

Clinicians Sensitization

ACUTE FLACCID PARALYSIS AND MEASLES SURVEILLANCE

28 JULY 2024



GAUTENG
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

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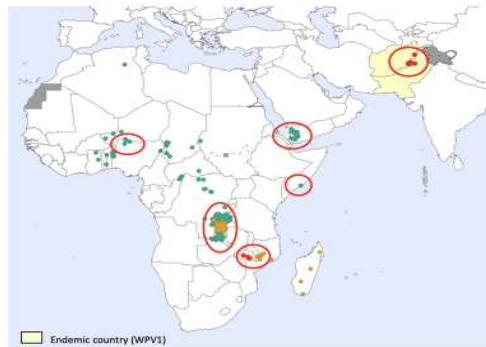
PRESENTATION OUTLINE

- Disease surveillance and objectives
- Progress Polio Eradication .
- SA AFP targets
- AFP surveillance and GP performance
- Measles surveillance and GP performance

Progress in polio eradication 1988 - 2023



1988



2023

1988: WHA

GPEI Resolution

350 000 cases

125 countries

Status as at 11 July 2023:

6 WPV Type:

5 cases from Afghanistan & 1 from Pakistan

2 endemic countries

Afghanistan & Pakistan

GOAL TO POLIO ERADICATION

RISK

- As long as there is Wild Polio Virus
- Circulating anywhere in the world,
- NO COUNTRY is safe from IMPORTATION!!!

Immunity gaps in the population increase the risk

- Fully immunized population
- Zero dose children

What are our risks of polio here in RSA?

- Polio could occur as
 - Imported wild-type polio
 - Imported cVDPV
 - Transmitted iVDPV
- If imported polio will spread if
 - Vaccination coverage is low
 - Surveillance for Acute Flaccid Paralysis (AFP) is inadequate

Polio Eradication Strategy 2022-2026

The Global Polio Eradication Initiative (GPEI) in the 2022-2026 Polio Endgame strategy is for countries to achieve polio-free certification. SA had its last Polio case in 1989 and received initial Polio free status in 2006. With annual progress reports submitted to ARCC (African Regions Certifications Committee) Between 2015-2017 a decline in immunization coverage of below National target of 80% and AFP Surveillance and stool adequacy rates of below 80% reflected poor AFP case reporting and investigation .

The ARCC raised concern and the country's Polio free status was withdrawn in December 2017.

Following efforts by the Country to address the gaps in Immunization coverage, stool adequacy, AFP Surveillance the country regained its **Polio free certification in September 2019**

South Africa regains polio-free status: Processes involved and lessons learnt

J C Y Nyasulu,^{1,2} PhD; R Maphoto,³ MMed; M G S Kamupira,⁴ PhD; N Msomi,⁵ PhD

¹ Division of Community Paediatrics, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa

² AFRIQUIP, Health Systems Strengthening, Johannesburg, South Africa

³ Child, Youth and School Health, National Department of Health, Pretoria, South Africa

⁴ World Health Organization, Pretoria, South Africa

⁵ Department of Virology, School of Laboratory Medicine and Medical Sciences, University of KwaZulu-Natal, Durban, South Africa

Corresponding author: J C Y Nyasulu (julietnyasulu@gmail.com)

Global Polio Eradication Initiative

Global Polio Eradication Initiative is an initiative created in 1988 just after the World health assembly resolved to eradicate Polio led by WHO at the time there were 125 countries with endemic polio . Wild Poliovirus types 2 and 3 (WPV2 and WPV3) were declared eradicated in 2015 and 2019, respectively .

The Polio Eradication Strategy 2022-2026 offers a comprehensive set of actions that will position the GPEI to deliver on a promise and commitment to eradicate Polio .

Global Polio Eradication Initiative(GPEI)

- GOAL 1 .

Consistent global implementation of Surveillance standards measured by monitoring the percentage of Districts achieving a non-polio AFP (NPAFP) reporting rate of $>2/100000$ ($>4/100000$ SA) .

GOAL 2.

Increased speed of detection and precision of surveillance system demonstrated through at least 80% of cases with adequate stool sample .

Why AFP surveillance?

- Detecting; notifying and investigating ALL AFP cases is the only way to detect polio or to exclude polio
- Acute Flaccid Paralysis is a category 1 legally notifiable medical condition in South Africa (and globally)
- Detecting and notifying all AFPs results in a sensitive surveillance system

