



**NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES**

Division of the National Health Laboratory Service

Foodborne Disease Outbreak And Agricultural and stock remedy poisoning notifications

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NOTIFIABLE MEDICAL CONDITIONS (NMC) CASE DEFINITIONS FLIPCHART

JUNE 2024, category 1: Immediate reporting telephonically followed by written or electronic notification within 24hrs of diagnosing a case

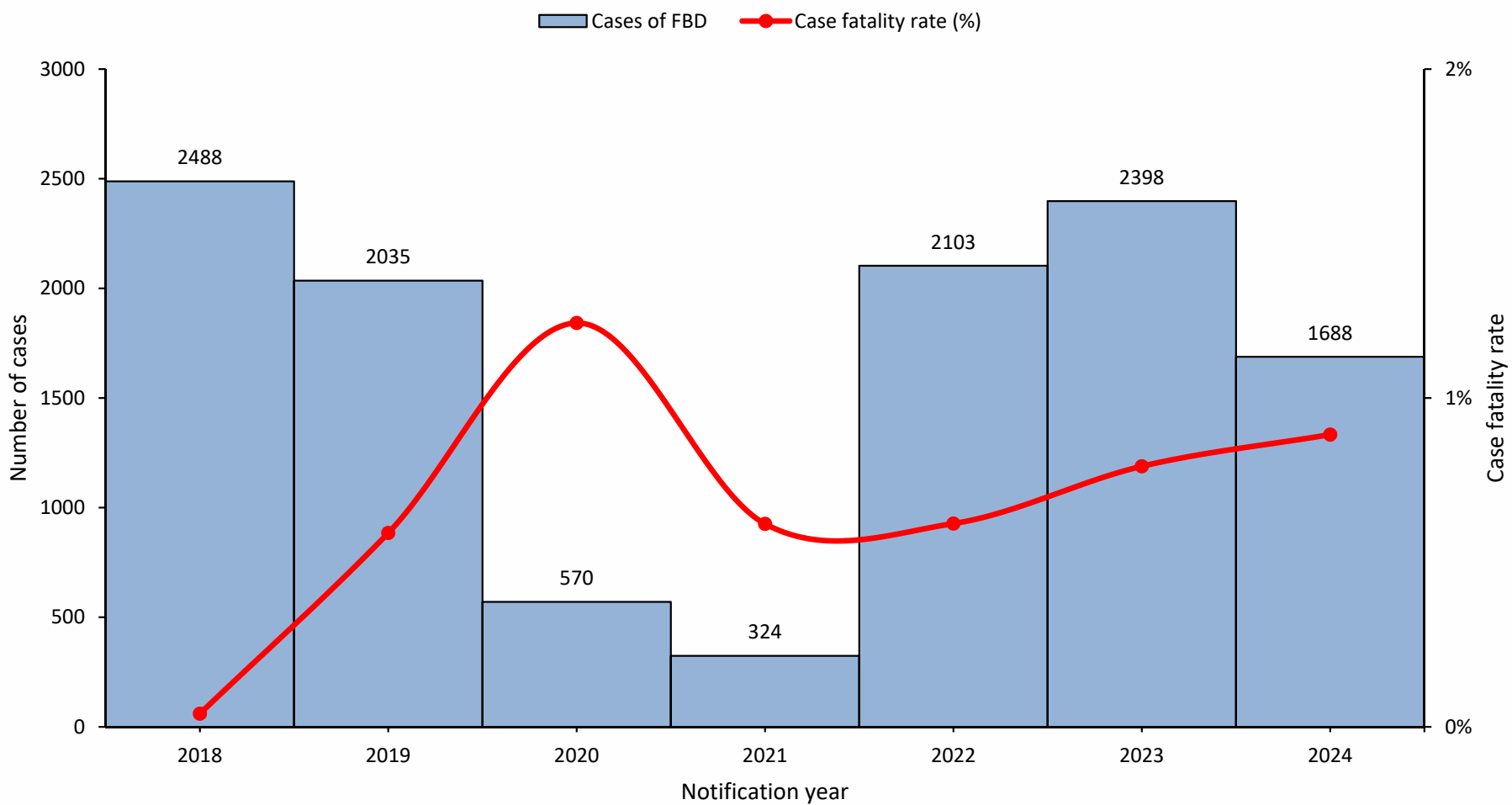
Why is surveillance necessary?	Who must notify and when?	Suspected case definition	Confirmed case definition
<p>Early identification of foodborne illness outbreaks will allow authorities to investigate the outbreak timeously, collect appropriate specimens, identify the outbreak source/s and implement interventions to prevent additional cases.</p>	<p>The healthcare worker who makes the diagnosis should</p> <ul style="list-style-type: none"> • <u>notify the outbreak by completing a NMC notification form for the index case only</u> • <u>submit a complete linelist of affected persons</u> to the responsible communicable disease control coordinator AND to the responsible environmental health practitioner AND to the NICD. 	<p>An incident in which two or more persons experience a similar illness (gastrointestinal) and are epidemiologically linked</p>	<p>⁴None</p>
<p>Additional notes</p> <ul style="list-style-type: none"> • It is not necessary to complete a NMC notification form for every single person affected by the foodborne illness outbreak. However, a line list (see resources below) should be submitted with names and demographic details of all affected persons. • Stool and/or vomitus specimens, and food/environmental specimens should be submitted to NHLS public health laboratories. See contact details for these labs in resources below. • A complete investigation of a foodborne illness outbreak requires additional data and results –including results of laboratory testing of clinical and food specimens, symptoms and clinical features of affected persons, the menu and list of foods offered at the implicated meal/s, complete food consumption history from affected AND non-affected persons, and investigation of foodhandlers. The Centre for Enteric Diseases at NICD provides assistance with outbreak investigations. 			
<p>Additional resources</p> <p>The NICD-NHLS quick reference guide for the investigation of food borne disease outbreaks (2012), line list (2012), case investigation form (CIF), and specimen submission forms for NHLS public health laboratories in Durban and Johannesburg are available at http://www.nicd.ac.za/diseases-a-z-index/foodborne-illness-and-gastroenteritis-outbreaks/</p>			



