

LISTERIA MONOCYTOGENES OUTBREAK RESPONSE



Venue: ICAM

Date: 20/04/2018

Presenter: JM MOKGATLE



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EH Investigations & Regulatory Framework



- EH investigations are conducted in terms of:
- Regulations Relating to EH Investigations and Inspections;
 - Section 80 and 83 of the National Health Amendment Act, 2013 (Act No. 12 of 2013);
 - Section 10 and 11 of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972).



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EH Investigations & Regulatory Framework



- In the absence of a SA regulation ready to eat (RTE) products must comply with the EU R2073 micro criteria

Food Category	Micro-organism	Sampling Plan		Limits		Analytical reference method	Stage when criteria is applied
		N	C	M	M		
RTE foods able to support the growth of Listeria Monocytogenes	L. Mono	5	0	100cfu/g		EN/ISO 11290 -1	Product placed on the market during their shelf life
				Absent in 25g			Before has left the immediate control of the manufacturer



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Listeria outbreak and EH investigations



- 12/01/18 nine children under the age of 5 years at Soweto presented to Chris Hani Baragwanath hospital with febrile gastro-enteritis.
- The paediatrician suspected foodborne disease, including listeriosis, as a possible cause.
- The (EHPs) were informed and on the same day visited the crèche, and obtained samples from two unrelated polony brands (manufactured by Enterprise and Rainbow Chicken Limited (RCL) respectively) and submitted these to the laboratory for testing.
- L. monocytogenes was isolated from stool collected from one of the ill children, and from both of the polony specimens collected from the crèche.

EH Investigations & Genome sequencing



- These isolates were sent to the NICD Centre for Enteric Diseases, and underwent whole genome sequencing and genomic analysis. The ST6 sequence type was confirmed on all three isolates on 27/01/18.
- EHPs, NICD and DAFF representatives, accompanied by 3 technical advisors from the WHO in Geneva, visited Enterprise food production in Polokwane and conducted an extensive environmental scanning and environmental sampling.
- The factory produces 62% of cold meat in the country.
- *L. monocytogenes* was isolated from over 30% of the environmental samples collected from this site.
- Whole genome sequencing analysis was performed from samples from the same Enterprise factory.



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Genome sequencing outcome



- 3/3/18 the outbreak strain, ST (Sequence type) 6, was confirmed in at least 16 environmental samples collected.
- Several ready-to-eat processed meat products from the Enterprise facility located in Germiston contain L. monocytogenes.
- In addition 109 contacts around Soweto were interviewed by NICD officials and 85% of them confirmed eating polony.
- The strain responsible for the outbreak was largely ST6.



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Link to RCL



- Link to under 5 children that were admitted at Chris Hani Baragwanath hospital with febrile gastro-enteritis.
- The (EHPs) obtained samples from two unrelated polony brands manufactured by Enterprise and RCL respectively and submitted these to the laboratory for testing.
- *L. monocytogenes* was isolated from stool collected from one of the ill children, and polony products [tested positive for *L. monocytogenes*](#), but the sequence types of the isolates were not ST6.
- One of the [outbreak strain](#) isolated was ST204.
- Contamination of ready-to-eat processed meat products constitutes a health risk in terms of Section 2 of the FCD Act, 1972 (Act 54 OF 1972)

Link to RCL



- On the 14/02/18 the FS DoH: EH in partnership with Fezile Dabi EHPs and NICD officials collected 195 environmental samples and 5 food samples from RCL factory at Wolvehoek.
- 10% of environmental samples collected by EHPs at this facility tested positive for *L. monocytogenes*.

