Independent Quarterly Assessment: WPV Outbreak Response Somalia

18-27 August 2013

Quarterly Assessment Objectives

The objectives of the 3 month assessment are to:

- Assess the quality and adequacy of polio outbreak response activities in order 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

- Provide additional technical recommendations to assist the country meet this goal

Methodology

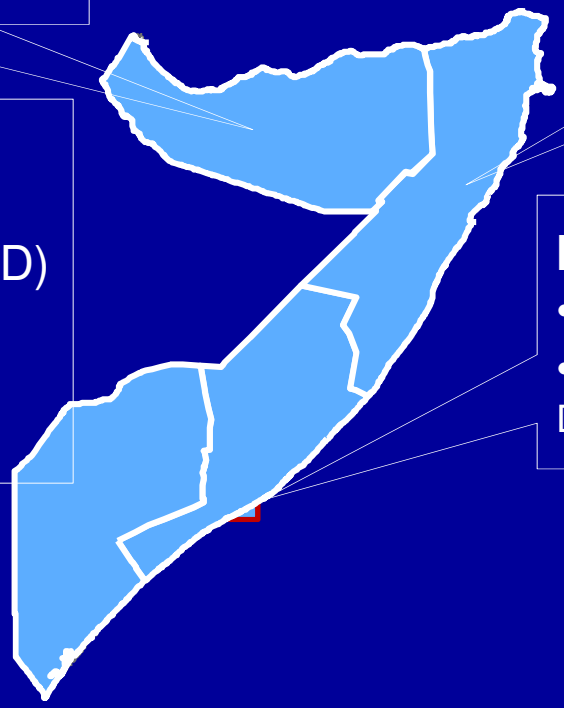
An inter-agency team of external experts conducted the assessment from 19-29 August that included:

- Direct observation of SIA and surveillance in all 4 zones of Somalia
- Analysis of surveillance, SIA, human resource and other program data
- Interviews with stakeholders including:
  - Government officials in all zones
  - WHO Somalia team (Nairobi national and zonal teams)
  - UNICEF Somalia team
  - UNICEF Regional Director
  - UN Resident Coordinator for Somalia
  - NGOs operating in Somalia
  - Kenya assessment team (for cross border coordination)

Assessment Teams

Somaliland
• Grace Kagondu (UNICEF)
Districts: Hargesia

Puntland
•Thomas Moran (WHO-HQ)
Districts: Garowe



WHO-Somalia (Nairobi)
•Sue Gerber (BMGF)
•Subroto Mukherjee (USAID)
•Chris Wolff (WHO-HQ)
•Patrick O'Connor (WHO-EMRO)

Mogadishu (Central/South)
•Jean Jacques (WHO-HQ)
•Hemant Shukla (WHO-HQ)
Districts: Baidoa, Mogadishu

The international reviewers were accompanied by the Somalia polio team from Nairobi and field level

Areas of Assessment

1. Speed and appropriateness of immediate outbreak response activities as per WHA Resolution, 2006 (WHA59.1)
2. Effectiveness of partner coordination during outbreak response
3. Quality of SIA – planning, delivery, monitoring and communications
4. AFP surveillance sensitivity
5. Routine Immunization performance
6. Adequacy of human resources to carry out effective response activities

Questions

1. Has the response met the outbreak standards?
2. What has been the impact of the response on the outbreak?
3. Is the campaign quality sufficient to interrupt transmission?
4. Is the AFP surveillance system sensitive enough to detect transmission?
5. Are there sufficient resources available to stop the outbreak?
6. What are the risks to stopping the outbreak?

Has the response met the outbreak standards?

WHA59.1 outbreak response requirements in polio-free countries

Minimum of three large-scale immunization rounds	
Targeting all children age less than five years in the affected and adjacent geographic areas	
Using appropriate OPV	
Achieving at least 95% immunization coverage	
Using independent monitoring	
At least two full immunization rounds in the target areas after the most recent WPV detected case confirmation	

WHA59.1 outbreak response requirements in polio-free countries

- Initial investigation and activation of local response within 72 hours of index case confirmation

Date	Event	Days
April 18	Onset of paralysis	0
April 21	Specimen Collection	3
April 29	Receipt in Laboratory	8
May 9	WPV notification	10
May 12	Case investigation	3
May 14	Intervention targeting 350,000 <5y in 16 districts of Banadir + 100,000 <10y in Afghoi	3
May 31	Emergency action plan established	17

Somalia Campaigns Planned and Conducted

	Date	Campaign type	Area	Target	Target pop	Vaccine
Round 1	14 - 17 May	sNID	16 districts of Benadir	Under 5	367,206	tOPV
	15 - 18 May		Afgoye district	Under 10	90,862	tOPV
Round 2	26 - 29 May	sNID	16 districts of Benadir	Under 10	734,413	bOPV
	26 - 29 May		Other accessible areas of South and Central regions + Puntland	Under 5	927,641	tOPV
Round 3	12- 18 June	NID	16 districts of Benadir	All ages	1,800,000	bOPV
	12 - 17 June		Other accessible areas of South and Central regions	Under 10	1,447,154	bOPV
	12 - 15 June		Puntland + Somaliland	Under 5	616,852	bOPV
Round 4	1 - 6 July	NID	All accessible areas of South and Central regions	All ages	5,453,915	bOPV
	1 - 4 July		Puntland + Somaliland	Under 5	616,582	bOPV
Round 5	21-25 July	NID	All accessible areas of South and Central regions	Under 5	1,707,365	
	25-29 July		Puntland + Somaliland			bOPV
Round 6	18 - 21 Aug	NID	All accessible areas of South and Central regions + Puntland + Somaliland	Under 10	3,415,271	bOPV
Round 7	15 - 18 Sept		All accessible areas of South and Central regions + Puntland + Somaliland	Under 10	3,415,271	bOPV
Round 8	13 - 17 Oct	CHD	All accessible areas of South and Central regions	Under 5	1,090,783	
	13 - 17 Oct		Puntland and Somaliland if funding allows	Under 5	616,852	bOPV
Round 9	17 - 20 Nov	sNID	All accessible areas of South and Central regions	Under 10	2,181,567	bOPV
Round 10	16 - 19 Dec	NID	All accessible areas of South and Central regions + Puntland + Somaliland	Under 5	1,707,365	tOPV

WHA59.1 outbreak response requirements in polio-free countries

Minimum of three large-scale immunization rounds	
Targeting all children age less than five years in the affected and adjacent geographic areas	Yes
Using appropriate OPV	Yes
Achieving at least 95% immunization coverage	No
Using independent monitoring	Partial (being expanded)
At least two full immunization rounds in the target areas after the most recent WPV detected case confirmation (30 July)	No (further SIAs planned)

Coordination

Start of the outbreak (first week)

- Official UN joint notification to MOH
- Outbreak focal points designated at MOH, WHO, UNICEF
- Health cluster informed and engaged to support
- UN Resident Coordinator gives polio top priority (PC1)
- Meeting with Kenya MOH within 2 days of notification
- International coordination of media messaging

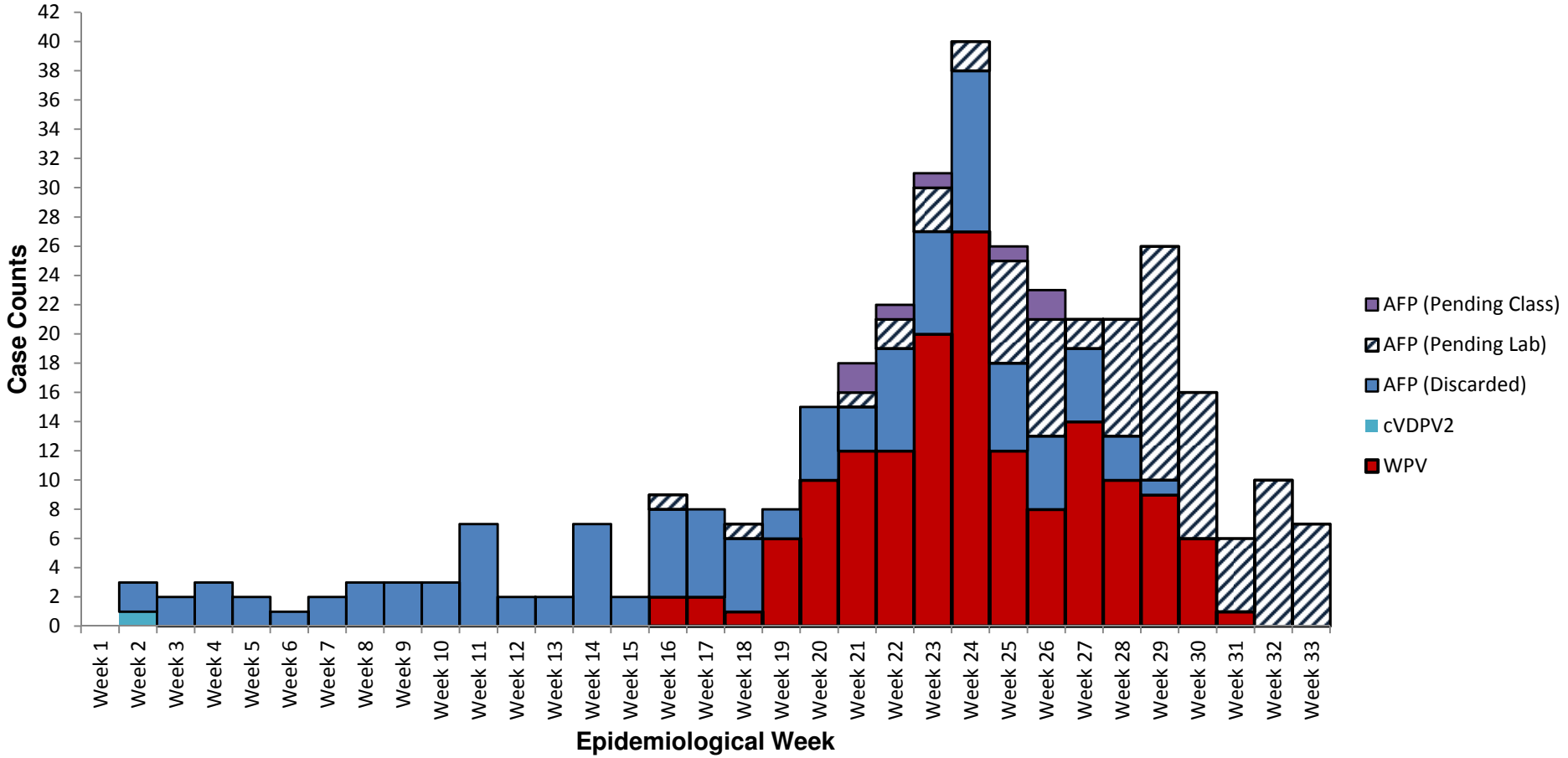
Ongoing coordination (weekly)