Number of foodborne disease outbreaks, cases, hospital admissions and deaths by notification year reported from all provinces, 2018 - 2024

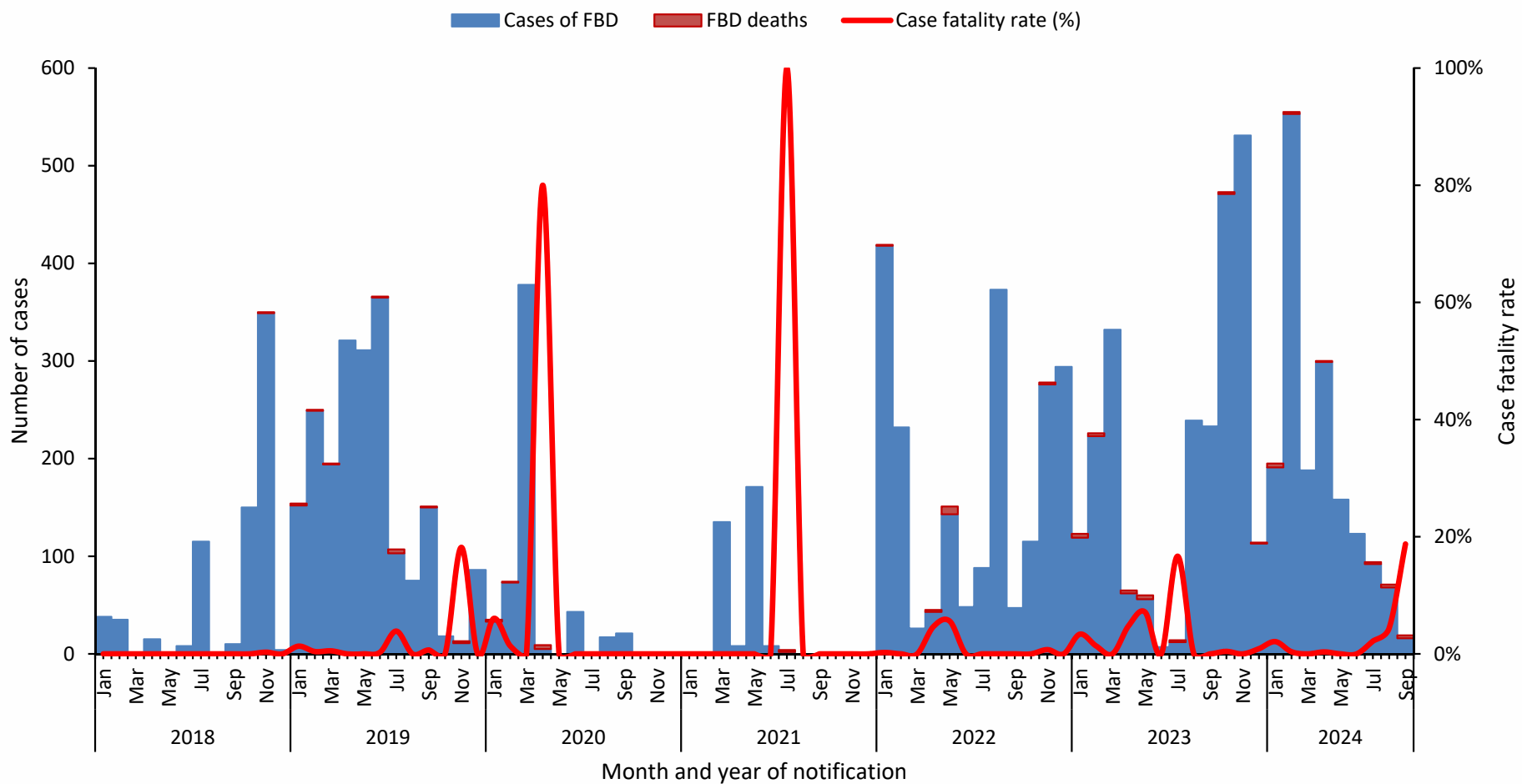
Notification year	No. of Outbreaks	Cases of FBD	Admissions	Admission rate (%)	Deaths	Case fatality rate (%)
2018	24	2488	376	15	1	>0.001
2019	77	2035	227	11	12	0.6
2020	34	570	53	9	7	1.2
2021	7	324	23	7	2	0.6
2022	95	2103	127	6	13	0.6
2023	120	2398	305	13	19	0.8
2024	107	1688	149	9	15	0.9
Grand Total	474	12932	2252	17	69	>0.01



