



Communicable Diseases Intelligence

Bulletin number 80/10
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VIRUS REPORTING SCHEME - A total of 713 new reports this period, with increases in the number of reports of coxsackie B virus, cytomegalovirus, Ross River, rotavirus, Q fever and Epstein-Barr virus infections.

- . Coxsackie viruses - The ICPMR, Sydney, reported two isolations of coxsackie B1, the first this year, both from patients exhibiting cardiovascular symptoms.

There were 10 reports of coxsackie B4, nine of which were from South Australia, compared with two, three and four for the previous three periods from all laboratories combined. One of the South Australian specimens had been received from Alice Springs. The remaining report was from Western Australia.

Coxsackie A16 was confirmed in one case of hand, foot and mouth disease in Western Australia. The typing of the enterovirus from a second case is yet to be completed.

- . Arbovirus infections - The outbreak of Ross River virus infections in Queensland continues, with 63 reports from that State. There were three reports of this infection in Darwin (reported by Western Australia) and one from South Australia. In addition, Fairfield Hospital reported two positive identifications of group A arbovirus - clinically Ross River virus infections - one from Echuca in Victoria, and the other from a 34 year old male who had probably contracted his infection in southern New South Wales.

The State Health Laboratory, Queensland, reported the detection of specific IgM to the Sindbis virus in a 61 year old female from Cairns. She had presented with fever, severe aches and pains, headache, extreme weakness and non-itchy urticarial-like lesions on her face, arms and legs, which became haemorrhagic after three days.

Two cases of dengue were reported by the Queensland State Health Laboratory, (one from New South Wales), and Fairfield Hospital reported two group B arbovirus infections, clinically dengue, in two 24 year old females recently returned from Bali.

- . Influenza - The WHO Influenza Centre, CSL Melbourne, reports its first two isolations of influenza A H₃N₂ since 1977. Both resembled A/Bangkok/1/79.

SALMONELLA TYPHIMURIUM FOOD-POISONING OUTBREAKS

(Contributed by J. Zagninski and G. Olsen, New England Region, Health Commission of New South Wales, Tamworth.)

Outbreak No. 1 (This report is a follow-up to advice contained in CDI 79/25.)

A large outbreak of food poisoning occurred at a hospital in the New England Region of New South Wales during 1979. More than 50 people developed gastroenteritis caused by Salmonella typhimurium (phage type 170). Of these, eight were patients and the remainder staff members (nursing - 29, domestic - 7, medical - 4, kitchen - 4, other - 3). The exact numbers were difficult to determine due to a viral gastroenteritis epidemic coinciding with this outbreak. However, 32 of the stool specimens submitted for examination were found to contain S. typhimurium 170.

The outbreak commenced 22 October 1979 and peaked the following day, with 18 staff reporting ill and a further 10 the next day. Individual cases were recorded on 27 and 29 October, and a further case on 10 November. S. typhimurium 170 was isolated from stool specimens in these cases. Symptoms included diarrhoea, vomiting, fever and abdominal cramps, with some lasting three days or more, and in some instances in excess of eight days.

On 24 October the N.S.W. Health Commission was notified by the hospital of a suspected outbreak of food poisoning which at first appeared to be confined to staff members who had eaten at the staff dining room on 21 October. Most of the salad foods served in the staff dining room were prepared for staff members only, and there was no likelihood of patients receiving these foods.

Investigations showed that chicken, roast pork and salad preparations were the most common food items consumed by those who were ill. Samples of prepared and raw food were taken for bacteriological examination from the hospital kitchen on 24 October. A portion of left-over rice salad prepared that day and served for lunch in the staff dining room, was found to contain S. typhimurium 170; however no outbreak was attributed to this.

S. typhimurium was also isolated from other raw meat samples, but these were found to be different phage types. In addition, S. derby and S. infantis were found in some items:

<u>Food</u>	<u>Serotype</u>
Chicken (1)	typhimurium 135 derby
Chicken (1)	typhimurium 135
Chickens (2)	derby
Lamb	typhimurium 135
Sausages	typhimurium 26 infantis

To prevent further out-breaks, all salads and excessively handled foods were deleted from the hospital menu from 29 October to 18 November. Foods prepared during this period were sufficiently heat treated to ensure destruction of any salmonellae present.