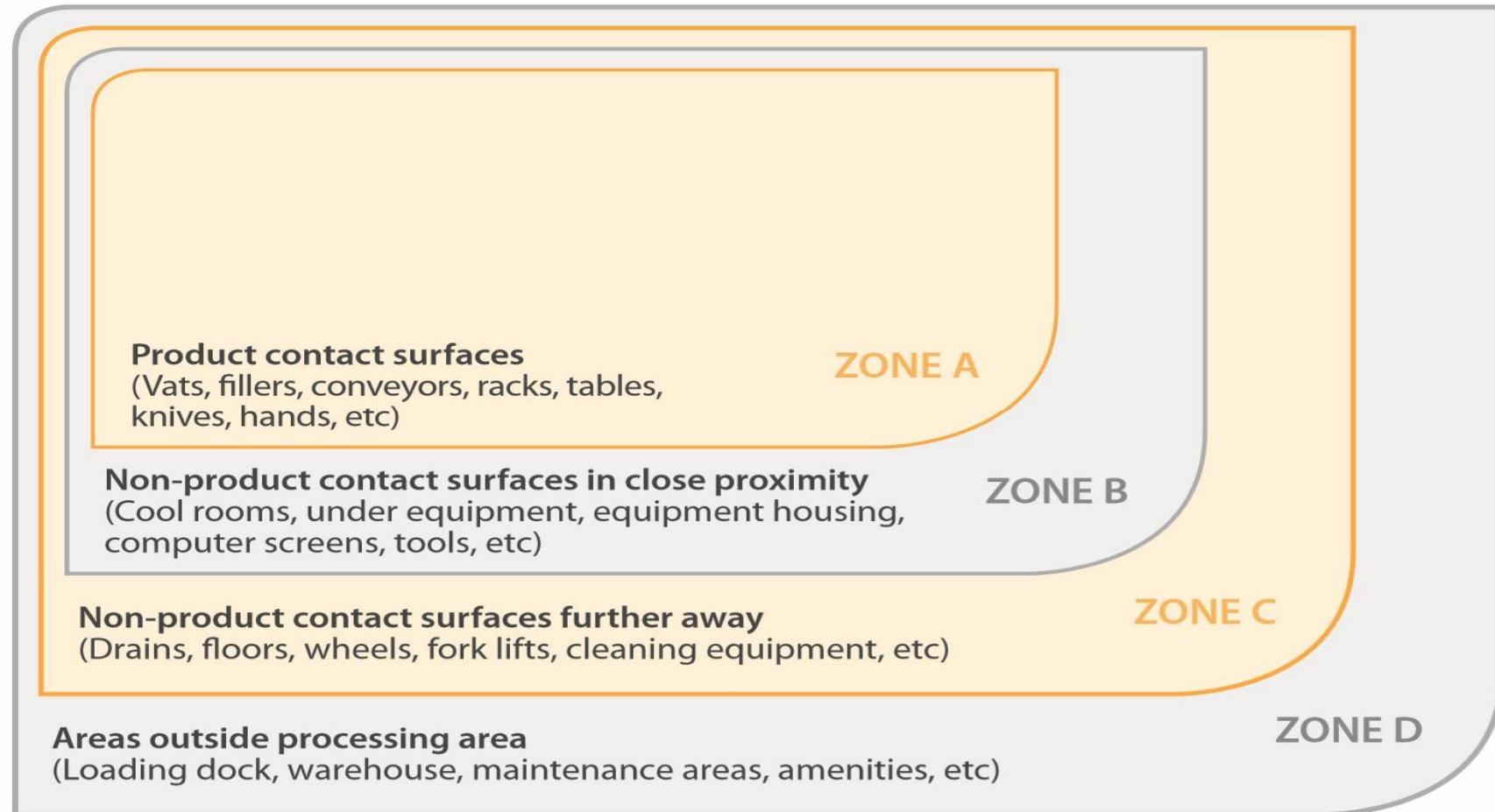


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Sampling zones



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Risk Description



Zone	Description	Risk to product	Examples
A	Product contact surfaces Surfaces over or through which product passes during processing (product contact surfaces/direct contact surfaces)	High	Conveyors, tables, racks, holding vats and tanks, utensils, pumps, valves, slicers, freezers, packing/filling machines
B	Non-product contact surfaces in close proximity to product Surfaces that are in close proximity to the flow of product and may indirectly lead to product contamination (non-product contact surfaces/in-direct contact surfaces that are close to product)	High	Conveyors, exterior of processing equipment, refrigeration units, equipment control panels, service lines, equipment/building above exposed product. May also include keypads and door handles
C	Non-product contact surfaces located further away from product Surfaces located further away from the flow of products. These surfaces are less likely to lead to product contamination but may hinder efforts to control pathogens (non-product contact surfaces/in-direct contact surfaces that are further away from product)	Low – provided good manufacturing practice (GMP) establishes control systems	Drains, walls, floors, condensate, hoses, trolleys, pallets, conveyor belts, forklifts, computer keyboards and telephones, switches, etc.
D	Surfaces outside the processing area Surfaces outside of the premises but includes areas through which people, equipment and ingredients may pass	Low	Locker rooms, cafeterias, entry/access ways, pallets and pallets, loading bays, roofs, gutters, waste pits, garbage storage areas



RCL Environmental Sample Floor plan



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Samples Collected



FOOD CONSULTING SERVICES

ENTERPRISE NO. 2009/09046/03 VAT NO. 4800170018

P.O. Box 1461
Halfway House
1685
South Africa

Tel: (011) 315-5007/8
Fax: (011) 315-5029
info@foodconsulting.co.za
www.foodconsulting.co.za



OUR REFERENCE: FCS 886 02 18
26 FEBRUARY 2018

NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
NO. 1 MODDERFONTEIN ROAD
SANDRINGHAM
2131

Attention: Nevashan Govender

MICROBIOLOGICAL TEST REPORT RE: PROCESSED MEAT EVALUATION

The following samples were received on 15 February 2018 for microbiological evaluation only.

