IMMUNIZATION VACCINE DEVELOPMENT

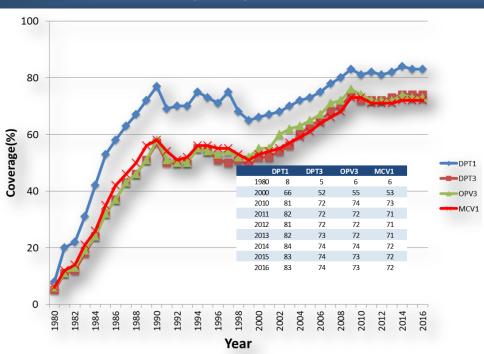
IMMUNIZATION AND POLIO UPDATE

IN THE AFRICAN REGION

July- August 2017 (Vol 5 issue N° 4)

Special issue featuring WHO/UNICEF Estimates of National Immunization Coverage (WUENIC 2016)

Coverage trends of DTP containing vaccines, first dose of Measles Containing Vaccine (MCV1) and 3rd dose of OPV in the AFR



Highlights

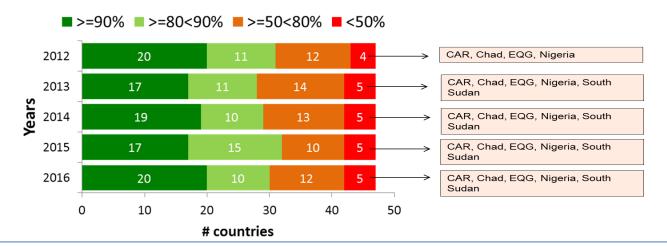
Based on the 2016 WHO/UNICEF Estimates of National Immunization Coverage (WUENIC) released in July 2017, Regional coverage for three doses of Diphtheria-Tetanus-Pertussis containing vaccine (DTP3), Polio (OPV3) and 1st dose of measles containing vaccine (MCV1) stagnated at 74%, 73% and 72% respectively in 2016.

These coverage rates remain well below the expected target of at least 90% according to the Global (GVAP) and Regional (RSPI) action plans, even though 20 countries achieved that goal.

Additionally, coverage with the 1st dose of DTP containing vaccine was also <90% denoting poor access to immunization. The Drop out Rate between this dose and 1st dose of Measles was 13%, far beyond the normal level and stresses the need to implement better mechanisms for defaulter tracing and catch-up vaccination.

Source: WHO and UNICEF estimation of national Immunization coverage 2016 released in July 2017???

Performances of countries for the 3rd dose of DTP containing vaccine in the AFR, 2012-2016

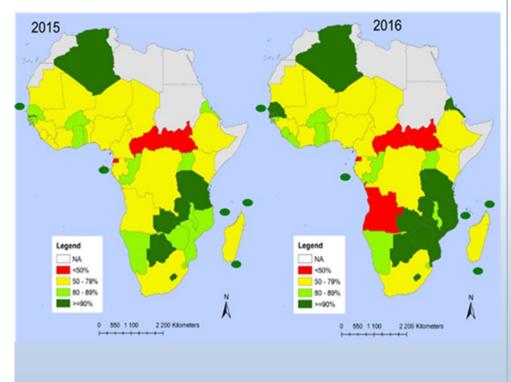


Highlights

Analysis of the 2016 WUENIC data shows that twenty Member States reached the GVAP goal of≥90% in 2016. This number remains almost the same over the past 5 years. A similar situation was observed for Member States that achieved lower levels of coverages. Fourteen out of the twenty countries have sustained the same coverage for 3 consecutive years.

More than half of the countries (27) in the AFR did not meet the GVAP goal. The same five countries (Central Africa Republic, Chad, Equatorial Guinea, Nigeria and South Sudan) recorded < 50% DTP3 coverage from 2013 to 2016.

Coverage of 1st dose of Measles Containing vaccine (MCV1) in countries in AFR, 2015 vs 2016



Highlights

The regional coverage for the 1st dose of Measles Containing Vaccine stagnated at 72% in 2015 and 2016.

