

EMERGING RISK IDENTIFICATION SYSTEM
Enhancing Food Safety in New Zealand

Signals

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A quarterly brief on emerging food safety issues (Jan-Mar 2024)

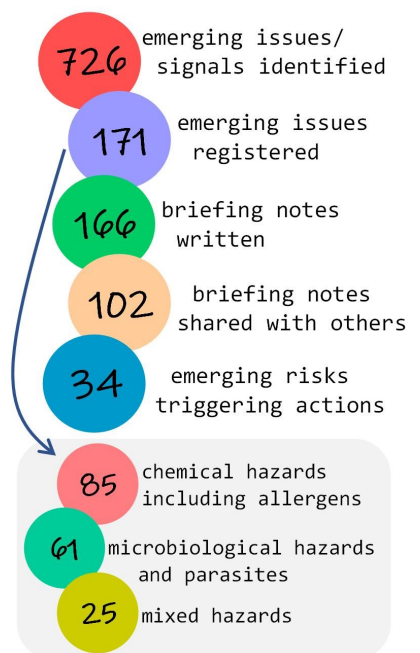
Scanning to prevent food safety failures

Recent incidents remind us that a single source of food contamination can impact many people. In February, hundreds became ill after sharing an unsafe meal at Khaparkheda temple, India. During March, food from a restaurant in Nha Trang, Vietnam, made more than 350 people sick, while in the US, the case count from contaminated cinnamon exceeded 500 people. With hindsight (and resourcing) the cause of food safety failures can be identified and actions taken to prevent them re-occurring.

Foresight focuses on what could come over the horizon so we can try to prevent food safety incidents. However, emerging risk work often means considering potentially foodborne hazards that have yet to cause obvious outbreaks or illness, or anticipating changes in people's exposure to hazards through their diet. Over three years, those involved in ERIS have

taken the time to consider over 170 emerging issues.

3 years in numbers (February 2024)



Publication information

This brief has been prepared for the ERIS project funders and the NZFSSRC by Nicola King (ESR), with support from Kate Thomas (NZFS), Abhi Gautam (ESR).

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News from the network

At the end of March, Highly Pathogenic Avian Influenza (H5N1) was detected among dairy cows in the USA. Globally, human illnesses have been caused by contact with infected animals with onward transmission among humans not yet observed. The risk of human infection via food is considered negligible and HPAI is inactivated by pasteurisation. As of 4 April, HPAI-positive herds were detected in six USA States. HPAI is not known to be present in New Zealand.

New Zealand researchers have recently published a review and risk assessment of cyclic imines in shell-

fish. Cyclic imines are a class of lipophilic marine algal toxin. The available evidence shows that, for most cyclic imines, dietary exposure through shellfish presents a low risk for adverse health effects. The current health-based guidance value for pinnatoxins can be regarded as conservative.

Coroner's inquests into the availability of allergen information on food delivery apps have been prompted by the deaths of customers in Australia and England because allergen information was missing.

Links to information: [HPAI](#) ; [cyclic imines](#) ; [Australia inquest](#) ; [UK inquest](#)

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Summary of activities

Identified this quarter were

- 8 emerging issues concerning food or the food industry.
- Signals prompting updates to 18 identified emerging risks.
- 59 signals that did not meet the requirement of being a foodborne emerging risk to human health.

The ERIS Action Forum will decide if they want to undertake actions on these signals or identified emerging issues.

Featured emerging risks and issues

Foodborne transmission of emerging parasites, *Enterocytozoon bieneusi* and *Cystoisospora belli*. A 2023 ranking of potential foodborne pathogens listed the microsporidian, *Enterocytozoon bieneusi* and coccidian parasite, *Isospora belli* (now *Cystoisospora belli*), among the emerging diarrhoeal foodborne parasites. Most microsporidia (a sub-phylum of spore-forming organisms) are considered to be opportunistic pathogens of immunocompromised people but there have been foodborne outbreaks caused by *E. bieneusi*. *C. belli* has not caused recent outbreaks but has been detected in some surveys of African produce. Better detection methods will generate more data on these microorganisms.

Potential risks from fungal mycelium as a food. With the emergence of Quorn during the 1960s, eating fungal mycelium is not a new concept. During recent years, the push for alternative proteins has opened the market to new mycoprotein products. The products

have no safety concerns when produced using good manufacturing practices. However, the rapid expansion of this market, including companies using different species of fungi, has prompted some experts to caution about potential microbiological hazards and toxin risks.

Mercury release into the aquatic environment from the Arctic permafrost. The permafrost is a soil layer where the temperature stays at or below 0°C for at least two consecutive years. For millennia, the permafrost layer has sequestered mercury (Hg) from the atmosphere. Global warming is causing the permafrost to thaw, restarting microbial decomposition processes and releasing Hg and methylmercury (the more toxic form) into the environment. Permafrost soils from Alaska were found to store nearly twice as much Hg as all other soils, the ocean, and the atmosphere combined. As the permafrost thaws over the next century, mercury uptake and biomagnification through aquatic food webs is likely to occur.

Some other observations

- To reduce packaging waste, the South Korean Government is looking to replace bottled water labels with a QR code system. Coca Cola is also trialing label-free soft drink bottles to make recycling easier. Mandatory consumer information still needs to be available. [Link to S. Korea news](#)
- Polychlorinated naphthalenes (PCNs) are persistent organic chemicals. An EFSA expert panel were unable to assess risks for animal health through PCN in feed and found no concerns for human health from food. Lack of toxicity data affected the assessments. [Link to Coca Cola announcement](#)
- An increase in extensively drug-resistant *Shigella* infections has been reported in Europe. Shigellosis can be foodborne but sexual transmission is important in this current trend. [Link to PCN report](#)
- Scientists in Europe have advocated for *Streptococcus suis* infections to be notifiable after assessing data on human cases and zoonotic clades. The main transmission route is contact with pigs. Raw or undercooked pork products cause foodborne outbreaks. [Link to XDR Shigella article](#)
- [Link to Europe review](#)
- [Link to 2021 Thailand review](#)

The NZFSSRC member organisations funding ERIS are:

