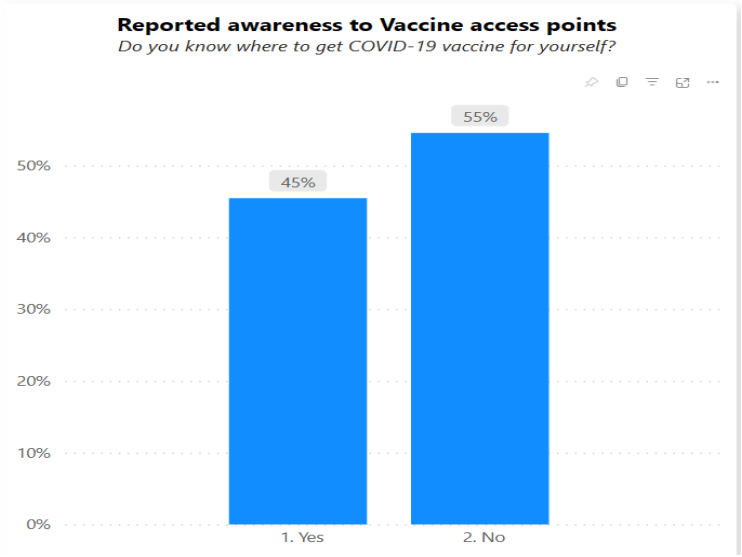
12. Learning Question: Is the country effectively addressing gender related barriers (e.g. faced by caregivers or adolescents in accessing immunisation services and barriers faced by health workers in delivering immunisation services)?

Indicator(s):

- Did (when) the country conduct a gender analysis that identified barriers faced by health workers, caregivers, and adolescents (yes/no)
- Has the country implemented initiatives that remove or reduce gender-related barriers?

The most recent gender barrier analyses were conducted in 2021 and 2022, specifically focusing on C-19 immunisation. The assessment aimed to comprehend the structural and gender disparities that contributed to lower participation rates among females. According to the report, 31% of women identified transportation challenges as the primary structural obstacle while getting to immunisation sites. Conflicting priorities such as employment, school, and childcare were a significant obstacle, as indicated in the graph below (filtered to display only female data). 11% of respondents reported the absence of a vaccine, which can be linked to two primary factors: vaccine stock depletion in August 2021 or insufficient knowledge about immunisation locations (Fig. 2). In 2021, focus group discussions revealed that women were requesting permission from their husbands or male relatives to get the immunisations.





To overcome obstacles faced by women, more than 1,500 social mobilizers are trained and assigned to the boma level to raise community awareness and guide individuals to the closest vaccination facilities. Given South Sudan's extremely patriarchal culture, community leaders were tasked with advocating for financial and emotional support for female relatives. To overcome the language barrier, various BCC materials were created in ten local languages, and forty community radio stations were contracted to broadcast jingles and participatory chat shows. Female political and community leaders who supported vaccinations advocated for them by sharing their testimonies. They took centre stage in sharing their experience with COVID-19 vaccines, addressing rumours around fertility, breastfeeding, and vaccine safety. Progressively, more outreach and mobile services were rendered, therefore reducing the distance that women, especially mothers, had to cover to access services. The campaigns improved the situation even further, as vaccinators reached out to families closer to their homes. Vaccination teams were also highly strategic in their outreach to mothers at food distribution events, nutrition sites, and health institutions where women brought their children

for vaccination. MOH also ensured that additional female vaccinators were hired, increasing trust in the vaccines among other ladies seeking vaccination.
Special populations, such as women in Protection of Civilian (POC) locations, refugee camps, and IDP camps, were addressed through community engagement meetings, gender-specific focus group discussions, and female radio listening groups. Female vaccinators and social mobilizers were chosen from these communities, improving access to health workers, and providing accurate information (via social mobilizers). As more women stepped up for the vaccination, trust in the vaccine grew. Men and women gained confidence in vaccines, leading to women making independent decisions to vaccinate.

Pic 1: Female influencers from South Soudan Organized Forces during a launch

Pic 2: Female Vaccinator in Renk County, Upper Nile state

A gender analysis for routine immunisation is scheduled for the first half of 2024. Following the C-19-focused assessments, specific activities have been put in place to tackle potential obstacles that may also affect the normal EPI programme.

- MOH and partners are promoting the recruitment of more women for the role of EPI vaccinators. A concerted effort is being made to monitor the number of female vaccinators involved and their involvement in all EPI training, including campaign training.
- Community engagement meetings involve men to enhance their involvement in EPI activities. For instance, using HSS and CDS funding, HPF, through its Implementing Partners, organised 198 community meetings. A total of 1791 individuals (545 male and 1246 female) attended these meetings to raise awareness about integrating C-19 and RI services, generate demand for the services, and participate in community mapping for micro plan development.

- Expanded outreach and mobile services to address the transportation difficulties experienced by caregivers by bringing services closer to the community. Social mobilizers' participation in choosing the location and schedule of outreach and mobile services enhances their utilisation.
- Community-led micro plan processes involved active engagement from women leaders and female boma health workers. This allowed caretakers to give feedback on EPI services and suggest ways to improve the link between EPI services and the community.

13. Learning Question: How well is the country implementing its health information systems and data strengthening, monitoring, and learning activities?

- What is the progress of planning and implementing health information systems and data strengthen monitoring, and learning activities? Do these collectively constitute at least 10% of your HSIS/EAF grant budget?
- How will the country address remaining data-related gaps or barriers to immunization programme performance?
- Comment on key results or findings for identified learning priorities based on the country's application. Specifically, what actions have been taken to improve immunization programme performance based on these data? e.g. better understand specific barriers to immunisation, successfully guide implementation, inform course correction for grant activities?

Please share any documentation of learning results if available (e.g. reports, evaluations, assessments, etc).

Continuous improvement of EPI data management is a crucial process of the vaccination program in South Sudan. Accurate and verifiable EPI data is essential for guiding intervention design, assessing plans, and measuring progress towards set targets and the implementation of interventions. Following the IRC's recommendation, the country allocated 10% of the HSS budget towards enhancing the management of data.

The Ministry of Health uses one integrated reporting system through the DHIS2, which is accessible across the country at the county level and in high-volume facilities. Data collection happens at the service delivery point (health facility, outreach post, or mobile site); these data are aggregated at the end of the month and reported through the DHIS2 at the county or health facility if it is capacitated. Routine immunisation data completeness has increased by a single digit to 83% from 82%, while timeliness has improved, though marginally, from 52% in 2022 to 56% in 2023. Impediments to improving reporting completeness and timeliness include logistical challenges in sending monthly reports, particularly among unsupported facilities; low motivation among officers, particularly those who do not receive incentives; inadequate knowledge of the importance of timely report submission; and a few organisations that prioritise using their reporting templates while paying little attention to submitting monthly reports to MOH.

To address the weakness in EPI data management, the country planned to implement activities that, by the end of 2023, were at varied levels of implementation.