Sample	Description
SS-159-1	Production Emulsifier blade
SS-159-2	Production Emulsifier side
SS-159-3	Production Emulsifier opening
SS-159-4	Production lander panel box
SS-159-5	Production blender panel 2
SS-159-6	Production staircase handle 2
SS-159-7	Production blender panel
SS-159-8	Production cossine blender
SS-159-9	P17 cozone blender
SS-159-10	P19 chiller 16 drain
SS-159-11	P21 production floor emulsifier drain



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Sample results



RESULTS

Sample ref.	<i>L. monocytogenes</i> (detection)
SS-159-1	ND
SS-159-2	ND
SS-159-3	ND
SS-159-4	ND
SS-159-5	ND
SS-159-6	Positive
SS-159-7	ND
SS-159-8	ND
SS-159-9	Positive
SS-159-10	Positive
SS-159-11	Positive
SS-159-12	ND
SS-159-13	ND
SS-159-14	ND
SS-159-15	ND
SS-159-16	ND
SS-159-17	ND
SS-159-18	ND
SS-159-19	Positive
SS-159-20	ND
SS-159-21	ND
SS-159-22	ND
SS-159-23	Positive



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Methodology



METHODS

The following standard FCS method was used.

Tests marked (*) "Not SANAS accredited" in this report are not included in the SANAS Schedule of Accreditation for this laboratory.

TM051 VIDAS *Listeria monocytogenes* II (LMO2)

The results in this report reflect only the analysis of the above-mentioned samples in the condition they were received (comments/ notes will be made in the event that samples deviate from the norm or any visual defects are noted). Only the results of the indicated methods are accredited, the comments and interpretations of the above mentioned results fall outside the scope of accreditation. This report may not be reproduced except in full. Extracts can be reproduced only with the express written permission of an FCS signatory. Method validations performed, prove that the results obtained and recorded in this report, fall within a 95% confidence level at k=2.



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National Measures Implemented



- Pronouncement by Minister to control outbreak. <https://www.gov.za/speeches/minister-aaron-motsoaledi-update-listeriosis-outbreak-south-africa-4-mar-2018-0000>
- Ministerial marching orders:
 - The National Consumer Commission (NCC) issued the manufacturers, i.e., RCL and Enterprise with safety recall notices in terms of Section 60(2) of the Consumer Protection Act;
 - The safety recall for the affected products including the entire distribution networks, both domestic and international;
 - Compliance notices to be issued by the Environmental Health Practitioners in terms of the National Health Act;
 - Temporary suspension of export registration documents of the affected two companies until further notice.
 - Members of the public to avoid all processed meat products that are sold as ready-to-eat.