A total of 17 countries reached ≥90% coverage in 2016 compared to 13 in 2015. In 13 countries coverage was sustained >90% for the past 2 consecutive years.

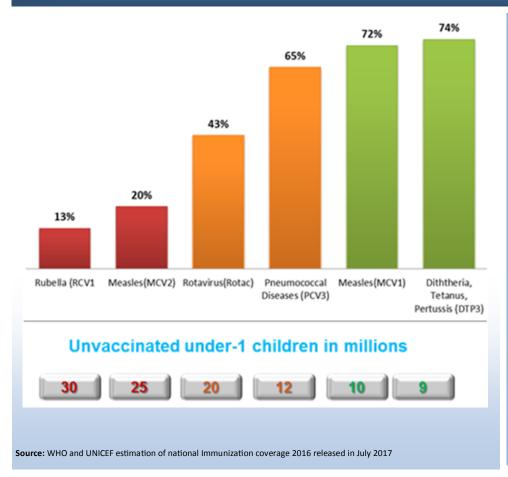
Botswana, Gambia, Rwanda and Seychelles maintained their MCV1 coverage ≥95% in 2016, while Comoros, & Zimbabwe increased their coverage from 90 to 99% and 86 to 95% respectively.

MCV1 coverage in CAR, Equatorial Guinea and South Sudan remained < 50% for both years with the lowest coverage of 30 and 20% in Equatorial Guinea and South Sudan respectively. Angola recorded a decrease in MCV1 coverage from 55% to 49%.

The regional coverage with the second dose of measles vaccine (MCV2) for the 25 countries using the vaccine, was 24% in 2016.

 $\textbf{Source:} \ \textbf{WHO} \ \textbf{and} \ \textbf{UNICEF} \ \textbf{estimation} \ \textbf{of} \ \textbf{national} \ \textbf{Immunization} \ \textbf{coverage} \ \textbf{2016} \ \textbf{released} \ \textbf{in} \ \textbf{July} \ \textbf{2017}$

Regional routine immunization coverage and un/under vaccinated children for selected vaccines



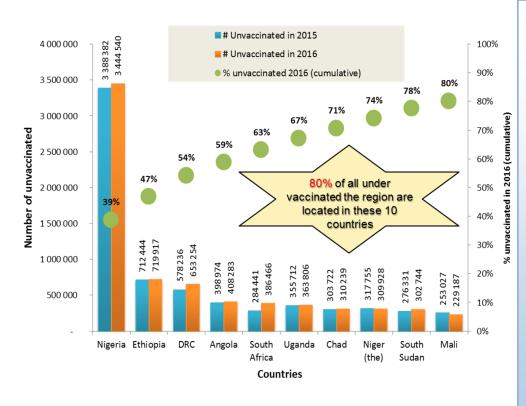
Highlights

Despite ongoing efforts by countries to meet the GVAP coverage target of $\geq 90\%$ at national level for all antigens, this was not achieved.

With regional coverage rates persistently stagnated far below the 90% target for all antigens, there are still too many children missing out on life-saving vaccines in Africa and those who access them are unable to complete because of many health systems issues including insufficient human, logistic and financial resources.

Country-tailored strategies are needed as well as implementation of the road map of the 10 commitments of the Addis Declaration on Immunization (ADI) to ensure that everyone in Africa, no matter who they are or where they live, can access the vaccines they need to survive and thrive.

Top 10 countries with the largest numbers of unvaccinated children in the AFR 2016 vs 2015



Highlights

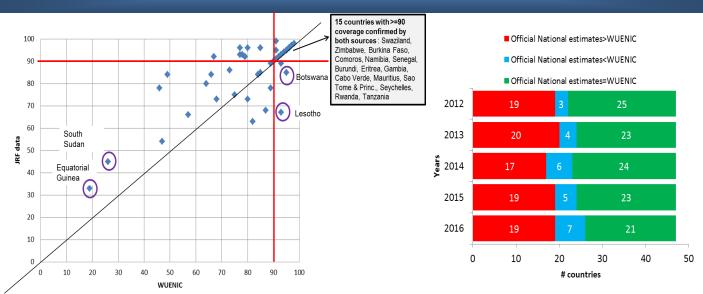
The 2016 WUENIC Data from the 2016 WUENIC shows that an estimated 9 million children were not reached with DTP3 in 2016 compared to 8.9 million in 2015. Around 80 % of these children are located in the 10 countries shown in the graph. An estimated 54% of these children are located in 4 countries only (Nigeria, Ethiopia, DRC and Angola).