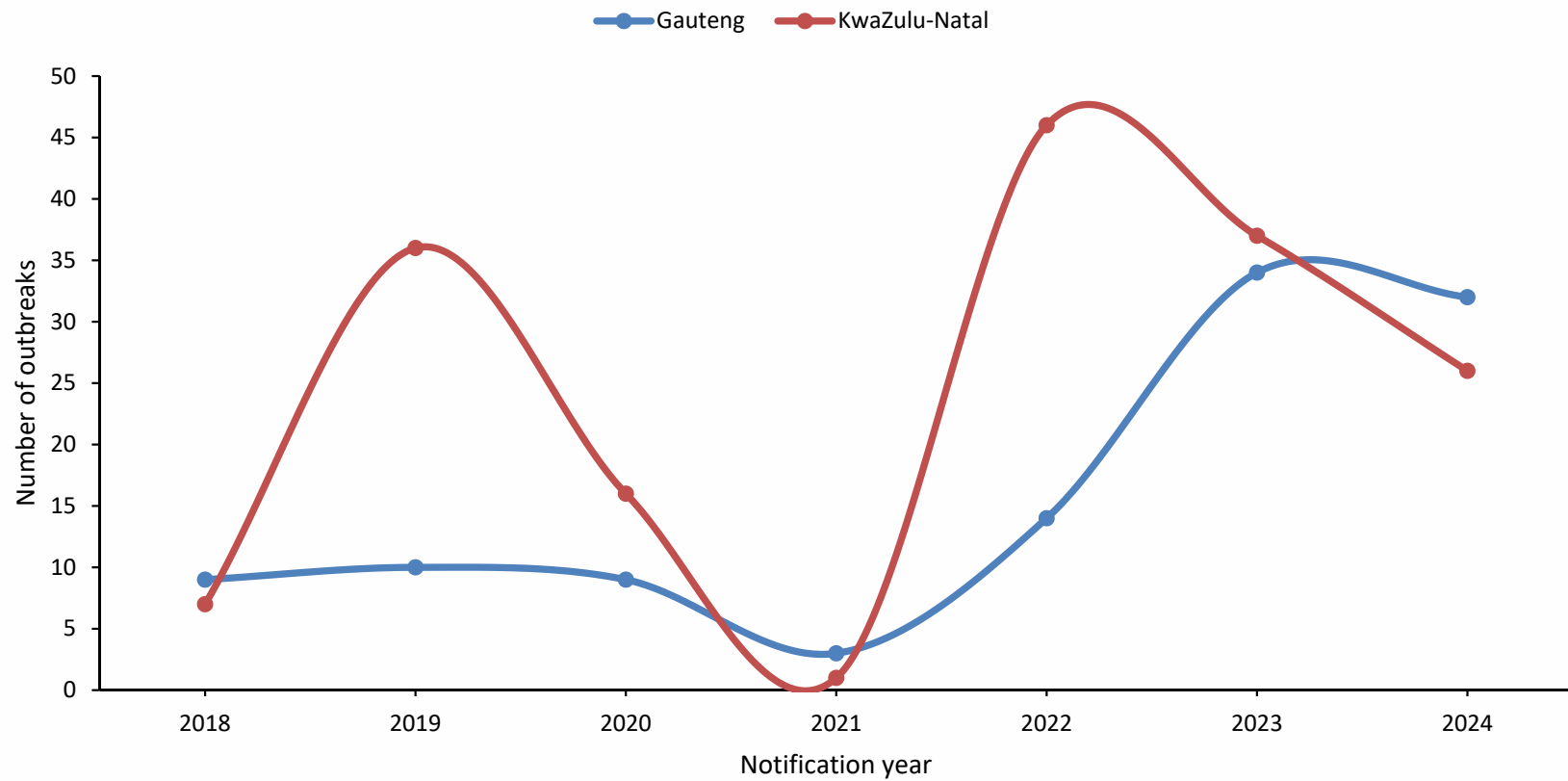


Number of foodborne disease cases and case fatality rate by notification year reported from all provinces, 2018 - 2024