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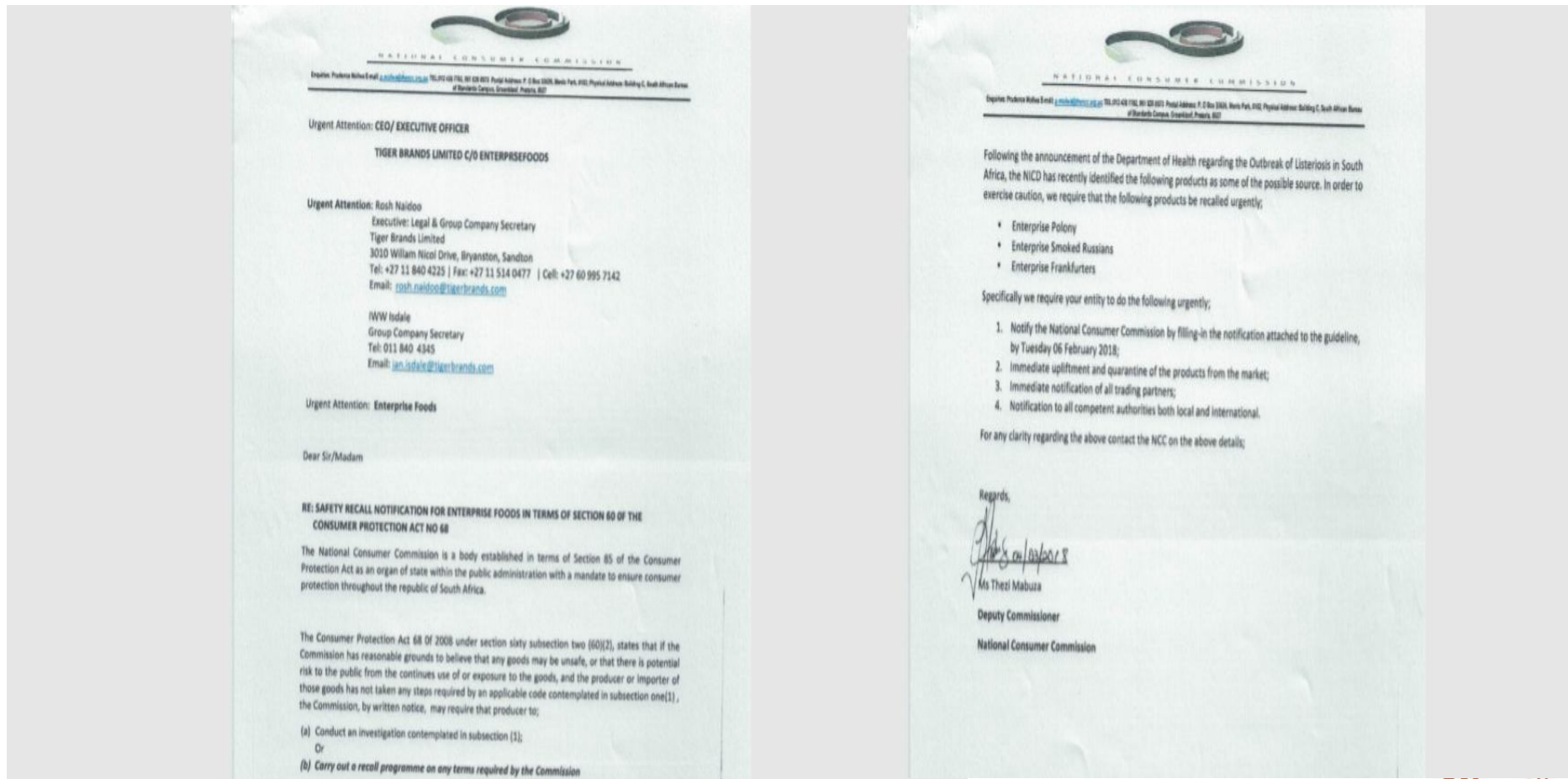
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Progress to date



- Safety recall of the affected products by NCC



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- The recall of implicated food products was announced on 04 March 2018. However, it is expected that new outbreak-related cases will continue to be reported, for the following reasons:
 - the incubation period of listeriosis can be up to 70 days;
 - the implicated food products have a long refrigeration shelf life, and it is possible that despite the recall some products were not removed from retail/home settings, and consumption might occur
 - the possibility of cross-contamination of other types of foods in the retail or home setting may result in additional cases



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Progress to date (Cont..)



- Temporary suspension of Export documents of the affected premises by the Department of Agriculture.



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Directorate: Veterinary Public Health, Department of Agriculture, Forestry and Fisheries
Delport Building, C/o Avenue 50th & Union Streets, Rivars, Pretoria, 0084
Private Bag X138, Pretoria 0001
Enquiries: Dr Mphahlele • Tel: +27 12 319 7889 • Fax: +27 12 319 7890 • E-mail: MphahleleM@daff.gov.za

To: Provincial Executive Officers (PEO)

SUSPENSION OF EXPORTS FROM RCL FOODS CONSUMER (PTY) LTD CHICKEN WOLWEHOEK (ZA 32) AND ENTERPRISE FOODS POLOKWANE (ZA 33)

As a result of the outcome of the Listeria outbreak investigation, a decision has been taken under Section 14(7) of the Meat safety Act, 2000 (Act No. 40 of 2000) to prohibit the export of meat and meat products produced from the two establishments below:

- ZA 32: RCL Foods Consumer (Pty) Ltd Chicken, Wolwehoek (Free State Province), and
- ZA 33: Enterprise Foods, Polokwane (Limpopo Province)

You are requested to suspend export certification, with immediate effect, of products produced at these two establishments.

As these two establishments also exported either directly or indirectly via retailers and distribution centres, you are also kindly requested to provide details of consignments that originated from these establishments that were certified in your respective Provinces (from April 2017 to date) using the attached template.

Further details on lifting of the suspension will be provided in due course once appropriate corrective actions have been instituted.

Your assistance is much appreciated.

Yours faithfully,

Dr Mphahlele
Director: Veterinary Public Health
Date: 05/03/2018



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- [illegible]



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Progress to date



➤ Response from the industry on food safety recall.