1. The data quality team at the national level was reinvigorated and met periodically to monitor EPI performance and the quality of data. Triangulation of vaccination and surveillance data categorized counties at risk of VPD outbreaks.
2. Data recording and reporting tools were produced, although they were inadequate to cover the entire year. Consequently, the absence of adequate tools, specifically child health cards, often compelled healthcare practitioners to resort to improvised solutions, such as using pieces of paper that the carers could not keep track of.

3. Tracking of data tools distribution - To decrease occurrences of incorrect distribution of data tools, the data quality team, created an Excel-based monitoring tool specifically for the distribution of these data tools. During supportive supervision, it has been seen that at certain facilities, vaccinators persist in using obsolete data tools, despite the presence of new and updated tools, resulting in substandard data quality. To discourage healthcare professionals from using outdated data tools, the national team, in collaboration with the subnational data officers, should develop a strategy for collecting outdated tools whenever updated tools are issued.
4. In the fourth quarter of 2023, and preparation for the new vaccine introduction, the tools were revised to include malaria, rota, COVID-19, and PCV vaccines. These tools are awaiting printing in January 2024. The IIP training conducted in Q4 provided an opportunity to train vaccinators on the revised tools.
5. The EPI dashboard, currently at 95 percent completion, is user-friendly. Dashboard features allow users to swiftly evaluate and share dashboard visualizations. The single-page dashboards comprise both interactive and static visuals. Viewers can drill down to individual data views using filters by selecting parameters of interest such as time frame, demographics, vaccination type, location, implementing partner, and dose numbers. Moreover, viewers can take screenshots of both interactive and static dashboards to use in presentations and quickly share with others. However, it still needs to be implemented at the subnational level to promote data utilization. In 2024, it is expected that EPI managers at the state and county levels will regularly use the dashboard and scorecards to give feedback to frontline health workers during quarterly performance review meetings and other coordination platforms at the county and state levels.
6. Cabinets for the proper archiving of data reports were procured and are awaiting distribution in the first quarter of 2024.
7. The standard operating procedures for EPI and surveillance data were reviewed and updated but are yet to be disseminated in the coming year.
8. County and state review meetings, attended by frontline healthcare workers from the Ministry of Health (MOH), partners, and supervisors, served as platforms to appraise the EPI program performance including data quality at the subnational level. These meetings also allowed supervisors to offer feedback and updates to the frontline health workers, allowed counties to exchange ideas with their peers, and facilitated collaboration between the state and county teams. In 2023, the county review meetings were held twice, and the state review meetings were held once, which is less often than the suggested quarterly and biannual frequency for the county and state review meetings, respectively. The meetings were held in all eighty counties, 10 states, and 3 administrative regions. These sessions were attended by stakeholders involved in the Expanded Programme on Immunization (EPI), including a member of parliament from Northern Bahr el Ghazal who participated in the state review meeting.
9. In 2023, all counties and 481 facilities were visited on at least one occasion to supervise services and frontline health workers. Supportive supervision visits offered opportunities to provide on-the-job mentorship on data management to subnational health workers, including vaccinators on data management. The significance of this activity in South Sudan is crucial due to the limited capabilities of HRH and the substantial turnover rate among them.
10. A comprehensive data quality assessment was last conducted in 2019. The planned DQSA and EPI coverage survey did not happen due to competing activities.

Nonetheless, considerable obstacles continue to persist, as evidenced by low reporting rates in some counties and incomplete, inaccurate, and improper data management at all levels.

- The number of operational health facilities offering EPI services often fluctuates, and there is no quick mechanism/process for deactivating the non-functional facilities, which impacts the report's completeness. Plans are underway to “deactivate” non-functional health facilities.

- Some functional facilities that provide EPI services are not on the DHIS, therefore impacting the reporting of all children who are vaccinated.
- There are inconsistent population figures that are not based on a census, and often different agencies use non-official (government) population figures, making it difficult to monitor the performance of the EPI programme.
- Limited skillset for the use of data for decision-making and course correction at the subnational level. There is potential for enhancing the way business is performed at the review meetings in 2024. The use of the EPI dashboard and scorecards to steer the discussions was inconsistent, and contrary to expectations. Involving community representatives, like health facility management committees and Boma health workers, in the review meetings would allow the community to participate in the discussions.
- Low morale among frontline health workers results in high attrition rates, affecting data collection and reporting.
- Reports from unsupported health facilities are often delayed due to insufficient logistical assistance and lack of accountability, as these facilities are run by volunteers.
- Triangulation of performance data with vaccine utilisation data is hampered by a lack of quality vaccine utilisation data especially from the service delivery points.
- Low literacy levels among the vaccinators is a contributor to suboptimal data management at the facility level.

The health transition offers the country an opportunity to continue to address the above challenges through the HSTP, in a collaborative, multi-stakeholder approach including all levels of healthcare provision and leveraging pooled resources for data management in the project.

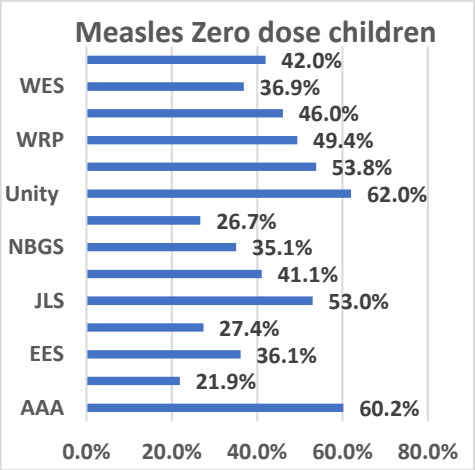
Operational research questions

To study the distribution/numbers and the sociodemographic determinants (including gender) of measles zero dose and penta one zero dose children during the measles campaign

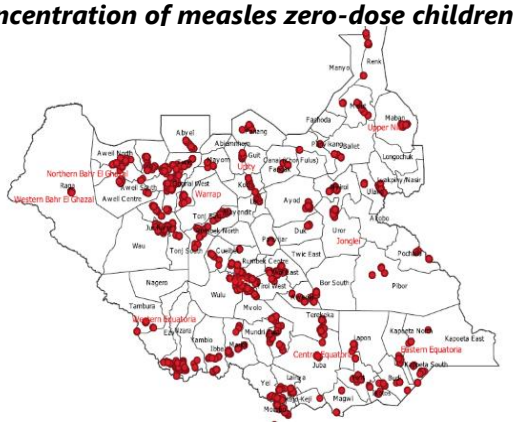
The following findings are from the post-campaign evaluation (PCE) of the measles follow-up campaign.

Zero-dose measles vaccine

A total of 11,733 (86.6%) of the children surveyed were aged 9-59 months old. The survey assessed the vaccination status of the children aged 9-59 months to ascertain their previous history of vaccination with the measles vaccine. The PCE found that 42% (4,929) of the children 9-59 months were vaccinated for the first time with the measles vaccine (zero-dose children) overall. Of the ten states and three administrative areas, Unity State had the highest proportion of zero-dose children, with 516 (62%) of the children vaccinated with the measles vaccine for the first time, followed by AAA, which had 60.2 per cent and Jonglei State with 53.0 per cent. The lowest proportion of zero-dose children was found in the CES and Ruweng Administrative Area.