The countries that are yet to achieve the GVAP target will require changing/adapting of existing strategies in order to meet the target. Among them, are the 5 countries (Central African Republic, Chad, Equatorial Guinea, Nigeria, and South Sudan) with less than 50% coverage with DTP3. Most of these countries are fragile states and/or affected by emergencies.

These are among the AFR priority countries that are supported to develop and implement national immunization coverage improvement plans with specific strategies to reach the unreached children. These are collaborative efforts with other immunization partners and close monitoring is done through regular teleconferences and field visits.

Source: WHO and UNICEF estimation of national Immunization coverage 2016 released in July 2017

Comparison between official national coverage and 2016 WUENIC for the 3rd dose of DPT containing vaccine in AFR countries



Source: WUENIC 2016 released on July 2017 and JRF official estimates as of July 2017

Highlights

Improvement in data quality remains one of the priorities in the Region. Over the years, almost the same number of countries (around 20) reported official national coverage rates matching with WHO & UNICEF Estimates of immunization coverage (WUENIC) among which, 15 have coverages≥ 90%.

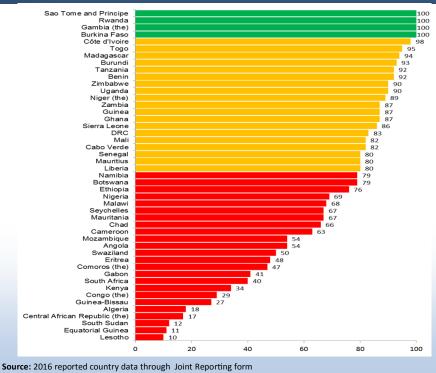
A few countries still have WUENIC coverage higher than national estimates mostly due to underreporting (eg of Botswana, Lesotho,...), while a vast majority of countries have huge discrepancies between WUENIC (lower) and national Estimates (Higher rates): Eg of South Sudan, Equatorial Guinea,.....

All countries have recently been trained to conduct data Quality Review and had developed data quality improvement plans requiring implementation to address the issues identified.

Routine immunization coverage in countries within the African Region in 2016 compared to 2015 (2016 WUENIC)