3010 William Nicol Drive, Bryanston Tel: +27(11) 840-4000 Fax: +27(11) 514-0084

PO Box 78056, Sandton 2146, Republic of South Africa

06 March 2018

The National Consumer Commission
By Email: P.Moiwa@thncc.org.za

Dear Prudence

RE: ENTERPRISE FOODS – RECALL

We refer to the above matter and our letter dated 05th March 2018.

Please note that it has been brought to our attention that the number of the helpline provided had a typo. Please note that the correct number is as follows: **0860 33 33 10**.

We apologise for any inconvenience caused.

Yours faithfully

AVISH KALICHARAN
GROUP COMPLIANCE DIRECTOR



3010 William Nicol Drive, Bryanston Tel: +27(11) 840-4000 Fax: +27(11) 514-0084

PO Box 78056, Sandton 2146, Republic of South Africa

05 March 2018

The National Consumer Commission
By Email: P.Moiwa@thncc.org.za

Dear Prudence

RE: ENTERPRISE FOODS – RECALL

We refer to the above matter and thank you and your team for a very constructive meeting this morning.

As discussed, please find attached:-

- 1) List of known export Countries;
- 2) List of affected products which are subject to the recall as well as a list of non-affected products.

We confirm that our Consumer Helpline number is as follows: **0860 333 3310**.

We will let you have the Recall Notification form and the additional information tomorrow, as undertaken.

Yours faithfully

AVISH KALICHARAN
GROUP COMPLIANCE DIRECTOR

COUNTRY	JULY		AUG		SEPT		OCT		NOV		DEC		JAN		FEB		MARCH		YTD TO TAL	
	CASES	TONS	CASES	TONS	CASES	TONS	CASES	TONS	CASES	TONS	CASES	TONS	CASES	TONS	CASES	TONS	CASES	TONS	CASES	TONS
BOTSWANA (Via Senn Foods Botswana)					0	0.0													0	0.0
LESOTHO (Via Vector Bloemfontein)	130	1.0	236	1.8	285	2.2	189	1.5	234	1.8	232	1.8	178	1.4	194	1.5	-34	-0.3	1644	12.9
MOZAMBIQUE (Via Tio Peixe Mozambique)			1404	11.2			1404	11.2			7020	56.2							9828	78.6
NAMIBIA (Via Vector Windhoek)									518	3.8	674	5.1	0	0.0					1192	8.9
SWAZILAND (Via Logico Swaziland)	0	0.0	0	0.0	3	0.0	-3	0.0											0	0.0
Grand Total	130	1.0	1640	13.1	288	2.2	1590	12.7	752	5.7	7926	63.1	178	1.4	194	1.5	-34	-0.3	12664	100.5



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Progress to date. (Cont..)



- Safety recall of the affected products by the industry



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Disposal of recalled products



- The Department of Environmental Affairs in partnership with the DoH issued a directive to Municipalities and the public on the correct disposal of recalled products.



Dear Madam/Sir

SPECIAL PERMISSION TO ACCEPT LISTERIA CONTAMINATED FOOD PRODUCTS FOR TREATMENT AND/OR DISPOSAL

In light of the recent outbreak of *Listeria* and given the potential for it to cause food-borne life threatening disease a number of food products have been recalled and require disposal. This letter serves to inform you that such waste may be accepted for treatment at a licensed incineration, non-ferrous or on-processing facility or may be accepted for disposal at a Class A landfill should you be approached to do so. Any condition of the respective Waste Management Licence (WML) of the receiving facility that may prohibit receipt of such waste will be suspended until such time as all of the waste has been treated and/or disposed of.

The receiving waste management facility must undertake a risk assessment and submit a risk management plan to the Department demonstrating that the proposed management option will ensure that the waste is managed in such a way that it no longer poses a risk to human or animal health, or the environment. The receiving facility must also prepare and submit detailed documentation to the Department indicating the treatment of waste processed on site.

Your cooperation in this regard will be much appreciated.

Yours sincerely

Ms. Michelle Gossard
Department of Environmental Affairs
Chief Director: Hazardous Waste Management and Licensing
Date: 27/03/2018



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Letter: gms-13173 people 504


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Action Plan by RCL



- RCL developed the following [action plan](#) for consideration by the collective

