1st 'Outbreak Response Assessment'

South Sudan

23rd to 27th March 2015

Objectives

- Assess the quality and adequacy of polio outbreak response activities to evaluate if the response is on track to interrupt polio transmission within six months of detection of the first case, as per WHA-established standards

- To provide additional technical recommendations to assist the country meet this goal

Subject areas of assessment

- Speed and appropriateness of immediate outbreak response activities as per WHA Resolution, 2006 (WHA59.1)
- Effectiveness of partner coordination during outbreak response
- Quality of SIAs – planning, delivery, monitoring and communications – this assessment should include adequacy of vaccine supply and appropriateness of the type of vaccine used
- AFP surveillance sensitivity
- Routine Immunization performance
- Adequacy of human resources to carry out effective response activities

The assessment focused on the quality of response in three conflict affected states

Assessment teams and Schedule

- Two teams:
  - Upper Nile State:
    - Hemant Shukla
  - Central Equatoria State:
    - Sam Okiror, Anindya Bose, Rustam Haydarov and Chidiadi Nwogu.

- Schedule:
  - 22nd: Briefing of the assessment team
  - 23rd-25th: Field assessment and desk review
  - 26th: Interaction with key stakeholders at national level
  - 27th: Debriefing

Methodology

- Interviews with key informants i.e. Government officials at national and sub-national levels; Partners including GPEI partners, NGOs, UN Agencies, Fund Managers and other relevant stake-holders

- Field Visits: Direct observation of SIAs and surveillance

- Review of key documents and programme data

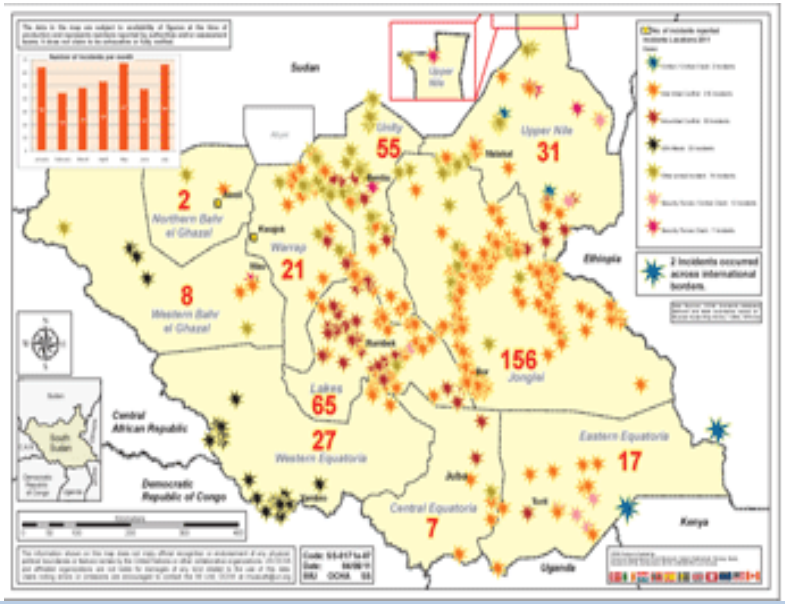
Field visit: Upper Nile

- Meetings:
  - State Minister of Health and DG Health
  - UNICEF and WHO staff
  - Exec Director and CHD of Akoka county
  - GOAL, IMA and IOM representatives

- Areas visited:
  - Akoka county:
    - Akoka village
    - Beinythiang RHC
    - Rom IDP camp

- Debriefing:
  - WHO and UNICEF Chief of field office in Malakal

Context in South Sudan: Conflict affected areas



- Conflict in three states:
  - Jonglei, Upper Nile and Unity
- >2 Million displaced
- Volatile security situation

- Health facilities, Cold chain destroyed & looted and staff displaced:
  - Normal surveillance structure disrupted
  - No NID for around one year
  - EPI services disrupted
- Limited communications, access still remains a major challenge

The assessment team acknowledges the extreme challenging situation in responding to the outbreak and commends the Govt., UNICEF, WHO and all other partners on ground for extraordinary effort.

Did the outbreak response activities meet the outbreak response standards, particularly in terms of speed and appropriateness?

Speed and appropriateness of immediate outbreak response activities…1

Indicators	Date	Follows global standards
Date of notification	27th Oct 14	
Date of activation of outbreak response	28th Oct 14	YES (<72hrs)
Date of first campaign	13th Nov 14	No (>2 Wks). Missed by 3 days
Date of outbreak response plan	18 Nov 14	NO (>2 Wks)

Speed and appropriateness of immediate outbreak response activities…2

Minimum of three large-scale immunization rounds	
Targeting all children of appropriate age in the affected and adjacent geographic areas	Partial
Using appropriate OPV	Yes
Achieving at least 95% immunization coverage	No
Using independent monitoring	No
At least three full immunization rounds in the target areas <u>after</u> the most recent WPV/cVDPV detected case confirmation	Partial

Speed and appropriateness of immediate outbreak response activities…3

Mop up campaign in Bentiu POC

- 13–16 November 2014
- 22,968 children 0 – 15years targeted using tOPV
- 40 teams
- 19,498 children reached
- Post Campaign Evaluation: 97.2%

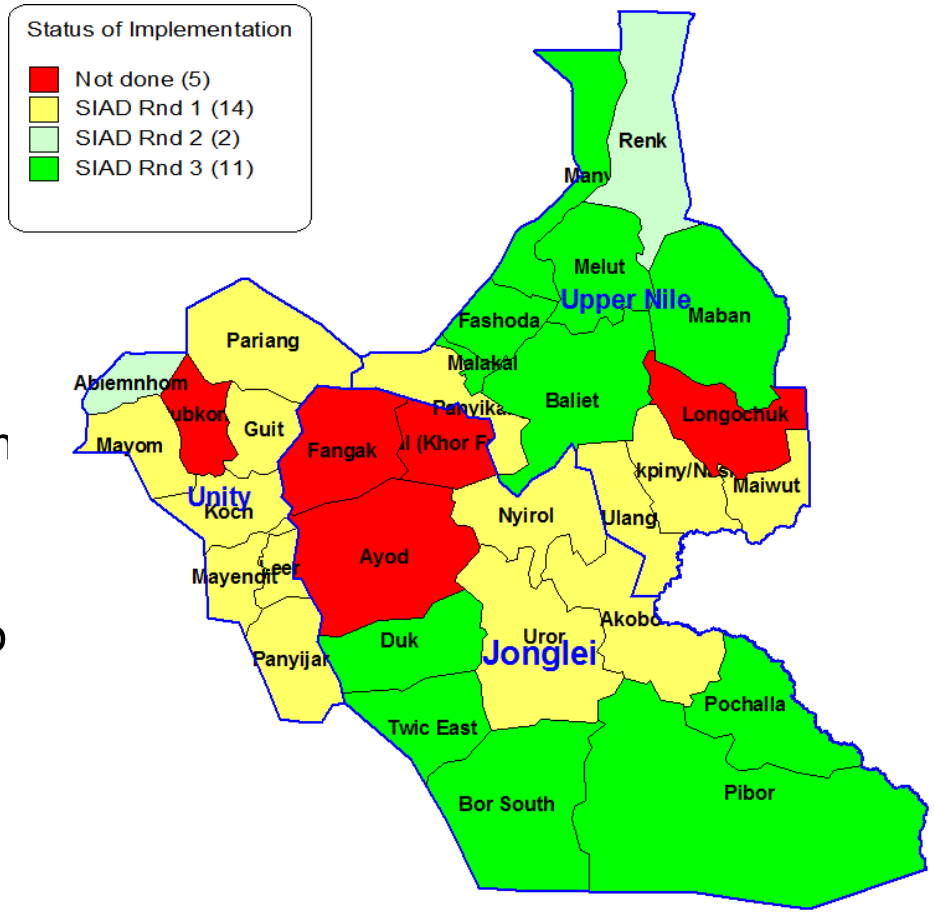
The Response Plan

- **Objectives:**
  - Interrupt circulation of the cVDPV2 within 6 months from September 2014 by rapidly increasing herd immunity of high risk populations
  - Intensify surveillance in 3-conflict affected states of Jonglei, Upper Nile and Unity
- **3 rounds of Short Interval Additional Doses (SIAD):**
  - Targeting 2.5million of 0-15 years age group in three conflict affected states with tOPV
  - Dates: Round 1 (2- 5 Dec); Round 2 (16 – 19 Dec); Round 3 (22 – 25 Jan 15)

The plan of conducting SIADs was not fully implemented primarily due to security and access related challenges

Implementation of response plan

SIAD	# of children reached	# of counties reached
At least 1 dose	**870,461**	**27 (+3PoCs)**
At least 2 doses	**421,276**	**14 (+3PoCs)**
all 3 doses	**301,949**	**11 (+3PoCs)**

