Email: la@anelichconsulting.co.za
Tel: +27 (0) 12 362 5960
Cell: +27 (0) 82 908 3166
Website: www.anelichconsulting.co.za

281 William Street • Brooklyn • 0181
South Africa

P O Box 36536 • Menlo Park • 0102
South Africa

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# TENTH UPDATE ON LISTERIOSIS OUTBREAK IN SOUTH AFRICA

By Dr Lucia Anelich

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The NICD has provided the latest update on the listeriosis outbreak in South Africa – attached to this note as at 27 February 2018. The outbreak remains across all nine provinces. The cases are up from 915 on 20 February to **945 (30 more**), with **176 deaths** (**4 more** than on 20 February).

**In summary to date for your convenience:**

| DATE | CONFIRMED CASES | DEATHS |
|---|---|---|
| 05 December 2017 | 550 | 36 |
| 20 December 2017 | 647 | 60 |
| 03 January 2018 | 717 | 61 |
| 12 January 2018 | 748 | 67 |
| 16 January 2018 | 767 | 81 |
| 25 January 2018 | 820 | 82 |
| 06 February 2018 | 852 | 107 |
| 15 February | 872 | 164 |
| 20 February | 915 | 172 |
| **27 February** | **945** | **176** |

The strain that is **still most frequently isolated** belongs to **sequence type ST6**. This continues to indicate that these isolates originate **from a single source**, most likely a food product on the market or a series of food products produced in the same manufacturing environment. The source may even be products that are consistently contaminated from batch to batch by persistent *L. monocytogenes* in the environment of the facility, particularly if there is no environmental control programme with associated **effective** cleaning and disinfection in place.

**Other statistics in summary (see more in NICD report):**

Outcome data is available for 635 of the 945 cases. Of these 635 cases, 176 deaths have been reported **(28% mortality rate)** which remains the same as for 15 and 20 February. It has decreased

from **34% on 25 January and 30% on 06 February.** This rate is **currently** (this will likely change as the disease progresses and more cases are traced) 2-7% higher than general mortality rates reported in other countries i.e. 20-25%. **Neonates ≤ 28 days continue to be the most affected group.**

Over 1500 foodstuffs have been tested from retail outlets, food processing plants and patient homes. Over 70 food items have tested positive for *L. monocytogenes*. These have undergone molecular sequencing at the NICD. Over 500 isolates of *L. monocytogenes* have undergone whole genome sequencing.

**However, the source of the outbreak remains unknown.** Anelich Consulting opinion: "By all accounts, the outbreak has not yet peaked and more cases and deaths can be expected if the source is not found soon".

## NEW course launched!

### *Listeria monocytogenes* – all you need to know to control it in your processing plant and how to establish appropriate microbiological criteria based on risk. Click here for more information.

Dr Anelich stated in previous communiques that this was **the worst documented listeriosis outbreak in global history**. **It remains so**. Her international colleagues in European countries, Canada, Australia and the USA concur.

This communique, further information and interviews conducted can be found on the Anelich Consulting website at www.anelichconsulting.co.za and by clicking on links provided.

See http://anelichconsulting.co.za/index.php/faq for regularly updated answers to Frequently Asked Questions.

Contact Dr Lucia Anelich at la@anelichconsulting.co.za for further assistance and scientific advice based on international best practice.



**Listeriosis**

*Listeria monocytogenes* is the primary cause of the illness called listeriosis. The organism is an **environmental pathogen** and is found in soil, water, sewage, and decaying vegetation. It can be readily isolated from humans, domestic animals, raw agricultural commodities, and food packing and processing environments (particularly cool damp areas that can contaminate food). It can cause two types of illnesses:

- A mild, non-invasive illness (called listerial gastroenteritis), which shows typical symptoms of gastroenteritis i.e. fever and diarrhoea. This form of the illness is rarely diagnosed and usually passes quickly without severe effects;

- A **severe, invasive** illness (called **listeriosis**). Listeriosis is characterized by a relatively high mortality rate i.e. **~20-25%** compared to illnesses caused by most other foodborne pathogens (<1 % for *Salmonella* or *E. coli* O157). In the invasive form of the illness, the organism has moved beyond the gut and has infected other parts of the body.

Persons who have the greatest risk of experiencing listeriosis due to consumption of foods contaminated with *L. monocytogenes* are **pregnant women and their foetuses**, the **elderly (over 65 years of age) and persons with weakened immune systems,** for example, undernourished persons, people who have had organ transplants, those with HIV/AIDS, diabetes, cancer and other autoimmune diseases.

**Pregnant women:** Pregnant women are approximately **20 times more likely** than other healthy adults to get listeriosis. Pregnant women typically experience only fever and other flu-like symptoms, such as fatigue and muscle aches. However, infections during pregnancy can lead to miscarriage, stillbirth, premature delivery, or life-threatening infection of the newborn, such as meningitis.

- **People other than pregnant women**: Symptoms can include headache, stiff neck, confusion, loss of balance, and convulsions in addition to fever and muscle aches.

People with invasive listeriosis usually report symptoms starting **1 to 4 weeks** after eating food contaminated with *L. monocytogenes*; some people have reported symptoms starting as late as 70 days after exposure or as early as the same day of exposure (although this is very rare).

**Foods that have caused outbreaks are typically contaminated from the environment during manufacturing/processing or packing.**

Listeriosis is **mainly associated** with consumption of contaminated Ready-To-Eat (RTE) foods. Foods most often implicated in foodborne outbreaks **globally**, are:

- Ready-to-eat deli meats (polonies, ham products etc) and hot dogs
- Refrigerated pâtés or meat spreads
- Unpasteurized (raw) milk and dairy products
- Soft cheese made with unpasteurized milk, such as queso fresco, Feta, Brie, Camembert
- Refrigerated smoked seafood
- Raw sprouts
- Pre-packaged salads
- Ice cream (not as common)

It is killed by thorough cooking and by temperatures used for pasteurization of milk.