

LISTERIA OUTBREAK

Summary

Between March and April 2024, six people spread across the Loddon Mallee region were confirmed as having listeria infection. Interviews with patients, clinicians, and families indicated all had consumed foods from a common chain of stores prompting the declaration of an outbreak in late March.

An extensive investigation followed, with more than 30 food premises inspected and sampled across multiple local government areas and beyond. Several sites tested positive for *Listeria monocytogenes*. Genomic testing confirmed the cases were closely related and linked to a known food product.

Working together, the Loddon Mallee Public Health Unit, Local council environmental health teams, Department of Health and regulators traced the source, confirmed the product was no longer in circulation, and ensured all affected sites were inspected and cleaned. The response improved clarity of roles across agencies and demonstrated the value of local networks, rapid communication and genomic tools in quickly identifying links.

This investigation showed how early collaboration, rapid testing, and clear processes can strengthen public health responses and build confidence in food safety.



Context and Scenario

Listeria is a bacteria commonly found in the environment that can contaminate food and cause an illness known as listeriosis. While most healthy people do not become seriously unwell, certain groups, including pregnant women, older adults, and people with weakened immune systems, are at much higher risk of severe illness.

Transmission usually occurs through eating contaminated foods. Products such as unpasteurised dairy, cold meats, and unwashed fruit and vegetables are recognised as higher-risk sources.

Listeriosis is relatively rare, but when cases do occur, the consequences can be serious. On average, around 17 cases are reported in Victoria each year, and about 63 nationally. In 2023, Victoria recorded 0.41 cases per 100,000 people, while the Northern Territory reported the highest rate at 0.79 per 100,000.

In the 5 years between 2017 and 2022 there were 2 confirmed cases of listeriosis reported in Loddon Mallee. An additional 2 cases were reported in 2023, followed by the 6 confirmed cases that formed this outbreak.

This context underscores the importance of early detection and coordinated public health responses when clusters of listeriosis are identified. Even a small number of linked cases signals a significant issue requiring prompt investigation to protect vulnerable groups and prevent wider spread.

Interventions

The outbreak was managed as a significant public health incident, requiring coordination across multiple regions and agencies. Formal coordination began in mid-March 2024, with initial problem assessment meetings followed by the establishment of an Incident Management Team. Eight incident management meetings were held between March and May, supported by daily operational briefings with public health officers, epidemiologists, and medical staff to ensure consistent oversight.

Case interviews using a standardised food history questionnaire revealed that most cases had consumed a common product purchased through several chain stores located across the region. These products were traced back to the same supplier and batch, providing a strong lead for investigation. Other common high-risk foods, such as packaged lettuce, were also noted.

Environmental investigations were led by local councils across seven local government areas, with support from state agencies. In total, 34 separate locations were assessed, with food samples and environmental swabs collected where available. Several positive detections of *Listeria monocytogenes* were identified, strengthening the link between cases and contaminated food products.

Through coordinated inspection, sampling, and regulatory follow-up, implicated products were confirmed to be out of circulation, and affected premises undertook thorough cleaning and compliance checks. This structured, multi-agency approach ensured both immediate risk reduction and stronger local systems for managing complex foodborne outbreaks in the future.

Potential Outcome/Impact

All six people affected met the confirmed case definition for listeriosis, with diagnoses supported by blood cultures and genomic testing. Clinical, diagnostic, and epidemiological evidence consistently aligned, confirming the outbreak.

Food and environmental sampling across multiple outlets produced several positive detections of *Listeria monocytogenes*, with genomic testing showing that most cases were linked to the same strain. The strongest evidence pointed to a product supplied by a single company, consumed by five of the six cases. Cross-contamination was also identified as a contributing factor across retail outlets. The confirmation of a common source supported immediate public health action. A recall of the implicated product had already begun within the company, and the investigation reinforced and accelerated this process. By removing contaminated food from circulation, inspecting affected premises, and requiring cleaning and compliance checks, the risk of further illness was reduced. No additional cases linked to the outbreak were reported after April 2024.

Lessons Learned

Key lessons at a glance:

- Update and maintain clear protocols, tools, and contact lists
- Strengthen collaboration with local government and partners
- Use standardised, accessible templates for data collection and sampling
- Improve communication and logistics, especially across jurisdictions
- Share key learnings with agencies to support local operational updates

June 2024