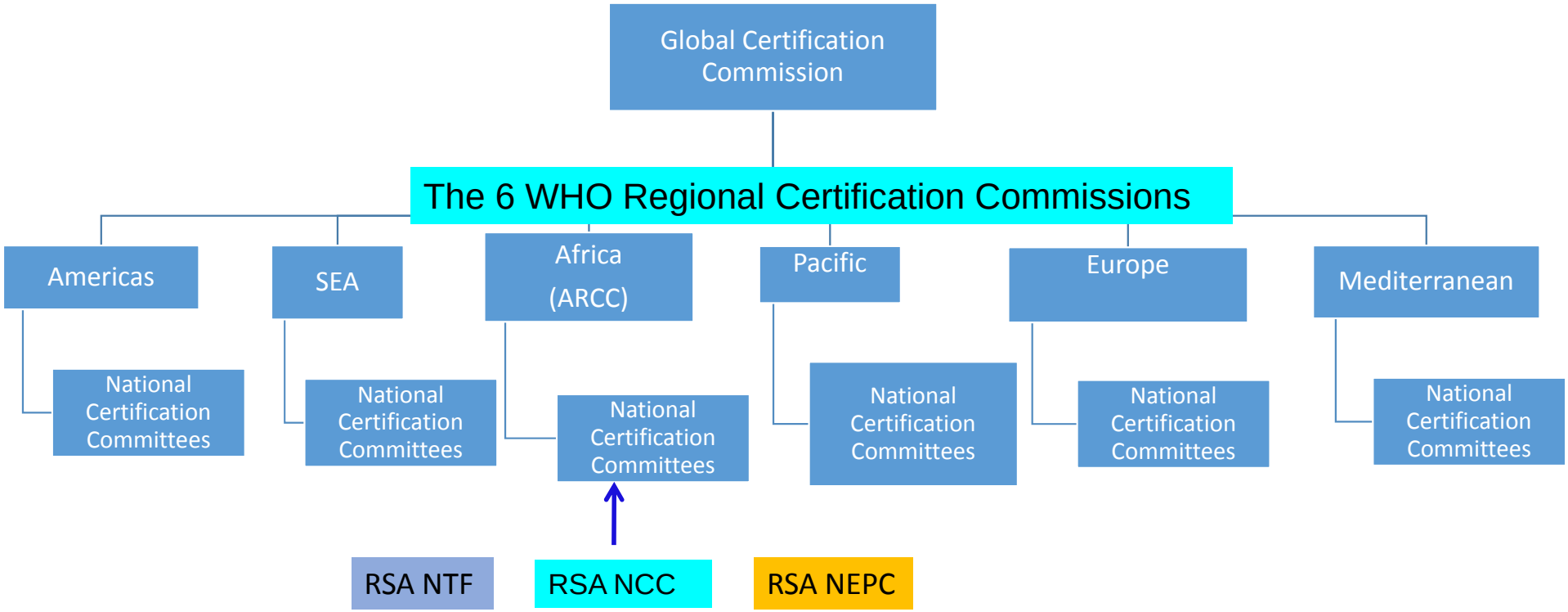
Maintaining a Polio-free Status in South Africa
three National Committees

KZN Polio Symposium, 11th March 2016

MJ Matjila: (NPEC Chair person)

Background(continued)

- Global Certification Commission (GCC) was established, in 1995 Director-General of WHO charged it with the following tasks:
  - Define the parameters and processes by which polio eradication will be certified,
  - Guide regions and countries in establishing their data collection processes;
  - Receive and review the final reports of Polio eradication from the Regional Certification Commissions (RCCs) and,
  - Issue a final report to the Director-General of WHO certifying that global polio eradication had been achieved


Global Certification Commission
The 6 WHO Regional Certification Commissions
Americas
SEA
Africa (ARCC)
Pacific
Europe
Mediterranean
National Certification Committees
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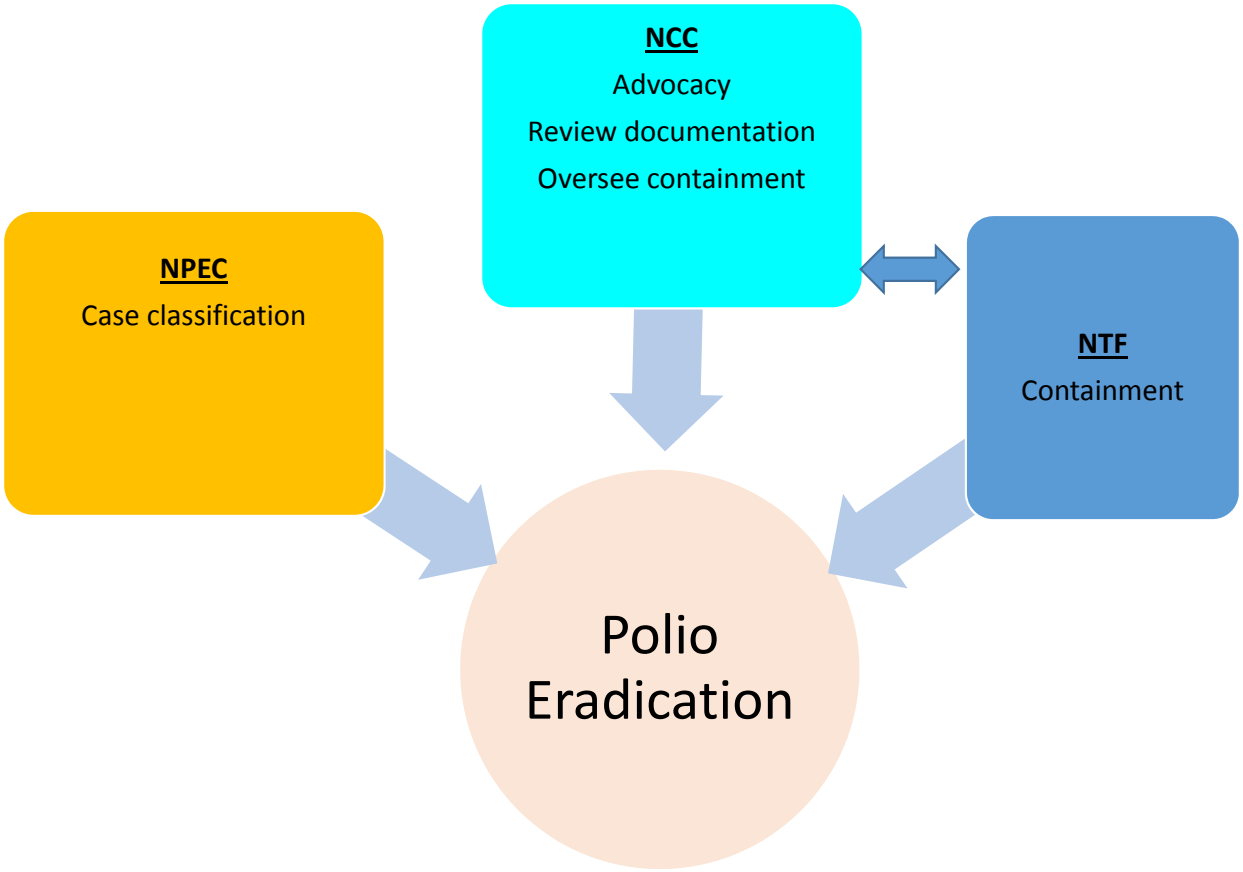
National Certification Committees
RSA NTF
RSA NCC
RSA NEPC