Kitchen staff with gastroenteritis symptoms were excluded from work until two consecutive stool cultures negative for salmonella were obtained. All other kitchen staff and dieticians were screened for salmonella. Two of the food handlers were found to be asymptomatic carriers of S. typhimurium 170, as was a dietician. Another food handler was found to be an asymptomatic carrier of S. typhimurium 35.

No locational or dietary pattern emerged with the eight patients with S. typhimurium 170. All were older patients with ages ranging from 58 to 88. One patient died.

Inspection of the kitchen and food storage areas revealed deficiencies in food handling and storage. Some foods that were prepared, (e.g. rice salad), were left out of refrigeration for lengthy periods; raw and cooked foods were stored together in coolrooms; bain-maries did not always maintain food at temperatures over 60°C, and the same "tools of trade" were used in the handling of raw and prepared foods (e.g. bench tops, cutting boards, etc.). Lack of adequate refrigeration facilities resulted in the storage of some prepared plated salad meals in the meat chiller. These problems have now been remedied. In view of the lack of understanding of basic sound food handling and storage practices, short food handling and hygiene classes were conducted for all food handlers, and a programme developed for educating hospital kitchen staff in the Region.

In conclusion, it appears that more than one food was implicated in the outbreak. In some cases it appears that low infective doses may have been responsible for disease in patients whose foods were not prepared.

The original source of contamination is unclear: either contaminated raw meat causing cross contamination in prepared foods, or carrier contamination of food is suspected.

(The authors acknowledge the assistance of the staff of the N.S.W. Health Commission, Division of Analytical Laboratories, Sydney, the Microbiological Diagnostic Unit, Melbourne, and the Australian Department of Health Pathology Laboratory, Tamworth.)

Outbreak No. 2

Fourteen people from three families became ill after a family gathering in Wee Waa, New South Wales. Symptoms consistent with food poisoning occurred after consuming a homemade 'Spanish cream' dessert on 28 October 1979.

The 'Spanish cream' which was made from duck eggs, milk, sugar, gelatine, vanilla essence and a whipped cream topping, was suspected as the

vehicle of infection, since all five members of one family arrived late and consumed this food only. It was, therefore, the one food common to all groups.

Symptoms included vomiting, diarrhoea, fever and abdominal cramps, with an average incubation period of 18 hours. In one case, the onset was only 5½ hours after consumption (without vomiting).

Left-over 'Spanish cream', which was a week old at the time of sampling, was found to contain Salmonella typhimurium (phage type 135) at 3.0×10^8 organisms per gram. Various ingredients were examined without success. However two of four faecal specimens from ducks of the egg supplier were also found to contain S. typhimurium 135. It appears that duck eggs were the original source of contamination of the food.

Warmed milk and water were used in the preparation of the 'Spanish cream'. It appears that this, in conjunction with the summer heat, contributed to the proliferation of the organism.

Editorial comment

In view of the frequency of human salmonella infections in Australia, the following brief summary of a report of an outbreak in Canada, from the Canada Diseases Weekly Report of 3 May 1980, and the author's comments, are of relevance.

The outbreak occurred in a group of elderly patients who had attended a pre-Christmas dinner at a senior citizens' complex on 20 December 1979.

Subsequent investigation showed that nine 30-pound frozen turkeys were purchased from a local grocery on 18 December and immediately placed in the store's cooler at 4°C (40°F). Approximately 24 hours later they were considered defrosted and properly thawed and, after washing, were transferred by volunteer workers to an oven for roasting at a temperature of 204°C (400°F). After 5½ hours, during which time the inside cooking temperature of the meat was not checked, the turkeys were thought to be sufficiently cooked and were removed from the oven and cooled for 1 hour. They were then taken to the complex and placed on a kitchen table for 24 hours at a room temperature of 10°-15.6°C (50°-60°F). Late on 20 December the turkeys were carved, other food items prepared, after which some 200 senior citizens sat down to their dinner. During the meal complaints were made that the meat was insufficiently cooked or was still 'pink'; one person claimed it had a greenish appearance.