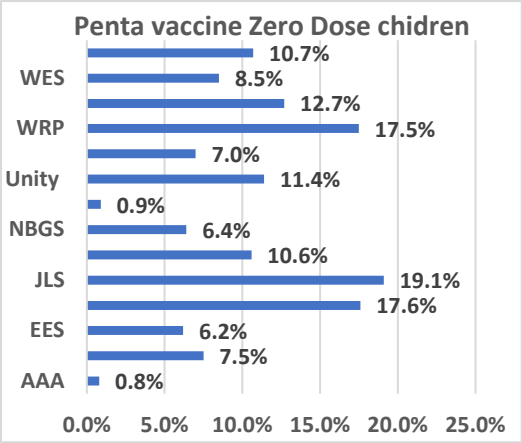
Concentration of measles zero-dose children

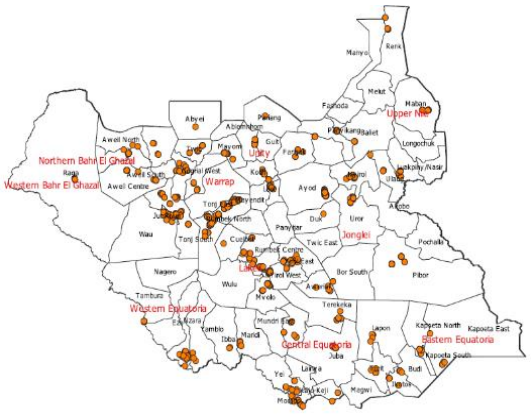


Zero-dose Pentavalent Vaccine

A total of 9,707 (71.7%) of the 13,542 children surveyed during the PCE were aged 6-23 months old. The PCE assessed their routine immunization vaccination records to ascertain their Penta vaccination status. It was found that 10.7% (1,040) were vaccinated for the first time (zero-dose) with the Penta vaccine. The majority of Penta zero-dose children were found in Jonglei State ((JLS)19.1%, Warrap State (WRP) 17.5% and Pibor Administrative Area (PAA) 17.6%. Other areas with a high proportion of Penta zero-dose children include Western Bahr el Ghazal State (WBG), Unity State, and Lakes State (LS).

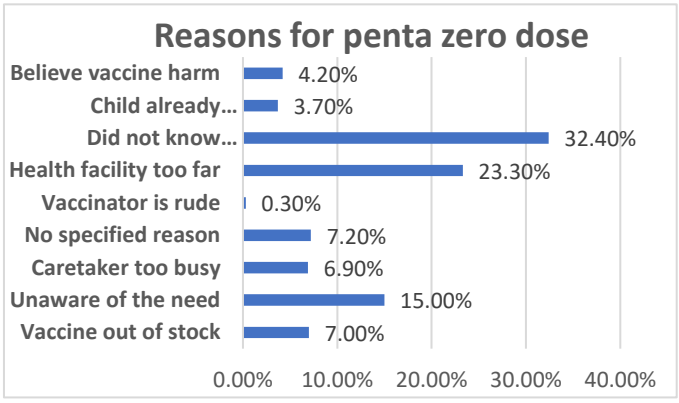
Concentration of Penta zero dose





Reasons for Zero-dose Vaccines

The survey found that the reasons for measles zero-dose vaccines and penta zero-dose vaccines were the same. Most of the respondents (32.4%) of the caretakers of the children stated that they did not know about the vaccination schedule for the vaccine. Other reasons for zero-dose vaccine include the distance of the health facility (23.3%), not being aware of the need to vaccinate (15.0%) and vaccine stock out (7.0%) in which the caretaker took the child, but the vaccine supply was gone. Another important reason identified was the negative attitude of the healthcare workers toward the caretaker in which case the vaccinator was found to be rude while some caregivers believed that the vaccine harms.



Data indicated no gender disparity in vaccination coverage, with zero-dose rates for the penta vaccine closely aligned at 5.4% for females and 5.3% for males.

Country comments:

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

14. Learning Question(s): Is the country implementing PEF TCA and COVAX TA as expected? Please explain how the TCA has helped to support the achievement of the country objectives.

To what extend has skill transfer taken place from partners -> EPI due to the use of TCA funding? Are there ways TCA can be better leveraged to measure and realised skills-transfer to EPI and overall programme sustainability?

To what extent is TCA (Technical Assistance) funding supporting alignment of partners among each other and with EPI. Are partner coordination mechanisms effective and can TCA be leverage better to support this?

Are TA resources for upcoming campaigns/ vaccine introductions/ initiatives believed to be sufficient.

In 2023, UNICEF, WHO, IOM, HPF, and AFH provided specific TCA to the country. The achievements are outlined in the table below.

Position	Deliverable	Status of implementation
WHO		
Technical Officer Immunization/Team Lead (91%) International/P4	Governance, Policy, Strategic Planning, and Programme Management 1. Management, Capacity, and Strategic direction - Support the development of national immunization policies, SOPs, guidelines, and work plans. 2. Ensure the functionality of decision-making bodies at the national level to facilitate the implementation of Immunization activities. 3. Coordinates the WHO immunization team and gets support from regional and HQ levels to inform sound strategic and technical direction. 4, Strengthen the Capacity of the National EPI programme to manage and oversee the programme. 5. Support planned vaccine campaigns and ensure evaluation. 6. Support improved coverage of traditional vaccines via innovative strategies. 7. Support the introduction of the new and underutilized vaccine into the immunization schedule & provide strategic guidance for VPDs activities and ensure their implementation. 8. Advocate for co-financing by the government and other partners.	Support to the National Immunization Strategy development, awaiting endorsement. SSITAG is functional with three meetings held and minutes available. Worked with WHO 3TC for the current Sudan crisis, NIS, and coverage survey. Provide technical inputs for EPI activities as required. Supported national-wide Measles campaign(finalized) and ongoing reactive campaigns. VPDs activities strengthened with MORSP plans being implemented. Resource mobilization is done with funds other than those from GAVI mobilized for EPI activities. Supported the MOH to be operational as requested
Data Manager (HIM) (67%) International/P3	1. Support the EPI M&E team to routinely update the roll of facilities offering immunization services, designing, and updating tools. 2.Develop an EPI dashboard at sub-national levels to facilitate the correct interpretation and use of EPI data. The dashboard will form part of the accountability framework for the EPI program and feed into the AF for the directorate of primary health care. 3.Conduct data desk review or triangulation analysis performed (coverage, surveillance, operational, others) to support population estimates and planning of services.	Feedback on status of RI provided and updated on EPI dashboard. EPI dashboard finalized and been utilize. Accountability yet to be fully mainstreamed on dashboard. Currently supporting the EPI coverage survey Working on the new data tools for EPI. Score cards yet to be developed. Data Quality Assessment and DQIP yet to be done