AFP surveillance

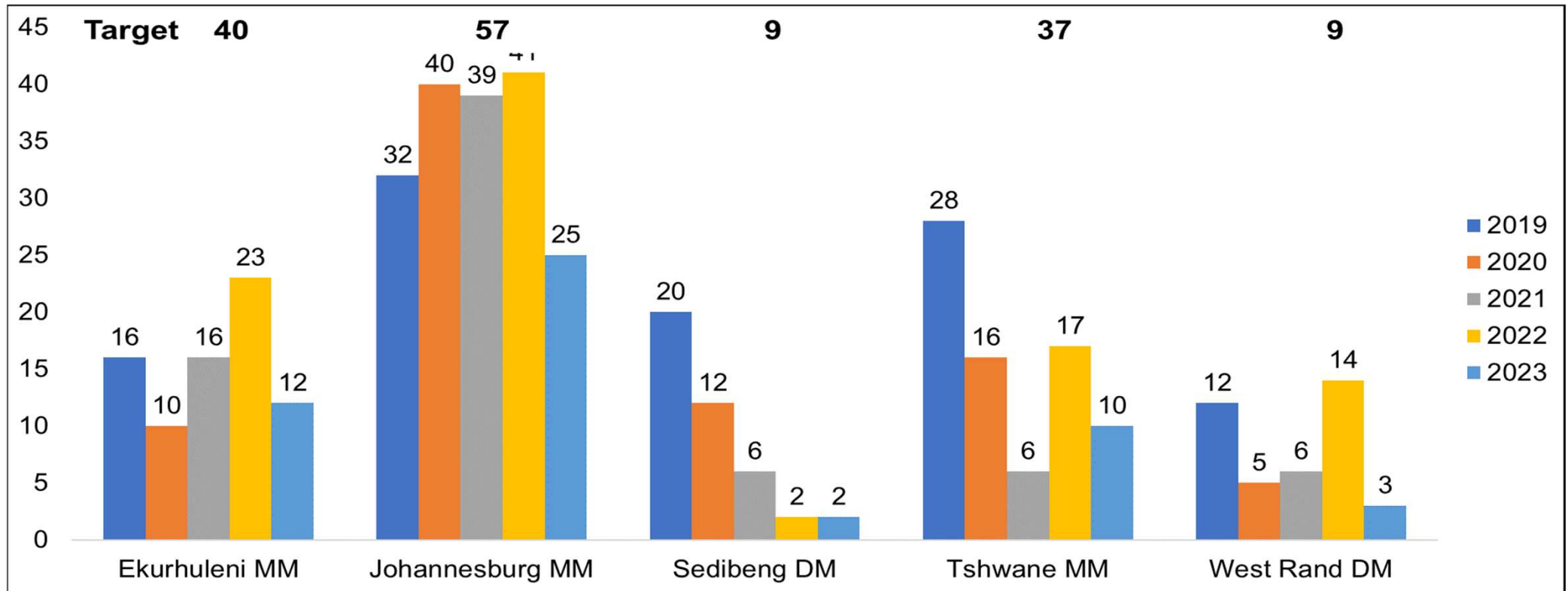
Two indicators remain the gold standard to assess AFP Surveillance Quality .

- 1. Non-polio AFP rate - 4 cases per 100 000 population under 15 years annually .
- 2. Stool adequacy- volume about 8-10g(size of 2 adult thumbnails. Rectal swabs are inadequate and extremely watery stool may be rejected.
- AFP case definition WHO –a child younger than 15 years presenting with sudden onset of floppy paralysis or muscle weakness due to any cause . Or any person of any age with paralytic illness if poliomyelitis is suspected by a clinician.

Surveillance targets-Polio

Function	Global Indicator Target	SA TARGET
Detection Polio Detection Rate)	<ul style="list-style-type: none"> • 2 or more cases of Non-Polio AFP cases per 100 000 below 15 years . • 80% of districts meet the above target 	<ul style="list-style-type: none"> • 4 cases per 100000 below 15 years . • 80% of districts meet the above target .
Investigation and Timeliness (Stool adequacy)	<ul style="list-style-type: none"> • 80% of cases have 2 stools collected 24-48 hrs apart that arrive at WHO accredited lab within 14 days of onset of paralysis . • 80% of districts that report meet the stool adequacy target . 	<ul style="list-style-type: none"> • 80% of cases have 2 stools collected 24-48 hrs. apart that arrive at WHO accredited lab within 14 days of onset of paralysis . • 80% of districts that report meet the stool adequacy target .
Transport Timeliness of specimen to lab	<ul style="list-style-type: none"> • 80% of stool specimen arrive at the lab in good condition within 3 days of collection 	80% of stool specimen arrive at the lab in good condition within 3 days of collection

Trends of AFP Case reporting by Gauteng Districts



District AFP reporting : 2019 - 2024

Year	Ekurhuleni MM	Johannesburg MM	Sedibeng DM	Tshwane MM	West Rand DM	Grand Total
2019	16	31	20	28	12	107
2020	10	41	12	16	5	84
2021	16	39	6	6	5	72
2022	23	41	2	17	15	98
2023	21	35	3	37	4	100
2024	13	21	6	26	7	73
Grand Total	99	208	49	130	48	534



AFP Surveillance target 2023 PER DISTRICT

Health District	Cases Detected	AFP Target	Adeq Stools	%Stool Adequacy/ Province	YDetectRate
				Red 0-59%	
				Yellow 60-79%	
				Green 80-100%	
Ekurhuleni Metro	23	40	14	61	2,3
City of JHB MM	35	56	33	94	2,5
Sedibeng DM	3	9	2	67	1,3
Tshwane Metro	37	36	33	89	4,1
West Rand DM	4	9	3	75	1,7
Gauteng	102	150	85	83	2,4