								Vac	ccines a	and ye	ar									
Country	вс	3	DPT	1	DPT	3	MC	/1	MC	/2	OP	В	IP	٧	YF	-V	PC	v3	ROTA	0
,	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Algeria	99	99	96	99	91	95	94	95	96	99	91	95	94	8			61			
Angola	58	79	79	77	64	64	49	55	26	26	66	70			53	72	58	58	53	49
Benin Botswana	96 98	96 98	86 98	86 98	82 95	82 95	74 97	74 97	74	80	78 96	78 96	62 49	31 8	78	77	75 95	75 95	95	95
Burkina Faso	98	98	95	95	91	91	88	88	50	50	91	91	40	0	49	88	91	91	91	91
Burundi	93	93	97		94	94	93	93	72	65	94	94	60	4			94	94	96	96
Cabo Verde	96	94	96	97	96	93	92	92	95	95	95	93	_	-						
Cameroon CAR	70 74	74 74	92 69	92 69	85 47	84 47	78 49	79 49			83 47	83 47	79 47	31 2	78	77	84 47	85 47	80	73
Chad	56	68	60	60	46	46	58	60			44	52	46	28	44	44	71	47		
Comoros(file)	94	94	96	96	91	91	99	90			92	92	91	91						
Congo (the)	85	85	85	85	80	80	80	80			80	80	37		65	65	80	80	80	80
Côte d'Ivoire DR Congo	95 80	79 74	98 80	99 82	85 79	83 81	77 77	72 79			80 74	81 78	61 57	39 48	70	49	83 77	72 73		
Equatorial Guinea	48	48	40	28	19	16	30	27			20	17	12	40			- 11	73		
ritea	97	97	97	98	95	95	93	85	85	75	95	95					95	95	96	96
thiopia	75	75	86	86	77	77	70	70			75	75					76	76	ස	63
Babon Bambia (the)	94 98	98 98	83 99	87 99	75 95	80 97	64 97	68 97	79	81	74 95	79 96	74 95	71	64 97	68 97	95	97	95	97
Sambia (ine) Shana	94	97	94	97	93	88	89	89	79 75	63	95	88	ဆ	/1	88	88	93	88	94	88
Guinea	72	72	65	63	57	54	54	53			42	42	57	8	54	54				
Guinea-Bissau	94	94	95	95	87	87	81	81			87	87	30		75	75	80	10	61	
(enya	99	87	96	96	89	89	75	75	32	28	88	83	59		1	1	78	75	74	66
esotho	98	98	98	98	93	93	90	90	82	82	90	90	44				93	29		
iberia	97	74	99	77	79	52	80	64			79	52			73	56	79	56	48	
/ladagascar	70	70	84	79	77	69	58	58			75	71	65	30			76	69	78	69
/alavi	86	90	89	93	84	88	81	87	61	8	83	88					83	88	81	84
/ali	92	92	86	82	68	64	75	70			67	66	58		73	68	70	53	60	33
/auritania	85	85	87	87	73	73	70	70			67	67	65	6			73	71	73	56
/auritus	98	98	97	98	96	97	92	99	92	96	96	98	96				10		92	66
/lozantique	95	95	90	90	80	80	91	85	51		80	80	84				80	80	76	17
Vamibia	94	94	98	98	92	92	85	85			92	92	46				81	81	86	87
Niger (the)	77	77	87	85	67	65	74	73	37	16	67	65	62	27	68	72	64	49	61	47
Vigeria	64	64	64	64	49	49	51	51			49	49	49	30	51	51	26	13		
Rwanda	99	99	99	99	98	98	95	96	90	87	99	99					98	98	98	98
Sao Tome and P.	92	97	97	98	96	96	93	93	76	76	96	96	67				96	96	24	
Senegal		95	96	94	93	89	93	80	75	54	92	85	72	81	87	80	93	89	93	83
Seycheles	99	99	98	99	96	97	97	98	99	98	96	97	99	35						
Sierra Leone	92	90	97	95	84	86	83	76	50	60	84	86			80	78	84	86	95	8
South Africa	74	67	78	83	66	75	75	76	70	66	66	75	78	83			69	77	73	7
South Sudan	37	43	35	37	26	31	20	20			31	41	26	3						
Sveziland	97	98	96	96	90	90	89	89	89	89	90	84	45	-			90	90	95	36
090	79	86	93	92	89	88	87	85	03	00	89	88	10		86	85	89	86	90	85
	93	93	89	89	78	78	82	82			82	82	60			ω,	78		30	U.
lganda Tanzania	99	99	99	99	97	98	90	99	74	57	93	96	ω				96	95	œ	01
anzania									71		87								96 m	98
Zantia Zantak	99	97	99	97	91	90	93	90	58	47		90					90	81	90	82
Zimbabwe NFR	95 81	90 80	94 83	94 83	90 74	87 74	95 72	86 72	63 24	18	90 73	88 73	41	19	45	45	90 65	87 59	91 43	39
Legend	UI	00			Objective a					10	70	10	71	10	70	40	•	00	70	00
- Agentu					On track for					87% an	d 89%)									
				N	Not on track	ofor the o	bjective	(Covera	ege belov		-									
				١	/accine not	in countr	yEPIso	hedule/	NA											

Proportion of districts with at least 80% coverage for the 3rd dose of DPT containing vaccine in AFR countries-2016 as per the latest JRF



Highlights

GVAP recommends that by 2020, coverage of target populations should reach at least 90% of national vaccination coverage and at least 80% vaccination coverage in every district or equivalent administrative unit for all vaccines in national immunization programmes.