Overview of the three Polio Committees



What Is Polio Free Certification?

- A formal process for the certification of polio eradication.
- It is conducted on a regional basis by an Independent groups of experts designated at the global, regional, and country levels to conduct the process
- Each WHO Region will be considered for free polio certification only when:
  - All countries in the region demonstrate the absence of wild type polio virus transmission for at least 3 consecutive years and
  - in the presence of high quality certification standard surveillance.
- In addition, all facilities holding wild type poliovirus infectious and potentially infectious materials must have implemented bio-containment measures according to the Global Action Plan for laboratory containment of wild poliovirus.

Regional Polio Certification Commission

- RCCs are appointed by the Regional Directors of each WHO region and should include members of the GCC who are from the region (usually the RCC chairperson) as well as representatives of other WHO regions.
- RCCs have the authority to certify the eradication of indigenous wild poliovirus in the region after considering all necessary evidence, including the views of NCCs and results of field visits to countries,

Key Requirements For Certification - 1

- Before any country is declared ***polio-free***, there must be no WPV circulation for at least 3 years AND:
- All the 5 certification criteria are reached and sustained.
  - A Non-polio AFP rate of at least 2/100,000) in children aged less than 15 years
  - At least 80% stool adequacy for all reported AFPs cases *(i.e. 2 stools specimens collected 24 hours apart, within 14 days of onset of paralysis, and received by NICD in a good condition).*
  - At least 80% cases with late stools followed up
  - All stools tested in a WHO accredited laboratory (NICD)
  - At least 80% of routine reports are submitted timeously AND:
- In addition there must be Evidence that:
  - ✓Surveillance is of a quality that can detect importation of wild polioviruses should this occur
  - ✓That the country is ready to respond to importation of wild polioviruses if it occured (Realistic response plan)
  - ✓Polio Imunization coverage levels are consistently at least 90% at district & sub-district levels (for all sub-populations)

Polio Certification At Country Level

- Though RSA has not reported WPV since 1989, it cannot be certified to have eradicated polio, but it must continue to maintain polio-free status, high polio immunization coverage, a high quality AFP surveillance system, as well as optimal polio containment measures.
- Each country must appoint three committees for polio eradication
  - National Polio Expert Committee (NPEC): classifies AFP cases
  - National Task Force (NTF): for containment of wild poliovirus in laboratories and
  - National Certification Committee (NCC): for preparation of the country documentation to the ARCC

NCC : Composition

- A minimum of 5 members with following expertise:
  - ✓Public health
  - ✓Paediatrics
  - ✓Epidemiology
  - ✓Virology
  - ✓Any medical related discipline/ leading scientist
  - ✓Chairperson of the NTF or nominee.
- Replacement of any member should be notified to ARCC through the Regional Office

NCC Terms Of Reference - 1

- To guide the country in the preparation of annual progress reports:
    - Complete country documentation
    - Presentation Annual Updates
- To review critically COUNTRY documentation BEFORE referring to ARCC
- To conduct site visits to verify data/situations of concern
- To review and understand why NPEC has classified cases as COMPATIBLE