AFP Surveillance Indicators (NICD) –Jan-July 2024								
District	Total_population	Under15_years	Target_AFP_Case	Total_AFP_Case	Adequately_investigated_cases	Not_Adequately_investigated_cases	NP_Detection_Rate	Stool_Adequacy
Ekurhuleni MM	4 250 640	1 016 691	41	10	7	3	1,5	70,0
Johannesburg MM	6 465 812	1 435 885	57	21	20	1	2,8	95,2
Sedibeng DM	972 188	226 046	9	6	5	1	5,1	83,3
Tshwane MM	4 038 360	933 008	37	22	20	2	3,7	90,9
West Rand DM	996 636	233 193	9	6	5	1	5,0	83,3
Gauteng	16 723 636	3 844 823	154	65	57	8	3,0	87,7

Ekurhuleni District Performance –Public and Private

HOSPITAL	2019	2020	2021	2022	2023	2024	Total
ARWYP MEDICAL CENTRE	1	1			1		3
BERTHA GOWADISTRICT HOSPITAL			1	2			3
BONAERO PARK CLINIC			1				1
BRAKPAN CLINIC				1			1
CHIEF ALBERT					1		1
CHRALOTTE MAXEKE	1						1
EOU					1		1
FAR EAST RAND HOSPITAL	2	2	3	3	1		11
FEZI NGIBENTABI					1		1
HEIDELBURG HOSPITAL	2						2
J DUMANE				1			1
LIFE GLYNNWOOD		1		1			2
LIFE SPRINGS PARKLAND	1						1
LINKSFIELD			1				1
MIDSTREAM MEDI-CLINIC			1				1
RAMAPHOSA CLINIC					1		1
RAMKUNUPI CLINIC						1	1
SLOVO PARK					1		1
SUNRISE VIEW CLINIC					1		1
TAMBO MEMORIAL	2	1		4	3		10
TEMBISA HOSPITAL		3	3	1	2		9
TEMBISA MIDRAND			1				1
THELLE MOGOERANE	2	1		3	5		11
THEMBELISHA CLINIC				1			1
	11	9	11	17	18	1	

JOHANNESBURG HEALTH DISTRICT-Public and Private

	2019	2020	2021	2022	2023	2024	Grand Total
BHEKI MLANGENI				2			2
BRITZ MEDICLINIC					1		1
CHBAH	5	5	6		2	2	20
CLINIX TSHEPO THEMBA		1					1
CMJAH		1	1	1			3
CROWN GARDEN CLINIC						1	1
EAST BANK CLINIC	2						2
Edenvale Hospital	2	1	1	1	1		6
HILLBROW CLINIC	1					1	2
NETCARE GARDENCITY				1	2		3
NINAMIYE CLINIC	1						1
RMMCH	3	18	21	19	16	5	83
ROSETTENVILLE CHC						1	1
SINETHEMBA CLINIC	1						1
SOUTH HILLS CLINIC				1		1	2
SOUTH RAND HOSPITAL	2			1	1		4
SPHUMULILE CLINIC SNAKE PARK		1					1
SRH						1	1
SUNDOWN CLINIC	1						1
TLADI PROVINCIAL CLINIC		1					1
WATERFALL CITY					2		2

AFP by Hospitals West Rand District

Row Label	CARLETONVILLE	DR YUSUF DAD LERATONG	LIFE ROBINSON PRIVATE	MAKI LEGWETE	MIPESSEN	ODIRILENG	PINEHAVEN	RMMCH	SIMUNYE	SLOVOVIL	TOEKOMS	TSHEPISO	WATERFALL	(blank)	Grand Total	
<2019/01/28																
2019		3	2		1						1				4	12
2020		3						1	1							5
2021			2		1							1			2	6
2022	4	3					1			1			1	1	3	14
2023	1	3														4
2024															1	1
Grand Tot:	5	12	4		1	1	1	1	1	1	1	1	1	1	10	42

PUBLIC HOSPITAL AFP CASES REPORTED : 2019 - 2024

	2019	2020	2021	2022	2023	2024	Grand Total
BERTHA GOWADISTRICT HOSPITAL	1		1	2		1	5
BHEKI MLANGENI HOSPITAL				2	1		3
BRONKHOSPRUIT HOSPITAL						2	2
CARLETONVILLE HOSPITAL				4	1	3	8
CHRIS HANI BARAGWANATH ACADEMICH HOSPITAL	6	5	6		2	2	21
CHARLOTTE MACHEKE ACADEMIC HOSPITAL	1	1	1	1			4
DR GEORGE MUKHARI ACADEMIC HOSPITAL	5	1	1	2	5		11
DR YUSUF DADOO HOSPITAL	3	3		4	1	1	12
EDENVALE REGIONAL HOSPITAL	2	1	1	1	1		6
FAR EAST RAND HOSPITAL	2	2	3	3	1	1	11
HEIDELBURG HOSPITAL	2					1	3
JUBILEE DISTRICT HOSPITAL	2	2				2	9
KALAFONG HOSPITAL	5	5			2	5	18
KOPANONG HOSPITAL	9	12	5	1	1	4	33
LERATONG HOSPITAL	2		1	1		1	5
MAMELODI REGIONAL HOSPITAL	2	2	1			11	21
ODI DISTRICT HOSPITAL	2					3	7
SEBOKENG HOSPITAL						1	1
SOUTH RAND HOSPITAL	2				1	1	4
STEVE BIKO HOSPITAL	1		1			1	4
TAMBO MEMORIAL HOSPITAL	2	1	1	3	3	2	12
TEMBISA HOSPITAL	1	3	3	1		1	9