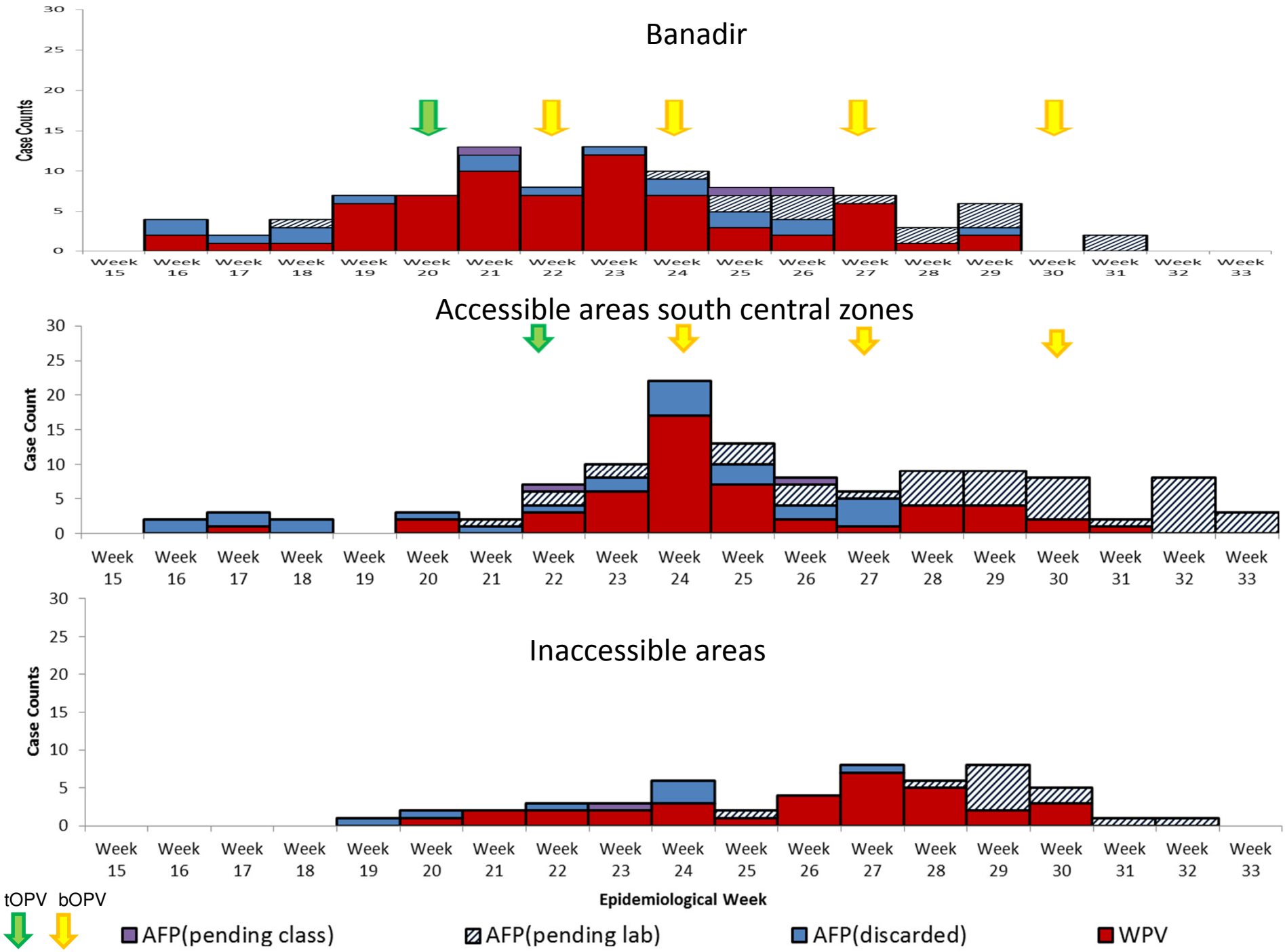
- WHO/UNICEF technical meetings in Nairobi
- Weekly sitrep distributed to all partners
- Conference calls
  - Monday – global partners
  - Thursday – WCO Somalia/EMRO/HQ
  - Bi-weekly – WHO Horn of Africa team leaders

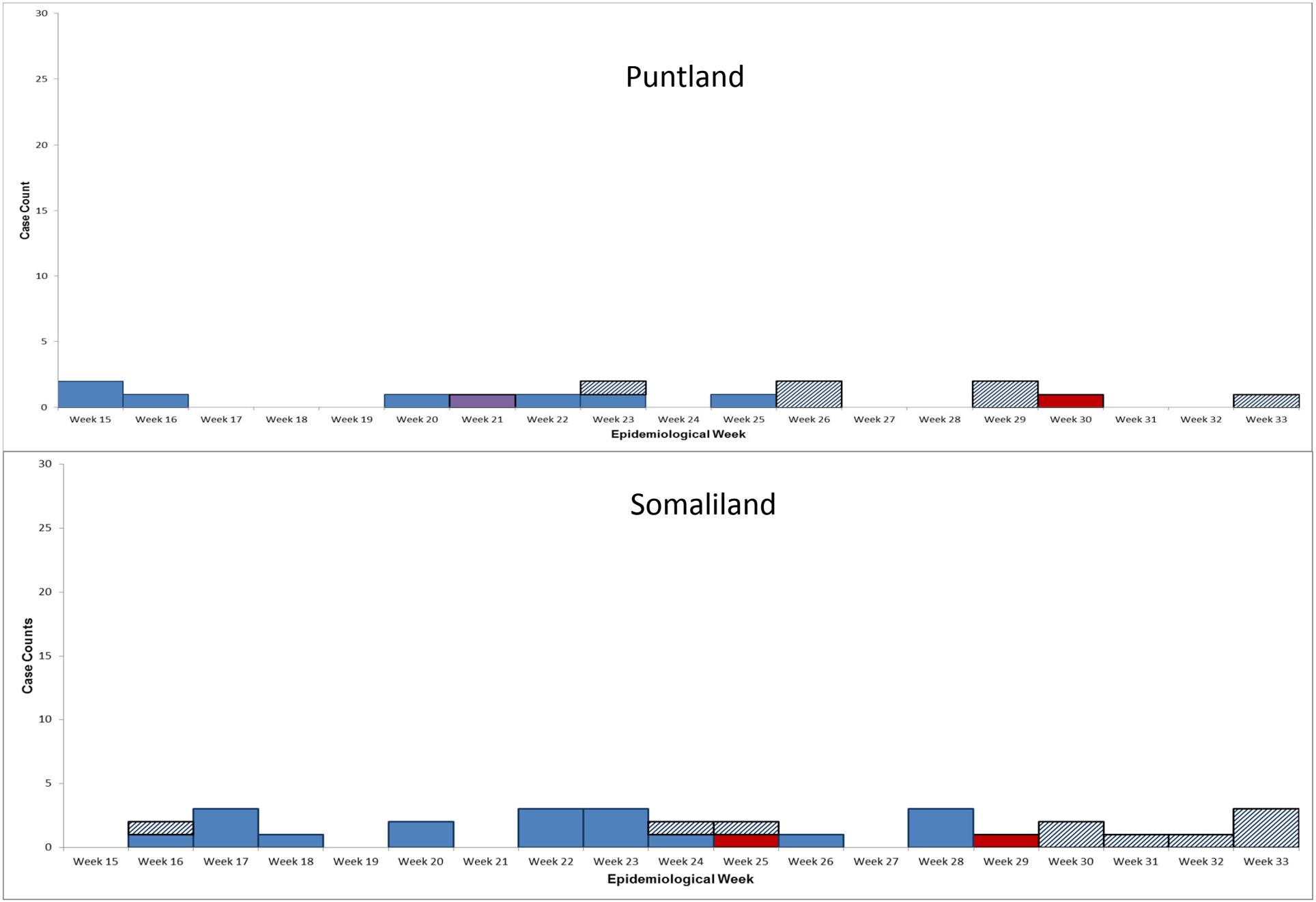
What has been the impact of the response on the outbreak?