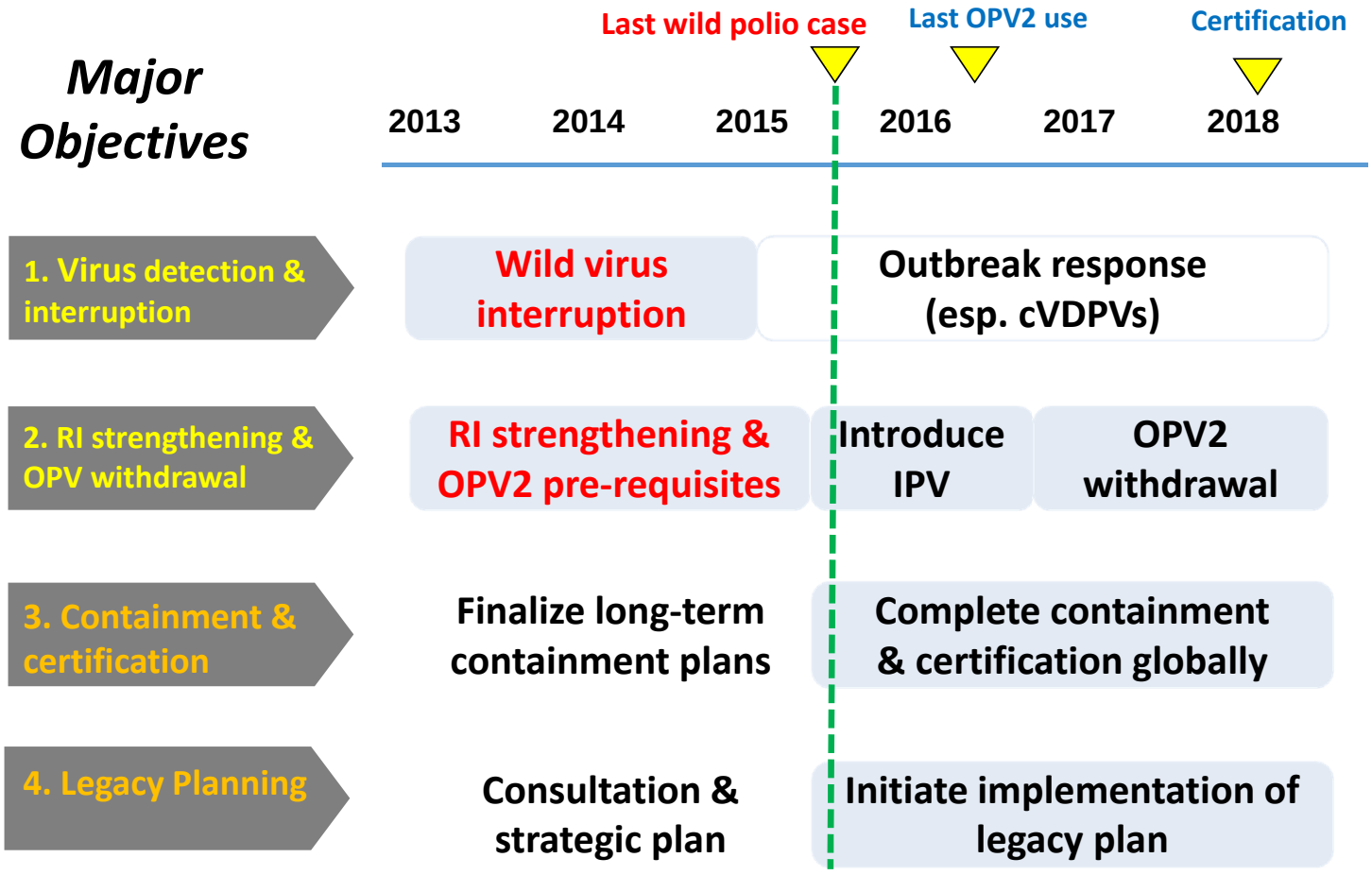
NCC Of Reference (continued)

- To recommend additional corrective measures or collection of data.
- Regularly submit reports on progress as well as UNRESOLVED issues to ARCC
- Oversee the implementation of Containment activities.
- Ensure that a realistic preparedness plan to respond to any wild poliovirus importations is in place.

Role of NCC in Containment - 2

- Act as a facilitating body for the functioning of the NTF in particular
- Carry out advocacy with government to provide the required political support for the process
- Advocacy with laboratories, research institutions and other relevant institutions that may habour materials that fall under the definitions of required materials for containment.
- Advocacy across ministries that are sensitive to external visits (potential importations)
- Play a leading role in adequately informing all the relevant authorities of the goals of containment as well as the necessity for it.

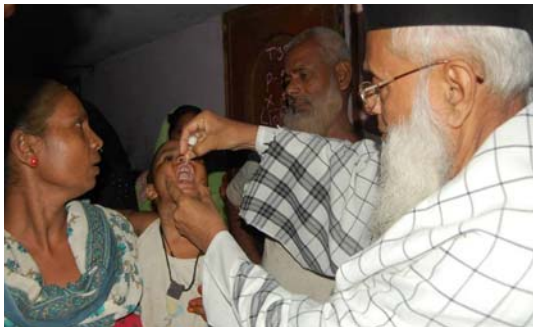
Polio Eradication & Endgame Strategic Plan 2013-2018



Focus on vulnerable/underserved populations

Tracking and vaccination of newborns

Immunization of underserved communities



Immunization of children in transit

- 8 million children in transit immunized in India each round
- 100,000 of these in running trains

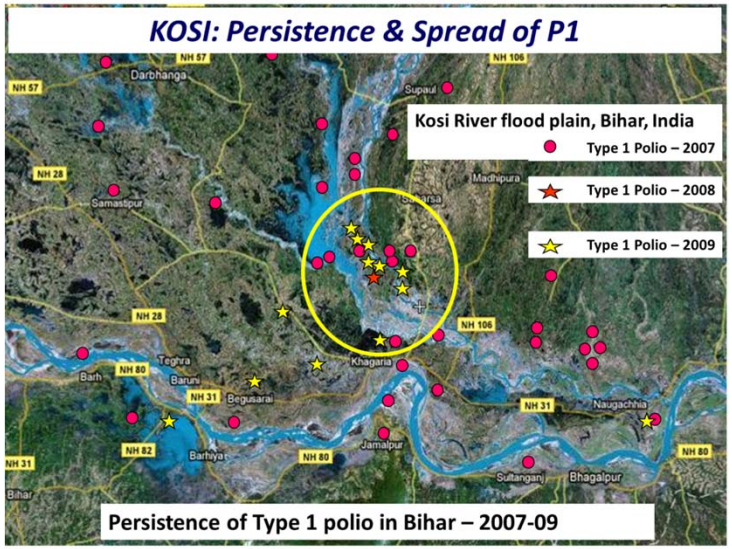
Religious congregations

2 million children vaccinated in congregations each year

Intense focus on migrants and mobile populations

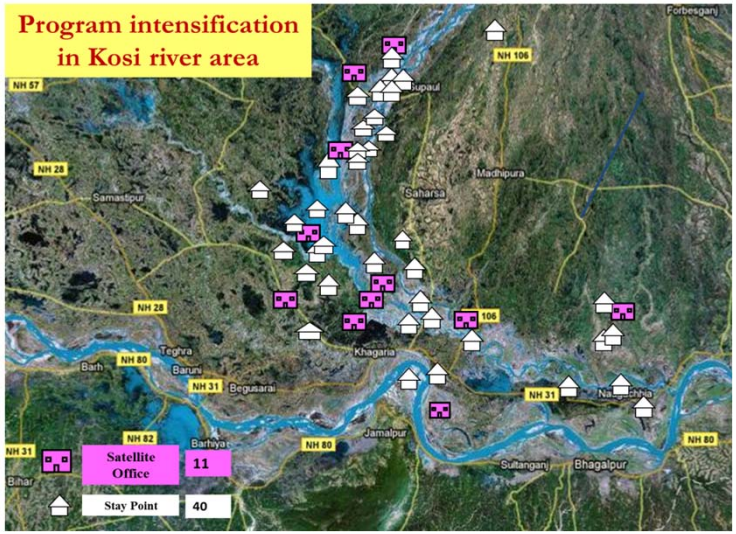
> 250,000 settlements with migrants identified and covered

KOSI Riverine area



Increased field presence led to:

- Better planning
- Objective Training
- Intensive monitoring
- Better implementation of strategies



Acute Flaccid Paralysis

AFP It is NOT a Specific Disease,

it is NOT Polio,

But A SYNDROME

that may be caused by

a number of conditions

that include Polio.