PRIVATE HOSPITAL AFP: 2019 - 2024

PRIVATE HOSPITAL	2019	2020	2021	2022	2023	2024	Grand Total
BOTSHILU PRIVATE HOSPITAL					1	2	3
BRAKPAN CLINIC					1		1
BRITZ MEDICLINIC						1	1
CLINIX TSHEPO THEMBA			1				1
GARDEN CITY					1		1
LIFE EUGENE MARAIS HOSPITAL					1	2	3
LIFE GLYNNWOOD			1		1		2
LIFE ROBINSON HOSPITAL						1	1
LIFE ROBINSON PRIVATE HOSPITAL		1					1
LIFE SPRINGS PARKLAND		1					1
LIFE WILGERS						1	1
LINKSFIELD				1			1
LOUIS PASTEUR HOSPITAL						2	3
MEDICINIC MUELMEDE					1		1
MEDICLINIC		1					1
MEDICLINIC VERREINIGING						1	1
MIDSTREAM MEDI-CLINIC				1			1
NETCARE GARDENCITY						2	2
NETCARE UNITAS HOSPITAL			1				1
PINEHAVEN			1				1
UNITAS HOSPITAL		2					1
WATERFALL CITY HOSPITAL					1	2	3
WILGES HOSPITAL					1		1
ZUID AFRIKAANS HOSPITAL						1	1
ARVYP		1	1			1	3

What to do with an AFP case

All AFP cases should have the following:

- Fill in the AFP case investigation form (CIF)
- Collection of **2 stool specimen 24 to 48 hours apart** to arrive at NICD within 14 days of onset of paralysis. Send with the CIF.
- **Complete the Neurological Assessment form**
- **Ensure 60-day follow-up of cases** that did not have 2 adequate stools.
- Send stools in a cooler box lined with frozen ice packs to NICD.
- Stool specimen to arrive at NICD in good condition with 3 days of collection.

Once a case has been detected in a HCF, the district is notified and assigns an Epid number



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MEASLES SURVEILLANCE

African Regional goal:

Measles elimination in $\geq 80\%$ countries by 2030 –WHO

1. **>95% MCV1 and MCV2 coverage at national and district level**
2. **>95% coverage in Supplemental Immunisation Activities**
3. **Incidence of < 1 case / million population /year (excluding imported cases).**

•Achieve the surveillance performance targets:

- a. *> 80% districts investigating one or more suspected measles cases /year,*
- b. *non-measles febrile rash illness rate of ≥ 2 per 100 000 population at national level.*

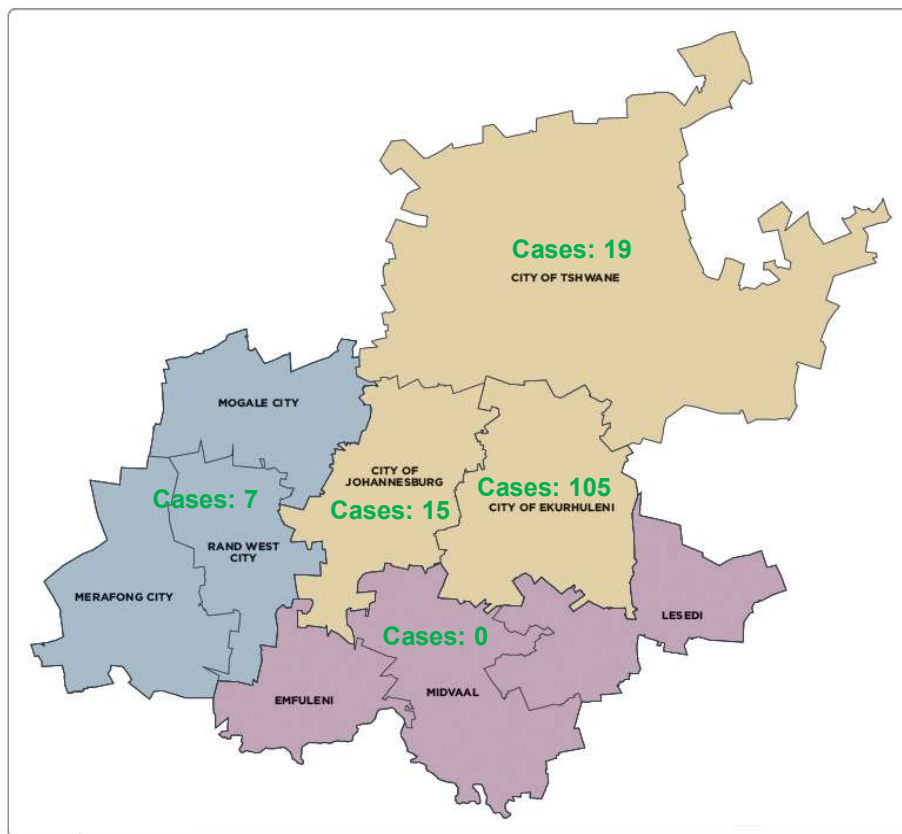
Strategies for measles control/ elimination-WHO