Distribution of Member States by the percent of districts achieving the target ≥ 80% in all districts coverage for DTP3 in 2016 on the graph shows that:

- ♦ Only 4 countries had all districts meeting the 80% GVAP goal.
 - ♦ 19 had between 80% and 99% of their districts achieving DTP3 coverage of ≥80%,
 - ♦ 12 had between 50% and 79% of their districts achieving DTP3 coverage of ≥80
 - ♦ 12 had <50% of districts achieving coverage of ≥80%

Data for Algeria are biased as the country did not report data per district in the JRF, but has reached the 90% coverage at national level..

Those countries should strengthen activities to equitably reach all children and increase coverage.

Analysis of vaccine stocks in countries in the AFR in 2016

Vaccine	# countries with vaccine stock out at national level	Duration	# countries with vaccine stock out at district level	# countries where district stock out is linked to national stock out	# countries with vaccination session interruption due to stock out of vaccine						
BCG	9	1-5 months	11	7	6						
DTP_HepB_Hib	3	1 month	8	3	3						
MCV	4	1 week to 3 months	6	2	3						

Central African Republic, Chad, Democratic Republic of the Congo, Kenya, Nigeria, Swaziland, Togo, Uganda, Zimbabwe Central African Republic (the), Congo (the), Democratic Republic of the Congo (the), Mali, Mauritius, Nigeria, South Africa, Uganda Central African DTP_HepB_Hib Oganda Central African Republic, Democratic Republic of the Congo, Nigeria, Swaziland, Uganda, Tanzania Procurement delays, Inaccurate forecasts, Funding delays, forecast not fully respected

Highlights

Data in the 2016 Joint Reporting form (JRF) show that 14/47 countries in the region reported at least one episode of stock out of one or more vaccines at national level for a duration of at least one week.

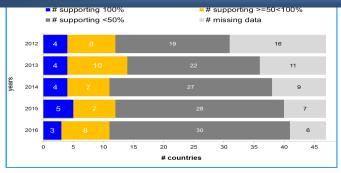
For some countries, there was also shortage at district level.

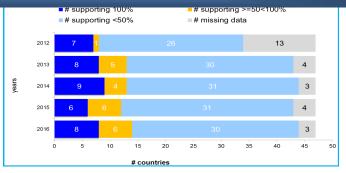
BCG vaccine has been the most affected antigen for stock out (09 countries). Most of the stock outs at district level were due to unavailability of vaccines at national level.

Recurrence of these vaccine shortages at district level in some countries probably may have contributed to the interruption of vaccination sessions and therefore to the non achievements of the set objectives.

In depth analysis of causes of these recurrent shortage need to be conducted and tailored corrective measures implemented to improve vaccine management in those countries.

Funding of immunization programmes by Governments in the AFR in 2016





Total expenditure on routine immunization funded by government

Total expenditure on vaccines Funded by government

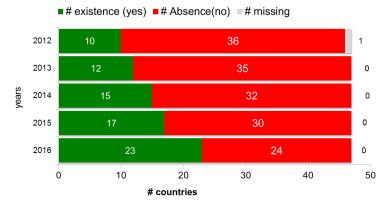
Highlights

Analysis of JRF data show that the number of countries whose immunization programmes are funded by their Governments has increased over the years up to 41 in 2016. However, the number of countries funding 100% of their immunization programmes has decreased from 5 to 3 in 2016. Most countries (30) are funding <50% of their immunization programme among which 10 funding even <20% leaving a lot of unmet needs and challenges to reach all target groups. Six countries did not provide this information in their 2016 JRF.