What Clinicians and the EPI Program Do

1. Detect AFP and Diagnose AFP:
   - Neurological assessment (and recording) of **Power**, **Tone & Reflexes**
   - Complete a CIF and a Neurological assessment Form.
2. Investigate the suspected AFP
   - Collection of 2 stool specimens 24 - 48 hours apart within 14 days of disease onset
   - Send stool specimens to NICD packed on ice
3. Report the AFP: Complete AFP Case Investigation Form and GW 17/5 Form
4. **EPI at National Office:** Compile a Line List of all AFP cases detected in the country.

   Provincial EPI does same.
5. National EPI -- Present AFP cases to NPEC for classification.

Responsibilities of NPEC

1. Make the final classification of AFP cases
   - *Not 100% accurate, reliant on best possible clinical diagnosis*
2. Monitor the quality of AFP surveillance and laboratory performance;
3. Monitor the progress towards polio eradication;
4. Provide technical advice for the polio eradication initiative.

Composition of NPEC

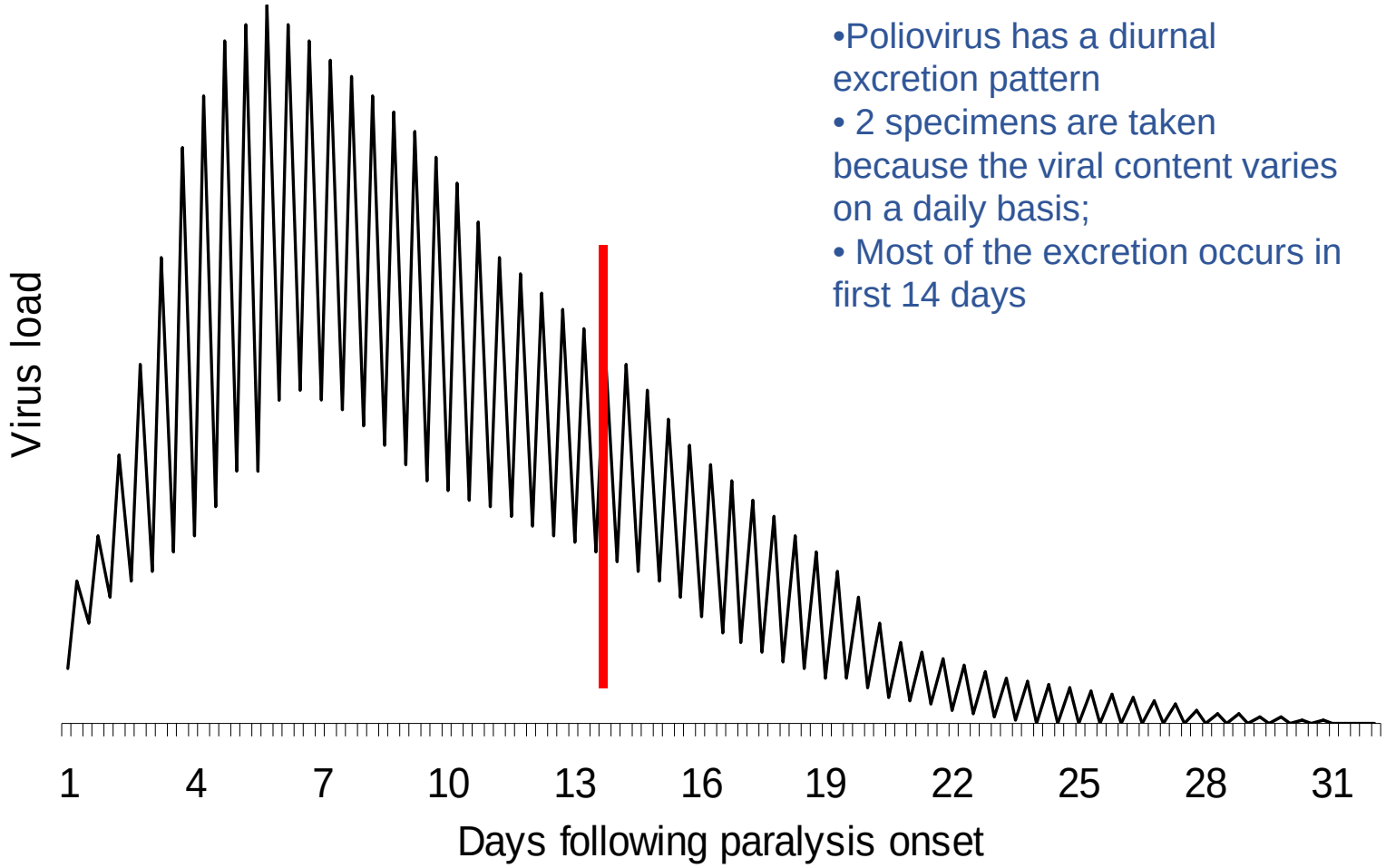
- 3 – 5 members
- Members are:
  - Epidemiologist
  - Virologist
  - Paediatrician(s)* – Preferably Paediatric Neurologists
  - Clinician
  - Public health experts
- Cannot be members of NCC at the same time
- Supported by the Secretariat

* = Where possible, NPEC must have at least one member in this category to function effectively.

Classification: AFP Cases

- NPEC members meet every 3 months - no AFP case should remain unclassified > 90 days past onset of paralysis;
  - By end of 90 days the NPEC must have all AFP cases classified
- 3 members of the committee form a quorum
- Where membership has changed, - secretariat arrange orientation of new members
- Secretariat assist with logistics & ensure smooth functioning of the committee

Why 2 stools within 14 days of onset?