		RCL FOODS Consumer (Pty) Ltd Total Integrated Management System
		ACTION PLAN REPORT FOR WOLWEHOEK PRODUCTION FACILITY
DATE	13 March 2018	
NON-COMPLIANCE	Municipal Health Service issued a Compliance Notice in terms of section 83 (1) (3) of the National Health Act (Act 12 of 2013) to Wolwehoek on the 5 th March 2018	
SAMPLING RESULTS & CONTRAVENTION	Environmental samples collected by the NICD on the 14 February 2018 at Wolwehoek facility (1 Station Road, Wolwehoek, Salsolburg) food processing facility tested positive for Listeria monocytogenes Contravention of section 83(1) (c) of the National Health Amended Act, 2013 (Act 12 of 2013) as amended	
SCOPE OF ACTION PLAN	RCL Foods conducted a gap audit at Wolwehoek to provide the Department of Health with a comprehensive action plan detailing steps to achieve the acceptable levels of Listeria monocytogenes in colonies. (further discussions with all relevant stakeholders to confirm acceptable levels- Listeria monocytogenes in colony)	
PROJECT SPONSER	Scott Pitman	RCL Foods Consumer Division Managing Director
PROJECT LEAD	Anton Geustyn	RCL Foods Chicken Division Manufacturing Director
PROJECT TEAM	Najib Salim	RCL Foods Consumer QA and Food Safety Executive
	Rhona Mbele	RCL Foods Consumer Risk Executive
	Rosalind Govender	RCL Foods Consumer QA Compliance Manager
	Koen Le Roux	RCL Foods Consumer Engineering Executive
	Liam Paterson	RCL Foods Chicken Division Manufacturing Executive – Further Processing
	Vindesh Soorujlall	RCL FOODS Chicken Division SHEQ Manager Further processing
	Ravi Naidoo	RCL Foods Chicken Division Operations Manager Wolwehoek



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BACKGROUND



➤ Samples collected by EHPs in response to the outbreak

	# Swabs	# positives	# Food Samples	# positive	Action taken
Fezile Dabi District	221	28	32	0	Issued a compliance notice to one facility and awaiting results of six facilities
Lejweleputswa	25		35	3	3 food samples tested positive and awaiting results
Mangaung Metro	0	0	46	7	Five patients advised to decontaminate the fridge.
Thabo Mofutsanyana	26	0	79	2	Awaiting results for 81 samples. 3 butcheries awaiting issuance of compliance notice.
Xhariep	No report	No report	Nil report	Nil report	N/A
Total for Province	272	28	192	12	