Within 24 hours many of the guests developed fever, abdominal cramps and diarrhoea, the maximum incubation period being 48 hours.

S. saint-paul (3) and S. hadar (11) were isolated from stool specimens obtained from 14 persons who had attended the dinner. This relatively small number was due in part to the age of the group concerned and to a lack of cooperation by many patients. As the majority of stool specimens examined showed S. hadar, and only those who had eaten turkey were ill, it was concluded that the turkey was the contaminated food served at the dinner.

At the local level there were several contributing factors, involving mainly the retail outlet, and to a lesser degree the volunteers. The major factor was the poor food handling procedures practiced by everyone involved. In a commercial food outlet the lack of sufficient knowledge of safe food handling practices is inexcusable. The list of errors found at the retail outlet included:

- (1) insufficient period of time for thawing the frozen turkeys - it usually takes more than 24 hours to defrost a 30 pound frozen turkey at 4⁰C.
- (2) omission of the use of a thermometer to check the inside cooking temperature.
- (3) undercooking of the meat - the recommended cooking time is 20 minutes per pound. Therefore the meat should have been cooked for at least 10 hours; and
- (4) lack of space and proper equipment for the preparation, safe storage and handling of food items in large quantities.

Every basic rule with respect to preparing, cooking, and storing the nine turkeys was broken, both by the professionals as well as by the amateurs.

As the result of the investigation, management of this retail outlet was ordered to discontinue the practice of catering to any parties and to limit any food business to the coffee shop.

The cost of this outbreak in terms of suffering and as a financial burden on the taxpayer was considerable. Only a 5 to 10 minute discussion with a public health inspector regarding how to prepare and serve the Christmas dinner would have prevented this outbreak of salmonellosis.

IMPORTED MALARIA

Fairfield Hospital reports that during the last four weeks 17 cases of malaria have been admitted to the hospital. This is the largest number of patients with this disease ever to be admitted in a four week period. Fifteen had infection due to Plasmodium vivax and two due to P. falciparum. Three of the patients with vivax malaria were Vietnamese refugees, but all of the others were itinerant Australians. Six had returned from Papua New Guinea, two from Indonesia, two from South-East-Asia, one from the New Hebrides and one from the Solomon Islands. Both of the patients with falciparum malaria had acquired the disease in Bougainville, and both the infections, on clinical grounds, were due to chloroquine-resistant strains.

Nine of the cases had received chloroquine, Maloprim or Fansidar whilst

in a malarious area, but had not received primaquine on their return to Australia to eradicate exo-erythrocytic stages of P. vivax malaria. (Prophylactic doses of chloroquine, Maloprim and Fansidar are not effective against these stages.)

Editorial comment

Reports received to date this year by the central malaria register indicate that the number of imported cases of malaria is likely to be higher than in previous years. Nevertheless, the proportion of travellers from malarious countries who suffer an attack of malaria after arrival in Australia is comparatively small. In 1978, for example, only 0.14% of 232,924 such travellers had malaria. The highest attack rate, 0.36%, was found in persons arriving from Papua New Guinea and the lowest, 0.01% from Malaysia⁽¹⁾.

It is therefore questionable whether there is sufficient justification for recommending primaquine for all arrivals from malarious areas, as it would be unnecessary for over 99.5% of such persons. Even if prescribed there is the likelihood of the two week course not being completed in a number of cases due either to the unpleasant side effects which sometimes occur, or to forgetfulness on the part of the 'patient' who feels completely healthy. There is the additional likelihood of the occasional severe adverse reaction if a quarter of a million full courses are prescribed each year.