- Poliovirus has a diurnal excretion pattern
- 2 specimens are taken because the viral content varies on a daily basis;
- Most of the excretion occurs in first 14 days

Polio Compatibles

NPEC classifies the AFP case as compatible if Surveillance system failed to :

- Detect an AFP case within 14 days from onset of paralysis and
- Collect adequate stool specimens from the AFP case notified

OR

- A case is lost at 60 day follow up
- Clinical notes are not helpful to conclude the classification
- Death before samples are collected not allowing patient clinical review

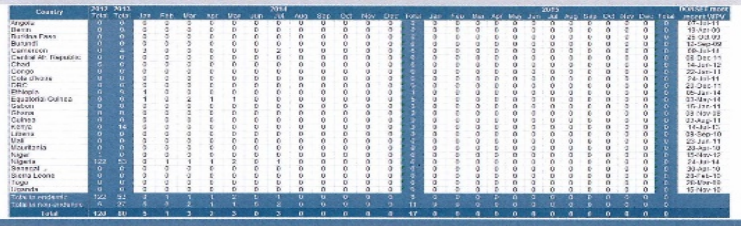
Surveillance Performance for 2015 (weeks 1-52)

Province	GAP District	Population	<15 yrs Population	Target AFP Cases	Total AFP Cases reported	Non-Polio AFP Cases <15yrs	Non-Polio AFP Rate < 15yrs	AFP Cases with 2 adequate stools 24hr apart within 14 days	AFP Stool Adequacy (%)
Eastern Cape Province	A Nzo DM	835899	301726	12,06904	6	6	2,0	5	83
	Amathole DM	895463	269612	10,78448	10	10	3,7	6	60
	Buffalo City MM	761501	229061	9,16244	13	12	5,2	12	92
	C Hani DM	806381	283478	11,33912	10	10	3,5	7	70
	Joe Gqabi DM	356819	120678	4,82712	2	1	0,8	1	50
	N Mandela Bay MM	1195603	336721	13,46884	12	12	3,6	10	83
	O Tambo DM	1374092	498847	19,95388	28	28	5,6	19	68
	Sarah Baartman DM	467046	130338	5,21352	5	5	3,8	5	100
	Provincial Total	**6692804**	**2170461**	**86,81844**	**86**	**84**	**3,9**	**65**	**76**
KwaZulu-Natal Province	Amajuba DM	522638	174586	6,98344	6	5	2,9	5	83
	eThekwini MM	3520558	963624	38,54496	19	18	1,9	17	89
	iLembe DM	485309	178497	7,13988	7	7	3,9	6	86
	Harry Gwala DM	651445	196118	7,84472	7	7	3,6	6	86
	Ugu DM	750215	264219	10,56876	10	9	3,4	7	70
	uMgungundlovu DM	1087086	321593	12,86372	11	11	3,4	10	91
	Umkhanyakude DM	649644	243945	9,7578	10	9	3,7	8	80
	Umzinyathi DM	522804	186532	7,46128	4	4	2,1	4	100
	Uthukela DM	695671	240302	9,61208	8	8	3,3	6	75
	Uthungulu DM	958267	354331	14,17324	9	8	2,3	5	56
	Zululand DM	844531	301261	12,05044	11	9	3,0	8	73
	Provincial Total	**10688168**	**3425008**	**137,0003**	**102**	**95**	**2,8**	**82**	**80**
Mpumalanga Province	Ehlanzeni DM	1751531	620876	24,83504	28	28	4,5	24	86
	G Sibande DM	1076612	300467	12,01868	16	16	5,3	13	81
	Nkangala DM	1407465	364056	14,56224	23	21	5,8	21	91
	Provincial Total	**4235608**	**1285399**	**51,41596**	**67**	**65**	**5,1**	**58**	**87**

Performance of AFP Surveillance in AFR, 2015 by country

Country	<15 yrs pop (million)	AFP in database	Annualized Non-polio rate	% cases with 2 stools within 14 days	Compatible	Confirmed WPV (Lab Data)	Pending cases 90 days after onset
Angola	10.4	458	4.4	96%	0	0	2
Burundi	4.0	56	1.5	91%	0	0	4
Cameroon	9.1	613	6.7	86%	0	0	1
Central African Republic	1.9	77	3.7	86%	7	0	4
Chad	6.6	435	6.5	93%	3	0	21
Congo	2.1	116	5.5	89%	0	0	1
Equatorial Guinea	0.3	9	3.0	56%	0	0	0
Gabon	0.6	61	7.6	87%	0	0	10
DRC	39.1	2095	5.2	89%	61	0	11
S.T. & Principe	0.1	1	1.0	100%	0	0	1
Central	74.4	3823	5.2	89%	71	0	55
Algeria	10.6	177	1.7	57%	0	0	43
Benin	4.3	198	4.6	97%	0	0	48
Burkina Faso	8.3	280	3.4	91%	0	0	5
Cape Verde	0.2	2	0.5	150%	0	0	0
Cote d'Ivoire	9.4	362	3.7	91%	0	0	28
Gambia	0.8	46	5.8	96%	0	0	0
Ghana	11.9	346	2.7	86%	19	0	50
Guinea	5.3	129	2.3	87%	4	0	60
Guinea-Bissau	0.8	15	1.9	80%	0	0	14
Liberia	1.7	22	1.3	95%	0	0	0
Mali	8.1	243	3.0	86%	0	0	0
Mauritania	1.4	53	3.9	95%	0	0	0
Niger	8.2	221	2.7	88%	0	0	72
Nigeria	83.0	13893	16.7	99%	23	0	22
Senegal	6.4	184	2.9	85%	0	0	28
Sierra Leone	2.8	36	1.3	81%	0	0	33
Togo	2.7	91	3.4	89%	0	0	0
IST West	165.9	16288	9.8	97%	46	0	403
Botswana	0.6	23	3.7	91%	0	0	1
Comoros	0.3	2	0.6	50%	0	0	2
Eritrea	1.7	61	3.6	95%	0	0	58
Ethiopia	39.7	1178	2.9	93%	1	0	5
Kenya	17.1	622	3.6	86%	0	0	26
Lesotho	0.7	13	2.0	100%	0	0	0
Madagascar	10.5	511	4.8	84%	0	0	171
Malawi	7.1	124	1.6	78%	6	0	10
Mauritius	0.3	6	1.8	100%	0	0	0
Mozambique	11.0	322	2.8	81%	5	0	42
Namibia	0.9	25	2.2	88%	1	0	2
Rwanda	5.0	176	3.5	98%	0	0	4
Seychelles	0.1	0	0.0			0	
South Africa	15.4	500	3.1	77%	0	0	14
South Sudan	7.8	323	4.1	96%	0	0	11
Swaziland	0.4	12	2.9	92%	0	0	0
Tanzania	20.9	795	3.8	96%	0	0	37
Uganda	17.2	574	3.2	90%	0	0	21
Zambia	8.7	235	3.5	86%	0	0	0
Zimbabwe	5.9	197	3.2	92%	7	0	45
IST South/East	161.396	5698	3.3	88%	20	0	452
Regional total	409.676	25909	6.3	94%	137	0	910