- Provision of 2 **routine doses** of measles vaccine
- Augmented efforts to close immunity gaps through **supplemental immunization activities (SIAs)**
- Conducting high quality **surveillance with lab confirmation**
- **Outbreak response vaccination**
- **Case management**

Measles outbreak progress 2022-2023-Gauteng Department of Health

- **The outbreak was initially declared on the 07 December 2022 in Ekurhuleni with 3 related cases.**
- **The Province has reported a total of 146 confirmed measles cases since the outbreak was declared in Limpopo Province in September 2022 and 144 cases since Gauteng Province was declared to be having an outbreak.**
- **The Provincial Measles Outbreak Response Campaign started on the 28 December 2022 set to finish on 31 March 2023. The target (95% vaccination coverage) was not reached therefore, there is a possibility of extending the campaign.**

Figure 1: Distribution of confirmed measles cases by district, Gauteng Province, 03 October 2022 - 5 April 2023 (n= 146)



District	Total cases (n)	Percentage (%)
Ekurhuleni	105	72
Johannesburg	15	10
Tshwane	19	13
West Rand	7	5
Sedibeng	0	0
Total	146	100

Ekurhuleni reported the highest number of cases (72%; 105/146)

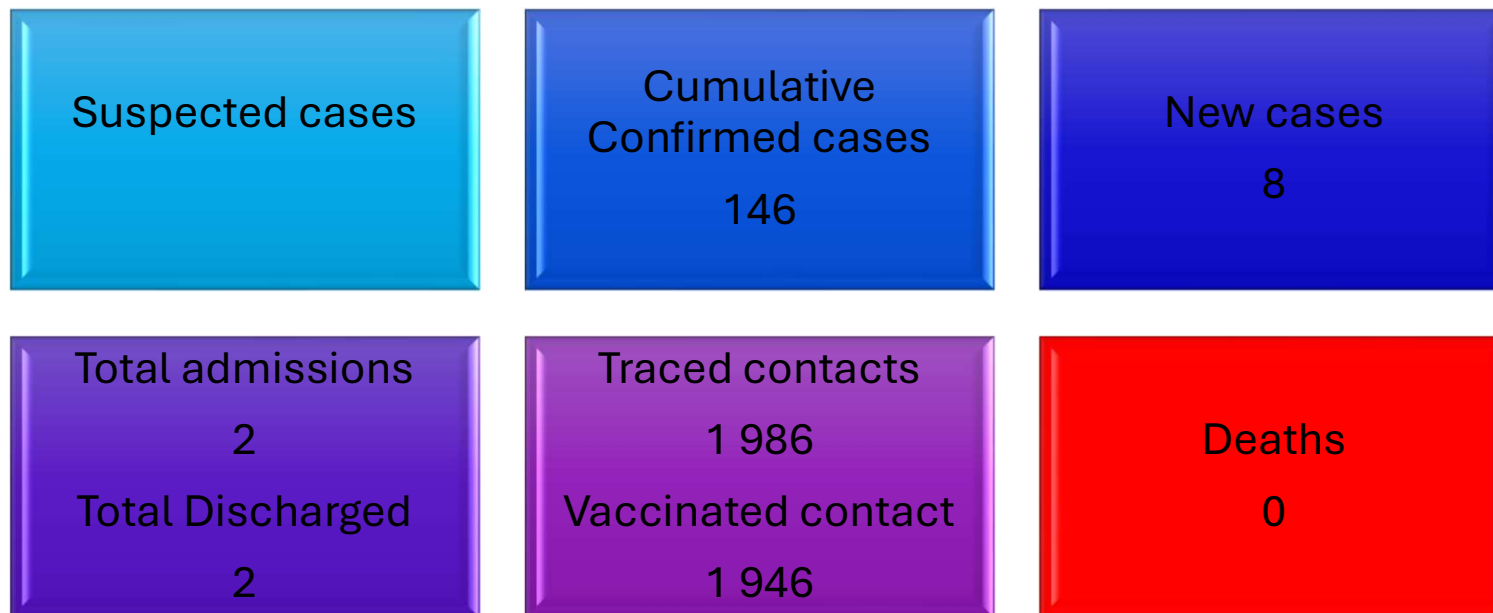
Figure 1: Distribution of confirmed measles cases by district, Gauteng Province, 01 January – July 2024 (n= 62)



District	Cumulative cases (n)	Percentage (%)
Ekurhuleni	3	5
Johannesburg	23	37
Tshwane	6	10
West Rand	2	3
Sedibeng	28	45
Total	62	100

Sedibeng District has reported the highest number of cases, 28 (45%) followed by Johannesburg District 23 (37%) cases.

Gauteng Province Measles Outbreak Status, as of 5 April 2023



Gauteng Province Measles Outbreak Status, as of July 2024

Cumulative Confirmed cases
62

New cases
4

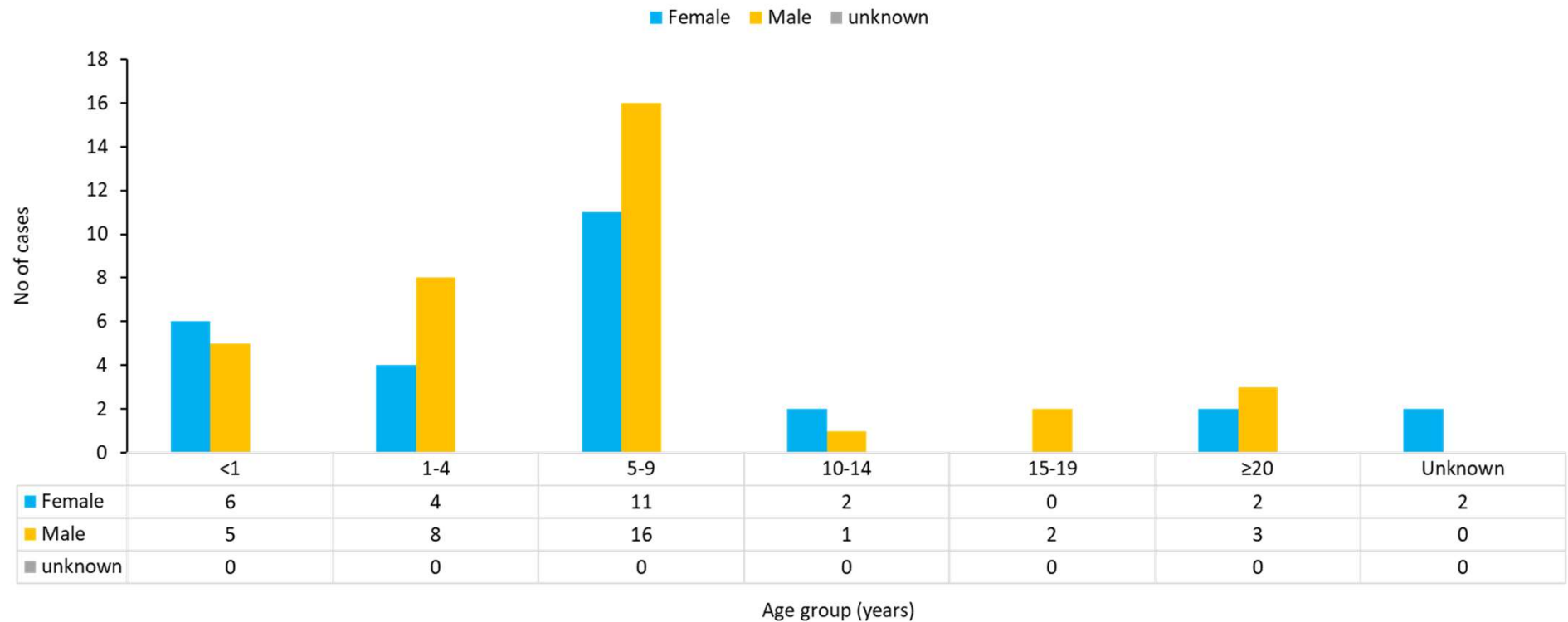
Total Admissions
0
Total Discharged
0

Deaths
0

Measles Surveillance Targets January –July 2024- Gauteng Province

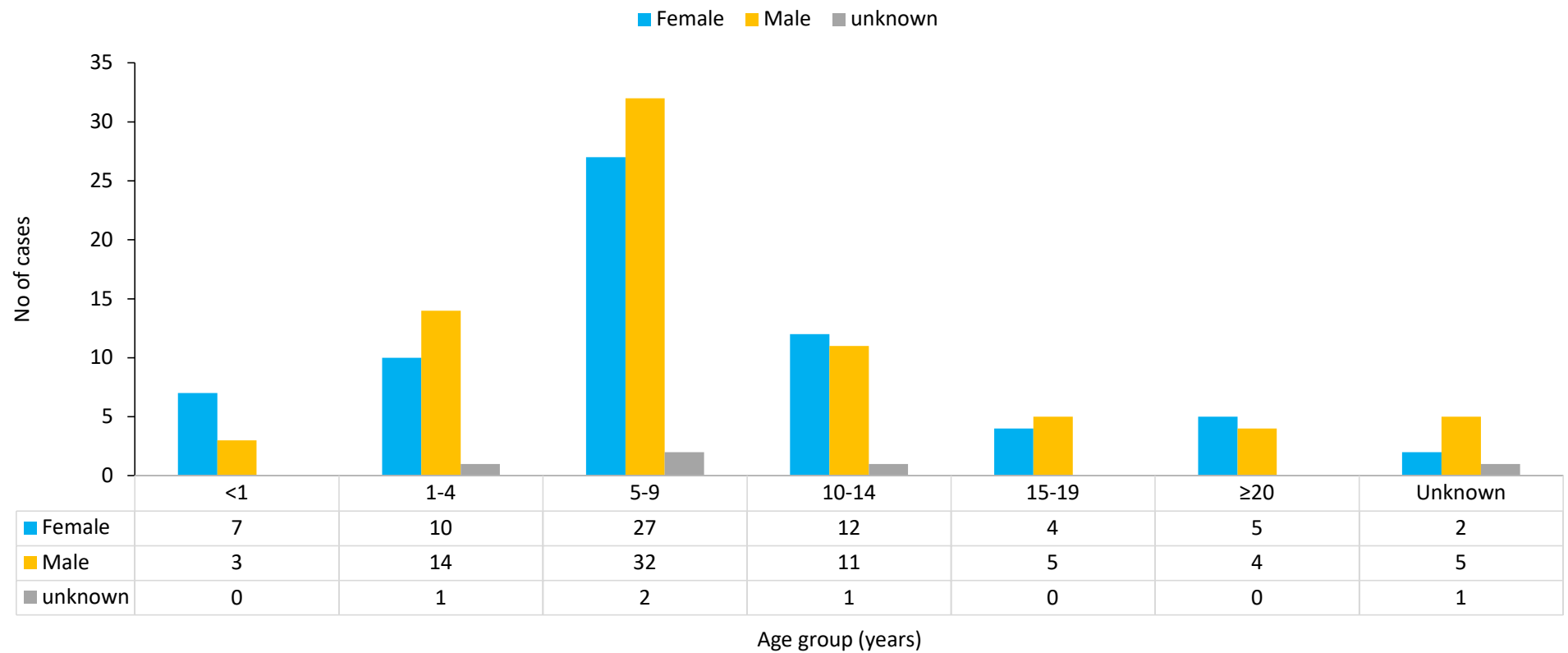
District	Total_population	Target_Mealses _Suspected measles Cases	Suspected measles	NMFRI_ rate	Positive measles	Measles_ incidenc e_rate	Compatible _Cases	Pending classification	Percentag e_sample _blood
Ekurhuleni MM	4 250 640	85	123	5,5	1	0,9	0	23	100
Johannesburg MM	6 465 812	129	234	6,4	16	6,0	0	11	100
Sedibeng DM	972 188	19	117	17,6	25	55,5	0	4	100
Tshwane MM	4 038 360	81	135	6,1	7	3,3	0	2	100
West Rand DM	996 636	20	63	11,8	0	3,9	0	5	100
Gauteng	16 723 636	334	672	7,1	49	6,8	0	45	100,0

Figure 3: Distribution of cases by gender and age group Gauteng Province, 01 January – 8 July 2024 (n= 62)



- A greater number of male cases (56%; 35/62) have been reported compared to female cases in the province. The highest reporting age group is the 5–9-year-old age group (44%; 27/62). NICD .

Figure 3: Distribution of cases by by gender and age group Gauteng Province, 03 October 2022 - 5 April 2023 (n= 146)



Majority of cases are among male children in the 5–9-year age-group.

What to do when measles is suspected

- Detect a case using the case definitions. Maintain a high index of suspicion.
 - Inform the facility Focal Person for surveillance (ICN) of the detected case.
 - Ensure that the case is reported to the District office.
 - Take blood specimen for confirmation of measles.
 - Fill in the case investigation form (CIF) in full .
 - Transport the specimen on ice in a cooler box with a copy of the CIF to NICD.
 - Notify the case using the APP or NMC booklet if the APP is not accessible