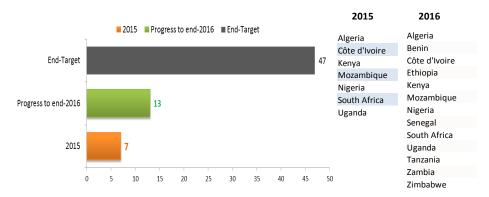
This picture is almost similar with the number of countries for which vaccine expenditure are funded by the Government where only 8 of them support 100%, mainly non GAVI eligible.

Status of National Immunization Technical Advisory Groups (NITAGs) in the African Region, 2012-2016

Existence of NITAG in AFR countries as reported in the latest JRF



Countries with NITAG in compliance with six "basic" indicators in 2016 vs 2015



Highlights

For evidence-based decision making, countries in the AFR have progressively established/ and/or strengthened their NITAGs over the years with a slight acceleration between 2015 and 2016.

In 2016, a total of 23/47 countries had a NITAG compared to 17 in 2015, among which 13 and 7 meet the 6 criteria's of functionality as defined by WHO in 2016 and 2015 respectively.

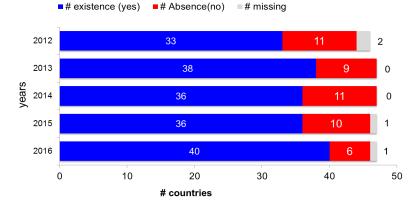
The criteria include:

- ♦ Formal written terms of reference
- ♦ Legislative or administrative basis establishing the committee
- ◆ Core membership with at least 5 main expertise areas represented among members
- ♦ Committee meetings at least once a year
- ◆ Agenda and background materials distributed ahead of meetings
- Signed Declarations of interests by members

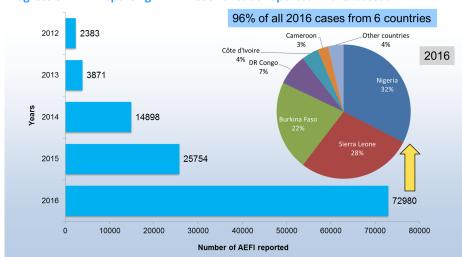
Efforts are ongoing in the remaining countries in the Region to ensure that this target is met as per the Regional Immunization Strategic Plan.

MONITORING OF ADVERSE EFFECTS FOLLOWING IMMUNIZATION (AEFI) IN THE AFRICAN REGION

Existence of AEFI monitoring system in AFR countries as reported in the latest JRF



Progress on AEFI reporting in AFR countries as reported in the latest JRF



Highlights

Efforts to improve AEFI surveillance continued in the Region and 40/47 countries reported having a national system to monitor adverse events following immunization with 37 that actually reported them in 2016.

There has been an increase in the number of countries reporting AEFI (from 75% in 2012 to 86% in 2016).

However, a total of 22 countries reported a minimum of 10 AEFI per 100 000 surviving infants in 2016. Five countries (Burkina Faso, Cameroon, Côte d'Ivoire, DR Congo, Nigeria and Sierra Leone) reported 96% of AEFI cases.

A significant increase in the number of AEFI reported was observed from 25,754 in 2015 to 72,980 in 2016)

Countries have developed and are implementing national plans consistent with the Global Vaccine Safety Initiative Blueprint in collaboration with the National Regulatory Authorities and National Pharmacovigilance centres. More needs to be done to improve reporting.

67th Session of the African Regional committee: AFR Polio Team received the Regional Director's award for outstanding team



67th African Regional Committee Victoria Falls , Zimbabwe: Picture of the award recipients



67th African Regional Committee Victoria Falls , Zimbabwe: Picture of the Regional Director with the polio team

Highlights

Every year, the WHO Regional Office for Africa recognizes staff members and team for their outstanding contribution to the work of the organization. The annual recognition and award ceremony is usually held during the Regional Committee meeting. At the 67 th Session of the Regional committee that took place in Victoria Falls, Zimbabwe, seven awards (three global Director-General's and four Regional Director's awards) were granted to the different staff members and teams among of which The Regional Polio Team received the Regional Director's award for outstanding team.

