



Situation Report			
Outbreak name	Listeriosis	Country affected	South Africa
Date & Time of report	21 May 2018	Investigation start date	August 2017
Prepared by	National Listeria Incident Management Team		

‘Team B’ on returning from their first factory inspection in Gauteng, Thursday 19 May 2018, along with environmental and food specimens in sealed coolerboxes, according to the protocol for specimen collection



Members of the Risk Communication team Team after completing their community engagement activity at Steve Biko Academic Hospital ante-natal clinic, Friday 20 May 2018.



1. Highlights

- 1 034 laboratory confirmed cases have been reported from 01 January 2017 to 10 May 2018. One additional case was reported during the period 11-16 May 2018; however reporting from the NHLS laboratory information system may have been incomplete this week.
- The number of reported cases per week has decreased since the implicated products were recalled on 04 March 2018 with a total of 64 cases reported since 5 March 2018 (average 6.4 cases/week), whereas 249 cases were reported for the 10 week period prior to the recall (average 24.9 cases/week).
- Provinces continue to submit the risk assessment tool for all food processing facilities and submit it to agent02EOC@nicd.ac.za.
- Implementation of Phase 2 of the Listeria Emergency Response Plan continues: Two additional factory inspections have been completed, and two additional training days for health practitioners (EHPs) were held in Gauteng on 18 May 2018.
- A joint media statement was released on 18 May 2018, and community engagement events were held in three major Gauteng public hospitals.
- Upcoming activities include training of EHPs and factory inspections in East London, Port Elizabeth and Nelspruit, and a media workshop. See below for details.
- Resources for Environmental Health Practitioners pertaining to listeriosis are available on the NICD website at <http://www.nicd.ac.za/index.php/listeriosis/>. This includes SOPs for specimen collection, RSA legislation, training powerpoints, and literature articles.



2. Background

Prior to 2017, an average of 60 to 80 laboratory-confirmed listeriosis cases per year (approximately 1 per week), were reported in South Africa. In July 2017, an increase in laboratory-confirmed cases of listeriosis was reported to National Institute for Communicable Diseases (NICD) which was followed by investigations into the reported increase. On 05 December 2017, the listeriosis outbreak was declared by the Minister of Health, Dr. Aaron Motsoaledi. The source of the outbreak was identified as ready-to-eat processed meat products manufactured at Enterprise Foods' Polokwane production facility. A recall of affected products was initiated on 04 March 2018.

3. Emergency Management Approach

Phase 2 of the Emergency Response Plan developed by the multi-sectoral incident management team (IMT) is being implemented. The aim of the plan is to control and end the current listeriosis outbreak, and to strengthen systems to facilitate prevention and early detection of outbreaks. To inform and support these aims, surveillance and investigation of cases of listeriosis and risk communication activities are ongoing. Additional activities to complement these are being conducted as follows;

- Phase 1: Development of the ERP, communication of the plan with provincial and district stakeholders, development of material and training of staff to support inspections of facilities identified as at-risk food processing plants;
- Phase 2: Inspection of at-risk food processing plant and strengthening the capacity of district environmental health practitioners;
- Phase 3: Reporting and consolidation of health system strengthening activities, and after action review.

4. Public Health action/response interventions

1. CO-ORDINATION

The IMT continues to meet daily to coordinate response and preparedness activities. Continuous communication with stakeholders including sharing of the listeriosis response plan and recent situation reports. The team is following up with provinces to provide weekly updates on implementation of the listeriosis plan. A matrix of key stakeholders has been finalised.

2. SURVEILLANCE

1 034 cases have been reported from 01 January 2017 to 16 May 2018. The number of new cases reported each week has decreased since the implicated products were recalled on 04 March 2018 (Figure 1). Neonates ≤ 28 days of age are the most affected age group, followed by adults aged 15 – 49 years of age (Figure 2). Most cases have been reported from Gauteng Province (59%, 606/1 034), followed by Western Cape (13%, 130/1 034) and KwaZulu-Natal (7%, 75/1 034) provinces (Table 1).