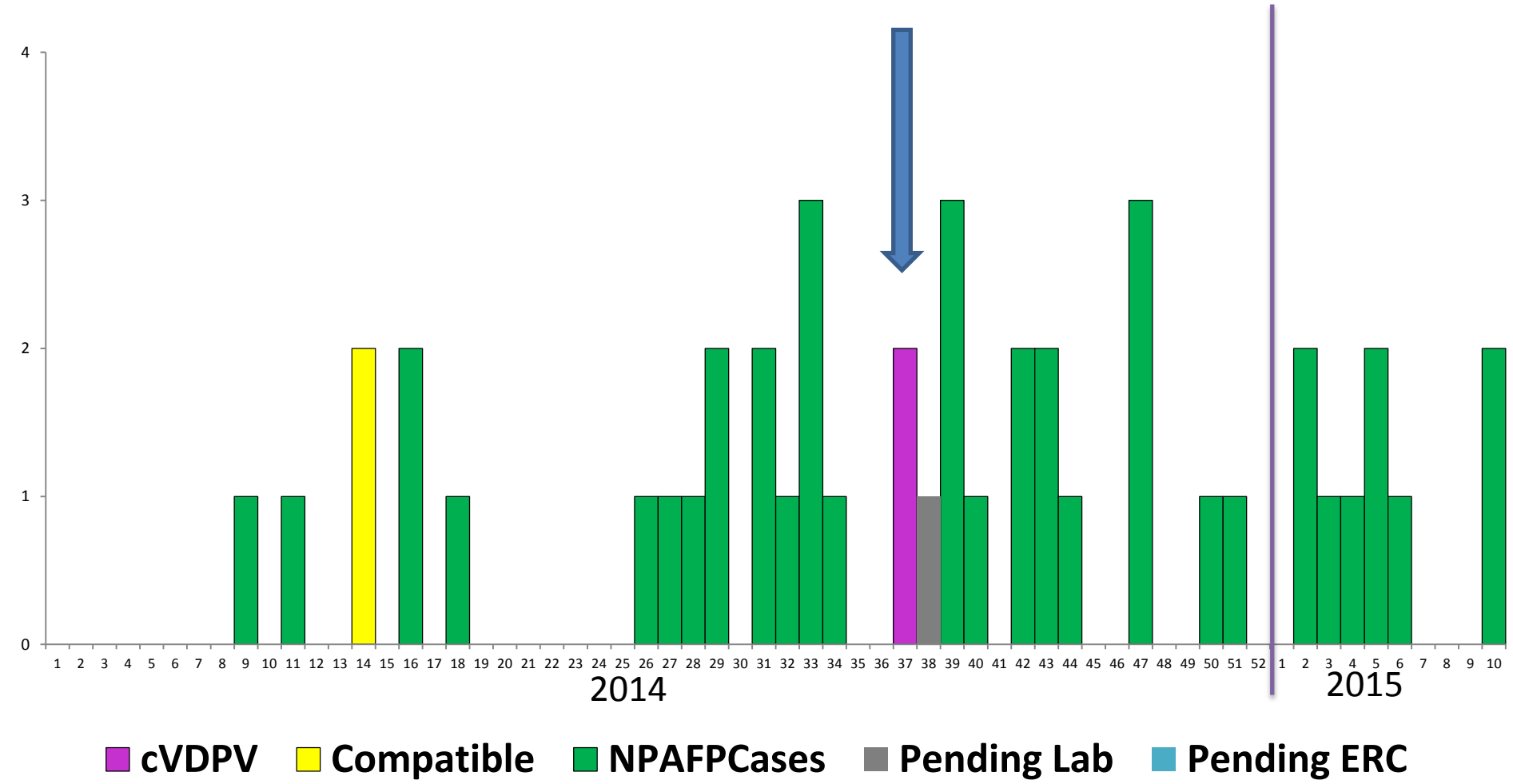


Key Issues on results

- Majority of admin coverage <95%
- High denominator estimates obtained in June 2014; field denominators are not verifiable
- High population movement in and out o havens
- Not all areas in some counties were reached
- Inability to conduct IM

What has been the impact of the response on the outbreak?

Epi Curve: 3 Conflict affected states, 2014-15



How effective has been coordination mechanism for outbreak response?

Effectiveness of partner coordination

- Focal persons identified by each agency
- Weekly SITREP produced and shared with partners
- Polio control room(PCR):
  - Established immediately after outbreak
  - Functionality of PCR suboptimal
- Good coordination between MoH, UNICEF and WHO at all levels
- Good support from partners on ground (IOM, GOAL, CARE, IMA, UNIDO, UNHCR and HPF, etc.)
  - Need to improve coordination further (structured forum?)
  - Fund/ Logistic/ vaccine supply—Joint/ coordinated planning
  - Coordination between partners on ground and national level needs to be improved.

Has SIA quality been sufficient to ensure poliovirus transmission is interrupted within shortest time possible?

Response SIAs

Jonglei State

County	total populaiton	target 0-15 children	Partner	Round 1			Round 2			Round 3		
				Date of Implementation	Adm results		Date of Implementation	Adm results		Date of Implementation	Adm results	
					# reache	%		# reach	%		# reach	%
Bor south	335,363	164,328	SMC	3- 6 Dec ,14	75911	46.2	29 Dec,14- 01 Jan,1	78615	47.8	26 - 29 Jan, 2015	83165	50.6
Bor (PoC)	2,481	1,216	IRC	2 - 5 Dec ,14	1216	100.0	29 Dec,14- 01 Jan,1	1207	99.3	26 - 29 Jan, 2015	1351	111.1
Old Fangak	174,893	85,698	CMA			0.0			0.0			0.0
Wuror	208,281	102,058	CARE	17 - 22 Dec,14	78,544	77.0			0.0			0.0
Ayod	196,224	96,150	Nile Hope			0.0			0.0			0.0
Akobo	218,000	106,820	COSV, MSF-B	11 - 15 Feb, 15	41,521	38.9			0.0			0.0
Pibor	160,412	60,128	IMA	6- 9 Dec ,14	61012	101.5	26-29 Dec,14	16035	26.7	26 - 29 Jan, 2015	16035	26.7
Khorfulus	35,414	17,353	IMA			0.0			0.0			0.0
Nyirol	202,000	98,980	MSF-B, CMA	15		0.0			0.0			0.0
Pochala	51,284	25,129	IMC	6- 9 Dec,14	20609	82.0	26 - 29 Dec,14	29830	118.7	26 - 29 Jan, 2015	29792	118.6
Twic East	81,019	39,699	CARE	6- 9Dec,14	9759	24.6	30 Dec,14- 02 Jan,1	13,648	34.4	26 - 29 Jan, 2015	13,851	34.9
Duk	64,596	31,652	SMC	6- 9Dec ,14	3457	10.9	30 Dec,14- 02 Jan,1	6184	19.5	26 - 29 Jan, 2015	6653	21.0

Response SIAs

Upper Nile State

County	total populaiton	target 0-15 children	Partner	Round 1			Round 2			Round 3		
				Date of Implementation	Adm results		Date of Implementation	Adm results		Date of Implementation	Adm results	
					# reache	%		# reach	%		# reach	%
Longochuk	198,563	97,296	IRC, GOAL,			0.0			0.0			0.0
Luakpiny/Nasir	380,460	186,425	IMA	25 - 28 Feb 2015		0.0			0.0			0.0
Maban (Refugee camp	266,438	130,555	IMC, RI, UNCHR	5 - 13 Dec,14	66940	51.3	27-30 Dec 2014	71072	54.4	3 - 7 March 15		0.0
Maban (Host Communi	58,797	28,811	CHD	7 -12 Dec, 14	27342	94.9	5 - 8 Jan, 2015	26948	93.5	3 - 7 March 15		0.0
Maiwut	197,557	96,803	GOAL	21-24 Dec,14	75339	77.8			0.0			0.0
Ulang	188,585	92,407	GOAL	8 - 12 Feb 15	52138	56.4			0.0			0.0
Baliet	30,453	14,922	GOAL	2 -6 Dec,14	373	2.5	22-25 Dec, 2014	359	2.4	28-31 Jan 15	2853	19.1
Akoka	23,000	10,350	CORDAID	9-12 Dec	9232	89.2	26-29 Dec, 2014	15269	147.5	30 Jan-2 Feb 15	13453	130.0
Fashoda	59,773	29,289	CORDAID	8 - 11 Dec,14	16959	57.9	22-25 Dec, 2014	24,653	84.2	6-9 Jan,15	24,450	83.5
Manyo	66,643	32,655	IMA	16 - 18 Dec,14	13240	40.5	5-8 Jan, 2015	7234	22.2	2-6, March, 15	4494	13.8
Panyikang	56,423	27,647	CORDAID	10 - 13 Feb, 2015	3818	13.8			0.0			0.0
Malakal	57,000	27,930	IMA	2 - 5 Dec,14	26546	95.0	16-20 Dec, 2014	25869	92.6	27-30 Jan,15	31329	112.2
Malakal (PoC)	19,000	9,310	IMA	2 - 5 Dec,14	9230	99.1	16-20 Dec, 2014	23577	253.2	27-30 Jan,15	15122	162.4
Renk	226,438	110,955	IMA, IOM, IRC	6-10 Dec,14	29135	26.3	5 - 7 Feb, 2015	26114	23.5			0.0
Mellut	110,600	54,194	IMA	15-18Dec 2014	34879	64.4	15-18 Jan 2015	16417	30.3	25 - 28 Feb, 15	30985	57.2