 - Send a copy of the CIF (and the top copy of the Notifiable Medical Condition form if there is no APP) to NMCsurveillanceReport@nicd.ac.za
 - Give the CIF and the top copy of the NMC form to the facility Focal Person, who in turn should send these to the district office.
- The district or provincial office assigns an EPID number to the case and gives it to the facility, NICD and national office.

Table 3: Measles Vaccination Campaign Coverage Gauteng Province, 28 December 2022 – 05 April 2023 –Outbreak response and Supplemental Immunization Activity .

HEALTH DISTRICT	TARGET POPULATION 6 MONTHS - 15 YEARS (95%)	6 – 11 months	12 – 59 months	5-15 years	TOTAL	Never vaccinated 6-59 months	COVERAGE (%)
EKURHULENI	1 051 595	24849	158721	343046	526616	9914	50,08
JOHANNESBURG	1 610 427	22379	157283	331288	510950	5365	31,73
SEDIBENG	253 697	3163	25671	72920	101754	1371	40,11
TSHWANE	933 690	22435	116080	285579	424094	1771	45,42
WEST RAND	235 833	12935	36290	93077	142302	190	60,34
GAUTENG	4 004 720	85 761	494 045	1 125 910	1705716	18 611	42,59

Challenges-Measles Vaccination Campaign

- Campaign deadline ended On the 31 March 2023 and coverage target of 95% has not been reached.
- Human Resources shortages
- Transport shortages

Sedibeng outbreak

- All learners were vaccinated in schools around Sicelo community.
- Door to door health promotion was conducted in Sicelo and Ramaphosa informal settlements.
- Social mobilization was carried in Sicelo community to vaccinate children including creches.
- Traditional healers and clinicians have been made aware of the measles outbreak in Sedibeng District through various platforms.
- Daily awareness is carried out in all health facilities in Sedibeng District.
- Two radio station interviews for measles awareness were carried out in Sedibeng District.