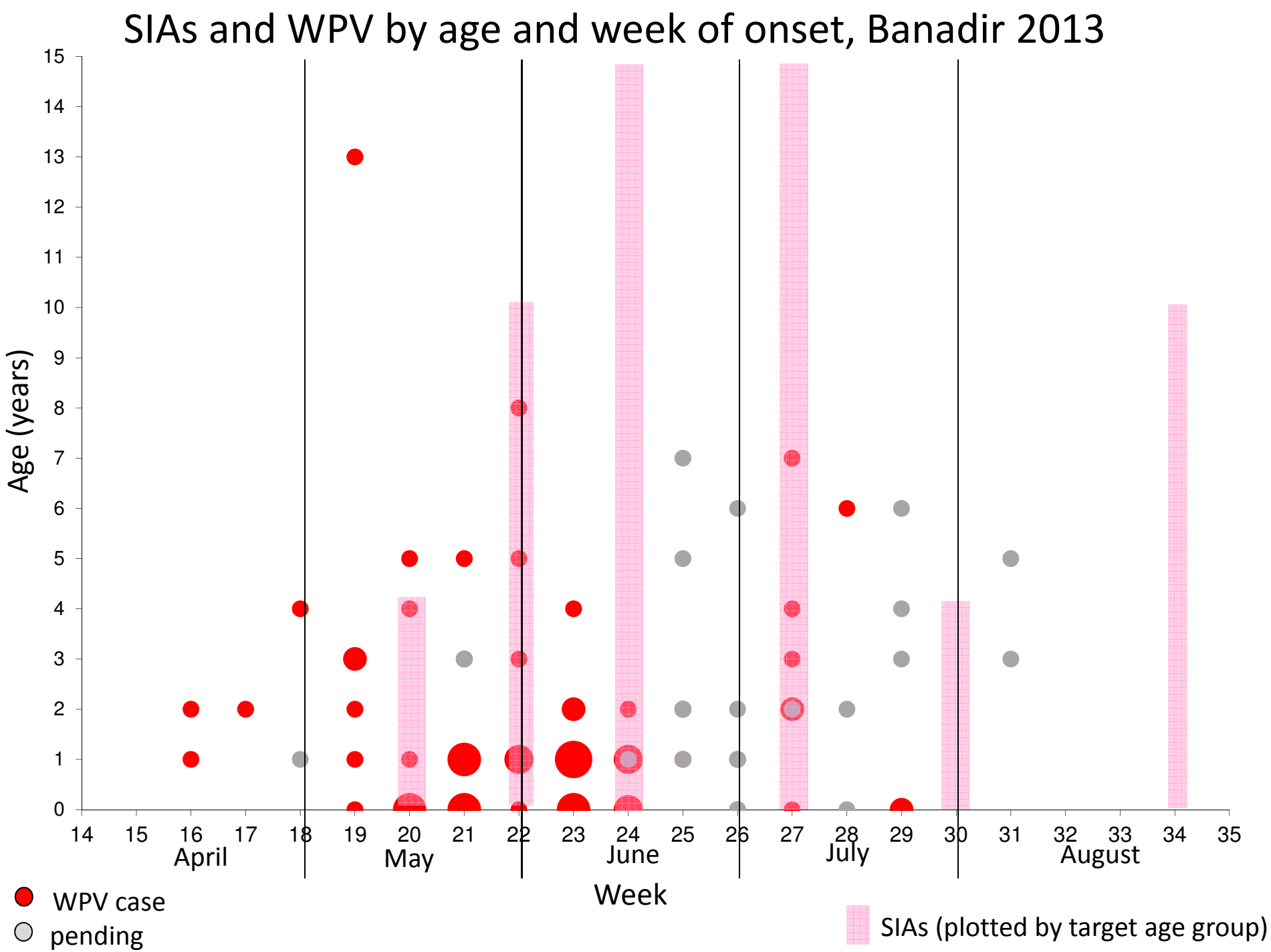
AFP Cases, Somalia, Jan - Aug 2013

(As of Aug 29, 2013)




Banadir
Case Counts
Accessible areas south central zones
Case Count
Inaccessible areas
Case Counts
Week 15
Week 16
Week 17
Week 18
Week 19
Week 20
Week 21
Week 22
Week 23
Week 24
Week 25
Week 26
Week 27
Week 28
Week 29
Week 30
Week 31
Week 32
Week 33
Epidemiological Week
tOPV
bOPV
AFP(pending class)
AFP(pending lab)
AFP(discarded)
WPV


Puntland
Case Count
30
25
20
15
10
5
0
Week 15
Week 16
Week 17
Week 18
Week 19
Week 20
Week 21
Week 22
Week 23
Week 24
Week 25
Week 26
Week 27
Week 28
Week 29
Week 30
Week 31
Week 32
Week 33
Epidemiological Week
Somaliland
Case Counts
30
25
20
15
10
5
0
Week 15
Week 16
Week 17
Week 18
Week 19
Week 20
Week 21
Week 22
Week 23
Week 24
Week 25
Week 26
Week 27
Week 28
Week 29
Week 30
Week 31
Week 32
Week 33
Epidemiological Week
AFP(pending class)
AFP(pending lab)
AFP(discarded)
WPV

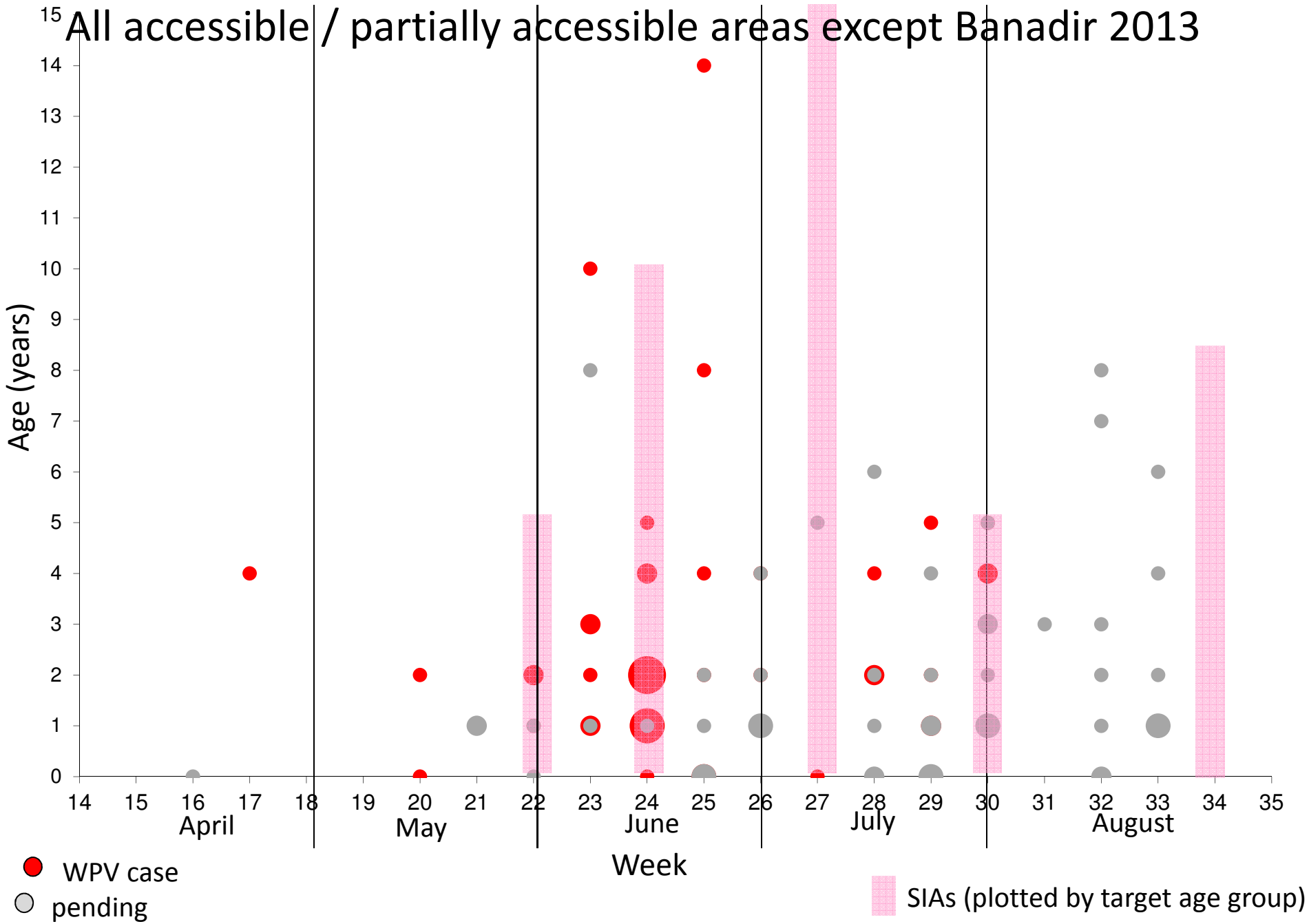

SIAs and WPV by age and week of onset, Banadir 2013
Age (years)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
April
May
June
July
August
Week
WPV case
pending
SIAs (plotted by target age group)

SIAs and WPV by week of onset, Banadir 2013

		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	total
Accessible	ABDUL AZIZ						1															1
	HAMAR JABJAB	1	1						1													3
	HAMARWEYNE						1															1
	KARAN							1	1	1												3
	MEDINA					1	1	2	4			1										9
	WABERI						2					1										3
	WARDEGLY					1		1	3				1									6
Accessible with security challenges	DANYILE				1	2	1	1														5
	DHARKENLEY			1				1			2		1		1							6
	HAWALWADAG							1														1
	HELIWA				2	1	1			3					1							8
	HODAN	1			3	2	1		2	2												11
	YAQSHID						2		1	1			4	1								9

Accessible areas of Banadir: preliminary signs of campaign impact

Accessible areas with security challenges: remain a risk


SIAs and WPV by age and week of onset
All accessible / partially accessible areas except Banadir 2013
Age (years)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35
April
May
June
July
August
Week
WPV case
pending
SIAs (plotted by target age group)