Monthly distribution of wild poliovirus cases from 2012 - 2015



Global Progress in the Certification of Polio-free Status

	WHO Region	Year in which Region Certified as Polio Free
1	WHO Africa Region	?
2	WHO Region of the Americas	1994
3	WHO South East Asia Region	2014
4	WHO European Region	2002
5	WHO Eastern Mediterranean Region	?
6	WHO West Pacific Region	2000

Even though the last WPV in RSA was in 1989 & the last reported iVDPV was in 2011.

High-risk Population Groups in RSA

1. **Remote areas, difficult to access as they are in deep rural, mountainous areas with poor or no roads and thus have isolated communities**
   - Eastern Cape: Amatole, Alfred Nzo Districts; Mbashe, Nyandeni, Qaukeni and Mnquma Sub-Districts in OR Tambo District
   - KwaZulu-Natal: iLembe, uMzinyathi, Harry Gwala District, Amajuba, uMkhanyakude, Umhlaba uyalingana, and Zululand DM
   - Limpopo: Greater Sekhukhune and Vhembe
   - Northern Cape: ZF Mgcawu and Namakwa

2. **Inner City slums, Informal settlements, nomads and high mobility groups:**
   - Mainly populations with foreigners, poor hygiene sanitation and water, living in abandoned buildings and mine dumps: with no fixed addresses
   - Gauteng: Mainly in Johannesburg, Tshwane and Ekurhuleni, but also West Rand and Sedibeng
   - Kwazulu-Natal: Durban Inner City
   - Western Cape: City of Cape Town
   - In all cities, towns, villages and even rural areas throughout South Africa

3. **Farm areas**: **Farmers may not release workers to take children for routine health services:**
   - All provinces are affected by farming areas mainly: Western Cape, Free State, Limpopo and Mpumalanga.

4. **Provinces bordering neighbouring countries:**
   - Eastern Cape and Free State sharing borders with Lesotho,
   - KwaZulu-Natal with Lesotho, Mozambique and Swaziland
   - Limpopo with Botswana, Mozambique and Zimbabwe
   - Mpumalanga with Swaziland and Mozambique
   - Northern Cape with Namibia and Botswana

Context and Framework of Polio Eradication

- 68th World Health Assembly Resolution, May 2015
  - Interrupt WPV transmission
  - Achieve and maintain certification standard-surveillance
  - Introduce IPV before the switch tOPV/bOPV in April 2016
  - Ensure that polio assets, lessons learnt and knowledge acquired are applied to support other national health priorities
- 25th Summit of African Union Declaration on Polio Eradication:

ASSEMBLY OF THE UNION
Twenty-Fifth Ordinary Session
14 – 15 June 2015
Johannesburg, SOUTH AFRICA

Our Historic Legacy To Future Generations"