Sedibeng Measles Immunization Response to Outbreak

Number of people immunized at schools of cases and in the Sicelo community between March and May 2024 in Midvaal, Sedibeng District, Gauteng Province.

Sedibeng	Schools	Number immunised	Other interventions
Midvaal	Ratasetjhaba Primary School March 2024	320	32 children given Vitamin A as prophylaxis to classmates before confirmation of measles case
	Sicelo Primary School	1131	
	Thomas Nhlapo Primary school	608	
	Randvaal Primary School	727	25 given Vitamin A
	Sicelo Township	236	Sicelo ward 8 was covered. <ul style="list-style-type: none"> • 20 given Vitamin A • 20 Deworming given • Referred 12 for catchup
Total		3022	

Challenges in Johannesburg Health District

- A great proportion of cases are from Muslim communities and these communities are vaccine hesitant due to trace amounts of gelatine in Public Sector measles vaccines.
- Targeted measles campaigns in vaccine hesitant communities are proving to be a challenge as they refuse door to door visits
- **Community do not respond to set vaccination sites**
- Community leaders have been engaged and letters from muslim religious organization have been acquired. All platforms have been used to communicate the need for vaccination. Community is still hesitant
- **Medical officers discourage the use of measles vaccines**

What to do when measles is suspected

- Detect a case using the case definitions. Maintain a high index of suspicion.
 - Inform the facility Focal Person for surveillance (ICN) of the detected case.
 - Ensure that the case is reported to the district office.
 - Take blood specimen for confirmation of measles.
 - Fill in the case investigation form (CIF) in full .
 - Transport the specimen on ice in a cooler box with a copy of the CIF to NICD.
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 - Give the CIF and the top copy of the NMC form to the facility Focal Person, who in turn should send these to the district office.
- The district or provincial office assigns an EPID number to the case and gives it to the facility, NICD and national office.

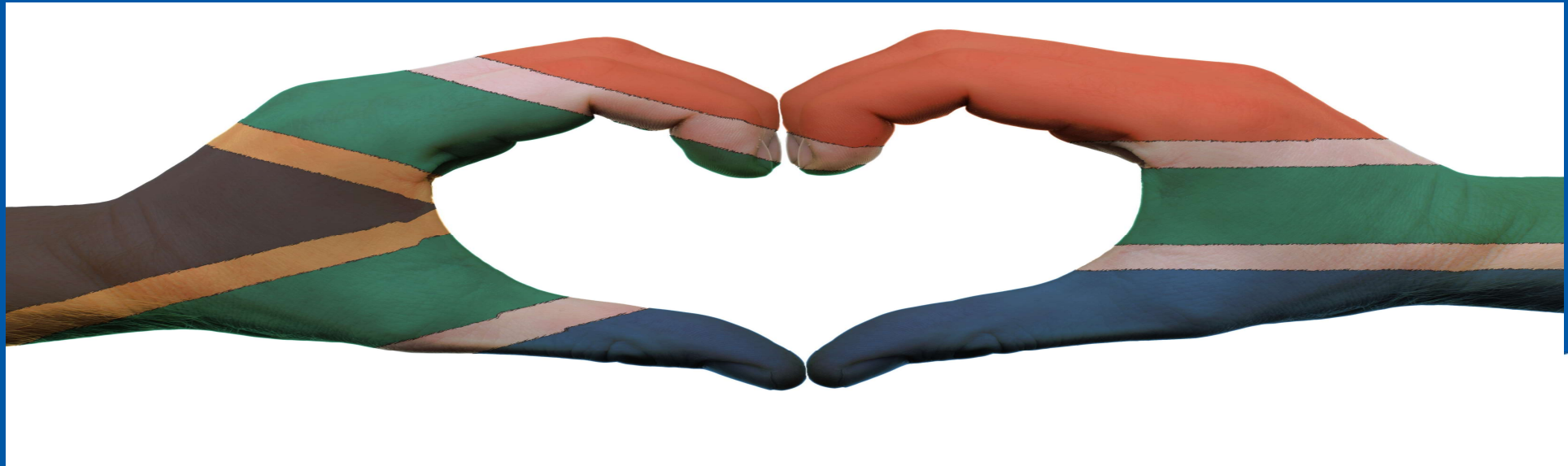
Immunization coverage Gauteng Province – DHIS

Output Indicator	Target 2024/25	2019	2020	2021	2022	2023
	Annual					
Immunisation under 1 year coverage	95%	88.1	83.2	88.2	87.2	81.2
Measles 1 st dose coverage under 1 year	95%	89.4	86.5	89.5	87.1	81.3
Measles 2nd dose coverage	95%	79.1	75.9	83.4	82.7	83

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- Mr Masilela Director –Maternal and Child Health .
- NICD and National Department of Health for Data .

THANK YOU



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