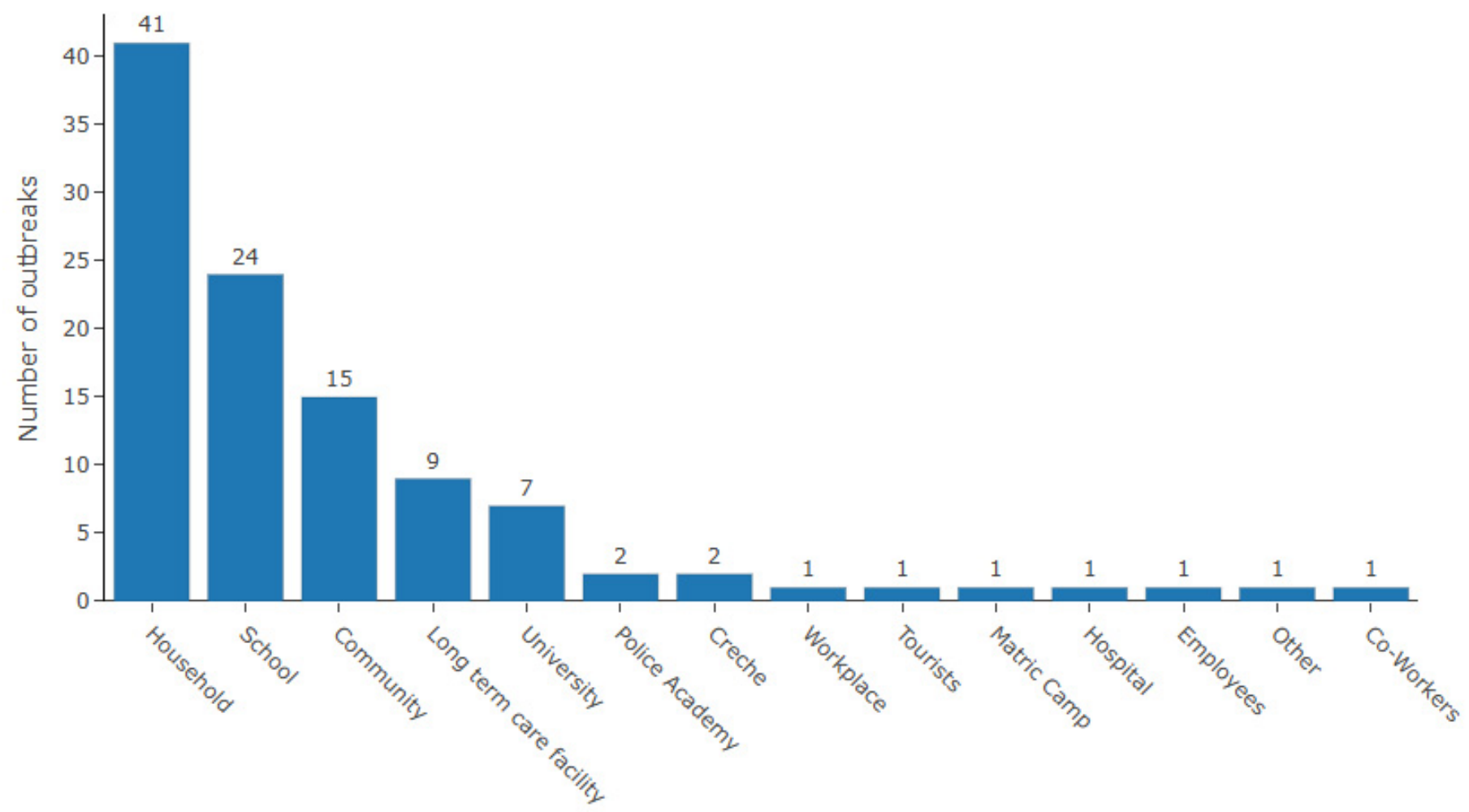




Number of foodborne disease cases and deaths by notification month and year reported from all provinces, 2018 - 2024

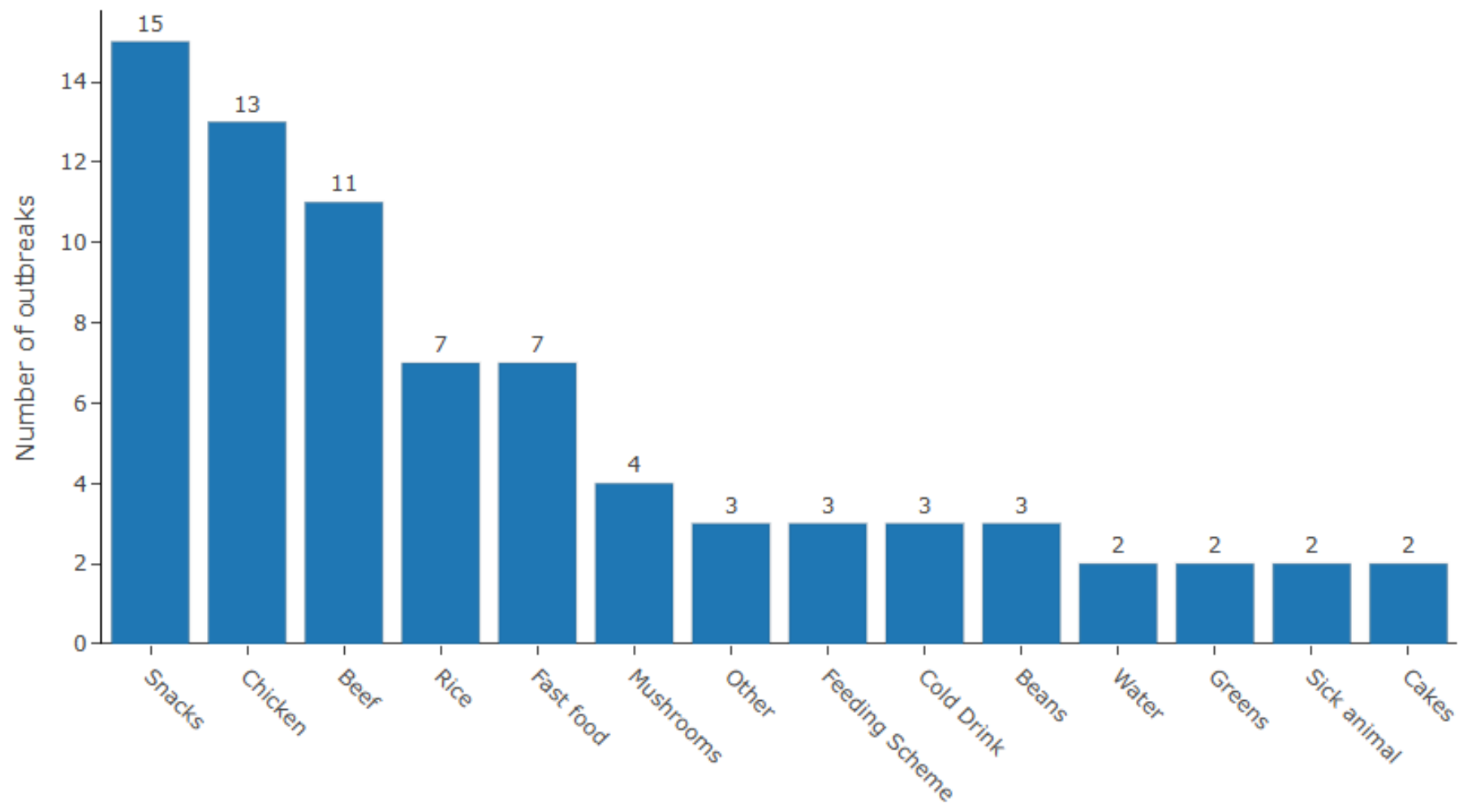


Number of foodborne disease outbreaks reported from Gauteng and KwaZulu-Natal provinces, 2018 - 2024