Moreover, to demonstrate the success stories of GIS and mHealth implementation to support the Polio Eradication Programme activities, a booth was established at the RC67 site. The booth was a hot spot to be visited by many country officials, delegates and partners. Visitors got a chance to use the technology themselves, and simulate different roles of submitting sensitive information via mobiles in the field, and the role of tracking teams and analyzing received data at the national level on central dashboards.

Dr Pascal Mkanda explained to different visitors how this technology was key to establish high level of accountability and have solid Monitoring and Evaluation to ensure timely and quality data collection, analysis and dissemination.

Training of country immunization Focal Persons and Data managers to the use of monitoring tools of the accountability framework in the 3 WHO/AFR sub regions (IST)







Group picture of participants at the training in the 3 subregions: from left to right: IST/ESA, IST/CE, IST/West

Highlights

The 3 workshops were held in Lusaka for IST/ESA from 20 to 21July 2017, for IST/CA in Libreville from 24 to 26 July 2017, and IST/WA from 02 to 04 August 2017 to train countries immunization focal persons and data managers on the use of monitoring tools for the accountability framework (AF) for Immunization and Polio eradication Programmes. Specific objectives were:

- To provide feedback on the progress of implementation the WHO accountability framework .
- To train country and IST and country immunization Officers on use Accountability monitoring/tracking tools of each level (Excel, MTT).
- ♦ To provide an overview on the use of innovations and technologies (and ISS, AVADAR, eSURV) for strengthening accountability for Immunization and Polio eradication Programmes
- To populate roles and responsibilities in the AF monitoring tools of Provincial and country (demonstration and hand on).
- identify & document the remaining issues/challenges towards the implementation of AF in ESA and reach a consensus on the way forward.
- To orient officers on how performance accountability will be monitored and used to improve individual and programme performance

Next steps were the following:

- ♦ Launch of the implementation, 1st week of Sept 2017
- Orientation on accountability framework for the remaining countries in IST/ESA (Mozambique and train Mauritius and Seychelles on AF tools) and IST/CA (Capo Verde, Sao Tome, Burundi and Equatorial) and IST/WA (Senegal, Togo, Capo Verde and Ghana), 1st 2nd week of October 2017
- ♦ 1st feedback of AF, 1st week of October 2017
- ♦ 1st quarterly review meeting in country, January 2018,
- ♦ 1st quarterly review meeting in IST, February 2018

Updates on Polio eradication Initiative in the AFR as of Week 35, 15 September 2017

AFP surveillance indicators, 2017 (as of week 35, 2017)

IST	AFP cases reported	Annualized NP- AFP Rate	% 2 Stools within 14 days					
Central	2763	5.4	90%					
West	15109	13.4	97%					
South-East	3893	3.4	90%					
Regional	21755	7.8	95%					

cVDPV and WPV cases reported in the Region

2017 cVDPV:

- No new cVDPV case was reported this week
- The date of onset of latest case was 20th June 2017 (Dem.Rep.Congo)

2017 WPV:

- No new wild poliovirus case has been reported this week
- ♦ The date of onset of the latest case was 21st August 2016 (Nigeria)

Wild poliovirus cases 2016-2017

2016

WPV cases by country: Week 1-34

2017

WPV cases by country: Week 1-34

COUNTRY	W1	W3	W1+ W3	Total	COUNTRY	W1	W3	W1+ W3	Total
NIGERIA	3 0 0 3		NIGERIA	0	0	0	0		
TOTAL AFR	3	0	0	3	TOTAL AFR	0	0	0	0

Highlights

At Regional level

2017 Data, as of 11th September 2017, no WPV case was reported in the Region. The date of onset of latest case of WPV was 21st August 2016 in Nigeria

At Global level

2017 Data, Ten WPV cases were reported from 2 endemic countries and 0 from non-endemic countries. No WPV case was reported from AFR (WHO/HQ, 12th September 2017).