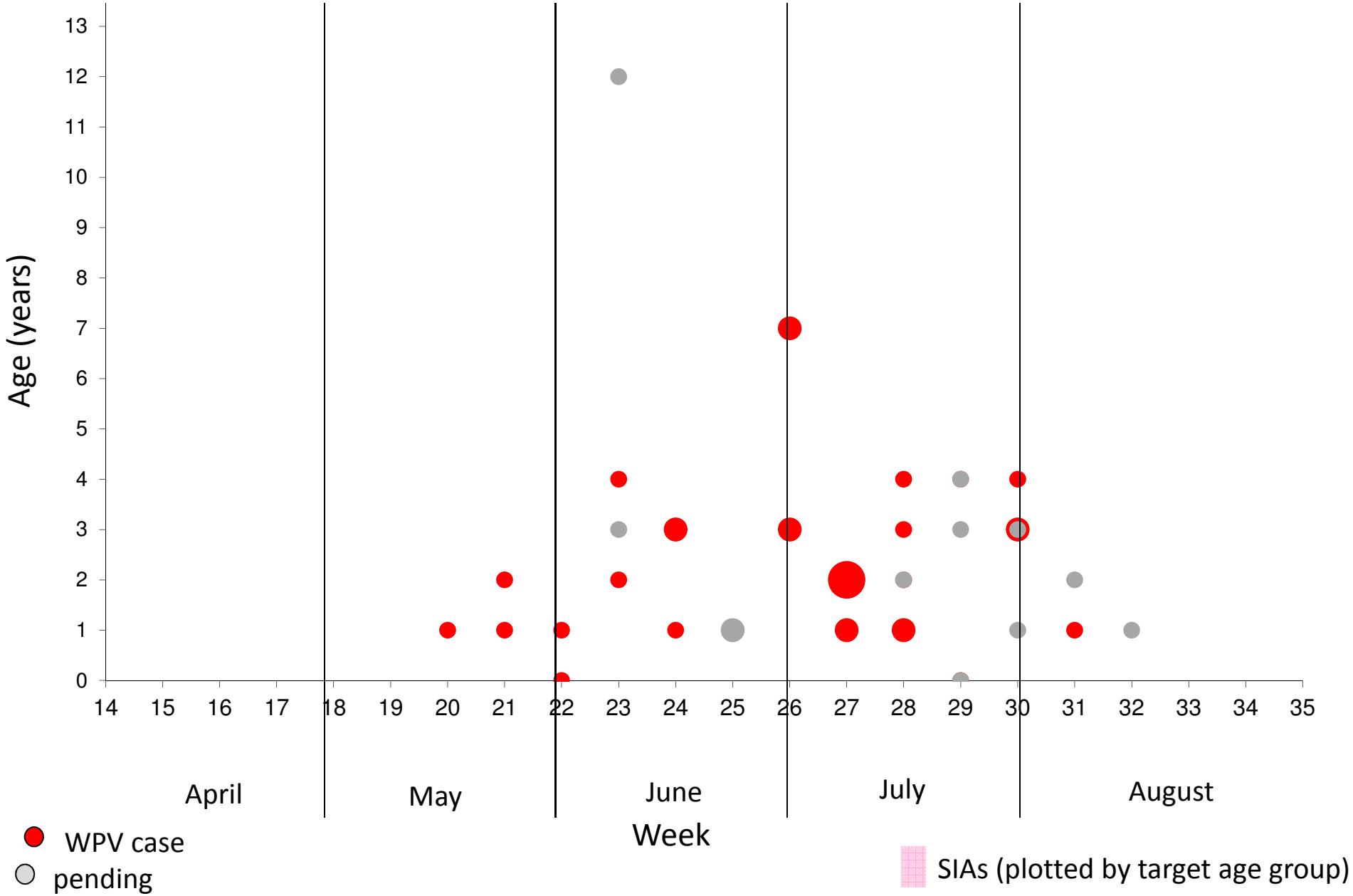
SIAs and WPV by age and week of onset
All accessible/partially accessible areas outside Banadir 2013

	REGION	DISTRICT	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	total
accessible	BAKOOL	EL BARDE									1												1
	BARI	BOSSASO															1						1
	GEDO	BELET HAWA											1										1
		EL WAQ															1						1
	LOWER SHABELLE	AFGOI					1			3	3	2											9
	MIDDLE SHABELLE	BALAD									2	1			2								5
		JOWHAR								1	1						1						3
	SOOL	LAS ANOD										1				1							2
partially accessible	BAY	BAIDOA									2	1											3
		BURHAKABA		1									1										2
	GALGADUD	EL BUR														1							1
	LOWER JUBA	AFMADOW / HAGAR														1							1
		KISMAYO					1		1		1		1	1	1	2							8
	LOWER SHABELLE	AWDHEEGLE									1												1
		MARKA							2	1	5	1			1								10
		WANLEWEYNE								1	1	1											3
				1			2		3	6	17	7	3	1	4	5	3						52

Afghoi: early area of outbreak - signs of campaign impact

Other areas: preliminary to say – Kismayo, Balad, Marka recently accessible areas remain at high-risk

SIAs and WPV by age and week of onset inaccessible areas



SIAs and WPV by week of onset, Inaccessible areas

Somalia 2013

	REGION	DISTRICT	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	total
Inaccessible	BAY	DINSOR								1			5	2	2								10
	GALGADUD	GALHARERI															1						1
	HIRAN	MAHAS									1					1							2
	LOWER JUBA	JAMAAME EAST							1														1
		JAMAAME WEST										1	1										2
		JILIB WEST										1											1
	LOWER SHABELLE	BRAVA					1																1
		KURTUNWAAREY								1	1												2
		QORYOLEY						1						1									2
	MIDDLE JUBA	JILIB EAST							1														1
		SALAGLE												1									1
	MIDDLE SHABELLE	ADALE												1									1
		ADEN YABAL						1				2	1			1							5
		MAHADAY									1												1
		RUNINGOD														1							1
							1	2	2	2	3	4	7	5	2	3	1						32

Inaccessible areas:

no house to house campaigns so significant risk of persistent WPV

*12 additional inaccessible districts have not reported WPV – vigilance for surveillance in these areas is critical for tracking the outbreak progression

Current status of outbreak

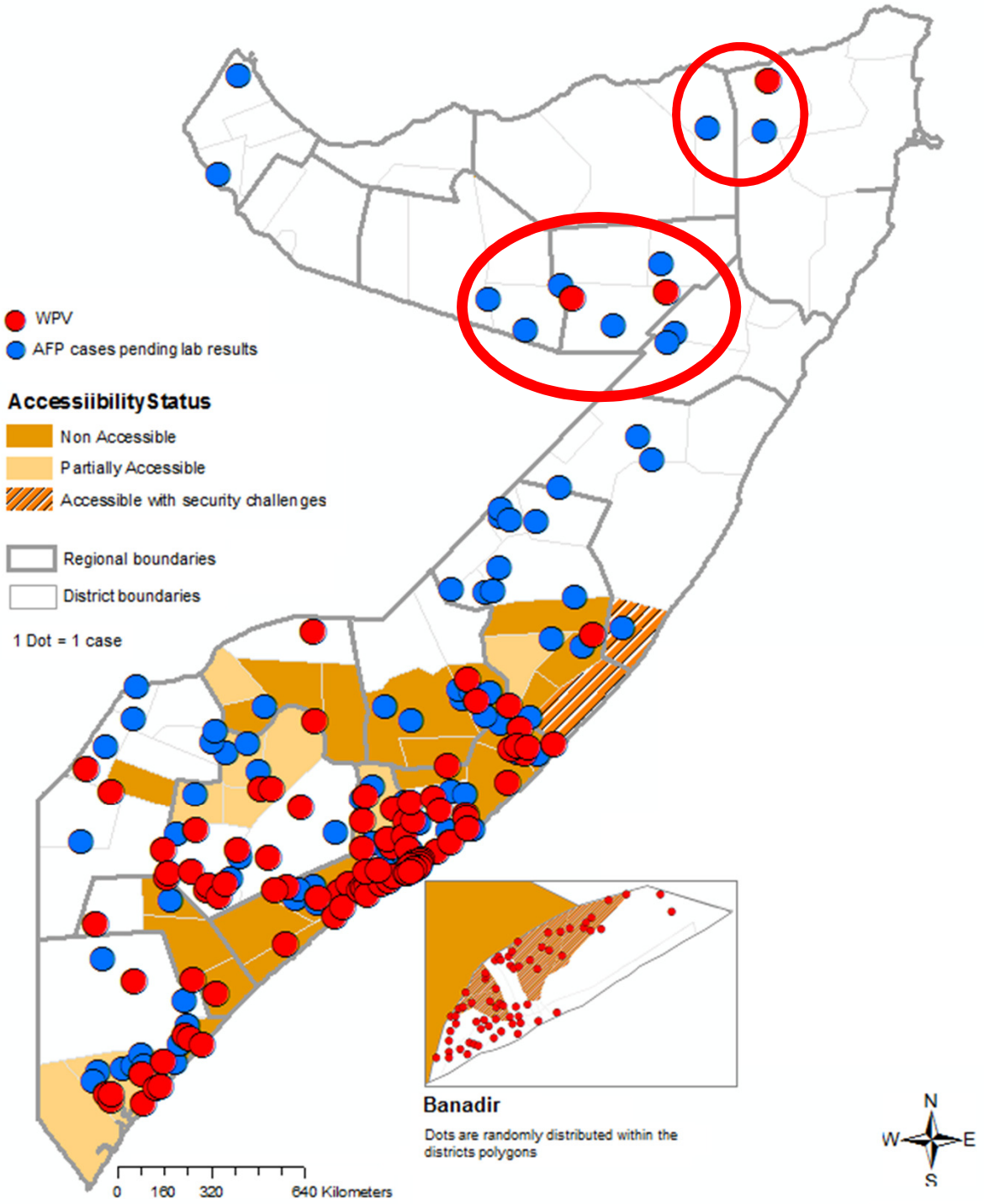
There is evidence of impact on the outbreak in Banadir

The outbreak is shifting to South Central zone – both accessible and inaccessible areas

All zones now infected (153 cases)