Common outbreak settings observed, 2024





Common suspected food items reported, 2024



Clinical and food samples collection

- In any foodborne disease outbreak; the identification of the source of infection requires the isolation of the causative pathogen from both the suspected food item and the clinical specimens from the cases
- However; there are many factors that may contribute to the poor collection of both clinical and food samples during outbreak investigation.
 - Unavailability of the left over food items at the time of the investigation
 - Lack of food retention samples
 - Delayed reporting/notification of outbreaks to the relevant authorities
 - Unwillingness of cases to give a stool specimen
- Environmental health practitioners are encouraged to collect food samples in all foodborne disease outbreak, as this is crucial in identifying the source of the outbreak

NOTIFIABLE MEDICAL CONDITIONS (NMC) CASE DEFINITIONS FLIPCHART

Category 2: Written or electronic notification within 7 days of diagnosing a case. The case must be notified following laboratory confirmation

AGRICULTURAL OR STOCK REMEDY POISONING

Disease epidemiology	Who must notify	Clinical case definition (Suspected case)	Probable case definition	Confirmed case definition
<p>A pesticide (e.g. an agricultural or stock remedy) is any chemical substance, or mixture of substances, intended to kill, repel, or control forms of plant or animal life considered to be pests, or to regulate plant growth. Pesticides include herbicides, insecticides, fungicides, rodenticides, repellents. Pesticides are potentially toxic to humans and the environment, and can have both acute and chronic health effects, depending on the quantity and ways in which a person is exposed. Some pesticides can remain in soil and water for years.</p> <p>The toxicity of a pesticide depends on its function, formulation and the route of exposure (i.e. ingestion, inhalation, or direct contact through the skin or eyes).</p> <p>Pesticide poisoning can be classified as occupational, if exposure occurs while at work, or non-occupational, which includes exposure at home as well as</p>	<p>The health care provider making the clinical diagnosis for a suspected, probable or confirmed case. Clinicians should not wait for laboratory confirmation before notifying.</p>	<p>Must satisfy ONE criterion in EACH category listed below:</p> <ol style="list-style-type: none"> Pesticide exposure <ol style="list-style-type: none"> Report of acute pesticide exposure, from a patient or witness Health effects <ol style="list-style-type: none"> Health care provider documenting ≥ 2 new post-exposure symptoms Cause-effect relationship The health effects must: <ol style="list-style-type: none"> not be associated with any other likely explanation AND <ol style="list-style-type: none"> occur within a reasonable time period after exposure 	<p>Must satisfy ONE criterion in EACH category listed below:</p> <ol style="list-style-type: none"> Pesticide exposure <ol style="list-style-type: none"> If criterion as for a Suspected case, must have Health effects criterion as for Confirmed case OR <ol style="list-style-type: none"> If criterion as for a Confirmed case, may have Health effects criterion as for Suspected case Health effects <ol style="list-style-type: none"> If criterion as for a Suspected case, must have Pesticide exposure criterion as for Confirmed case OR <ol style="list-style-type: none"> If criterion as for a Confirmed case, may have Pesticide exposure criterion as for Suspected case Cause-effect relationship The health effects must: 	<p>Must satisfy ONE criterion in EACH category listed below:</p> <ol style="list-style-type: none"> Pesticide exposure <ol style="list-style-type: none"> Observation of residue/odour by health care provider OR <ol style="list-style-type: none"> Clinical response to treatment or antidote (e.g. atropine) OR clinical description by a health care provider of ≥ 2 post-exposure health effects (at least 1 of which is a sign) characteristic for the pesticide OR <ol style="list-style-type: none"> Laboratory test demonstrating physiologic response to pesticide (e.g. prolonged clotting or pseudocholinesterase level below normal laboratory range) Health effects <ol style="list-style-type: none"> Health care provider documenting ≥ 2 characteristic signs OR <ol style="list-style-type: none"> Health care provider documenting ≥ 3 new post-exposure characteristic symptoms