Response SIAs

Unity State

County	total populaiton	target 0-15 children	Partner	Round 1			Round 2			Round 3		
				Date of Implementation	Adm results		Date of Implementation	Adm results		Date of Implementation	Adm results	
					# reache	%		# reach	%		# reach	%
Rubkona	319,485	156,548	CARE			0.0			0.0			0.0
Rubkona (Bentiu PoC)	41,933	20,547	CARE	13 - 16 Nov, 14	19,498	94.9	2 - 5 Dec, 2014	20,993	102.2	13 - 16 Jan, 15	28416	138.3
Mayom	402,420	197,186	CARE	11 - 13, Feb 15	27194	13.8			0.0			0.0
Pariang	191,198	93,687	CARE	24 - 27, March 15		0.0			0.0			0.0
Guit	126,526	61,998	CARE	16 - 19 Dec,14	78,811	40.6			0.0			0.0
Koch	188,886	92,554	WR	16 - 19 Dec,14	25,193	27.2			0.0			0.0
Panyijar	165,554	81,121	IRC	15		0.0			0.0			0.0
Leer	94,034	46,077	Nile Hope	15 - 19 Dec,14	12,921	28.0			0.0			0.0
Mayendit	83,757	41,041	UNIDO	15 - 19 Dec,14	20112	49.0	23 26 March 2015		0.0			0.0
Abiemhnom	76,481	37,476	NPDC/CARE	31 - Dec -3rd Jar	29,532	78.8	5 - 9 Feb, 2015	17252	46.0			0.0

Quality of SIAs

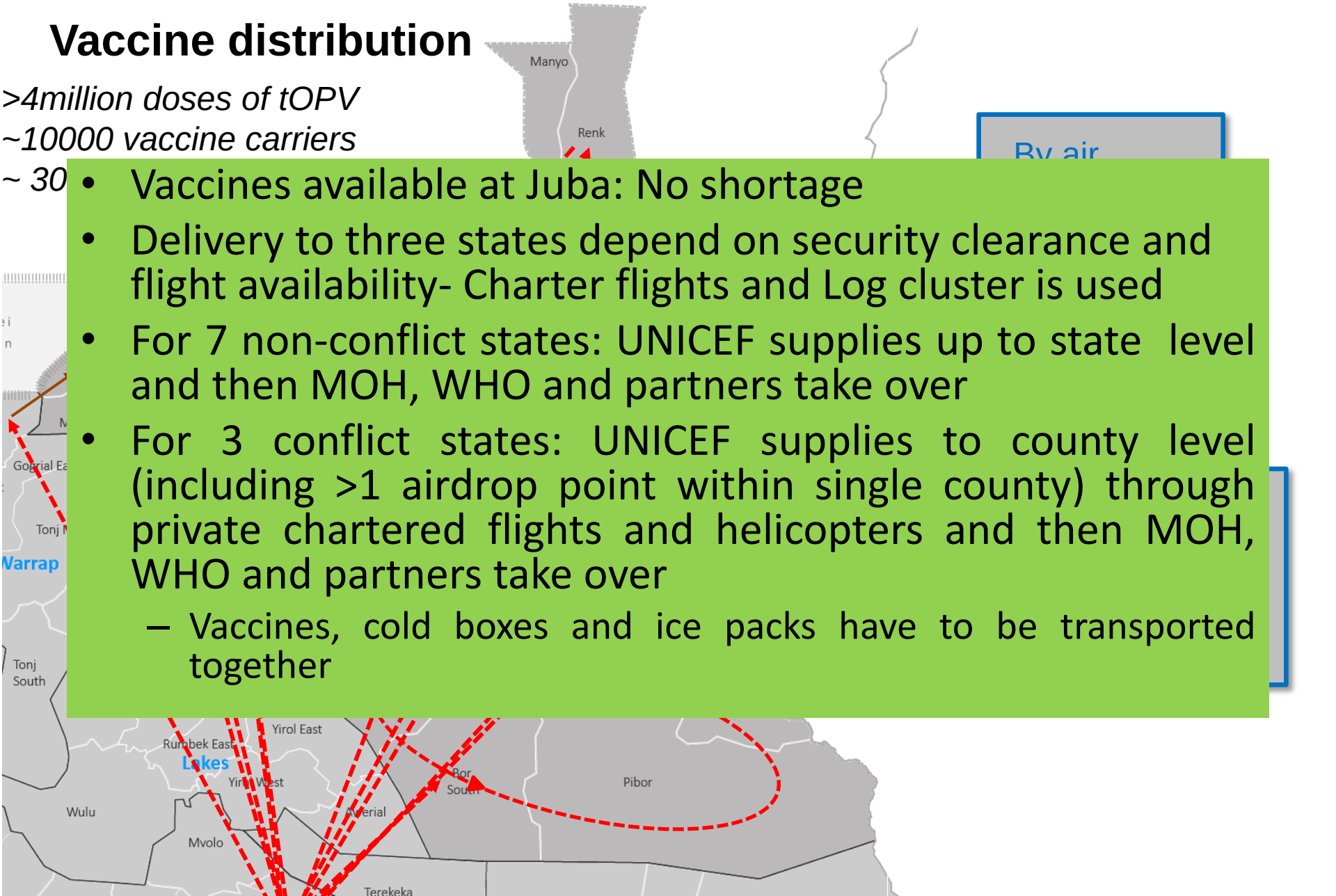
- Involvement of government in outbreak response
- SIADs and NIDs planed and conducted in areas as soon as they became accessible despite extreme security, planning and logistical challenges.
- Fairly good coverage as observed in field during assessment.
- Funding:
  - Requested funding available to country in time
  - Incidence of delays in operational fund distribution to conflict affected states
  - Cash transfer to three affected states a challenge-clearance needed from central bank

Vaccine transportation under challenging circumstances

Vaccine distribution

>4million doses of tOPV
~10000 vaccine carriers
~ 30

- Vaccines available at Juba: No shortage
- Delivery to three states depend on security clearance and flight availability- Charter flights and Log cluster is used
- For 7 non-conflict states: UNICEF supplies up to state level and then MOH, WHO and partners take over
- For 3 conflict states: UNICEF supplies to county level (including >1 airdrop point within single county) through private chartered flights and helicopters and then MOH, WHO and partners take over
  - Vaccines, cold boxes and ice packs have to be transported together



Quality of SIAs

- Quality of SIA campaigns:
  - IM being done in all but three conflict affected states
  - Overall children covered in SIADs is <50% of target due to inability to conduct SIAs in certain areas
  - Quality of activity not verified
  - Target population is inconsistent

- Micro-planning:
  - Bottom up resource micro-planning done however it is adjusted as per fund allocated from National level.
  - Field level implementation micro-plan including SM is very weak

Quality of SIAs

- Supervision:
  - Supervisory structure exists (1 for 4 VT)
  - Variable quality of supervision by first level of supervisors (inadequate understanding of checklist)
  - Suboptimal supervision from higher level

- Inconsistent field supervision and monitoring in accessible areas of three conflict affected states

- Training:
  - Evidence of systematic training for the outbreak response campaigns not seen.
  - Many of the workers seen in field not able to read the language used in training module and formats