- Somaliland and Puntland most recently

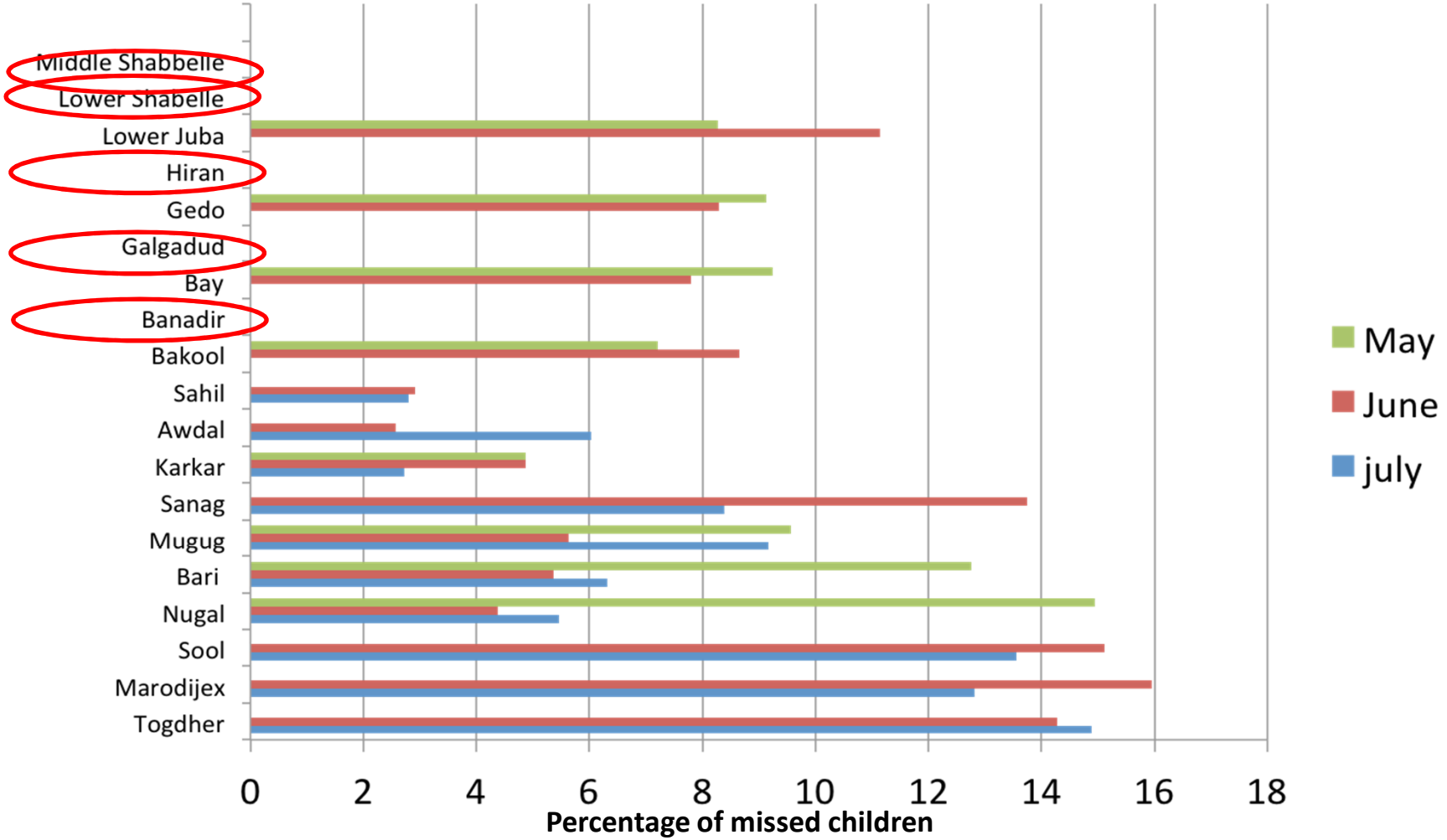
Continued risk of international spread to Kenya, Ethiopia and expansion to Yemen



Is the campaign quality sufficient to interrupt transmission?

Campaign quality: Rapid coverage assessment (RCA)

(monitoring during campaign)



Needs to be systematically conducted and reported on a regular defined schedule so that campaign quality can be tracked

SIA Quality: Field Observation

Limited RCA data shows overall 90% coverage – further data needed (IM, etc.)

- Microplanning:
  - Improved quality in South/Central Zone; not amended or standardized in other zones
  - Target population, vaccine requirements and social data not entered in micro-plans
  - No validation of micro-plan quality
- Supervision:
  - Supervisory system exists - 1 supervisor for every 5 teams
  - No systematic checking of houses
- Training:
  - Training module needs to be adapted for National program

SIA Quality: Field Observation

- Independent Monitoring:
  - No consistent system for independent monitoring
    - June SIA: only Banadir
    - August SIA: 29/82 accessible districts
- Review mechanisms:
  - No system of pre/post campaign review
    (Somaliland has post-campaign review)
- Data:
  - Delayed availability of campaign data
  - No/limited use for corrective action (operation/social)
- Cold chain
  - No stage 3 or 4 observed in field
  - Acute shortage of vaccine carriers, particularly Somaliland and Puntland
    - Local market purchase of vaccine carriers allowed campaign to be conducted

Social mobilization – field observations (1)

- Strong communication outbreak response plan developed
- Generally good community awareness and demand for polio immunization services (> 80% in all zones over four rounds)
- Strong visibility of vaccination teams and programme through aprons and support from posters and village announcers
- Local cadre of community mobilizers established in highest risk areas with plans to build capacity to deliver additional health messaging

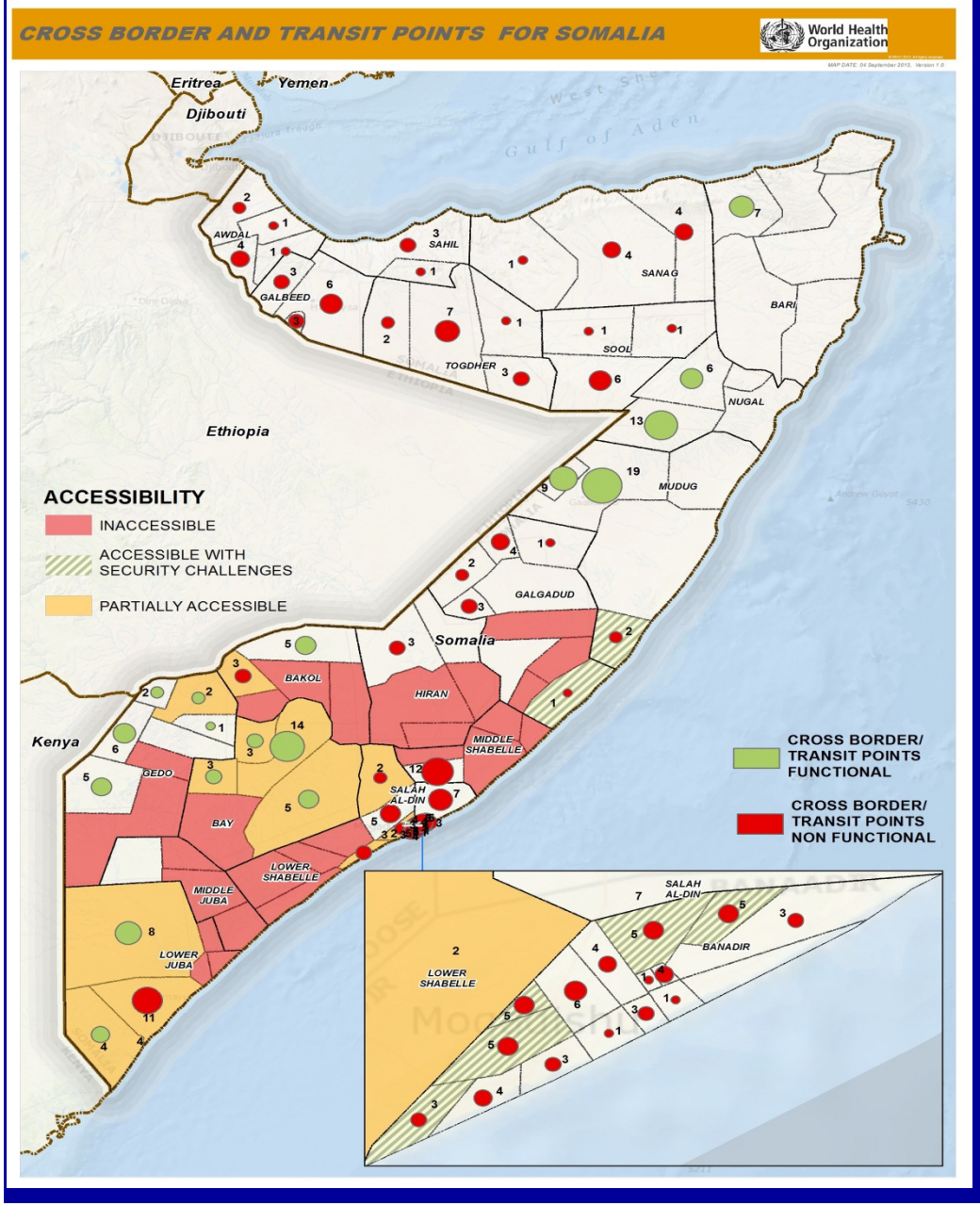
Social mobilization – field observations (2)

- Micro-plans do not have expected set of social data. Need social data and capacity for analysis to track communication strategies
- Limited pre-campaign monitoring of social mobilization activities (tracking mosque announcement, checklist, etc.)
- Mosques not adequately sensitized to deliver messaging (only 10% of caregivers reporting local mosque as a source of information about the campaigns)
- Appropriateness and capacity of community mobilizers needs review (some mobilizers are too young to approach women with children, selection is made by local authorities and do not follow recommended criteria)

IDP Camps: Field Observations

- Good quality of coverage in IDP camps
- Good acceptance of polio vaccination services
- Incoming population has high immunity gap – many are coming from inaccessible areas
- Opportunity for immunizing new arrivals

Inaccessible areas



Observations of two pronged strategy for inaccessible areas:

1. Permanent vaccination posts (PVPs)
   - Insufficient implementation in key central zone areas (only 4 / 107 planned sites)
   - Teams should be 2 persons
   - Existing teams not paid due to lack of clarity on funding source and procedures
   - Insufficient implementation in Somaliland , Puntland, central zones

2. Vaccination of expanded age group from health facilities
   - Efforts ongoing though limited progress to date

Permanent Vaccination Posts (PVPs)

Zone/ Country	Number PVP planned	Number PVP functional	Average number children immunized / week	Total number children immunized to date
Central (all age)	**107**	**4**	**1750**	**7500**
South (<10y)	**76**	**65**	**9417**	**27958**
Bakool		5	1295	1295
BAY		31	3712	14583
Gedo		14	1387	2775
Lower Juba		15	3023	9305
Somaliland	**54**	**0**	**0**	**0**
Puntland	**38**	**0**	**0**	**0**
Total	**275**	**69 (25%)**	**11167**	**35458**

Potential for over ~50,000 children per week if all PVPs implemented!

Is the AFP surveillance system sensitive enough to detect transmission?

