

The Disease Surveillance and Investigation Section of the Communicable Disease Control Branch (CDCB) is responsible for the routine surveillance and investigation of sporadic cases of disease and the identification and investigation of clusters and outbreaks. All investigation data are subject to change, as this is the nature of clusters and outbreaks.

An outbreak is defined as the occurrence of cases of disease above what is normally expected within a specific place or group of people over a given period of time.

Foodborne Disease Investigations 2016

A foodborne **outbreak** is defined as an event where two or more people experience a similar illness after eating a common meal or food and epidemiological evidence indicates the meal or food as the source of the illness.

Salmonella Typhimurium phage type 135a – Restaurant - January

On the 28th January, a medical notification for a *Salmonella* case was received which indicated that four out of five people in a family were unwell with gastroenteritis after consuming milk shakes from a café. On the 29th January, a call was received from a Victorian resident indicating that three out of four people were unwell with gastroenteritis after eating food from the same café while attending a national sport event. An investigation was launched. A total of 31 people with gastroenteritis who consumed food from the café were identified across three jurisdictions, with 26 positive for *Salmonella*. Twenty-three cases were residents of South Australia, with 19 confirmed as *Salmonella* Typhimurium phage type 135a with an MLVA profile 03-14-10-10-523. Other cases were interstate residents. An environmental investigation at the premise identified that the ice-cream was made with raw eggs. The ice-cream was served in milk shakes, and as a topping for various desserts.

Salmonella Anatum – Community – February

On 1st February, an increase in notifications for *Salmonella* Anatum was detected through routine surveillance. Interviews were conducted with five cases and no common links were found. On the 4th February the Victorian Department of Health and Human Services announced they had an increased number of notifications for *Salmonella* Anatum and had initiated a product recall for pre-packed salad greens. Twenty-eight cases tested using whole genome sequencing had the outbreak sequence in SA. Thirteen of the cases reported eating pre-packed salad greens.

Salmonella Typhimurium phage type 9 – Restaurant – February

An increase in notifications for *Salmonella* Typhimurium phage type 9 was noted on 10th February 2016. All cases with dates of onset since 25th January were interviewed and three cases with onset dates between 25th and 30th January were linked to a café in metropolitan Adelaide, one of whom (onset date 30th January) worked as a food-handler at the café. One of the cases was hospitalised. The three cases consumed a range of egg based dishes at the café. All three cases had the same MLVA profile: 03-15-07-12-550. The outbreak information was referred to local council environmental health officers for investigation.

Salmonella Typhimurium phage type 9 – Takeaway – February

An increase in notifications for *Salmonella* Typhimurium phage type 9 was noted on 10th February 2016. All cases with dates of onset since 25th January were interviewed and ten cases with onset dates between 1st and 10th February were linked to a takeaway outlet in metropolitan Adelaide. One of the cases was hospitalised. The ten cases consumed a variety of Vietnamese rolls which were made with raw egg butter.

All ten cases had the same MLVA profile: 03-25-12-11-523. The outbreak information was referred to local environmental health officers for investigation. Two samples of egg butter from this outlet were submitted to the laboratory; no *Salmonella* was detected in either sample.

***Salmonella* subsp 1 ser 4, 12:i:- – Restaurant – February**

There was an increase in *Salmonella* subsp 1 ser 4, 12:i:- with nine notifications received within a four week period. Seven cases were interviewed and, from the interviews, three cases were linked to a takeaway outlet in metropolitan Adelaide. All three cases had consumed Vietnamese rolls or salad which included a number of common ingredients. The premise was inspected by the local council environmental health officer, a number of food samples were submitted to the laboratory, but no *Salmonella* was detected in the food samples. Two of the three cases were reported as the same MLVA profile; 04-14-10-00-490 with the MLVA typing for the third case pending. The source of the infection was not determined.

***Salmonella* Typhimurium phage type 44 – Restaurant – February**

On the 23rd February, a *Salmonella* medical notification was received, which mentioned the person ate at café A. The following day two suspected food poisoning cases were notified who had consumed food from the same café. An investigation was commenced and, in total, 13 cases of *S. Typhimurium* phage type 44 MLVA 03-10-09-10-523 and two cases of suspected food poisoning were linked to the café. Ten of the cases identified eating eggs on toast, three cases identified eating pancakes and one case each identified eating a breakfast donut and a chicken salad. Three environmental inspections were conducted at the café. Poor food handling and practices were identified. Samples taken at the café tested negative for *Salmonella*.

***Salmonella* Typhimurium phage type 108 – Institution – April**

Three cases of *Salmonella* Typhimurium phage-type 108, MLVA 03-09-09-14-523, occurred in residents at a correctional facility. All three cases shared a house within the facility and prepared their own food, including raw egg milkshakes. An inspection of the facility was conducted by the local government environmental health officer. No further cases were reported from the facility.