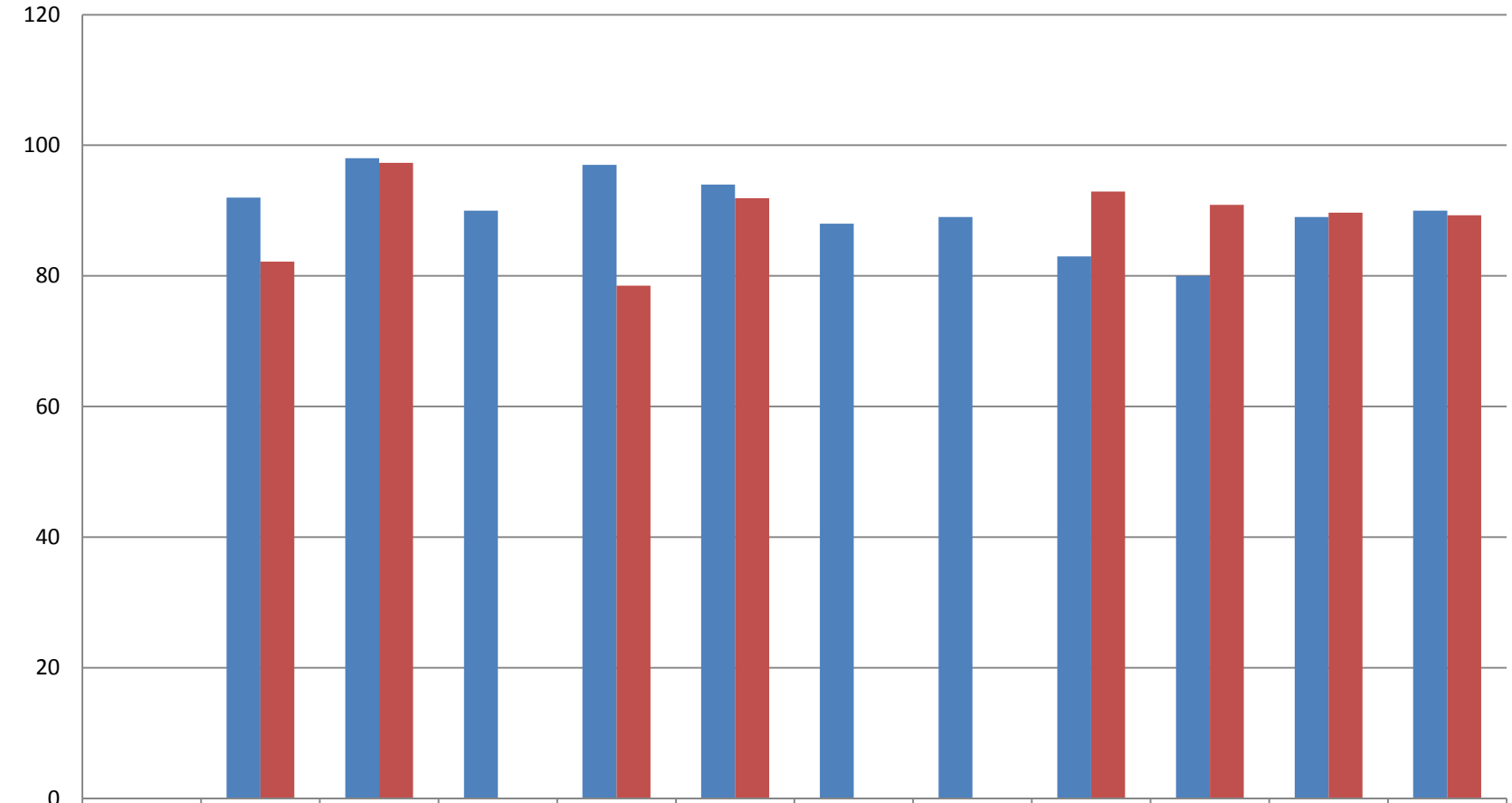
Quality of SIAs

- Review mechanisms:
  - PCR is used for tracking the preparation of campaign.
  - However, structured system of post campaign review or pre-campaign preparatory assessment meetings lacking

- Data:
  - Coverage data from SIADs is available but missed children information is not captured well.
  - Suboptimal use of data for corrective action

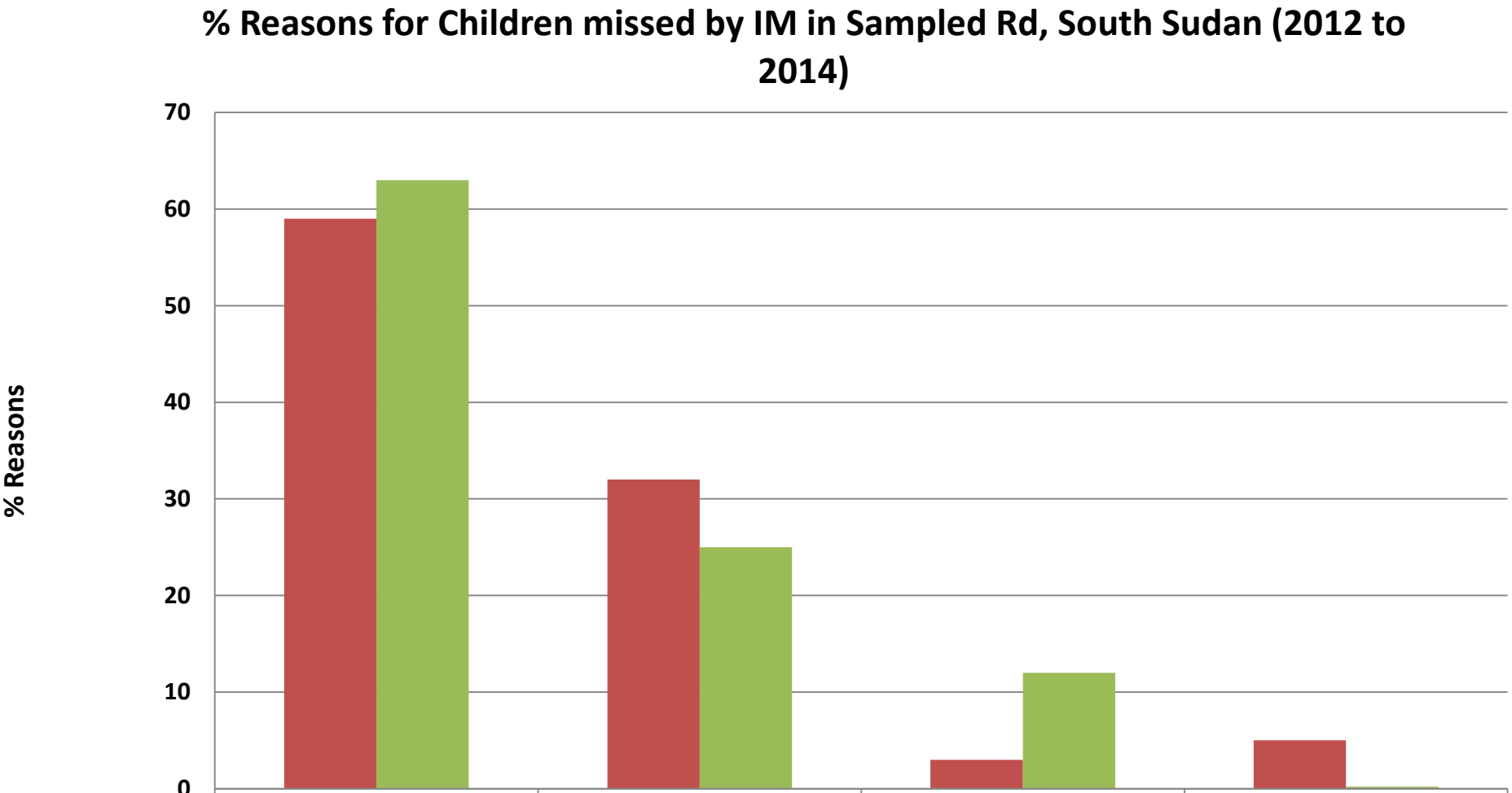
- Cross border activities
  - No documented cross border activities in/ around conflict affected zone

% IM Cov. by States, 2013/2014 (Rd3)



	Central Equatorial	East Equatorial	Jonglei	Lakes	NBG	Unity	Upper Nile	Warap	WBEG	WEQ	South Sudan
IM 2013 Rd 3	92	98	90	97	94	88	89	83	80	89	90
IM 2014 Rd 3	82.2	97.3	-	78.5	91.9	-	-	92.9	90.9	89.7	89.3

Reasons for Children Missed



Communications

- Social mobilization response is well articulated & conceptualized
  - *SIAD-specific plans, content, training module, social mapping and messaging*
  - *state plans largely informed by social profile and PCE data*
  - *social mapping available for selected states*

- However, social mobilization implementation management and accountability is suboptimal *(both for hired SM and partner NGOs)*
  - *lack of training, technical guidance and SM specific educational aids and tools*
  - *no proper SM deployment plans, weak field supervision and monitoring*
  - *accounting for SM outputs, reporting, and analysis of results*
  - *in 3 conflict states limited to POC and IDP camps*

- Network of state C4D officers is active; their capacity and quality of their outputs varies significantly. Two positions are currently vacant.

- Robust analysis of PCE data; use for action is limited to national level.