AFP surveillance sensitivity

2013 (As of 24 August)	NP-AFP rate (annualized)	Adequate stool collection
Somalia	**3.4**	**86.9%**
Somaliland	4.1	95.2%
Puntland	5.8	95.2%
Central	2.9	82.6%
South	3.0	91.9%

AFP surveillance sensitivity by "accessibility"

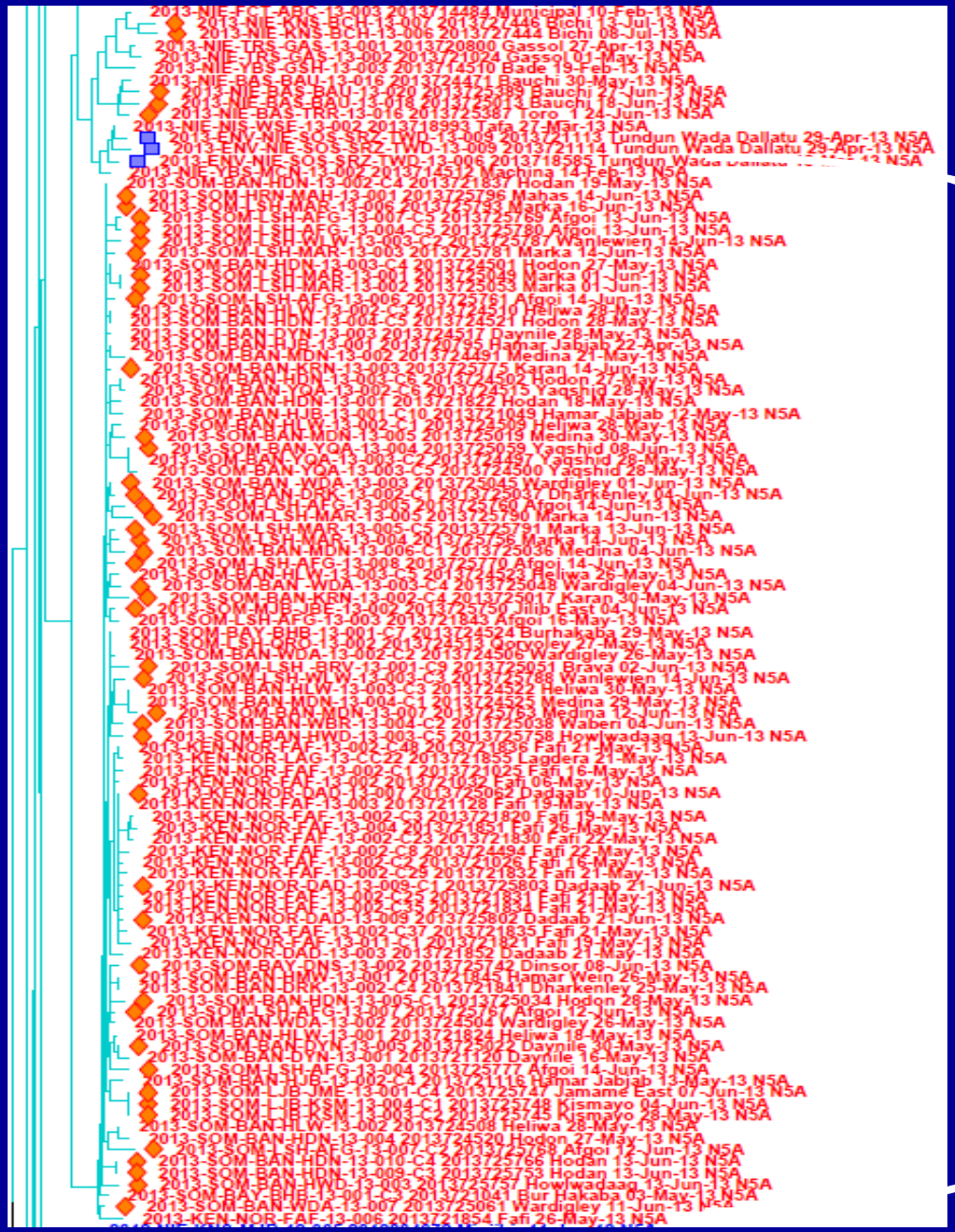
Somalia 2013	NP-AFP rate	Adequate stool collection
Inaccessible districts	2.7	87.1%
Accessible districts	3.8	86.8%

AFP surveillance sensitivity: NP-AFP rate by regions, quarterly

	2011				2012				2013	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
AWDAL	8	2	8	6	4	6	6	2	6	8
BAKOOL	5	3	3	5	3	3	3	3	3	5
BANADIR	4	3	1	2	3	3	1	4	1	5
BARI	3	6	6	0	11	3	5	5	3	5
BAY	5	5	2	0	2	3	1	3	1	3
GALBEED	3	3	1	4	1	3	1	4	3	4
GALGADUD	8	10	4	4	6	6	4	8	3	7
GEDO	3	3	5	3	2	2	3	3	3	4
HIRAN	6	4	2	2	4	2	2	4	2	10
LOWER JUBA	3	2	0	5	3	0	0	3	3	3
LOWER SHABELLE	3	1	3	2	1	2	2	3	0	1
MIDDLE JUBA	3	3	3	6	6	3	3	3	3	0
MIDDLE SHABELLE	5	2	3	2	0	5	2	0	1	2
MUDUG	8	5	5	3	8	5	3	5	8	10
NUGAL	6	11	0	6	16	5	11	5	10	
SAHIL	6	12	6	18	6	17	6	6	22	16
SANAQ	3	0	7	3	0	3	3	3		0
SOOL	4	8	0	8	4	4	8	4		12
TOGDHER	3	5	2	3	2	3	3	3		0
Grand Total	**4**	**4**	**3**	**3**	**3**	**3**	**2**	**3**	**2**	**4**

Focus on Lower Shabelle, Middle Juba, Sanaq and Togdher + inaccessible areas

Genetic sequencing analysis



Somalia Kenya sequences

No orphan viruses detected to date

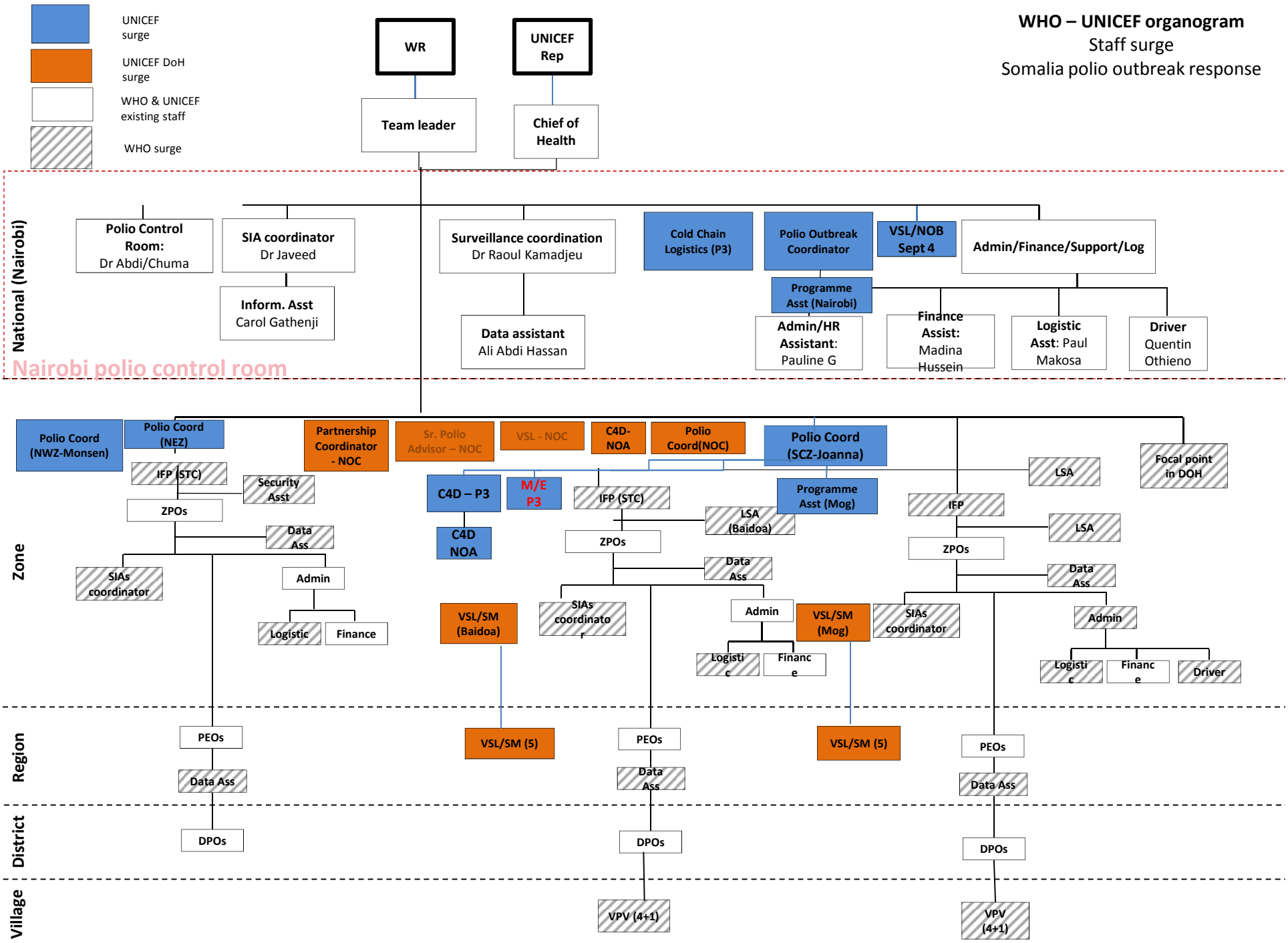
AFP surveillance timelines

	Mean (days)		Median (days)		Range (days)	
Onset of paralysis to notification	***2012***	***2013***	***2012***	***2013***	***2012***	***2013***
Somalia	4.0	6.7	3	4	1-18	1-43
Somaliland	3.0	3.4	2	3	1-8	1-10
Puntland	5.1	5.6	5	5	1-18	1-21
Central	3.9	7.8	4	5	1-10	1-43
South	4.5	5.4	4	4	1-17	1-29
Notification to 2d specimen						
Somalia	1.9	2.2	2	2	1-8	1-22
Somaliland	2.3	2.2	2	2	1-5	1-7
Puntland	2.2	2.1	2	2	1-8	1-8
Central	1.5	2.1	1	1	1-4	1-22
South	2.1	2.3	2	2	1-3	1-10
2d specimen to the laboratory						
Somalia	5.0	4.6	5	3	1-15	1-41
Somaliland	4.4	3.6	4	3	1-11	1-10
Puntland	4.3	2.7	4	2	2-10	1-10
Central	4.8	3.2	4	3	1-13	1-17
South	7.8	9.9	8	8	2-15	1-41

AFP cases 2012 = 148, 2013 = 344

No delays detected due to increased workload from outbreak

Are there sufficient resources available to stop the outbreak?


UNICEF surge
UNICEF DoH surge
WHO & UNICEF existing staff
WHO surge
WR
UNICEF Rep
Team leader
Chief of Health
WHO – UNICEF organogram
Staff surge
Somalia polio outbreak response
National (Nairobi)
Polio Control Room: Dr Abdi/Chuma
SIA coordinator Dr Javeed
Inform. Asst Carol Gathenji
Surveillance coordination Dr Raoul Kamadjeu
Data assistant Ali Abdi Hassan
Cold Chain Logistics (P3)
Polio Outbreak Coordinator
VSL/NOB Sept 4
Admin/Finance/Support/Log
Programme Asst (Nairobi)
Admin/HR Assistant: Pauline G
Finance Assist: Madina Hussein
Logistic Asst: Paul Makosa
Driver Quentin Othieno
Nairobi polio control room
Zone
Polio Coord (NWZ-Monsen)
Polio Coord (NEZ)
IFP (STC)
Security Asst
ZPOs
Data Ass
SIAs coordinator
Admin
Logistic
Finance
Partnership Coordinator - NOC
Sr. Polio Advisor – NOC
VSL - NOC
C4D-NOA
Polio Coord(NOC)
C4D – P3
M/E P3
C4D NOA
VSL/SM (Baidoa)
IFP (STC)
ZPOs
Data Ass
SIAs coordinator
LSA (Baidoa)
Programme Asst (Mog)
Admin
Logistic
Finance
VSL/SM (Mog)
Polio Coord (SCZ-Joanna)
IFP
ZPOs
Data Ass
SIAs coordinator
LSA
LSA
Focal point in DOH
Admin
Logistic
Finance
Driver
Region
PEOs
Data Ass
VSL/SM (5)
PEOs
Data Ass
VSL/SM (5)
PEOs
Data Ass
District
DPOs
DPOs
DPOs
Village
VPV (4+1)
VPV (4+1)

Adequacy of Human Resources

- International consultants were deployed to support the initial outbreak response and develop coordinated outbreak response plans

- While there has been progress, there is an urgent need to fill remaining positions
  - Field Security Officer (Mogadishu)
  - Data assistants

- Village polio volunteers yet to be engaged (field level)

Somalia Outbreak Surge Support

Staff Planned	Total	Vacant	Issue
WHO International	7	1	Need to extend into 2014 Security officer a priority
WHO Field Staff	37	37	Recruitment in process – long duration due to need for careful selection of local staff
UNICEF International/ National	14	5	Funding only available through December 2013
UNICEF National SM, M&E, Logistics	19	19	Planned and important but funding not available
WHO Polio Volunteers	220	220	Postponed due to outbreak demands (sensitive discussions needed at field level with communities)

Adequacy of Financial Resources

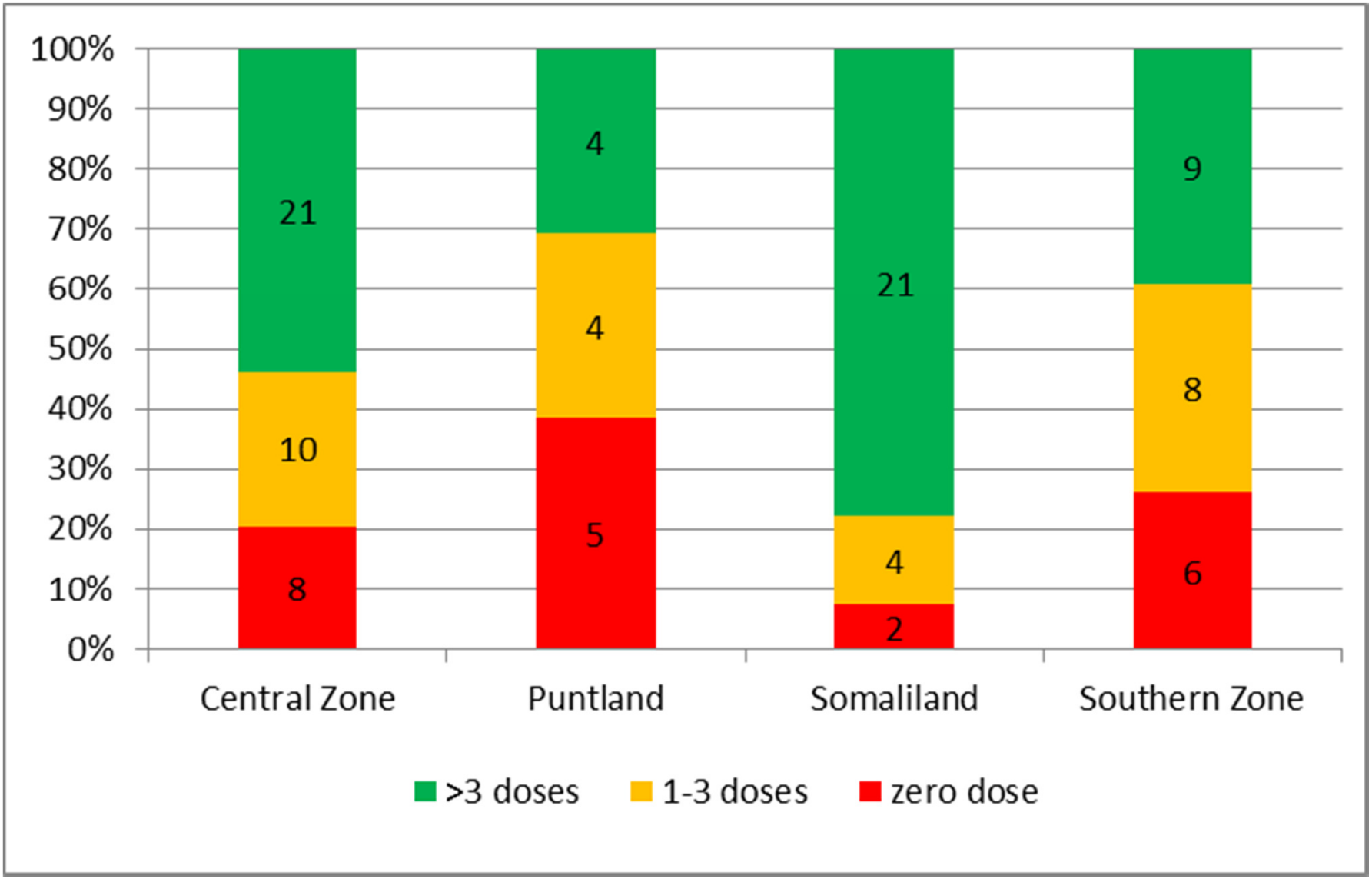
- Comprehensive budget plan was developed for 2013 and funding has been secured for all SIA and surveillance activities through December 2013
- A substantial funding gap remains for UNICEF surge (US$2.6m) and UNICEF support for October/November SIAs (US$1.14m)
- ESARO is leading regional donor outreach with support from WHO and UNICEF HQ to fill gap and source funds for activities and surge support in 2014 (5 Sep)

What are the risks to stopping the outbreak?

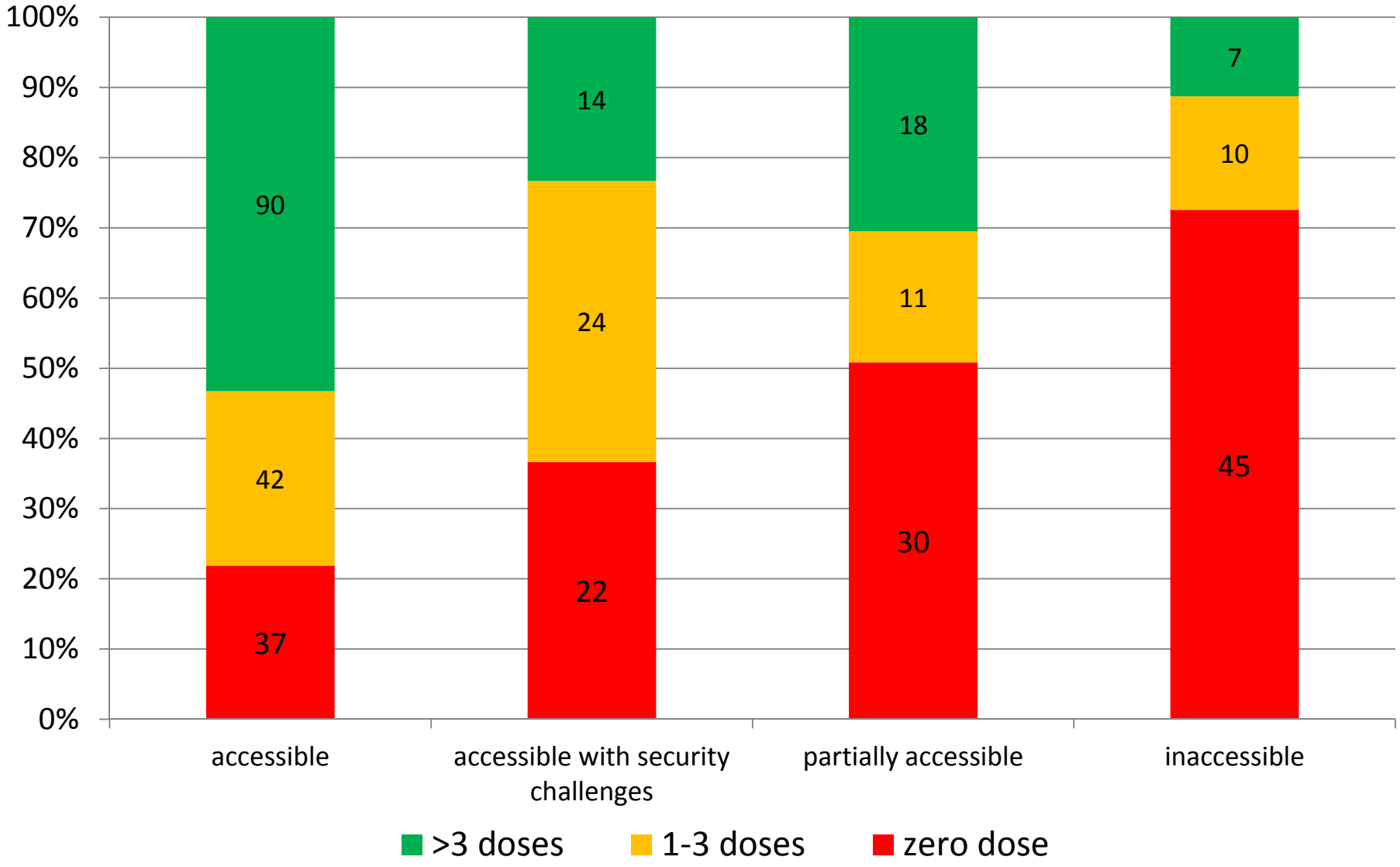
Risks

- Inaccessible areas:
  - ~1 million children < 10y unimmunized
- Accessible areas:
  - Continued gaps in SIA quality
  - Insufficient SIA data available to track progress
  - Overall population immunity is low, particularly in:
    - Central: Lower Shabelle, Banadir
    - South: Kismayo, Balad
    - Puntland: Bari, Nugal, Mudug
    - Somaliland: Togdher
- Possibility for deterioration of security which may further complicate operations