***Salmonella* Typhimurium phage type 9 – Restaurant – April**

Three persons with *Salmonella* Typhimurium phage-type 9 infection were identified as eating at the same restaurant. The restaurant was inspected by the local government environmental health officer. Environmental samples from the restaurant were collected and tested negative for *Salmonella*. Two of the cases had an MLVA of 03-24-13-10-523 with the results of the other case pending.

***Salmonella* Typhimurium phage type 135 – Takeaway – May**

On 11th May, CDCB received notifications for four confirmed cases of *Salmonella* who all identified eating Vietnamese rolls from the same takeaway shop in metropolitan Adelaide. A total of thirty-four *Salmonella* Typhimurium 135 cases were linked to food prepared by the takeaway shop with 31 cases reporting that they had consumed various Vietnamese rolls. Twenty-six cases had the same MLVA profile, 03-12-09-11-523, with MLVA typing results pending for eight cases. An environmental investigation of the premise identified that raw egg was being used in the butter spread for the rolls. However, food samples tested negative for *Salmonella*.

***Salmonella* Typhimurium phage type 9 – Restaurant – August**

Multiple reports of suspected food poisoning were made to CDCB and the local government following consumption of food at the same hotel in August 2016. A case-control study was conducted. Of 219 people interviewed, 84 were confirmed with *Salmonella* and 59 reported experiencing gastrointestinal illness. The majority of confirmed cases were infected with *Salmonella* Typhimurium phage type 9 (81 cases), with other types of *Salmonella* also reported. The predominant MLVA type of cases was 03-24-11-10-523 (83 cases).

The results from the case-control study indicate that the odds of cases eating scrambled eggs were 41 times higher than the odds of controls eating scrambled eggs. Environmental swabs of the kitchen did not detect *Salmonella*.

***Salmonella* Typhimurium phage type 135 – Bakery – October**

Eight people with *Salmonella* Typhimurium phage type 135 consumed sandwiches or wraps from the same bakery. All cases had the same MLVA profile, 03-14-10-10-523. An environmental health inspection of the premises was conducted and no major issues were identified.

***Salmonella* Typhimurium phage type 9 – Restaurant – December**

Fourteen people with *Salmonella* Typhimurium phage type 9 were associated with the same restaurant; 11 had consumed food from the restaurant and three were staff members. Food samples, including aioli, hummus and dukkha, and environmental swabs from the restaurant were positive for *Salmonella* Typhimurium phage type 9. A prohibition order was placed on the venue and it was closed until clearance was given by SA Health.

***Campylobacter* – Commercial caterer – December**

Six cases of campylobacteriosis and five cases of gastroenteritis were reported among 90 attendees at a wedding. Food was supplied by a catering company and served on boards to be shared amongst a group of people. The local council inspected the catering company and the preparation of chicken liver parfait was inadequate; cases also reported inadequate and dirty toilet facilities at the venue.

PLEASE NOTE: MLVA (Multi-locus variable number tandem repeat analysis) is a laboratory technique used to determine if bacteria are genetically similar.

Vaccine Preventable Disease Investigations 2016

Measles

South Australia experienced an outbreak of measles in September, consisting of four cases. The source of the outbreak was a traveller returning from Thailand. SA Health urges anyone planning to travel overseas to ensure they are fully vaccinated before leaving Australia.

Meningococcal infection

There were two invasive meningococcal infection clusters identified in August/September caused by *Neisseria meningitidis* serogroup B. The cluster comprised of two males, both in their late teens. CDCB identified 11 people with social connections to both cases and these people were directed to receive clearance antibiotics.

Outbreaks Reported by Aged Care Facilities in 2016

Month reported	Agent identified	Number of facilities affected
January	Gastroenteritis, organism not detected	4
	Norovirus	1
	Rotavirus	1
February	Gastroenteritis, organism not detected	1

	Norovirus	1
	Influenza	1
March	Norovirus	2
April	Gastroenteritis, organism not detected	1
	Norovirus	1
	Rotavirus	1
May	Gastroenteritis, organism not detected	4
	Norovirus	2
June	Gastroenteritis, organism not detected	2
	Norovirus	3
	Rotavirus	1
	Influenza	1
July	Gastroenteritis, organism not detected	7
	Norovirus	3
	Influenza	1
August	Gastroenteritis, organism not detected	1
	Norovirus	10
	Influenza	2
September	Gastroenteritis, organism not detected	1
	Norovirus	4
	Influenza	5
October	Gastroenteritis, organism not detected	1
	Norovirus	1
	Influenza	8
November	Gastroenteritis, organism not detected	5
	Norovirus	3
	Influenza	8
December	Gastroenteritis, organism not detected	3
	Norovirus	4
	Influenza	5

Data correct as of 22 August 2017 and subject to change.

For more information

**Communicable Disease Control Branch
Public Health and Clinical Systems**