Communications

- Mass communication and engagement of radio network is good and relevant, however outputs are not monitored or systematically analysed
  - *wide & engaging PSAs, feature stories & call-in talk shows*
  - *pre-tested content and messaging is informed by PCE data*
  - *eight language adaptations*

- Disproportional focus on production of IEC and visibility materials
  - *misuse of T-shirts & caps, inappropriate use of posters*
  - *poor/late distribution of IEC materials, stockpiling of large quantities*
  - *generic messaging intended mainly for literate audiences*

- Unavailability of social mobilization funds in some conflict states (ex. Upper Nile) due to organizational barriers and unclear *modus operandi*
  - *extended absence of C4D officer at state level – occasional surge support*
  - *confirmed constraints and delays in fund transfers through PCAs*
  - *selection and on-boarding of partner NGOs*

Cold chain & vaccine management

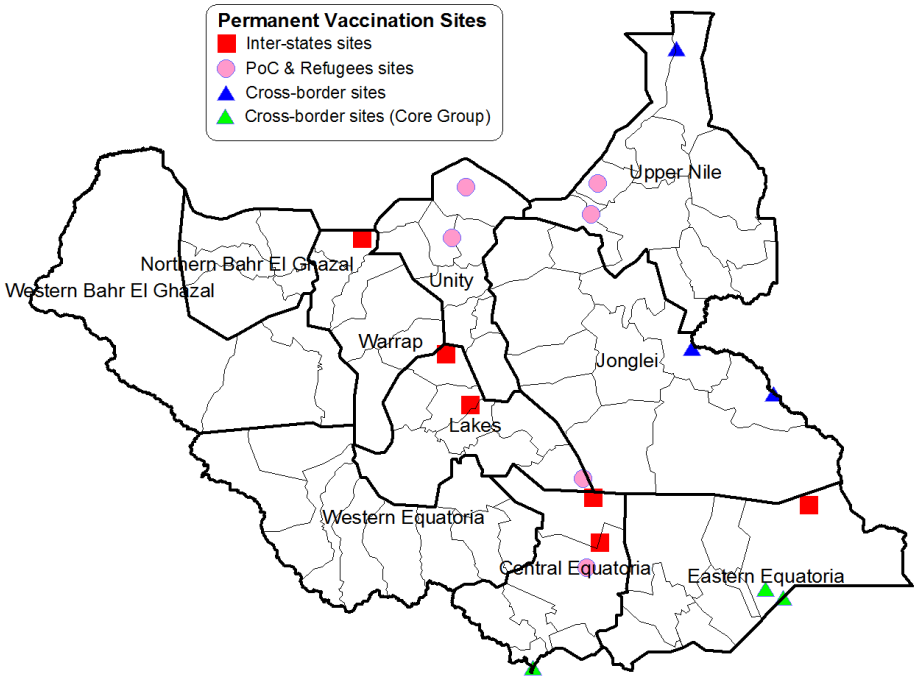
- Human resource:
  - No national level staff for Cold chain and vaccine management (CCL&VM) by Govt.
  - No cold chain technicians at state level from Govt.
  - Existing HR needs support in capacity building

- Operational issues:
  - Fairly good system of vaccine storage, inventory keeping and management at national level
  - Issue of non return of cold boxes
  - Usage of vaccine is not well documented and unused vials are not being returned.

Cold chain equipment capacity based on RI requirement (2014 status)

	National Vaccine store	County level stores	MOH - PHCC and PHCU	NGO - Pvt. Hospital, PHCC and PHCU	State vaccine stores	State Hospital MOH
Number of stores (N)	1	98	599	309	10	11
Per cent stores having surplus space	100%	50%	37%	45%	100%	45%
Per cent stores having adequate spaces (+/- 10% of required space)	0%	1%	0%	0%	0%	0%
Per cent stores having deficit space	**0%**	**49%**	**63%**	**55%**	**0%**	**55%**
Grand Total	100%	100%	100%	100%	100%	100%

Permanent vaccination posts



Categories	#	Status
Inter-states sites	6	Planned
PoC & Refugees sites	7	Operating
Cross-border sites	3	Planned
Cross-border sites (Core Group)	3	Operating
Total	**19**	

Permanent Vaccination points

- Functional only in some POCs
- No functional points at major crossing points
- Need for systematic and uniform data flow and analysis

Other vaccination opportunities

- ERMs and RRMs are being used as vaccination opportunity.

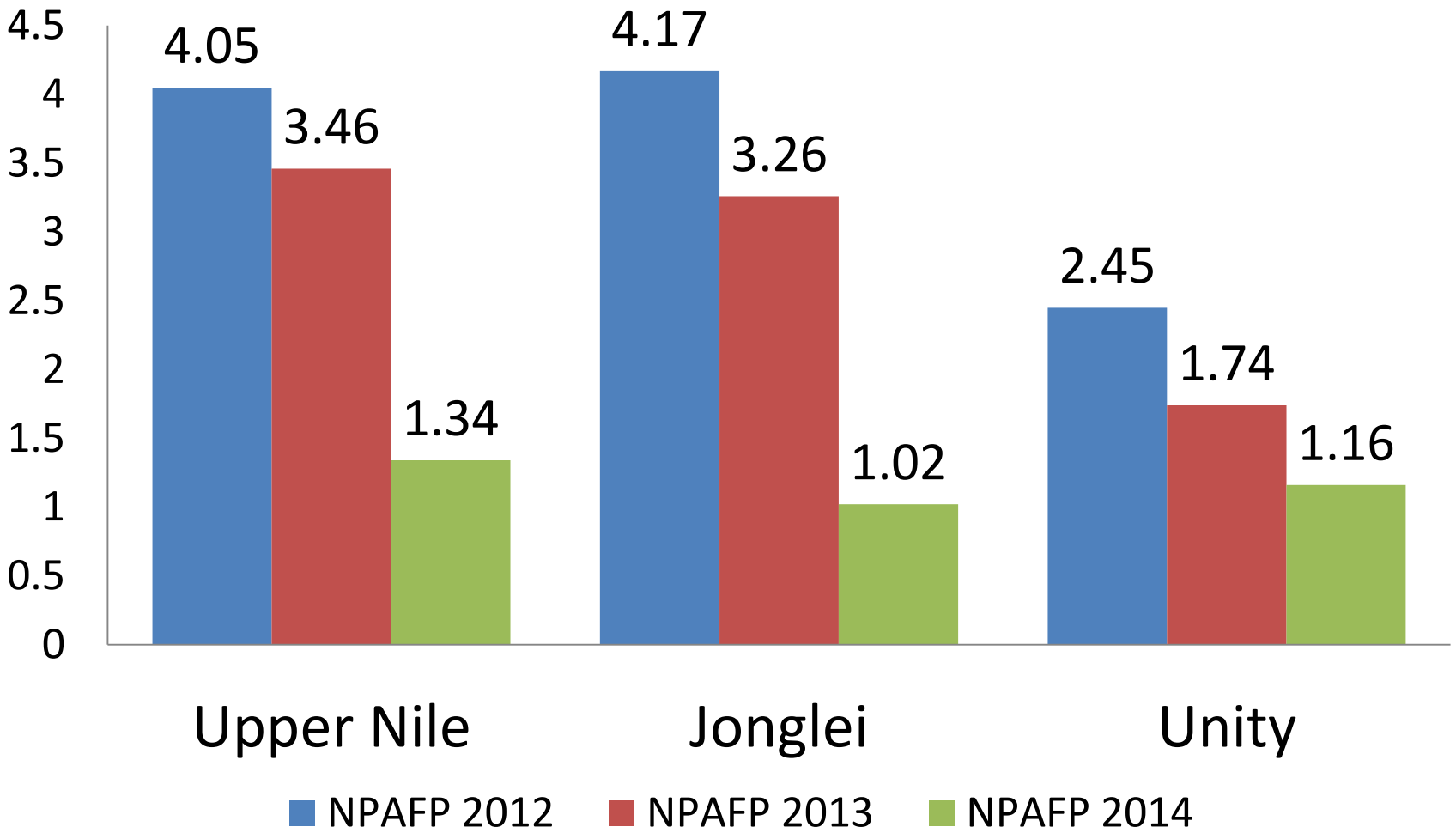
- RI in IDP camps
  - OPV3: 3864

- Integrated campaign 16/32 counties in the 3 conflict affected states (July – November 2014):
  - OPV: 480,402 (up to 15yrs)

- 42 Rapid Response Missions (RRMs):
  - 140,143 (up to 15 years) vaccinated with OPV since crisis

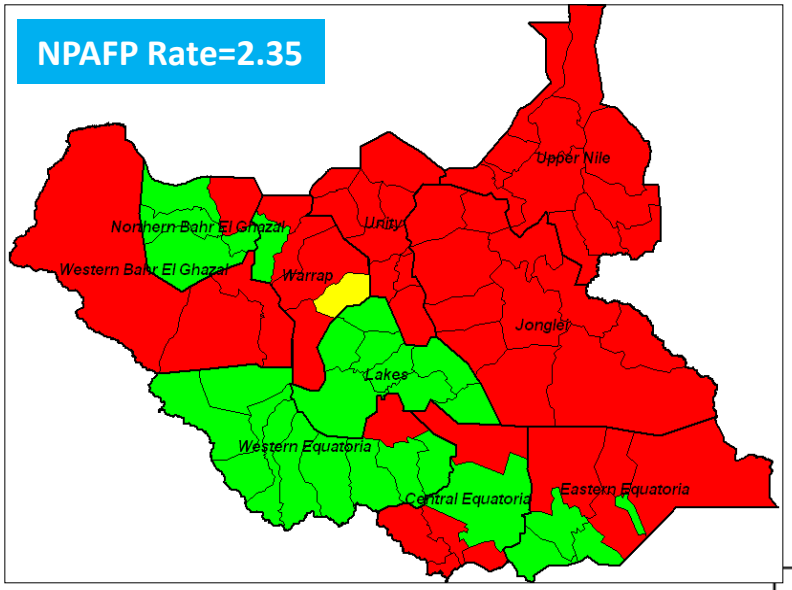
Is the AFP surveillance system sensitive enough to detect all transmission?

NPAFP: 3 conflict affected States (2012-2014)