	4.Assist the EPI program to develop EPI score cards to be discussed in the quarterly county review meetings and monthly facility-community (BHI) engagement meetings. 5. Continuously assess training needs and support the ministry's capacity-building efforts in data management. 6.Support Data Quality Assessments, draft the Data Quality Improvement plans, and monitor its implementation	
NPO Surveillance Officer (60%)	1. Monitor and guide VPD surveillance activities, using international and national indicators to support evidence-based decision-making for routine immunization. 2.Track zero-dose children, missed communities, etc. through case-based surveillance data and provide regular feedback to guide the vaccination component of the EPI programme. 3. Support sentinel surveillance for Rotavirus and other diseases as the Ministry of Health planned. 4. Work with other partners to ensure the early detection and reporting of vaccine-preventable disease outbreaks to allow the immunization team to respond timely. 5. Ensure capacities for VPD surveillance by supporting capacity building and technical support. Lead the technical end of the AEFI surveillance system and served as the secretariat for the National AEFI committee, supporting the timely investigation of all AEFI cases.	Currently tracking VPDs (Measles and Rota) data and providing update with the EPR team with plans for weekly updates. Identified and line listing zero and missed communities through different surveillance data reporting systems (EWARNS, IDSR and Case-based) Sentinel site for Rota ongoing (2) Working with Int consultant to strengthen AEFI with plans for cascaded training in the fourth quarter
NPO Routine Immunization Officer (60%)	1. Support the monitoring and evaluation of national immunization programme (NIP) strategies. 2. Support the Ministry of Health or other partners in the country conducting quality vaccination campaigns three. 3. Support the EPI Manager in conducting training and offer feedback on mechanisms to improve EPI training. 4.Monitor implementation of recommendations. Conduct field visits to monitor immunization practices and provide improvement plan feedback.	Supported various RI activities that included providing support to EPI TWG, and the co-secretariat of SSITAG. Conducted field visits (4) for RI monitoring and training. Working with partners on IIP
UNICEF		

Immunization Manager (50%)	• Technical lead in the immunization service delivery, Strengthening leadership, programme management and coordination. • Grants management and oversight for all EPI activities implementation. • Donor reporting and proposal development • Coordinated all EPI activities at both National and State levels leading to worthy funds utilization. • Engagement of MoH, IPs, RO, HQ, and donors	• Grants management and oversight for all EPI activities implementation. • Donor reporting and proposal development • Coordinated all EPI activities at both National and State levels leading to worthy funds utilization. • Engagement of MoH, IPs, RO, HQ, and donors
Vaccine and Cold Chain Specialist (92%)	Development of iSC strategy, EVMA planning & IP implementation, strengthening NLWG, Vaccine forecasting. Coordinating the immunization supply chain activities: • Two NLWG meetings were held. • Vaccine forecast for 2024 submitted in time. • EVMA preparation on ongoing • Oversight of the solarization project which 70 HFs have benefited.	Coordinating the immunization supply chain activities: • Two NLWG meetings • Vaccine forecast for 2024 submitted in time. • EVMA preparation on ongoing • Oversight of the solarization project which 70 HFs have benefited.
Vaccine and Cold Chain Officer (60%)	Roll out of eSMT at NVS & ten states, flight booking, review vaccine & injection distribution plans, EVM training.	eSMT training conducted and implementation are ongoing. Increase in vaccine stock visibility. Quarterly vaccine requisition reviewed, and distribution conducted for RI vaccines. Reduced stock-outs at National and State Over two hundred flight bookings and deliveries for Covid-19 and measles SIA completed from Jan- sept 2023.

Cold Chain officer 60%)	Cold chain installation, repair and maintenance activities, update CC inventory, forecast for spares and coordinate cold chain maintenance.	Within 2023, 154 PCs of CCE have been installed, maintenance conducted, and spare parts procured. Cold Chain inventory was updated which led to the mapping. of CCE. Supported the revision of the CCEOP 5.0, African CDC operational deployment plans. Coordinated repairs of faulty equipment
Social and Behavior Change Specialist (75%)	Design, management, monitoring, and evaluation of evidence-based, inclusive, and innovative SBC strategies.	Supports integration of community networks into BHI including working with a Consulting firm to develop strategy and completion of training tools. Working with the institution (New Angle) to design and conduct a BeSD survey on ZDC and HTR communities. Supported capacity development of MoH-EPI Comm Officers including equipped with computers and training on demand generation skills for Immunization.
Social and Behavior Change Officer (92%)	Mapping of different community mobilizers; nutrition volunteers, hygiene promoters, and Boma health workers for harmonization. Revise the state communication strategies.	Support the research firm to conduct HCD to establish low RI uptake with a focus on ZDC, drop-outs and hard-to-reach communities five states namely, Jonglei, Upper Nile, Unity, Northern Barh el Ghazal and Western Equatoria Partnership with media organizations (Eye Media and several local radio stations). Supported integrated Measles Follow-up campaign. Providing technical to MoH-department of Health Education and running RCCE TWG and participation in EPI TWG Mapping of community volunteers in progress

Indigo research consultant (100%)	Support indigo device deployment and research on it use.	Supported finalization of research protocol Developed research questionnaire. To support training, deployment, and data collection and analysis
HPF -3 Gavi funded positions		
	Tickler File scale up Strategy developed and disseminated.	The Tickler File scale up Strategy was shared with MOH (Ministry of Health) and Gavi on time. The training on Tickler file was included in the immunisation in practice training and during supportive supervision, so far, all the 46 HPF (Health Pooled Fund) supported countries have received the Tickler files and training has also been finalised.
	Strategy and SOPs for seasonal intensification of routine immunization activities in flood-prone and underperforming counties using data from DHIS-2 developed and disseminated (PIRI).	The strategy and the SOPs have been finalized and shared with the MOH for review and approval.
	Lessons Learnt report on the Toyota vaccine vehicle pilot.	Pilot was supported by Gavi and MOH Data was collected and presentation done to MOH. Lessons learnt report on Toyota vaccine vehicle was shared on time with MOH and Gavi.
	Mobile outreach strategy and SOPs (including performance-based incentive guideline) developed and disseminated.	Mobile Strategy and SOPs including performance-based incentive guideline has been developed shared with the MOH for approval.
	BHI Immunization tools revised and disseminated.	The BHI immunization tools are in the process of being revised by the BHI Technical working group.
	6-month report on service delivery strengthening, last-mile delivery strengthening, and new strategies implemented to improve immunization service delivery and reach zero dose children.	Report compiled and submitted to Gavi.
	Update report on tailored integration approaches to reach the at-risk populations developed and disseminated. Plan for integration implementation.	Report compiled and submitted to Gavi.
	Capacity needs assessment conducted at the subnational level including key staff involved in the immunization programme. Report of findings documented and disseminated across the key stakeholders.	A capacity needs assessment was conducted and a report on the findings was compiled and submitted to MOH and Gavi. A presentation on the findings was done to the EPI (Expanded Programme on Immunisation) Technical working group.
	Based on findings from the capacity needs assessment, develop and document a capacity development plan, TOT modules and training implementation plan.	Based on the findings from the capacity needs assessment, the capacity development plan, TOT modules and training implementation plan were done and discussed with the MOH.