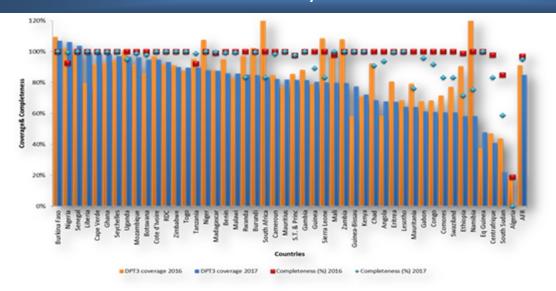
AFP surveillance

2017 Data: A total of 44 out of 47 (94%) countries achieved the recommended operational NP-AFP rate of at least **2**/100,000. (*Data source – WHO/AFRO, 2017, last update 11th September 2017*).

Distribution of cVDPV and aVDPV cases by serotype in AFR, 2015-2017

)15			2016						2017							Total						
Serotype	type 1		1 type 2		type 3	type 3		type 1		type 2		type 3		type 1		type 2		type 3		type 1			type 3	
Classification	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV	aVDPV	cVDPV
CAMEROON																			0	0	0	0	0	0
CHAD			1																0	0	1	0	0	0
DRC			2				1									8			1	0	2	8	0	0
ETHIOPIA			1																0	0	1	0	0	0
GUINEA				7															0	0	0	7	0	0
KENYA																			0	0	0	0	0	0
MADAGASCAR	1	10																	1	10	0	0	0	0
NIGER																			0	0	0	0	0	0
NIGERIA				1			1			1									1	0	0	2	0	0
UGANDA																			0	0	0	0	0	0
SOUTH SUDAN			1																0	0	1	0	0	0
TOTAL	1	10	5	8			2			1						8			3	10	5	17	0	0

Reported district data completeness and coverage of DTP3 containing vaccine per country January– June 2017-2016



Source: Countries administrative reported data.

Highlights

Data reported in this issue cover the period January – June 2017 compared to data for the same period in 2016. Regional data completeness was 95% in 2017 vs 97% for the same period in 2016.No data were reported by Algeria, while 4 countries (Ethiopia, Mauritania, Namibia and South Sudan), reported completeness <80%.

The regional administrative reported coverage for DTP3 and Measles 1st dose containing vaccine for the period were 85 and 84% compared to 91 for both antigens during the same period in 2016. Thirteen countries reported DTP3 coverage ≥90% among which 3 had coverage above 100% (Burkina Faso, Nigeria, Senegal). Four countries reported DTP3 coverages <50% (Algeria, CAR, Equatorial Guinea, South Sudan). The same plus Mauritania and Namibia reported MCV1 coverages <50% except South Sudan.

Drop out rate between 1st dose of DTP1— and Measles containing vaccines was maintained at 7% for the region with rates ≥20% in Chad, Cap Verde (37%), CAR, Equatorial Guinea, Gambia, Guinea Bissau (the highest with 41%), Mauritania. Negative Drop Out rates were also reported by 9 countries.

Data quality improvement, information management systems and experience sharing by countries in the AFR, 2017



Group photo: Data quality improvement training for Non-GAVI eligible Anglophone countries, Brazzaville Kintele 16-18 August 2017



Working session : Data quality improvement training , for Non-GAVI eligible francophone countries , Brazzaville Kintele 12-25 August 2017

Highlights

Since 2016, following global meetings on data quality improvement and immunization monitoring, the African Region has conducted a series of training for National immunization and Health management Information teams in Information systems assessments, data desk reviews, field review and quality improvement planning. The training was conducted for both GAVI and non GAVI eligible countries. After these workshops, 46/47 countries (except South Africa) initiated data quality reviews (DQR) and development of strategic and annual data quality improvement plans.

To improve the quality of data reported through the annual Joint Reporting Form (JRF), WHO AFRO organized 3 peer review workshops in the 3 WHO Sub regions (ISTs). During these workshops time was dedicated to data analysis and data quality improvement, an opportunity to either start or improve their data desk review reports. To date, all 47 countries have their data desk review reports at different stages and development of strategic and annual plan is ongoing. So far 10 countries have been supported to conduct in-country DQR and to develop data quality improvement plans that will be included in cMYP and EPI annual plans.