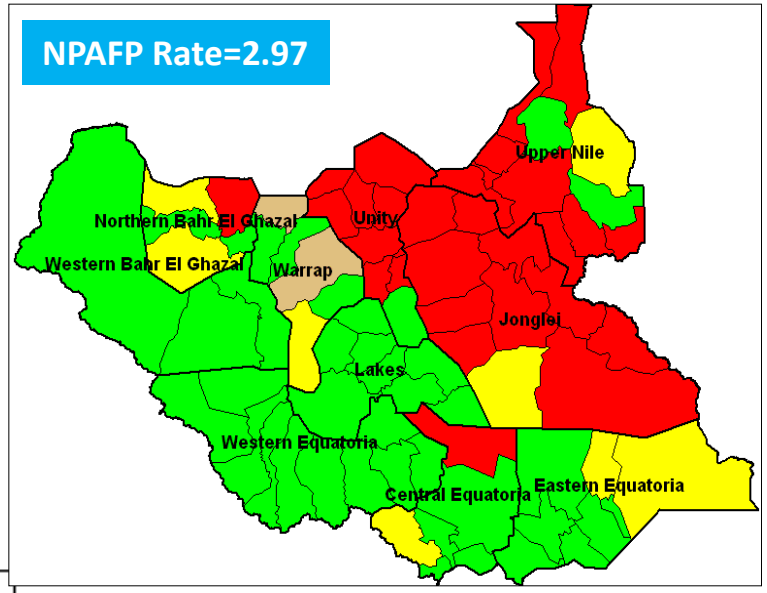


Annualized NPAFP Rate by Quarter (2nd Admin Level) -2014

First Quarter



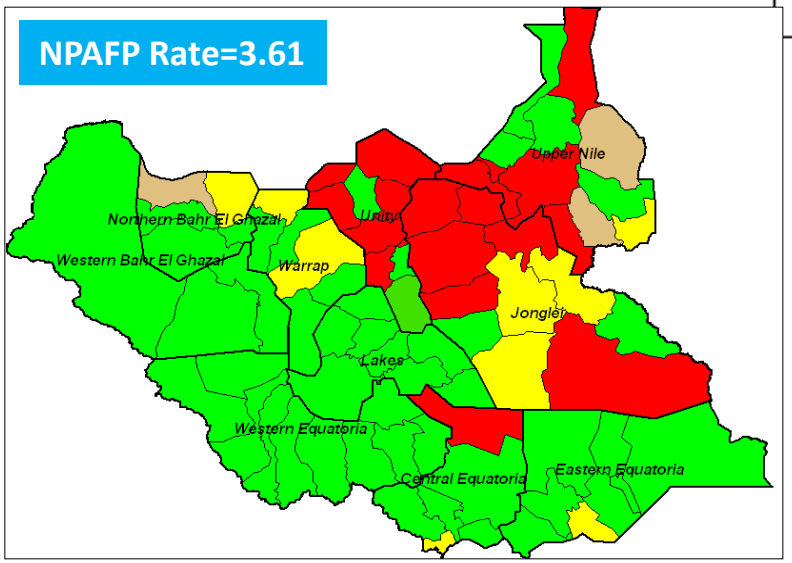
2nd Quarter



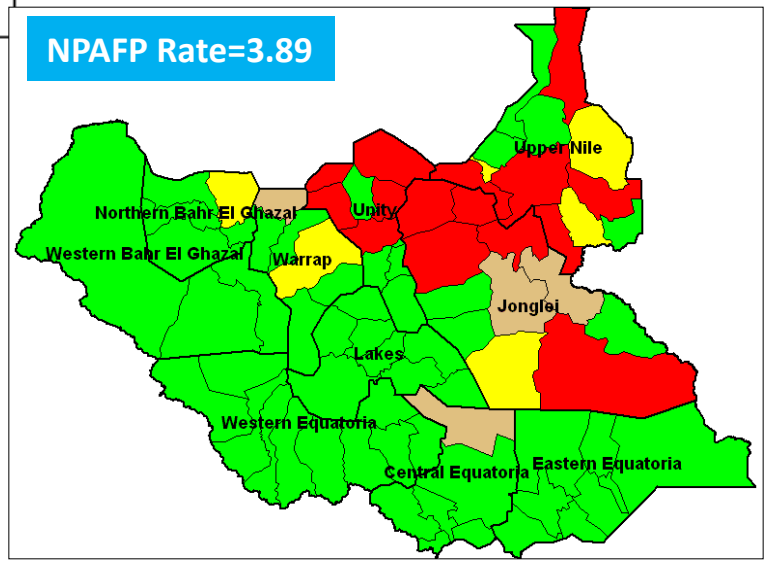
Legend - NPAFP_Rate

- 0.00 - 0.00
- 0.01 - 0.99
- 1.00 - 1.99
- 2.00 +

3rd Quarter

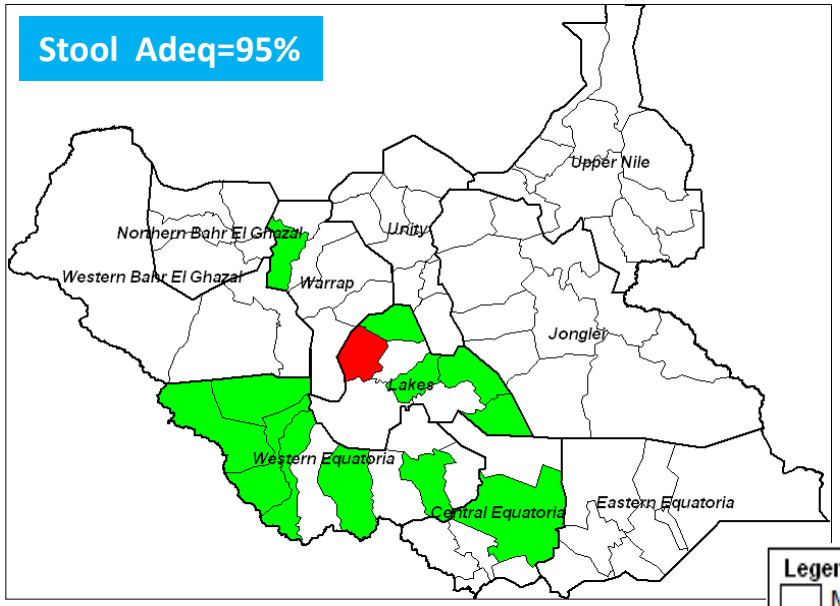


4th Quarter

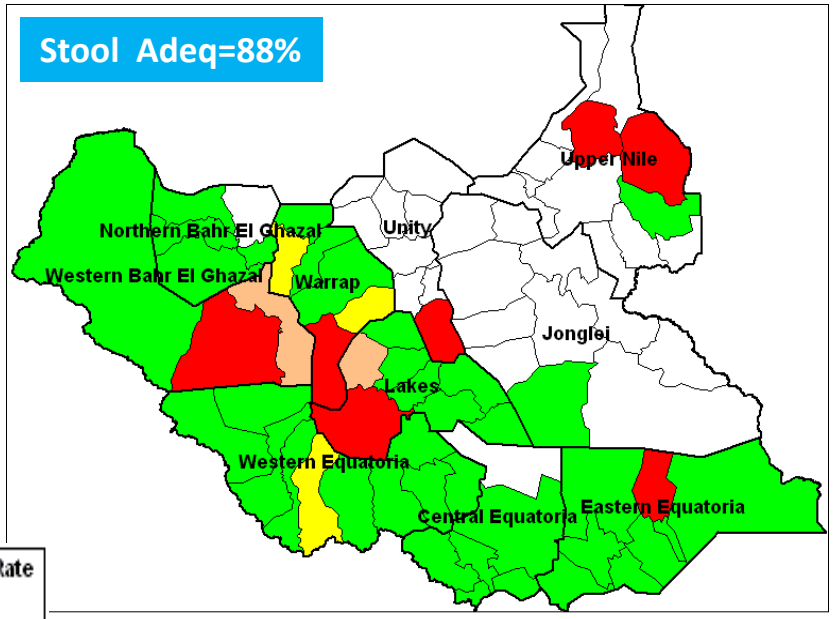


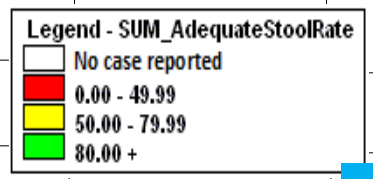
Stool Adequacy Rate by Quarter (2nd Admin Level) -2014

First Quarter

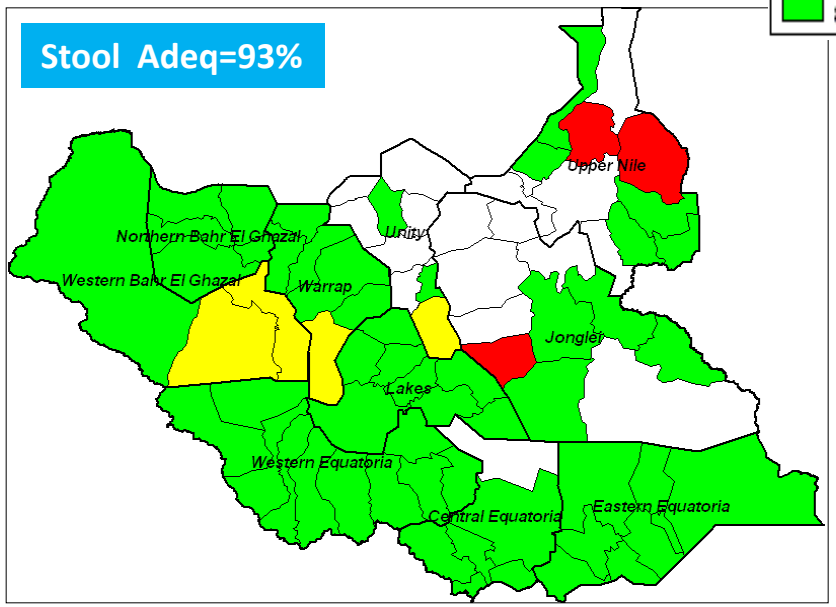


2nd Quarter

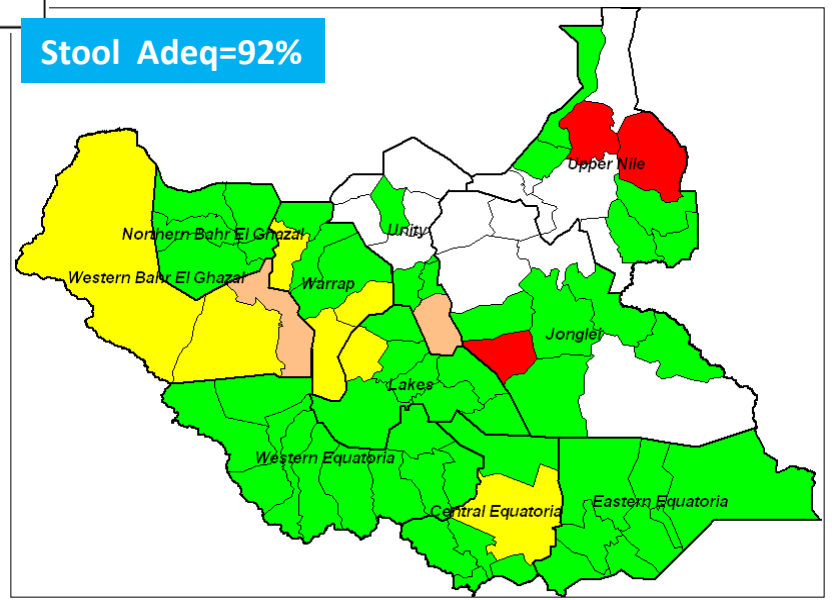




3rd Quarter



4th Quarter



AFP surveillance sensitivity

- Trends in key surveillance indicators:
  - Low NPAFP detection rate in 2014 in many counties in conflict affected states as compared to 2013
  - However, improvement seen in the last quarter of 2014
  - Destruction of surveillance infrastructure and population movement key reason

- Case investigation:
  - Done by CHD, partner agency and FS.
  - However, training for CI to partner agencies not given.

- Mechanism of stool shipment in place. However delay in reaching stool from field to lab

AFP surveillance sensitivity

- Reporting network:
  - In conflict affected states, partners and CHDs report AFP cases
  - However, documentation of all available functional health facility and prioritization is lacking at state level.
  - Documentation of ACS visits at the state or health facility level is suboptimal
  - Weekly reporting from facilities is not regularly analyzed for timeliness or completeness at state level.
- Specific activities to increase sensitivity of surveillance following outbreak
  - Sensitization of partners in health cluster meeting done
  - Sensitization workshops in Unity POC
  - Linking surveillance indicators to performance of FS
  - Redeploying displaced FS

% AFP cases with ≥3 contact samples

	2012	2013	2014	2015
Jonglei	71.8%	74.2%	75.0%	80.0%
Unity	94.7%	92.9%	75.0%	100.0%
Upper Nile	83.3%	96.2%	100.0%	100.0%

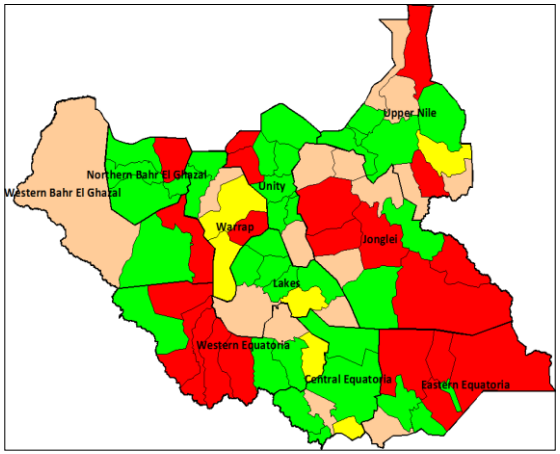
What is the status of RI coverage?

Routine Immunization performance

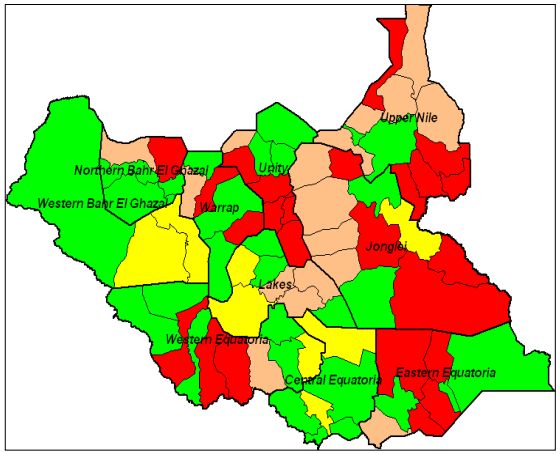
- EPI in 3 conflict affected states has disrupted
- It is being done through implementing partners at some of the camps. However, full potential is still not fully tapped.
- Cold chain capacity disrupted; needs to be re-established