		TOT training was done in the 7 HPF-supported States, and facilitators from the MOH were included in the planning and training in this process.
	Report on capacity building trainings documented and disseminated.	This is in progress since the training was finalized 22nd of February 2024. The training report will be shared with the MOH and Gavi by the end of February 2024.
AFH – Subnational coordination		
	Coordination of EPI activities improved focusing on building the capacity of MOH to coordinate with partners – Upper Nile, Unity, Jonglei states and Pibor, Ruweng administrative areas	= Helped the state and counties coordinate the microplanning process - Supported the state and counties in reporting vaccine stock monthly. - Helped the county and state EPI focal points use the data for decision-making. - Participated in the state and county review meetings

Skills transfer to MOH is happening albeit at a slow pace. Examples of TCA leading to demonstratable skills transfer to local MOH staff include,

1. Vaccine arrival reporting, vaccine distribution planning, and annual vaccine forecasting are skills that the vaccine and cold chain consultant was able to impact the iSC manager at the national vaccine store.
2. Cold chain consultant was able to work alongside the MOH technicians and impacted skills on maintenance/repair of cold rooms and other CCE. In partnership with a local training institution, cold chain assistants were trained for each county.
3. An international consultant worked alongside a local consultant (embedded in MOH) to write the successful malaria and Rota-PCV applications.
4. An MOH officer worked alongside an international consultant to plan and execute the national measles campaign.

The following TCA are pending.

1. Conducting the EVMA.
2. Conducting the coverage survey.
3. Conducting the data quality assessment and development of improvement plans.
4. Scaling up the use of the EPI dashboard and scorecards.
5. Designing a systematic means for updating the cold chain inventory.
6. Mapping of community volunteers for community mobilization.
7. Gender barriers analyses.

Indicator(s): Country analysis on partner performance as per work plans

Country comments:

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

Summary of Issues discussed:

On February 5, 2024, the country appointed a 15-person, multi-agency team from the immunisation TWG to prepare for the Joint Appraisal. This team was divided into smaller thematic teams to pre-populate the various sections of the Joint Appraisal template. The Joint Appraisal was held in Juba, South Sudan, from March 4th to 8th, 2024. Participants included representatives from the Ministry of Health, in-country partners, and technical partners from outside the country. Participants included MOH, WHO, UNICEF, HPF, Africa CDC, IOM, JSI, AFH, the core group of partners, SCI, USAID, BMGF, and GAVI.

The discussion that transpired during the JA is summarised below.

Service delivery

- Despite extremely high vaccination coverage, it is well known that a significant number of children remain unvaccinated. Which denominator to utilise for monitoring EPI services: PES 2021 or the population projections from the 2008 census? Both populations have very high coverage, yet it is known that many children are not vaccinated. Using an average of the different populations is a viable solution, as was done for the C-19 vaccination. The country should also consider the microplanning population, which is generated from the bottom-up. In most cases, populations based on SIA microplanning are inflated. Unfortunately, not all facilities conduct microplanning for routine immunisation and therefore the population estimates cannot be used for monitoring coverage.
- IPV coverage, particularly the second dose, remains very low. There is a need for a concerted effort to address the challenges vaccinators may be facing.
- Measles lags other vaccines in uptake. There is a need to understand the challenges to be addressed, as the low coverage is leading to an accumulation of susceptible children and, therefore, measles outbreaks.
- Tracking of implementation of EPI service by delivery strategies and last-mile delivery of vaccines are weak: It is not clear what was implemented against what was planned. A significant emphasis was placed on the accountability of outreach and mobile services implementation and the last mile delivery. It was recommended that the country utilise the available GIS-enabled phones and tablets procured for C-19 data management and leverage the experience of using ODK for supportive supervision to keep track of the implementation of the outreach and mobile services. This will foster accountability.
- The dry season vaccination should be conducted at least three times to ensure that children receive the three doses of Penta. Even better, the country could use county-based vaccinators to continue providing EPI services to the areas only reached with the dry season vaccination so that children can get the measles vaccine too.
- The malaria vaccine introduction is scheduled for July 2024. The country should initiate preparations in advance of the introduction. Gavi will support TA to facilitate the effective introduction of the vaccine.
- The country is planning a dual introduction of Rota and PCV vaccines in 2025. The country should initiate preparations in the fourth quarter of 2024.
- In spite of the South Sudan policy of vaccinating children up to ‘3 months, most facilities do not provide immunization services beyond 11 months. Training and supportive supervision should place emphasis on this to reduce the zero dose children and mitigate VPD outbreaks.
- IIP trainings: The MOH should maintain a database of the vaccinators and other HRH trained by county, sex, and frequency of the trainings.

- Integration of EPI with other child and maternal services is still weak. The rollout of the RED guideline and continued advocacy among the funding agencies for the various interventions is needed to make integration happen. Capacity building of other HRH especially nutrition staff and clinicians on EPI will go a long way in making integration effective.
- Can BHW be used to administer vaccinations? Using the BHWs is a potential solution to the high attrition of vaccinators and is likely to reduce missed opportunities for vaccination. This is a policy issue that has not been discussed but would need the input of the MOH leadership and the professional bodies. However, the high attrition among vaccinators is also seen among the BHWs. Besides, the BHW are already overstretched with responsibilities, and adding role of vaccination may not produce the desired results.
- The effect of population migration on the coverage and calculation of zero-dose children. IOM is tracking migration, but this information is not used in planning. To what extent did the Sudan crisis, for instance, affect the number of children who were vaccinated by counties and overall, for the country?

Leadership Management and Coordination

- In what ways is the country coordinating the various partners to minimize duplication? The country has mapped all partners providing EPI services, with particular emphasis on those funded by Gavi, USAID, and BGMF, including the ZIP project, and this information can be accessed on the EPI dashboard. This has minimized duplication.
- What purpose will NIS serve in HSTP? This remains an open question. However, the country ought to finalise and obtain ICC endorsement of the document. EPI stakeholders should continue to engage with HSTP to better understand how the activities in the NIS will be implemented in the HSTP work plan.
- Regarding vaccine cofinancing, the country has been granted waivers/exemptions by Gavi since 2016. In 2022, partial payments were made by the country. An allocation of approximately $10 million has been set aside for purpose of financing vaccines and global fund related products. There is, however, a need for the EPI manager and the DG PHC to follow up on these payments for 2023 and subsequent years.
- The DFC refund in the amount of $540K is overdue, notwithstanding the government's persistent commitment to settling the matter. Gavi to decide on this matter.
- Nine of the 11 vehicles can be accounted for. The country is proposing to Gavi that the vehicles be handed over to MOH fully.

Data Management

- The cleaning of DHIS to remove duplicate facilities that are contributing to the suboptimal completeness of reporting is long overdue. This has not happened due to administrative challenges, but the concerned department has given an undertaking to address this challenge in the 2024.
- The stockout of data tools and the uncoordinated distribution of the tools are compromising data quality. The country will use funds from UNICEF to procure adequate tools and liaise with county M&E officers as well as the implementing partners to ensure that tools are distributed to all facilities in a coordinated fashion.
  It is critical that vaccinators receive proper training on updated tools during the IIP and new vaccine's introduction, and it is also necessary to withdraw the outdated tools in order to prevent their continued use.
- DQSA has not been conducted since 2017. The country should ensure that the DQIP developed by the CDC in 2018 is implemented, as the findings are still relevant. The SOPs should be updated and disseminated during the IIP training and new vaccines introduction training.