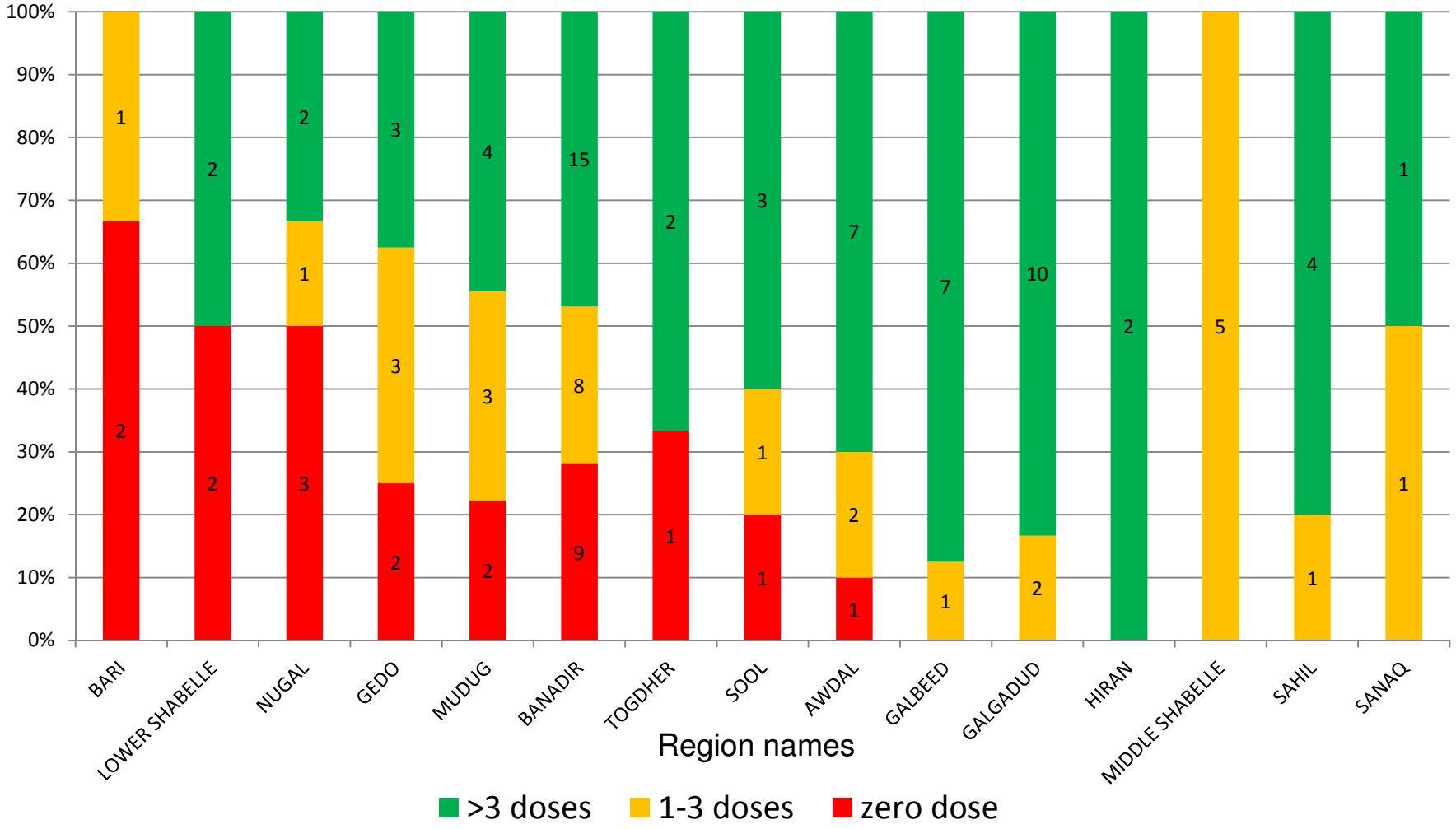
OPV status of non-polio AFP age 6-59m
Zones of Somalia, 2013



OPV status of non polio AFP age 6-59m
Districts of Somalia by access status, 2013



OPV status of non-polio AFP age 6-59m
Accessible districts within the regions of Somalia, 2013



Accessible districts within the regions of Bari, Lower Shabelle, Nugal, Gedo, Mudug, Banadir, Sool, and Awdal have immunity gaps that need to be addressed through increased campaign quality

WHO/UNICEF Immunization Coverage Estimate JRF-Somalia

	2012	2011	2010
BCG	37	39	39
DPT1	52	52	55
DPT3	42	41	45
OPV3	47	49	49
MSL	46	46	46

*** ~1 million un/under-immunized children (<9y) in inaccessible districts of South and Central Zones**

Conclusions

Conclusions (1)

- The response to the outbreak in the first 3 months has been fast, aggressive and flexible; however, some milestones in the outbreak response plan have been missed.
- There is significant risk that Somalia will not stop transmission within 6 months due to substantial under/un-immunized populations and therefore, outbreak response planning should be extended through June 2014.
- The AFP surveillance system is well functioning and sensitive enough to timely detect poliovirus circulation though vigilance is needed in areas that are difficult to access. There have been efforts to enhance AFP surveillance during the outbreak.

Conclusions (2)

- Routine polio population immunity as measured by the Joint Reporting Form (JRF) and immunity status of NP-AFP cases is low and concerning.
- Further gains can be made in controlling the outbreak through increased focus on improving campaign quality in accessible areas
- Expanded age group vaccination, Permanent Vaccination Points (PVPs), SIADs in newly accessible areas, and cross-border activities are key strategies for controlling the impact of inaccessible areas.
- A strong communication outbreak response plan was developed for Somalia with clear behavioral and communication objectives and an appropriate mix of strategies and activities.

Recommendations

Overarching Recommendations (1)

- Exemplary Government commitment to stopping polio transmission in Somalia should continue by declaring the current polio outbreak a national public health emergency
- The Somalia Outbreak Response Plan should be reviewed to ensure that the key strategies and activities not yet implemented are fully implemented by November 2013.
- Somalia must now begin longer term planning efforts to ensure enhanced SIA and surveillance activities can continue through to June 2014

Overarching Recommendations (2)

- An aggressive and flexible SIA campaign schedule must be maintained in Somalia until June 2014. Additional all age campaigns should be considered across the country as early as October 2013.

- Funding gaps in maintaining the current organogram structure through June 2014 should be raised with regional and HQ level management

Coordination

- Following each campaign, campaign reviews should be conducted to assess collected data and field observations and prioritize resources and supervision for future campaigns. The notes and findings of each level of campaign review should be shared with Nairobi.

- Weekly coordination meetings for both operations and communications in each zone should be officially established with notes and actions recorded.

- The national team should designate a cross border coordinator to support coordination with the HOA and implementation of cross-border recommendations within Somalia.

SIA Operations (1)

- Permanent Vaccination Post (PVP) strategy should be rapidly scaled to be operational by end September 2013 in:
  - all identified transit sites continuing to cover <10y
  - all IDP camps covering all age groups
- Conduct and document SIADs in newly accessible areas and IDP camps to boost immunity in these existing high risk populations
- A standard template for team micro-planning that incorporates social/communication components should be finalized and shared with all zones for implementation by October 2013.

SIA Operations (2)

- Micro-plan review should begin immediately by senior programme supervisors in highest risk areas as recommended in the Somalia Outbreak Response Plan – Zones should report monthly on areas where micro-plan reviews have been conducted

- The training package for the immunization workforce should be urgently reviewed. This training package should include elements on proper house and finger marking, re-visiting missed children and tracking refusals, effective micro-planning, social mapping, and supervision

SIA Operations (3)

- Post Campaign Independent Monitoring and Rapid Coverage Assessment should be expanded to all accessible districts from October 2013
- A standard set of campaign quality analyses should be developed and produced within 2 weeks of every SIA in order to track progress
- The programme should prioritize improving campaign quality in accessible areas through increased field supervisory visits from national and zonal level to ensure direct oversight of activities
- Standard SOPs should be developed for both Communication Announcers and Community Mobilizers to clarify their respective roles and objectives
- UNICEF should consider recruiting a social data analyst

Surveillance

- Focus should be given to improving active case search in hospitals and in reporting sites that border inaccessible populations
- A one day AFP sensitization training package should be developed and conducted at major hospitals, nursing schools and public health institutes before end 2013
- Village Polio Volunteers must be engaged and trained to support AFP surveillance in selected areas

Routine Immunization

- WHO and UNICEF should support the establishment of EPI services in all hospitals by end 2013

- Routine Immunization stock outs at regional, district and health facility level were identified by the assessment team. Stock out information collected weekly by DPOs should be shared with UNICEF for enhanced tracking and follow up of RI stock management and distribution

Human Resources

- Teams have been strengthened by deployment of international consultants and some national focal points. However, there is a an urgent need to finalize recruitment of security and national surge staff and village polio volunteers identified in the joint WHO/UNICEF organogram

- UNICEF should advertise and recruit for a Nairobi based SIA Coordinator responsible for overall coordination of UNICEF partnership responsibilities

The assessment team congratulates the Somalia team on a robust response to the outbreak and is confident that with continued effort the outbreak can be controlled.

Thank you