NOTIFIABLE MEDICAL CONDITIONS (NMC) CASE DEFINITIONS FLIPCHART

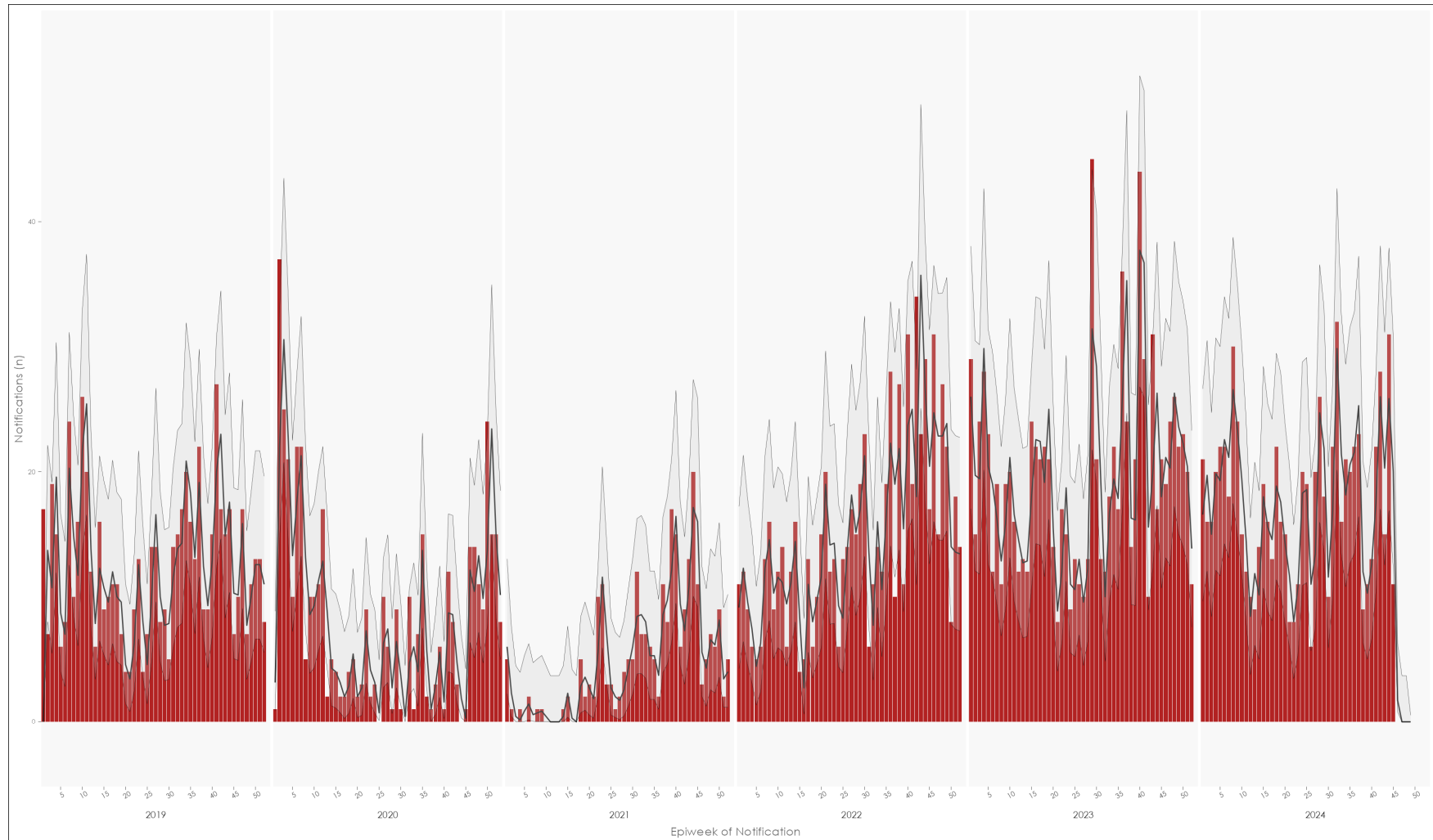
all cases involving suicide or self-harming behaviour.			<ol style="list-style-type: none"> be characteristic of the pesticide OR	
			AND <ol style="list-style-type: none"> occur within a reasonable time period after exposure 	<ol style="list-style-type: none"> Autopsy evidence of pesticide poisoning 3. Cause-effect relationship The health effects must: <ol style="list-style-type: none"> be characteristic of the pesticide AND <ol style="list-style-type: none"> occur within a reasonable time period after exposure

Additional resources

- Thundiyil, Josef G, Stober, Judy, Besbelli, Nida & Pronczuk, Jenny. (2008). Acute pesticide poisoning: a proposed classification tool. Bulletin of the World Health Organization, 86 (3), 205 - 209. World Health Organization. <http://dx.doi.org/10.2471/BLT.08.041814>
- <https://ndc.services.cdc.gov/case-definitions/pesticide-related-illness-and-injury-acute-2010/>



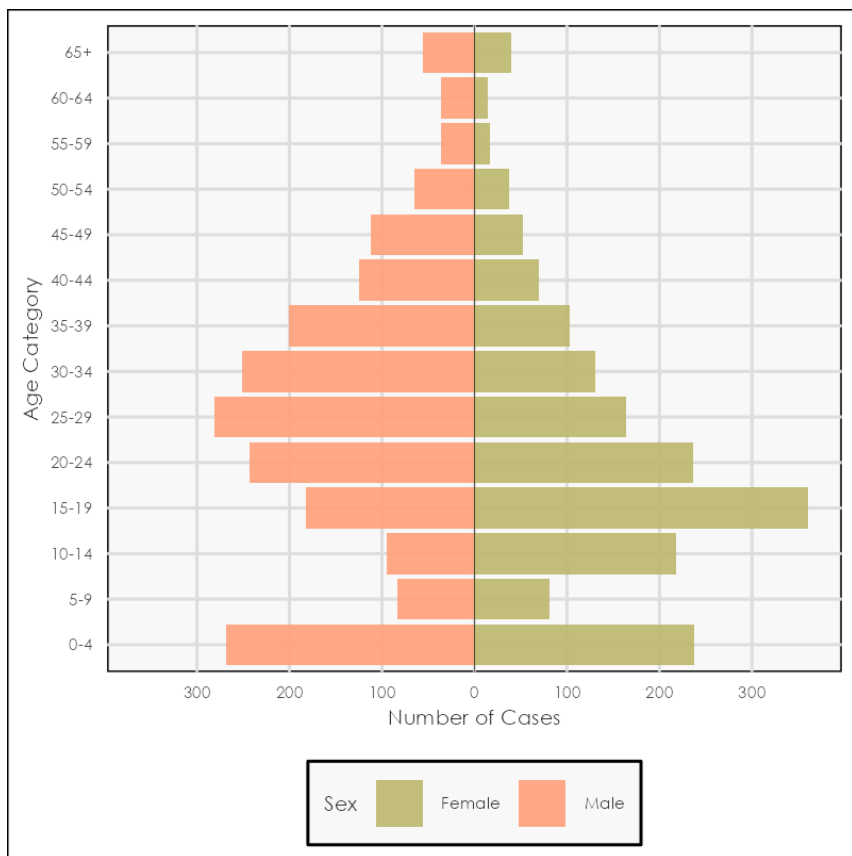
Agricultural and Stock Remedy Poisoning



Epicurve of Agricultural and Stock Remedy Poisoning in South Arica, 2019 - 2024



Agricultural and Stock Remedy Poisoning



Age and Sex pyramid of Agricultural and Stock Remedy-Poisoning notifications in South Africa, 2019 - 2024