POLIO GLOBAL ERADICATION INITIATIVE

EVERY LAST CHILD

AFP Case Neurological Assessment Form

Annex 2.4 AFP Case Neurological Assessment Form

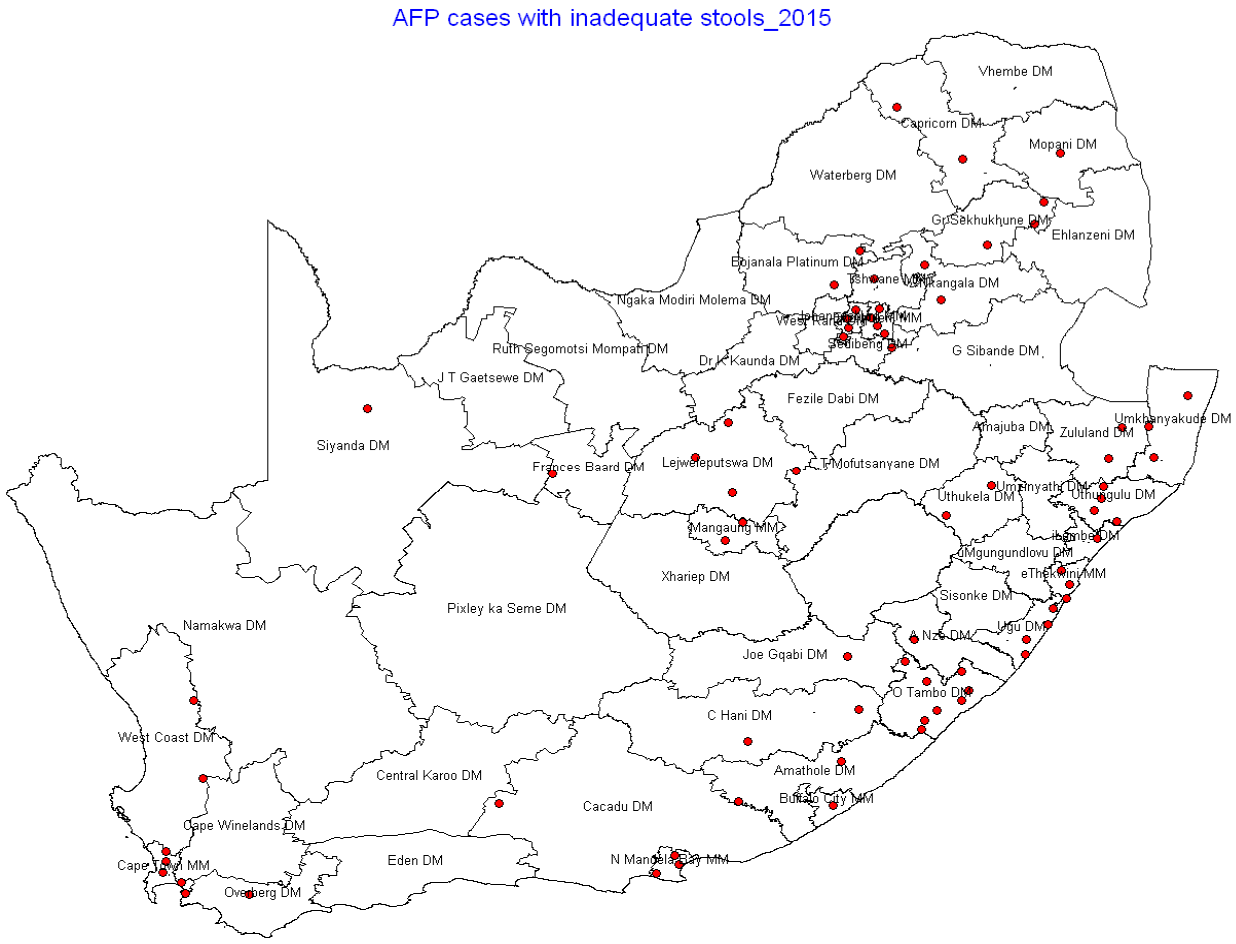
NEUROLOGICAL ASSESSMENT FORM FOR ALL ACUTE FLACCID PARALYSIS (AFP) CASES

1	EPID number	SOA--_____--_____--_____--_____ (Country Province District Year Case number)
	IDENTIFICATION	
2	Province	
3	District	
4	Name of AFP case	
5	Date of Birth	
6	Onset of paralysis	
	NEUROLOGICAL EXAMINATION	
6	Glasgow Coma Scale	Eye Opening (5) ; Verbal Response (5) ; Motor Response (5) ; SCORE (15)
7	Power (0-5) 0 = No movement 1 = Flicker 2 = Gravity eliminated 3 = Against gravity 4 = Just below normal 5 = Normal for age	Upper Limb: Right, Left; Lower Limb: Right, Left
8	Tone (Normal/Increased/decreased)	Upper Limb: Right, Left; Lower Limb: Right, Left
9	Reflexes (0-4) 0 = No reflexes 1 = Decreased 2 = Normal 3 = Brisk 4 = Brisk with clonus	Upper Limb: Right, Left; Lower Limb: Right, Left
10	Sensation (intact/loss distribution/level)	
11	Bowel control/continence (normal/abnormal)	
12	Bladder control/continence (normal/abnormal)	
13	Cerebellar signs (present/none)	