Routine Immunization: Performance

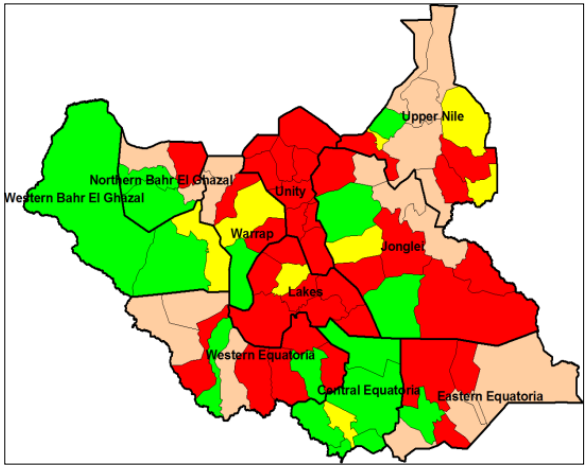
2011



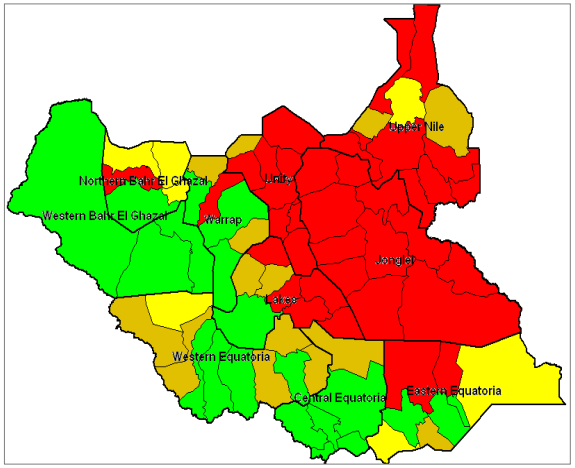
2012



2013



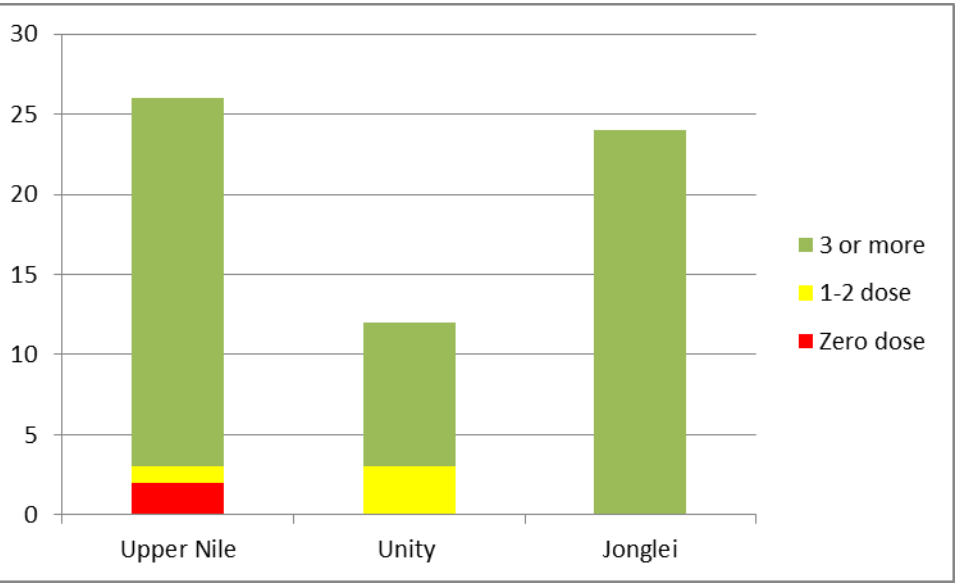
2014



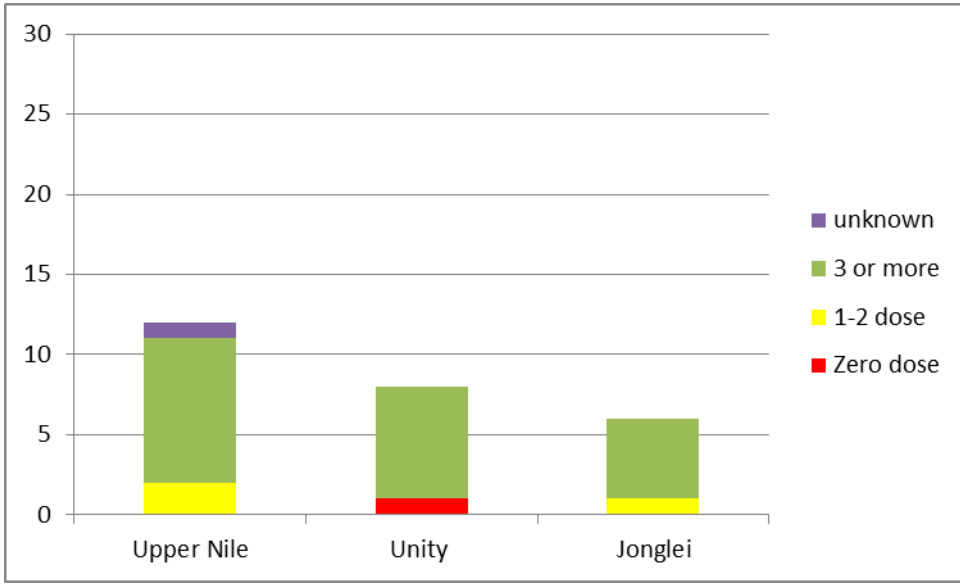
DPT3<50% | 50%≥DPT3<70% | 70%≥DPT3<80% | DPT3≥80%

OPV Doses in NPAFP cases (6-59 Months)

2013



2014



Have sufficient financial, material and human resources been made available to support full implementation of all recommended polio outbreak response activities?

Adequacy of resources

- WHO:
  - Surge budget not in the country
  - Only one surge staff for limited time
  - Plan for increasing FS and FAs in 3 affected states
  - Need of vehicles, motorcycles and boats
  - Polio staff busy in many other tasks
- UNICEF:
  - 2 Vacancy in C4D staff in state level (including Upper Nile)
  - No surge plan following outbreak
  - Polio staff busy in many other tasks

What are the risks to stopping the outbreak?

Risks

- Counties with no campaigns for more than a year
- Compromised quality of SIAs in even accessible counties
- Suboptimal EPI coverage in conflict affected states
- Possibility of missing transmission as evidenced by low NPAFP rate- Functional health facilities from partners not fully tapped.
- Suboptimal HR capacity at national level as well as in field

Conclusions

Conclusions…1

Country mounted swift outbreak response despite extremely challenging security situation. However, there is strong possibility of continuation of undetected transmission as well as re-emergence of cVDPV.

Conclusions…2

- Coordination mechanism exists at national and state level however needs to be more functional

- SIAs planned for outbreak response were appropriate in terms of age group targeted, area to be covered and vaccine type used:
  - However none of the planned SIADs have been implemented in 5 counties
  - Quality of SIAs in counties which conducted SIADs needs to be improved

Conclusions…3

- Surveillance: Possibility of missing transmission can not be ruled out. Untapped potential of strengthening surveillance in conflict affected states
- EPI coverage suboptimal; scope of improving it particularly in areas with partners on ground
- Suboptimal HR capacity (Govt., WHO and UNICEF) at national level and conflict affected states
- Social Mobilization: Well conceptualized however need to be operationalized better.
- Supervision from National and state level suboptimal

Recommendations

Recommendations…1

- Complete three SIADs and two NIDs in all the counties of 3 states as soon as any window of opportunity opens.
- Rapidly improve the quality of SIAs in accessible areas:
  - Appropriate micro planning; quality training and improve first line supervision
  - Institute system of monitoring and review of SIA quality
- Establish and streamline permanent vaccination strategy at major crossing points around conflict affected areas and IDP/POC camps; track and analyse the data from these points.

Recommendations…2

- Increase field supervision activities from National and state level

- Strengthen functioning of polio control room- Structure meeting in PCR with all key stakeholders with clear documented action points

- Surveillance:
  - Identify, enlist, map and sensitize all available health facilities in three conflict affected states
  - Strengthen system of sensitization of reporting network/ health facilities
  - Track and follow up on ACS visits and weekly zero report system.

Recommendations…3

- Use available partners on the ground in conflict affected states to improve RI coverage.

- Rapidly fill the HR gaps in Govt., UNICEF and WHO at national level and in three conflict affected states on priority basis; fast track the implementation of surge plan including recruiting FAs and FSs.

- Tap more into Rapid Response Teams (RRTs) and Rapid Response Missions (RRMs):
  - High level advocacy for prioritizing polio/ immunization;
  - improve coordination/ communication with all involved.

Recommendations…4

- Cold Chain:
  - Human resource
    - Complete hiring at national and state level by Govt.
    - Support capacity building for existing CCL & VM staff at state and county levels by partners
  - Strategic prioritization of facilities for cold chain equipment support (Rationalize or new)
  - Institutionalize system for return (backhauling) of cold boxes.
  - Regularize return of unused vaccine vials and reporting on vaccine usage.

Recommendations…5

- Communications:
  - Prioritize social mobilization in the three states, addressing existing operational barriers
  - Improve management, quality implementation and accountability of social mobilization programme
  - Operationalize comprehensive communication plans (to a county level), enabling social mobilization activities in the three states; extend beyond POCs and IDP camps
  - Review and rationalize production and use of visibility materials; develop and roll-out of education and comprehensive SM products

Thank you