	2019 N = 640 ¹	2020 N = 428 ¹	2021 N = 256 ¹	2022 N = 778 ¹	2023 N = 1 013 ¹	2024 N = 792 ¹
Province						
EC	74 (12%)	19 (4.4%)	5 (2.0%)	29 (3.7%)	41 (4.0%)	43 (5.4%)
FS	56 (8.8%)	49 (11%)	12 (4.7%)	103 (13%)	184 (18%)	93 (12%)
GP	362 (57%)	306 (71%)	185 (72%)	528 (68%)	622 (61%)	438 (55%)
KZN	7 (1.1%)	3 (0.7%)	1 (0.4%)	7 (0.9%)	9 (0.9%)	21 (2.7%)
LP	27 (4.2%)	15 (3.5%)	7 (2.7%)	16 (2.1%)	40 (3.9%)	55 (6.9%)
MP	18 (2.8%)	6 (1.4%)	2 (0.8%)	4 (0.5%)	21 (2.1%)	36 (4.5%)
NC	2 (0.3%)	3 (0.7%)	4 (1.6%)	10 (1.3%)	9 (0.9%)	2 (0.3%)
NW	48 (7.5%)	7 (1.6%)	16 (6.3%)	17 (2.2%)	24 (2.4%)	26 (3.3%)
WC	46 (7.2%)	20 (4.7%)	24 (9.4%)	64 (8.2%)	63 (6.2%)	78 (9.8%)

¹n (%)

Agricultural and Stock Remedy Poisoning in notifications South Africa, 2019 - 2024



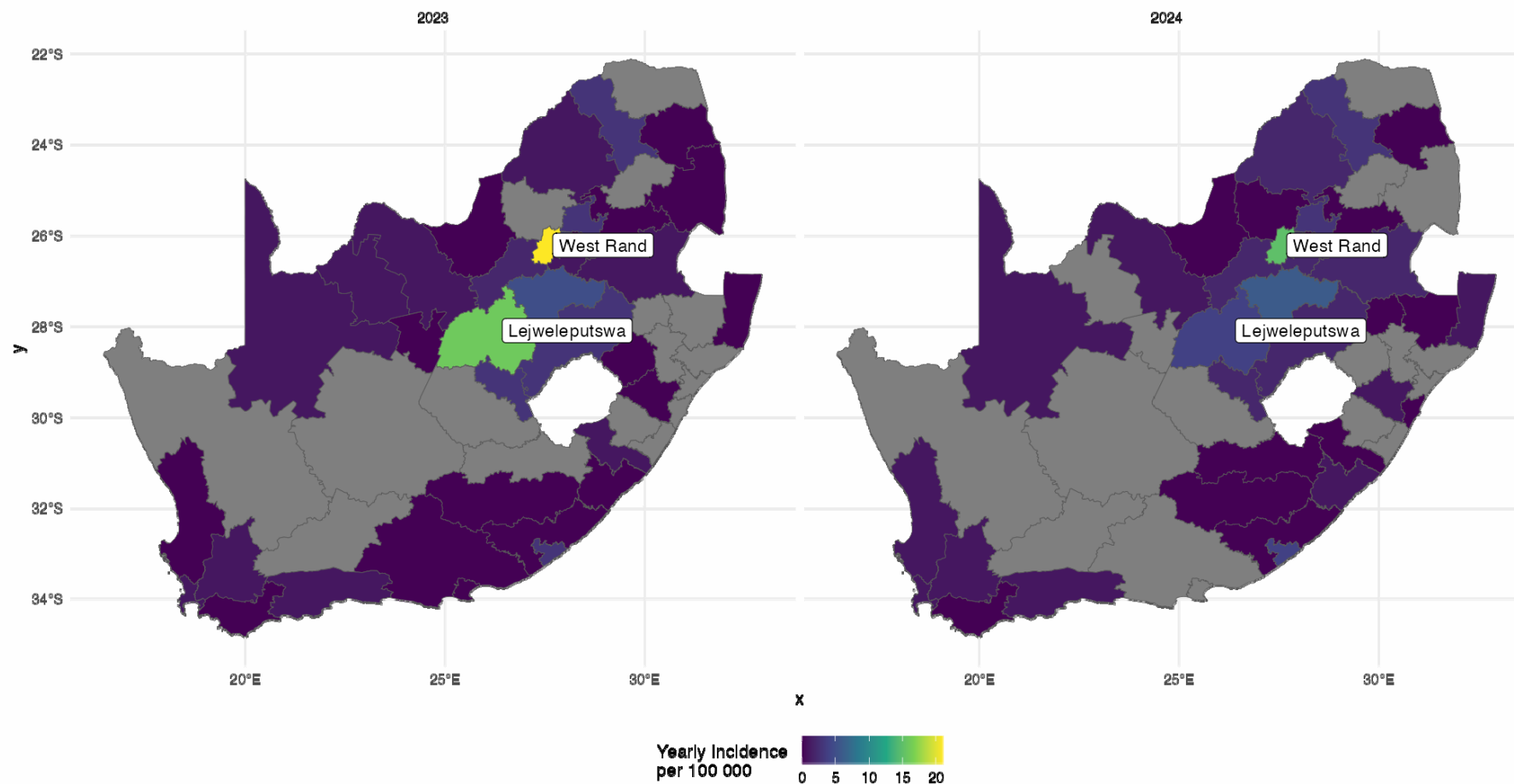
	Notifications before 2024		Notifications in 2024	
	Confirmed * N = 26 ¹	Suspected N = 3 115 ¹	Confirmed * N = 0 ¹	Suspected N = 792 ¹
Age				
Median (Q1, Q3)	23 (12, 35)	25 (14, 36)		19 (2, 33)
Unknown	0	52	0	6
Sex				
Female	9 (35%)	1 431 (46%)	0 (-%)	388 (49%)
Male	17 (65%)	1 681 (54%)	0 (-%)	403 (51%)
Self-Defined	0 (0%)	2 (<0.1%)	0 (-%)	1 (0.1%)
Unknown	0 (0%)	1 (<0.1%)		
Province				
EC	2 (7.7%)	168 (5.4%)	0 (-%)	43 (5.4%)
FS	2 (7.7%)	404 (13%)	0 (-%)	93 (12%)
GP	18 (69%)	2 003 (64%)	0 (-%)	438 (55%)
KZN	1 (3.8%)	27 (0.9%)	0 (-%)	21 (2.7%)
LP	0 (0%)	105 (3.4%)	0 (-%)	55 (6.9%)
MP	0 (0%)	51 (1.6%)	0 (-%)	36 (4.5%)
NC	0 (0%)	28 (0.9%)	0 (-%)	2 (0.3%)
NW	1 (3.8%)	112 (3.6%)	0 (-%)	26 (3.3%)
WC	2 (7.7%)	217 (7.0%)	0 (-%)	78 (9.8%)
Vital Status				
Alive	25 (96%)	2 815 (90%)	0 (-%)	715 (90%)
Deceased	1 (3.8%)	259 (8.3%)	0 (-%)	70 (8.8%)
Unknown	0 (0%)	41 (1.3%)	0 (-%)	7 (0.9%)