- EPI coverage survey vs. MIC? WHO ought to provide guidance regarding this issue. Digital microplanning: UNICEF is conducting pilot program for digital microplanning in four states. Given the challenges of a reliable population figure for microplanning and the migratory nature of the population in South Sudan, this could be a viable solution.
- Gavi and country to adjust the targets in the MEL plan to reflect the revised WUENIC.

Immunization supply chain

- The discrepancy between vaccine forecasts and actual allocations by Gavi is contributing to vaccine stockouts. The country is proposing to Gavi that official population figures be utilised when allocating vaccines. This issue is as contentious as the population figures.
- EVMA is overdue and should be conducted, followed by an improvement plan to ensure vaccine management is effective at all levels.
- The current cold chain inventory is based on a desk review and therefore might not be very accurate. There is a need to conduct a comprehensive assessment to inform the expansion, replacement, and maintenance of the cold chain in the country.
- 88% of CCEOP has been procured against what was planned due to price fluctuations in the market. WB, Can Give and other donors supporting cold chain expansion and solarization of health facilities and vaccine stores.
- Current capacity is adequate for introduction of PCV and Rota, and malaria vaccines. However, with the planned introduction of measles second dose, gaps will be noted at all levels.
- Present C-19 vaccines are set to expire in May 2024, and the Janssen vaccine, which is considered the preferable option, will no longer be accessible for procurement in 2024. The country is conducting an evaluation of the two C-19 vaccines that the UNICEF supply division predicted would be available after May 2024. A committee has been formed to seek approval from SSITAG and DFCA prior to the country's acceptance of the vaccines.

Social Behavior Communication

- Gender barrier analysis in relation to EPI has never been conducted in South Sudan. A consultant hired by MOH through WHO is currently conducting the assessment and will thereafter assist the country in developing appropriate interventions to address the gender barriers.
- EAF for SBC and expansion of the Boma health initiatives have not yet been released by Gavi, and this has caused a delay in the implementation of the full package of services for reaching zero-dose children.
- SBC-related indicators are deficient in the DHIS. The SBC team will liaise with the relevant department to explore the inclusion of indices related to zero-dose children at the community level. For example, the number of zero-dose children referred by community mobilizers.
- The establishment of a monitoring mechanism to verify the vaccination status of defaulters identified by BHWs is an area in which World Vision excels and from which other partners may be able to learn.
- Continuous procurement is required to address a megaphone scarcity caused by attrition. Gavi ought to reassess the ban on the acquisition of the items once the country provides an inventory of said items.

SIA

- What is the quality of outbreak reactive vaccination and the national measles campaign? How can the quality be improved? It was suggested that a proper, comprehensive outbreak investigation, including a root cause analysis, be conducted to understand the outbreaks as a means to improve the quality and impact of the responses. Furthermore, the country intends to develop an application for a follow-up measles campaign in 2025, introduce a second dose of

the measles vaccine in the last quarter of 2025, and switch from a 10-dose measles vaccine vial to a 5-dose measles vaccine vial. Partners who are supporting outbreak reactive campaigns must adhere to the WHO guidelines and use an online reporting system for real-time data analysis and action.

The program plans to address the bottlenecks and challenges identified as per the five thematic areas: service delivery, Data management, Supply Chain, SIA, and Demand generation. The program has developed an annual workplan for 2024 outlining specific activities under each thematic area.

Draft annual operational plan and NIS are attached for reference.

Activity	Timelines			
	Year 2			
	Q1	Q2	Q3	Q4
OBJECTIVE 1 Design & build a resilient, agile, and efficient supply chain that can ensure reliable and predictable supply at all levels of the health systems Description				
Activity 1.6 Transport vaccines from national level to eleven state hubs and 24 county stores.				
Activity 1.7 Conduct last mile delivery of vaccines to 1500 facilities offering vaccination services as guided by the iSC strategy and the local prevailing context (e.g. prepositioning of vaccines during flooding and use of QuadBikes)				
Activity 1.8 Continue the phased rollout of automated SMT and viva to improve vaccine visibility and availability in thirteen states/administrative areas and 40 counties; Deployment of stock management module of DHIS2 at the health facility level which will be integrated with the county Web SMT (this would be part of a larger repository around module development)				
EPI office internet and office supplies				
Procurement and maintenance of 8 Electrical Bio-Medical Waste Incinerators, one refrigerated truck and 3 vehicles, communication supplies (battery) and 1 Reefer container				
Review of Infection prevention guidelines (Waste management)				
Conduct study on INDIGO and report preparation.				
Conduct Periodic CCE inventory.				
Installation of solar refrigerator				
Construction of 27 Incinerators in twenty-seven health facilities.				
Review of the existing vLMIS tools and revision in line with iSC strategy on the vaccine inventory control system				

Harmonization and optimization of the vLMIS form to be used at all levels of supply chain				
Transformation of optimized vLMIS forms into digital platform (eSMT and DHIS-2)				
OBJECTIVE 3 Design and implement sustainable strategies that respond to identified barriers (geographical & social) in order to close immunity gaps in zero dose, under-immunized and missed communities				
Conduct monthly targeted and GIS monitored outreach and mobile services to 138 unsupported health facilities in thirty counties with the highest numbers of zero dose children (currently reporting 184,110 zero doses). Covid -19 vaccination will be integrated with these RI services with a focus on increasing uptake among women (71argeted71 low).				
Tailored annual refresher training for 1380 vaccinators and other HRH (including integration of services) based on the HRH training needs assessment				
Conduct consultative meeting to review the IIP modules to include new vaccines and technologies				
Building on the HSS 2 experience, conduct at least one outreach per week to inaccessible areas as guided by facility level micro plans.				
Phased revitalization of use of tickler system for defaulters tracing in eighty counties; prioritizing the 30 counties that contributed to over 80% of defaulting children (reported 61,874 defaulters in 2020)				
Targeted joint integrated monthly supportive supervision to health facilities (prioritizing the poor performing counties/facilities with less than 50% vaccination coverage) using revised ODK tools by MOH and partners				
OBJECTIVE 5 Facilitate implementation and monitoring of integrated service delivery approaches to reach zero dose under-immunized and missed communities				
Pilot integrated outreaches and mobile services with other child survival programs (nutrition, Education, WASH) to reach every child equitably in the six counties annually and scale up to 30 counties by 2026. (3 good performing & three lower performing) in Jonglei, Unity, WBG, NBG, WES & Upper Nile				
OBJECTIVE 2 & 6 Improve quality of immunization services including standards and user service experience to reduce drop-out				