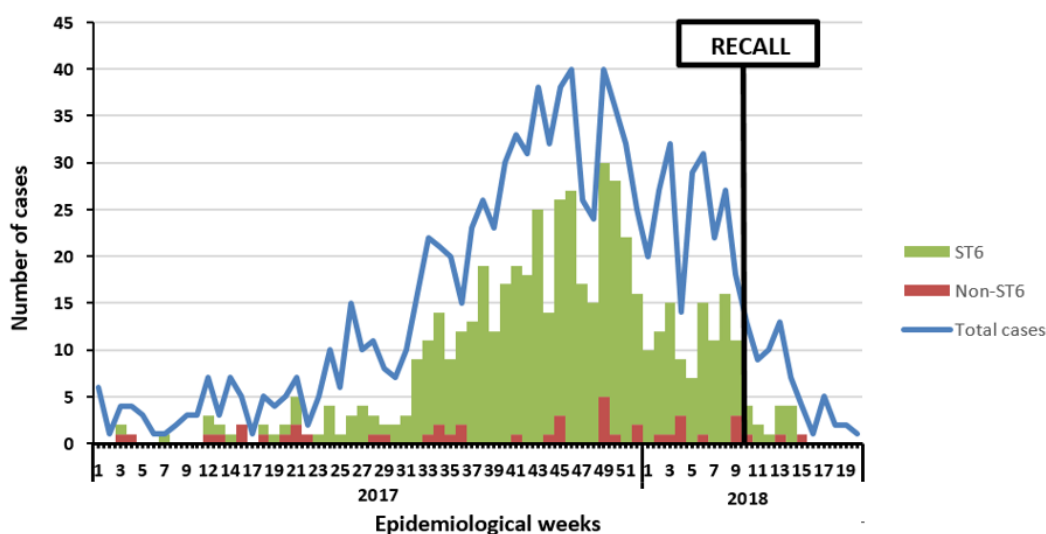


Figure 1: Epidemic curve of laboratory-confirmed listeriosis cases by date of clinical specimen collection (n=1 034) and sequence type (ST) (n=541), South Africa, 01 January 2017 to 16 May 2018

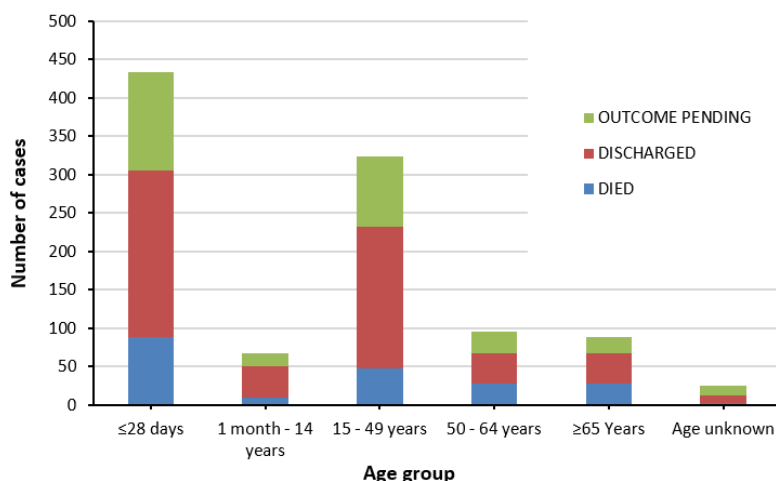


Figure 2: Age distribution and outcome of laboratory-confirmed listeriosis cases, South Africa, 01 January 2017 to 16 May 2018 (n=1 034)

Table 1. Number of laboratory-confirmed listeriosis cases and deaths by province, where outcome data is available:

Province	Outcome available (as a % of total cases in RSA)	Number of deaths (% of those with outcome available)	# cases (% of total cases)
Gauteng	383 (63.2)	106 (27.7)	606 (58.6)
Western Cape	114 (87.7)	30 (26.3)	130 (12.6)
Kwa-Zulu Natal	66 (88.0)	21 (31.8)	75 (7.3)
Mpumalanga	47 (97.9)	11 (23.4)	48 (4.6)
Eastern Cape	30 (56.6)	11 (36.7)	53 (5.1)
Limpopo	34 (65.4)	7 (20.6)	52 (5.0)
Free State	30 (85.7)	8 (26.7)	35 (3.4)
North West	25 (86.2)	7 (28.0)	29 (2.8)
Northern Cape	6 (100.0)	3 (50.0)	6 (0.6)
Total	735 (71.1)	204 (27.8)	1 034

- Following a recall of implicated products, the number of cases are going down. However, it is anticipated that cases could still be reported for the following reasons:
 - The incubation period of listeriosis can be up to 70 days
 - The implicated products have a long shelf life and it is possibly that despite the recall some products have not been removed from retail or consumer’s homes
 - Cross-contamination at retail and in the home can occur
- Post recall (05 March 2018 to date), all new cases of laboratory-confirmed listeriosis are contacted by IMT members, and a comprehensive food history is obtained. Exposure to food products implicated in the listeria outbreak is determined.
 - 43 interviews have been done on 66 persons who were diagnosed with listeriosis after the recall
 - 27/43 (63%) of ill people or their proxy reported consuming polony prior to their illness onset.