¹n (%)

Descriptive Statistics of Agricultural and Stock Remedy poisoning notifications , 2019 – 2024

* There is no centre at NICD with expertise to classify and validate poisoning cases.





Incidence of Agricultural and stock remedy poisoning notifications in South Africa, 2023 and 2024



Notification platforms

Notifiable Medical Conditions (NMC) Case Notification Form
 (Section 60 (1) (g), (h) and (w) of National Health Act, 2003 (Act no. 61 of 2003))
 This form must be completed immediately by the health care provider who diagnosed the condition. Please mark applicable areas with an X

Health facility name (with provincial prefix) **CHRIS HANI BARA HOSP** Health facility contact number **0118009000** Health sub-district **COJ**
 Patient file/folder number **003** Patient **HPRS-PRN N/A** Date of notification **2 0 1 8 - 0 4 - 1 0**

Patient demographics

First name **OLIVE** Patient residential address **10 VILAKAZI STREET**
 Surname **MINT** **Orlando East**
 S.A ID number **2 0 0 5 1 8 0 2 3 8 0 8 9** **Soweto**
 Passport/other ID number **SOUTH AFRICAN** **Gauteng** Post code **1980**
 Citizenship **SOUTH AFRICAN** **Employer/educational institution address**
 Date of birth **2 0 0 0 - 0 5 - 1 8** Institution name **UNEMPLOYED**
 Months (if less than 1yr) **0 5** Days (if less than 1 month) **1 8** Street name, building, location description
 Age **18** Sub-place, suburb, village, postal area
 Gender **Female** Township
 Is patient pregnant? **No** Post code
 Contact number **0 7 8 1 7 5 1 1 1 1 1** Contact number

Medical conditions details

NMC diagnosed **MALARIA** History of possible exposure to NMC in the last 60dys No Yes Unknown
 Method of diagnosis **MALARIA** Clinical signs and symptoms ONE, Y Rapid test X-ray Laboratory confirmed Other
 Clinical symptoms relating to the NMC **LETHARGY, FEVER, CONFUSION**
 Treatment given for the NMC **COARTEM**
 Date of diagnosis **2 0 1 8 - 0 4 - 0 9** Date of symptoms onset **2 0 1 8 - 0 4 - 0 2**
 Patient admission status **Outpatient** Inpatient Ward name **20**
 Patient vital status Alive Discharged Deceased Date of death **y y y y - m m - d d**

Travel history for the last 60 days

Did patient travel outside of usual place of residence? Yes No **If yes, complete the travel details below**
 Place travelled to or place travelled from **Province or Country** **Locality/town/village** **Date of exit from South Africa** **Date of entry into South Africa**

Vaccination history for the NMC diagnosed above (complete only for vaccine preventable NMC)

Vaccination status **Date of last vaccination**

Specimen details **Notifying health care provider's details**
 Was a specimen collected? Yes No **First name**
 Date of specimen **2 0 1 8 - 0 4 - 0 9** **Surname**
 Specimen barcode **ACDB425PZ1** **Mobile number**
SANCP/HCPSA number **Notifier's signature**

The top copy (white) must be sent to the sub-district/district office. The middle copy (blue) must be attached to the patient referral letter or patient file. The bottom copy (pink) must remain in the booklet

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Enter password

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HEADING

Thank you