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Post recall information

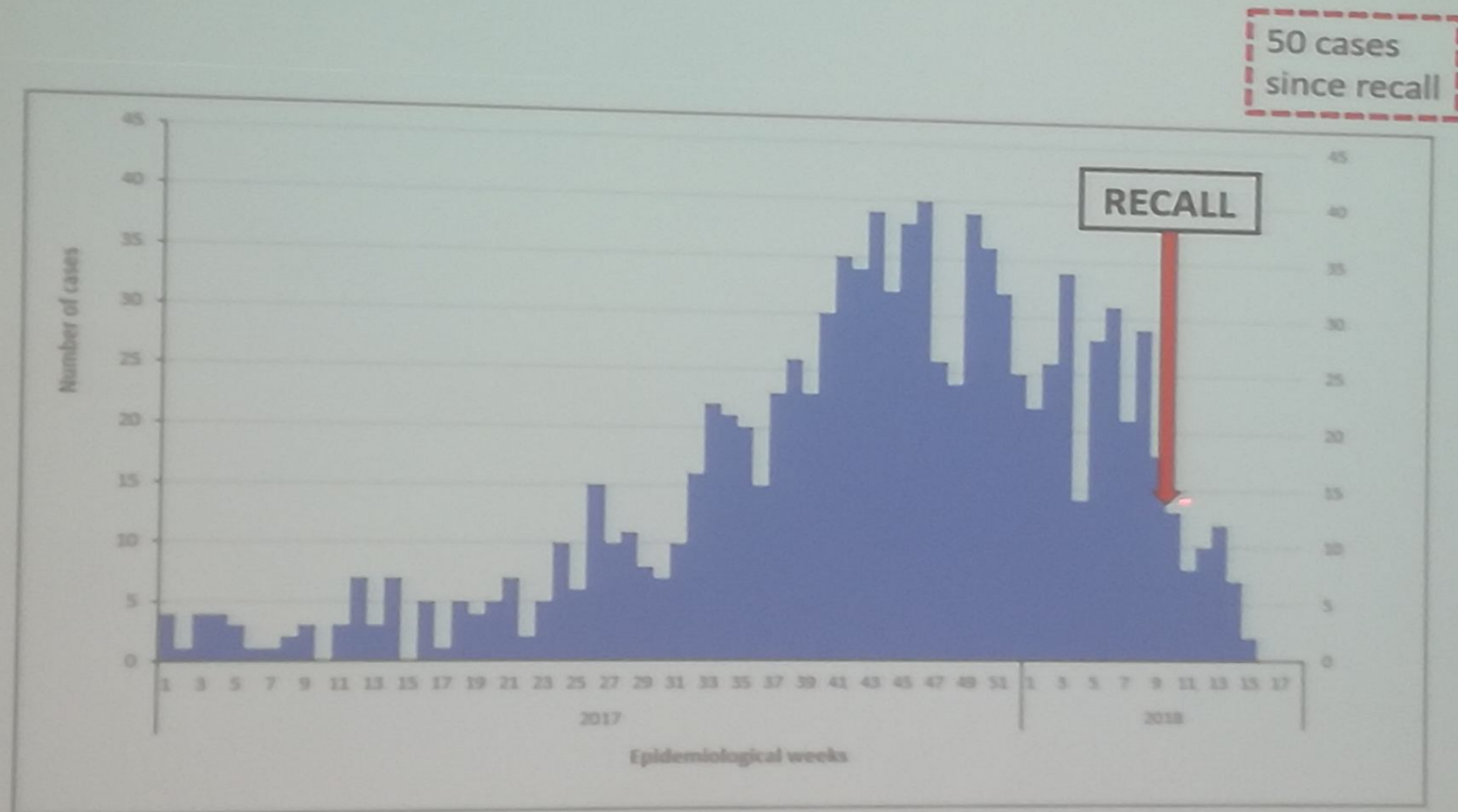


Figure 1: Epidemic curve of laboratory-confirmed listeriosis cases by epidemiological week and date of sample collection, South Africa, 01 January 2017 to 17 April 2018 (n=1 019)



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Issues to Note



- There are 113 food processing plants in the country;
- The focus is on RTE products such as polony and other cold meats;
- Food samples must be collected by Municipal EHPs from food processing plants, retailers and lab confirmed cases;
- On the 15/12/17 Listeria was declared a notifiable medical condition because it met two of the IHR prescribed criteria:
 - Communicable;
 - Rapid spread in communities;
 - Displayed unusual behaviour;
 - Cross border restrictions;
 - Spillage to neighbouring countries.



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National Listeriosis Control



- Public Health Emergency Operational Centre has been established through the assistance of WHO;
- Chaired by Dr Yogan Pillay, DDG: HIV/AIDS, TB and MNCH;
- Based at NICD offices in Johannesburg.
- It will be operational for three(3) months;
- The project is divided into three phases (Phase 1 – 3)
- Developed National Listeriosis Response Plan;
- Organisational structure has been established;



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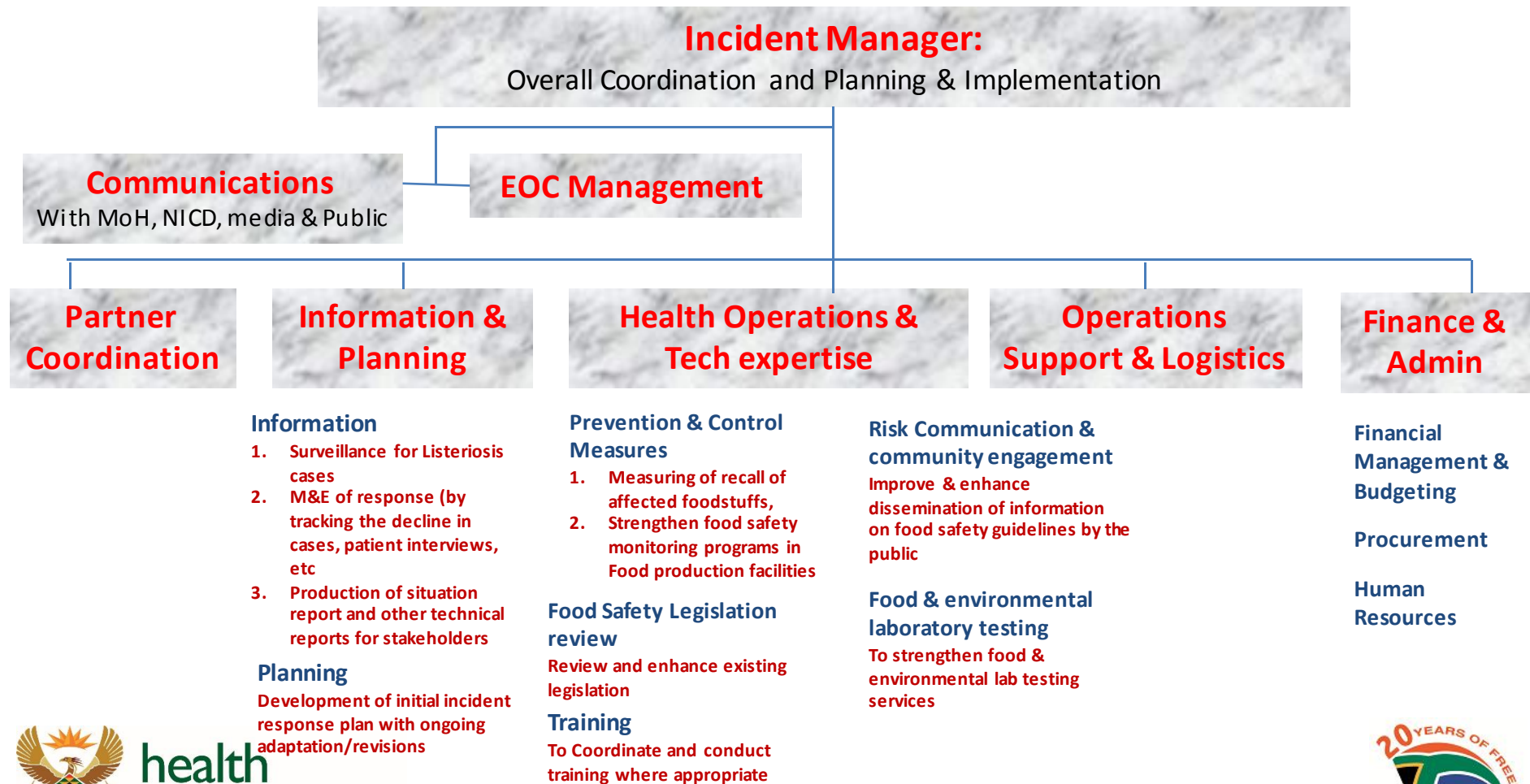
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IMT Organogram