Name of examining Dr:_____ Date of examination:_____

Contact details of examining Dr:_____ Signature of examining Dr:_____

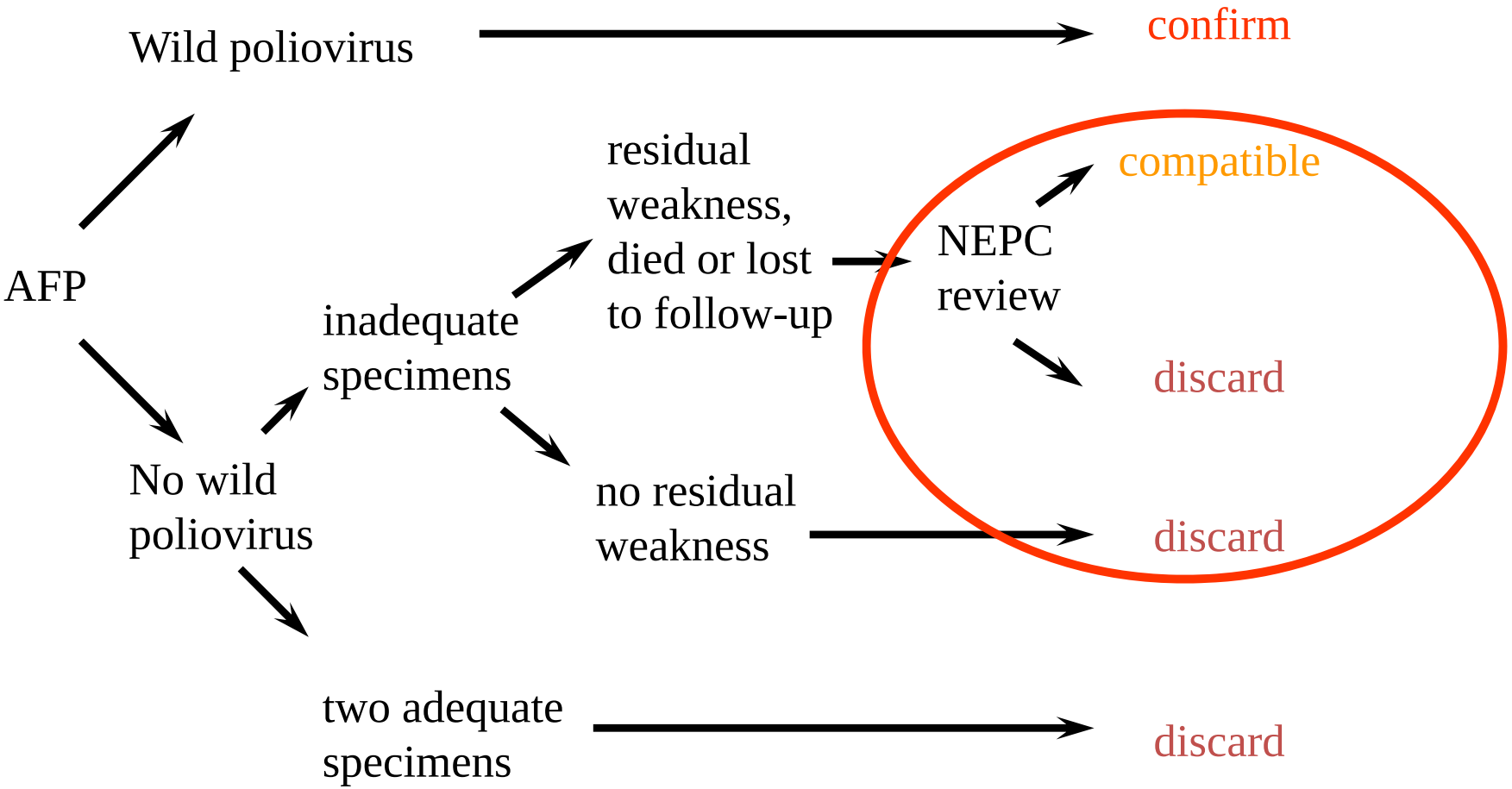
AFP Cases with Inadequate Stool in 2015



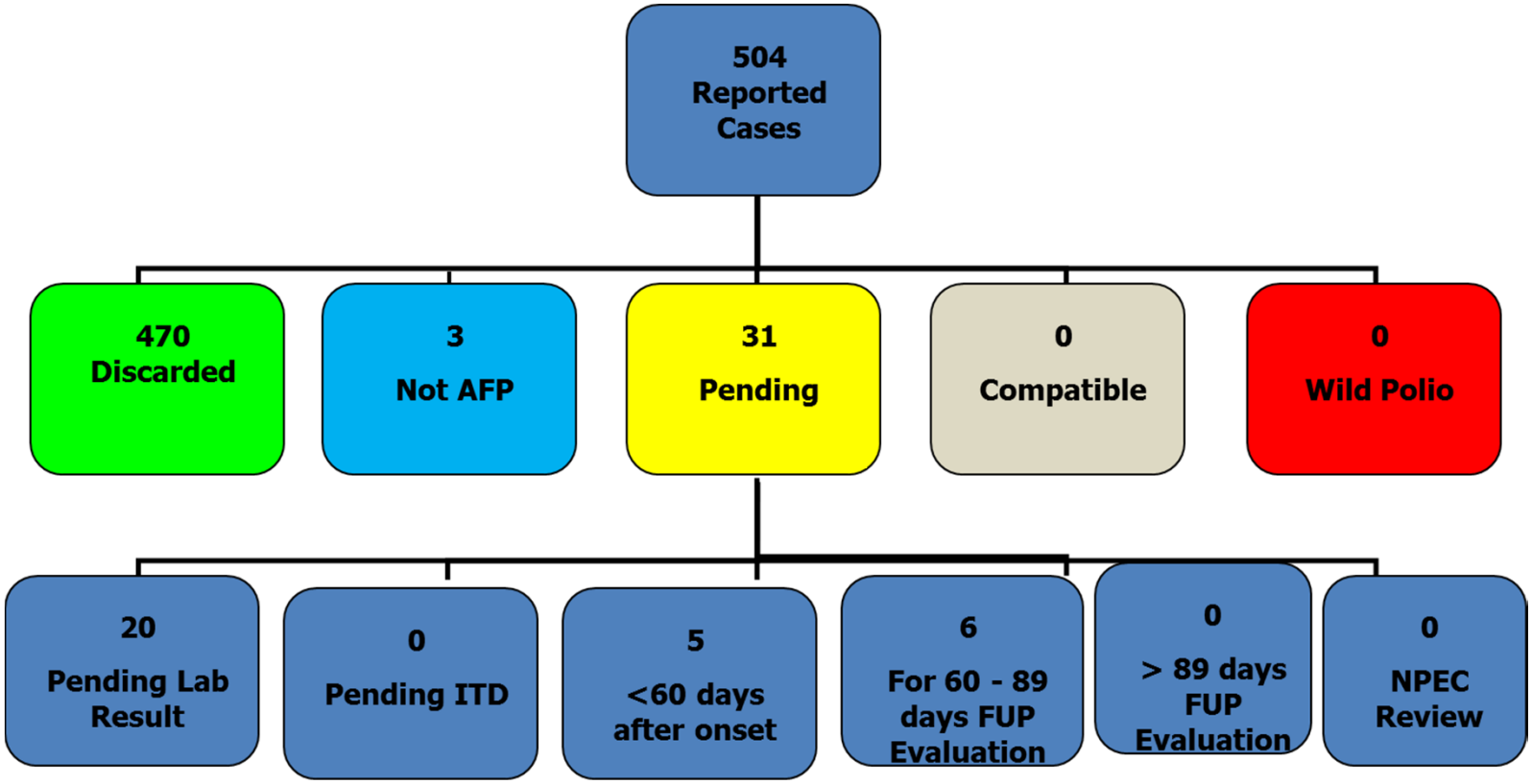
Case classification

Status	Classification	Circumstances/Conditions
Final	Confirmed wild type	If WPV is confirmed in stools by NICD
	Confirmed vaccine associated	If VDPV is confirmed in stools by NICD
	compatible	If there's inadequate stools, paralysis remains after 60 days of follow-up, the clinical picture is consistent with polio and no sufficient clinical records to suggest most probable alternative clinical diagnosis. **Occurence of such cases indicates failure of surveillance in that district.**
	discarded	If 2 adequate but negative stools, Inadequate stools but clinical records indicate alternative diagnosis, clinical picture not consistent with polio, OR full recovery form paralysis on 60day follow-up,
	denotified	Not an AFP
Pending	Inadequate information	
	60 day follow up not yet done	

Virological Classification of AFP Cases



Example of AFP case Classification



Lab Survey & inventory (LS2)

- **Survey all biomedical labs to identify those with WPV infectious materials or potential WPV infectious materials and encourage the destruction of all unneeded materials;**
- **Develop an inventory of labs that retain such materials and report to the ARCC;**
- **Instruct labs retaining such materials to institute enhanced bio-safety level-2**
- **Plan for global certification**

Sectors with Labs that may harbour WPV or Potentially Infectious Materials

Sector	Institution	Laboratory
Health	Biological Standards	Virology
Education	Research Centers	Bacteriology
Defense	Universities	Parasitology
Environment	Environmental	Gastroenterology
Agriculture	Hospitals/Clinics	Pathology
Science/Tech.	Military	Mol. Biology
Others	Vaccine producers	Nutrition
	Public Health labs	Genetics
	Others	Veterinary
		Medical

AND WHEN AFRICA IS FREE OF POLIO, WE SHALL CALL A BIG PARTY

Thank You