Activity 2.1 Deploy EVMA 2.0 at national and subnational levels and perform periodic EVMA Assessments; Implement EVMAcIP.				
Activity 6.1 Develop comprehensive facility-level micro-plans (including settlement areas of populations affected by flooding) in consultation with the community (using the HCD approach, updated social maps and women leaders in the community will be engaged during the microplan development).				
OBJECTIVE 4 Design and implement sustainable intensification strategies that respond to identified barriers (geographical & social) in order to close immunity gaps in zero dose, under-immunized and missed communities				
Activity 4.1 Conduct and intensify dry season vaccination (PIRI) in the thirty-three counties prone to flooding to reach 117,032 zero-dose children between January – May of each year and as the season changes.				
OBJECTIVE 7 Expansion of social mobilization networks in a harmonized, multi-partner, integrated manner (including SBC and gender-related activities)				
Recruit of additional nine hundred BHWs and 46 supervisors who will target 100 bomas with the highest numbers of zero-dose children. Information will be sex aggregated with interest for more target BHWs.				
Partner with community drama groups, to promote RI targeted in ten counties with the lowest zero dose children to link them with the BHCs in the different bomas				
Identify and build the capacity of powerful influential leaders among IDPs, refugees, nomadic populations, and urban poor populations and connect them to health providers for continuous advocacy and mobilization				
Quarterly feedback/meeting with leaders in twenty counties				
Conduct KABP surveys on COVID-19/RI				
HCD for COVID-19/EPI: Training, Ideation, Co-design, Prototyping and Implementation in five select counties.				
Training for partners including preparation for risk communication.				
Development, review and printing of contextualized IEC materials and messages				

Revise the state communication strategies based on finding from KAP surveys, behavioural studies and community rapid assessments and Strengthen MOH capacity in conducting.				
Immunization Demand generation sub working group meetings at the national and state levels."				
Evidence generation through BeSD surveys and rapid assessments around ZDC and hard-to-reach communities for increasing Immunization coverage.				
OBJECTIVE 8 Ensure timely fit for purpose information is available across all levels of the system, including community level (including program reviews and operational research)				
Activity 8.1 Update DHIS2 including one. Harmonization of DHIS to deactivate non-functional, duplicate, or non-existent facility records to correct the denominator 2. Include in DHIS facility records for unsupported operational MOH facilities three. Complete assignment of (easy) unique identifier code to each facility record in DHIS that can be adopted to harmonize all other health information systems in use in the country four. Align administrative location of facilities and Bomas to improve data quality				
Updating (COVID-19 context) and dissemination of the national data management SOPs during the county review meetings				
Procurement and distribution of data recording and reporting tools (including A3 size registers for outreach and mobile services)				
Distribution of cabinet trunks for safe storage of data collection tools				
Use of the MOH PowerBI license for the EPI and C-19 dashboard				
Conduct quarterly (consistent) and semi-annual performance review meetings at county and state/national levels, respectively. Develop facility-level population estimates based on official NBS population estimates				
Conduct the EPI coverage survey including PCCS for the national measles campaign				
Conduct the biannual data quality assessments and develop a Data Quality Improvement Plan				
Conduct a JAR				
External EPI review and surveillance				
Conduct EPI gender barriers assessment and interventions to address the identified barriers				
OBJECTIVE 10 Strengthen program performance monitoring and management at national and subnational levels				
Strategic management and leadership (Result based management)				

Conduct fortnightly EPI TWGs for the coordination of services				
Conduct quarterly SSITAG meetings				
Conduct quarterly ICC meetings to provide stewardship and coordination of the EPI activities				
Advocate with government leadership and parliamentarians for increased EPI allocation to cover some salary and payments under HSS.				
OBJECTIVE: Motivate human resources to deliver vaccination services **Description**				
Director General PHC				
EPI manager				
Deputy EPI manager				
Data officers				
SIA & surveillance officers				
National cold chain technicians				
State EPI manager				
Cold chain technicians				
iSC vaccine and cold chain management officer				
State EPI officers				
Secretary				
Drivers				
Vaccinators				
Objective: New vaccine introduction				
Introduction of malaria vaccine targeting the high endemicity counties				
Initiate preparations for the introduction of Rota and PCV in 2025				
Develop and submit an application for Measles follow-up campaign, measles second dose introduction and switch from ten dose vial to 5 dose vial for the measles vaccine				
Objective: Accelerated disease control and Outbreak response vaccination				
Conduct targeted VPD outbreak responses				
Participate in the external EPI and surveillance review				
Support the VPD surveillance laboratories				

Conduct periodic risk assessments for VPD Conduct Measles Reactive Campaigns to lab confirmed outbreaks				
Support Point of entry, Transit point immunization in response to the Sudan crisis				
Conduct VPDs (YF, Cholera, Meningitis) Reactive Campaign and PCE				
Finalize the Annual Polio Report				
Implement two rounds of polio campaign				
Develop quarterly AFP risk assessment				
Develop annual Measles risk assessment				
Support functionality of Polio Committees (NCC, NPEC and NTF)				
Conduct ACS for VPDs diseases (AFP, Measles, NNT)				
Conduct Supervisory visits and on job trainings on VPDs				
Maintain the ES sites for Polio Surveillance				
Maintain the AVADAR system for community surveillance				
Maintain the Polio EOC functionality				
Conduct Polio outbreak investigation and response reaching at least 95%				
Conduct measles outbreak investigation and response reaching at least 95%				
Strengthen the existing measles laboratory (provide reagents and kits), QC for the lab Strengthen the Rotavirus surveillance and laboratory (provide reagents and kits), QC for the lab Maintain the case-based data base for AFP, Measles and NNT				
Objective: Improve AEFI case detection, reporting and investigation				
Meet Stakeholders in AEFI Surveillance (DGs, CA Chairperson, National AEFI FP, HEP) Conduct Refresher training for Causality Assessment Team members Conduct Causality Assessment Committee Meetings as required Conduct quarterly National AEFI committee meetings Support Expert committee and National AEFI committee to conduct clinician sensitization across the county. Review guidelines, SOPs, and reporting tools Support final update and validation of guidelines and tools				
Conduct meeting with communications team on risk communication and contribution to AEFI guidelines				

Final update, print and distribute hard copies of AEFI guidelines and SOPs to health facilities				
Distribute AEFI/Reporting tools				
Support Causality Committee, National AEFI committee and State AEFI teams for rumor and case investigation(s) of serious AEFIs				
Support States in AEFI data verification and harmonization				
Support AEFI case investigation, management, and response Support AEFI monitoring and Supervision across the country Conduct quarterly data harmonization and reclassification				
Objective: Develop policy and guidelines for Immunization Programme				
Finalize the updating of EPI Policy				

The following selected activities require fresh financing to be implemented, while others require re-allocation of funds, as shown below.

Activity	Comment
EPI coverage survey	Subject to guidance from WHO, the country needs to mobilise $ 1 million for the implementation of the EPI coverage survey
Comprehensive measles outbreak investigation including a root cause analysis	A concept note to support this activity was shared with Gavi for consideration. The assessment will inform the measles follow-up campaign application and the outbreak reactive campaigns
Scale up of tickler system for defaulter tracking in Jonglei, Upper Nile, and Unity states and Pibor, Abyei and Ruweng administrative areas.	Subject to Gavi and MOH approval, UNICEF could reallocate the funds for procurement of GIS smartphones to scale up this activity in the three states and administrative areas.
Comprehensive cold chain inventory to identify gaps in cold chain availability and facility readiness	UNICEF to share a concept note with budget to Gavi for consideration
TCA for malaria vaccine introduction	Gavi has already indicated the desire to support this activity. The country to identify the TA needs and share with Gavi. The TA should be complementary to existing TA
TCA for Rota and PCV vaccine introduction	Country to identify TA needs and share with Gavi for consideration

TCA needs under the PEF TCA funding lever in the context of the HSTP are yet to be discussed with MOH.

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Recommendation

Thematic area	Follow up action	Timeline	Responsible person/partner
Service delivery			
	The country to incorporate a system of accountability into the overall operation of outreach and mobile services, as well as last-mile delivery. These include the utilization of GIS-enabled devices for vaccination reporting during outreach and mobile services. (Country to use existing investments - one thousand tablets purchased for COVID data reporting, Gavi funded GIS phones through HPF and UNICEF).	April 2024	MOH/UNICEF/WHO/HPF

	To ensure that children are fully immunized, the country to make the essential arrangements for follow-up vaccination in areas where children were vaccinated during the dry season. A minimum of three visits are required to ensure vaccination completion.	April, May, and June 2024	MOH/WHO/UNICEF/HPF/IOM/IRC/CORE GROUP
	The malaria vaccine is expected to be introduced in the country by July of this year. Consequently, the country and partners should initiate preparations for the introduction of the malaria vaccine, and also the planned introduction of PCV and Rota.	July 2024	MOH/WHO/UNICEF
	Training inventory, including the documentation of its impact and the distribution of participants by gender, county, and state	From April 2024	MOH/WHO/UNICEF/AFH/IOM/IRC/Core Group/HPF/Save the Children
	The country to Fasttrack the process of seeking approval for deployment of the new C-19 vaccines (SSITAG, DGCA, ICC)	From May 2024	MOH
	Country to develop effective mechanism for linkage between the chronic disease management (NCDs) with routine C-19 immunization at health facility level	From May 2024	MOH
Data management			
	Design a comprehensive methodology that integrates SIA campaign data, geospatial analysis, and AI-based projections with the 2008 census data to estimate the most accurate denominators for EPI monitoring and planning.	As soon as possible	MOH/WHO
	In light of the variability and lack of consistency in population figures, the	As soon as possible	MOH

	country should employ a triangulation approach to assess county performance, utilizing data on disease burden, vaccine utilization, supplemental immunization coverage, and disease burden.		
	In light of the importance of the EPI coverage survey for SOUTH SUDAN, the country to consult with WHO and MOH leadership at all levels regarding the feasibility of substituting the EPI coverage with the MIC survey.	As soon as possible	MOH/WHO
	The country should conduct the biannual assessment of data quality and utilize the results to formulate strategies for enhancing data quality. The country to strongly consider utilizing the data accuracy rate in the process of converting administrative data to official coverage figures in the JRF	As soon as possible	MOH/WHO/IPs
	Conduct a thorough review of the existing data within DHIS2 to identify inaccuracies and gaps, especially regarding health facilities' information and functionality.	As soon as possible	MOH
	Ensure complete endorsement, printing, and dissemination of all Standard Operating Procedures (SOPs) for data management.	As soon as possible	MOH/WHO
	Implement the Data Improvement Plan formulated in 2017 to enhance data accuracy and reliability in health information systems.	As soon as possible	MOH/WHO
Leadership Management and Coordination			
	The NIS should be finalized and endorsed by the ICC to serve as a reference and advocacy document for the	As soon as possible	MOH/WHO

	implementation of EPI services for the period of the document. The NIS will serve as the reference document for the development of the annual operational plans, efficient resource mobilization, utilization, and monitoring of EPI performance		
	Leverage the HSTP's momentum for negotiations and ring-fence funding for co-financing vaccines with MOH leadership and decision-makers, including the parliamentary health committee. Develop evidence-based strategy by MoH to bolster advocacy efforts for increased domestic resource allocation towards immunization, encompassing traditional vaccine procurement, Gavi co-funding, and operational delivery costs	As soon as possible	MOH
	The country to include the GMR on the EPI dashboard for monitoring of progress	As soon as possible	MOH
Immunization supply chain			
	Gavi to utilize the official government figures for vaccine allocation in order to mitigate the under allocation and stock stress that have been observed in recent years.	As soon as possible	MOH/UNICEF
	The country to implement the EVMA and subsequently develop and implement a comprehensive improvement plan that will be monitored and reported on quarterly basis	May 2024	MOH/UNICEF
Supplemental Immunization Activities			
	Set up/Maintain online reporting system for real-time data entry and analysis, different	As soon as possible	MOH/WHO/UNICEF

	partners including health cluster partners support outbreak response and report using different mechanism.		
Social Behaviour Communication			
	The country to finalize the gender analyses and employ the results to formulate interventions aimed at alleviating gender-related obstacles in order to enhance EPI performance.	From Feb to May 2024	MOH/WHO
	The country should include SBC indicators in the DHIS-2, particularly those pertaining to SBC-related work for Boma health workers, in order to monitor defaulting children who are vaccinated subsequent to referral.		
	In light of the need for additional megaphones and the freeze on procurement of megaphones, the country should update the inventory and submit it to Gavi for review	As soon as possible	MOH/UNICEF
	Prior to introducing the malaria vaccine, a formative assessment should be conducted to determine how the community perceives the vaccine. This will enable the development of effective community mobilization strategies aimed at increasing uptake.	As soon as possible	MOH/WHO/UNICEF
	Gavi to release the remaining EAF funding for the expansion of BHI in the country to support efforts to reach zero dose children in counties with substantial number of zero dose children	As soon as possible	Gavi
Other that requires new funds			
	In case the WHO advises that the country to continue with the conduct of an EPI coverage survey, the country to	As soon as possible	MOH/WHO/UNICEF

	mobilize at least $1M to bridge the gap in funding		
	The country to conduct a detailed outbreak investigation for the multiple outbreaks to inform appropriate responses, improve the quality of VPD surveillance reporting especially the vaccination status of the suspected cases.	As soon as possible	MOH/WHO/UNICEF
	County to consider PCE following vaccination in response to an outbreak.	As soon as possible	MOH/WHO/UNICEF
	The country to conduct a detailed cold chain inventory to identify gaps in cold chain availability and facility readiness	As soon as possible	MOH/UNICEF

Annexes

Annex 1: Cold Chain Inventory

Cold%20Chain%20Inventory.xlsx

Annex 2: National Bureau of Statistics projected population and Population Estimate Survey 2021-2022

South%20Sudan%202021-2023%20PES%

NBS%20projection%20Popn%20and%20T

Annex 3: JA group work

JA%20Group%20work.xlsx

Annex 4: Megaphones Inventory

SSD%20Megaphone batteries%20Inventor

Annex 5: Annual Report

Annual%20report.docx

Annex 6: Biannual Report

Annual%20report.docx

Annex 7: Insights report

South Sudan - Insights Report.pdf

Annex 8: IIP training

IIP%20training_HPF.xlsx

IIP%20training%20Summary%20report%