3. LABORATORY

- **NICD:**
 - a. All clinical isolates received at NICD are undergoing whole genome sequencing (WGS). A total of 543 clinical isolates have undergone WGS to date (Figure 1); 92% (499/541) belong to the sequence type 6 (ST6) outbreak strain, and the remainder belong to thirteen different sequence types. Of the 66 cases reported post recall, 31 viable isolates of *Listeria monocytogenes* have been received by the NICD from the laboratory where the diagnosis was made. WGS has been



completed for 18 of these isolates to date; 14 are outbreak strain ST6 and 4 are other sequence types..

- b. Case investigation forms were received for 42/66 post-recall cases
- c. For the purposes of assessing linkage of *Listeria monocytogenes* strains to the South African outbreak, the NICD has deposited 10 representative ST6 sequences in the public GenBank - NCBI database (<https://www.ncbi.nlm.nih.gov/Traces/study/?acc=SRP142281>). Please contact Dr Anthony Smith (anthonys@nicd.ac.za) regarding sequencing queries.

• **NHLS Public Health Laboratory:**

- a. NHLS Trakcare has been set up to support data collection from environmental and food specimen request forms, including data on patient name, should the food specimens have been collected from patient homes.
- b. A PCR test has been optimised for detection of *L. monocytogenes* in food samples at the Infection Control Laboratory, NHLS. This will shorten the turn-around-time for results.
- c. Environmental Health Practitioners are requested to contact their local NHLS laboratory to obtain results.

4. ENVIRONMENTAL HEALTH and FOOD SAFETY

- Two teams of EHPs and trainers (Team 'A' and Team 'B') finalised logistics for proposed provincial trainings and factory inspections for the next month.
- Two factory inspections to Gauteng meat processing plants were conducted on 17 May 2018, one in Tshwane and a second in Heidelberg.
- Provincial and district environmental health teams continue to submit completed risk evaluation tools of food processing plants. The tool is available at <http://www.nicd.ac.za/index.php/listeriosis/> with the link 'Food processing plant risk-profiling tool for completion by District Municipalities (2018)'. All districts are requested to send completed forms to agent02EOC@nicd.ac.za
- Four factory visits and inspections were conducted by the IMT. Three Tiger Brands facilities and one RCL facility were inspected. Reports have been shared with the district municipalities, who are responsible for monitoring implementation of food safety legislation.
- The IMT members were trained by Infection Control Services laboratory on a new SOP for collection of specimens from food processing facilities.

5. RECALL PROCESS

No update has been received from the National Consumer Commission.

6. TRAINING/CAPACITY BUILDING

- Two additional training days were held for Gauteng EHPs on Friday 18 May in Kalafong (36 persons trained) for Tshwane and West Rand and at NICD (95 persons trained) for City of Johannesburg, Ekurhuleni and Sedibeng.

7. FOOD SAFETY LEGISLATION REVIEW

- An in-house discussion amongst government stakeholders on proposed legislation to regulate the processed meat industry was held on Friday 18th May, 9am-12noon.

8. RISK COMMUNICATION, COMMUNITY ENGAGEMENT & SOCIAL MOBILISATION

- The '5 keys to safer food' posters have been completed with the new layout and design, and are ready for printing.
- A joint media statement from all government departments providing an update on activities of the IMT was prepared, reviewed by senior officials and released (see www.nicd.ac.za)
- A 'Vox pops' video was developed by the digital team on community perceptions and understanding of listeriosis messages.
- Community engagement events were done at Helen Joseph, Kalafong and Steve Biko hospitals.



- Media and social media monitoring is done daily. Media enquiries pertaining to testing of imported meat and follow-up questions pertaining to the joint media statement

5. Challenges / Gaps

Provinces and districts are urgently requested to complete risk assessment profiles for all food production facilities.

6. Recommendations & priority follow-up actions

- A 3-hour media workshop to update journalists on listeria activities is planned for 30 May 2018 at GCIS offices, Tshedimoseiso House, 1035 Schoeman St, Hatfield, Pretoria, 0028. For further enquiries please email Nombulelo Leburu at nombulelo.leburu@health.gov.za.
- Training of EHPs and factory inspections will take place in Mpumalanga, East London and Port Elizabeth this week.

7. Conclusions

Phase 2 of the ERP continues with the following activities conducted by the IMT over the past week: 1) ongoing surveillance and investigation of cases; 2) inspection of 2 Gauteng factory visits including environmental and food sampling; 3) additional training of Gauteng EHPs and 4) preparations for training and inspections in Mpumalanga and the Eastern Cape provinces; 5) release of a joint media statement updating the public on activities of the IMT; 6) Community engagement activities at ante-natal clinics at 3 major Gauteng hospitals.