Draft Joint Incident Management Team (IMT) Organogram



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National Listeriosis Response Plan



Objectives Supporting the overall goal of the response

1	Strengthening multisector coordination under one structure, working as one team
2	Strengthening Listeriosis surveillance to ensure timely detection and response to clusters and outbreaks
3	Strengthening lab capacity to support food and environmental testing, including enumeration of the levels in the food
4	Strengthening food safety monitoring programs in food production facilities and monitor the recall of implicated foodstuffs
5	Review and enhance existing legislation relating to food safety, enforcement and outbreak response
6	To continuously inform stakeholders and public in an accurate, timely and consistent, transparent and comprehensive way on the response to Listeriosis outbreak in South Africa



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Phase 1 (09 - 26 April)

Phase 2 (26 April – 20 July)

Phase 3 (20 July – 31 August)

Stakeholder communication (keeping stakeholders DoH, Dti, DAFF, DEA, industry, media, public) informed re: plan and progress

Information: Production of information products, sitraps, reports, etc

Legislative review: Immediate support for inspection teams,

P&C, Tiger Brands & RCL: Expect review group to advise & Action

Risk Assessment:

1. List of food production facilities & metadata
2. Identification of facilities to inspect

Risk Communication:

1. Preparation of material
2. Training

P&C Inspection team (n=10 -15)

1. Assembling a team,
2. Preparation of checklist, SOP,
3. Training

P&C – Recall: collection of data

Information (sequencing): outsourcing, staffing & database

NHLS Food Lab: Optimisation of SOPs, database, infrastructure, DNA extraction etc.

Risk Communication Activities

P&C Inspection team (n=10 -15)

Inspection and follow up on all identified facilities

Information (sequencing): sequencing of all isolates

NHLS Food Lab: testing of facility sampling

Risk assessment review of findings

Recommendations

Infor: Detection and investigation of clinical cases

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Key activities



- Key activities
 - Information
 - Epi and surveillance;
 - Situation report
 - Legislation
 - Review an alignment of food safety legislation
 - Environmental Health
 - Monitoring and recall of affected food;
 - Conduct risk assessment and identify high risk food production facilities;
 - Conduct inspections
 - Train Provincial and district EHPs;
 - Food Laboratory Testing
 - Strengthen and capacitate food safety testing in line with the international and new guidelines



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How Provinces can assist



- Contribute towards strengthening health systems in provinces
 - Monitor and control literia and prevent future outbreaks;
 - Strengthen provincial health systems;
 - Support National Emergency Response Plan (ERP).



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How provinces can assist



- Be aware of the ERP – distribute the 2 paper summary in the department, esp with your media liaison officer;
- Work with the IMT in the following areas:
 - Epi and surveillance – case notifications, activate your provincial ORT, share activities with the IMT (reports);
 - Risk Management/Communications – continue with the activities, address the misunderstandings, promote food safety, share activities with the IMT;
 - Environmental Health, DAFF/VPH – participate in training, work with the districts, participate in inspections, follow-up on inspections and share activities with IMT



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THANK YOU KE YA LEBOGA



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