Nevertheless, there does appear to be a clear indication for the administration of an eradication course of primaquine (7.5 mg tds for two weeks to persons who have a history of severe exposure (particularly in Papua New Guinea) and to those who are proceeding to the malaria receptive areas of Australia, i.e. north of 19°S latitude.

Reference:

(1) Black R.H. - Personal communication

SMALLPOX

Press reports approximately a month ago indicated that a patient, recently returned to Italy from South-East Asia, was suspected of having smallpox.

The World Health Organisation has confirmed that the diagnosis was chicken-pox (source - WER 2 May 1980).

At the Thirty-third World Health Assembly in Geneva this month, the World Health Organisation officially declared the global eradication of smallpox.

As at 9 May 1980 the following countries are the only ones still requiring smallpox vaccination certificates from all travellers (WER 9 May 1980)

Benin	Lesotho
Chad	Madagascar
Democratic Kampuchea	Mali
Djibouti	

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 1-5 -80 - 14-5-80 BULLETIN NUMBER - 80/10
 VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES-CONTINUED

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VIRUS OR VIRAL ANTIGEN	ICPMR (NSW) / WVH (ACT)	RAHC (NSW)	PHH/ POW (NSW)	FAIR- FIELD (VIC)	RCH (VIC)	IMVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	Total
1021 ECHOVIRUS TYPE 21.....	1								1
1023 ECHOVIRUS TYPE 23.....			1						1
1030 ECHOVIRUS TYPE 30.....				3					3
1101 POLIOVIRUS TYPE 1.....						2	1	1	4
1102 POLIOVIRUS TYPE 2.....						4			4
1103 POLIOVIRUS TYPE 3.....						2			2
1104 POLIOVIRUS-VACCINAL STRAIN.....	1					1			2
1200 MUMPS VIRUS.....	1	1	2	1		1	1		7
1300 HERPES VIRUS GROUP-NOT TYPED.....				2		2			4
1301 HERPES SIMPLEX VIRUS-NOT TYPED.....	15		1		3	2	17	39	77
1302 EPSTEIN-BARR VIRUS (EB VIRUS).....	6								6
1303 VARICELLA-ZOSTER VIRUS.....	4			1		1			6
1306 HERPES SIMPLEX TYPE 1.....	3		6	14		9			32
1307 HERPES SIMPLEX TYPE 2.....	30		5	28		10			73
1399 HERPES VIRUS TYPING PENDING.....			7	1					8
1401 COXIELLA BURNETI.....	7					2	24		33
1502 PICORNA VIRUS-NOT TYPED.....								8	8
1514 MOLLUSCUM CONTAGIOSUM.....						1			1
1521 MEASLES VIRUS.....		2	1	1			1		5
1522 RUBELLA VIRUS.....	1			3		1		2	7
1530 HEPATITIS A VIRUS.....								4	4
1532 HEPATITIS B ANTIGEN.....		2	5	30		9	6	14	66
1535 HEPATITIS A ANTIBODY.....						5			5
1541 CHLAMYDIA A - TRIC TYPE.....	13		3			4		20	40
1556 CMV - CYTOMEGALOVIRUS.....	8		5	34	1	3	4	6	61
1563 CORONAVIRUS.....				1					1
1564 ROTAVIRUS.....	9			5	2	9			25
1599 ENTEROVIRUS TYPING PENDING.....			9		11	3			23
ARBO. GROUP A.				2					2
SINDBIS VIRUS							1		1
ROSS RIVER VIRUS						1	63	3	67
ASTROVIRUS	1				1				2
DENGUE							2		2
ARBO. GROUP B.				2					2
Total.....	115	9	54	3	50	98	136	118	713

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 1/5/80 to 14/5/80 80/10

Viral Identifications by Clinical Information Table 1.

Code 00,99 -No ill or data; 01,02,11,12 -Respiratory; E3 -Encephalitis; M3 -Meningitis; 04 -Paralysis; 05,13 -CNS other unspec.;

07,49 -GI; 17,47 -Hepatic; 19 -CVS; 89 -Urinary; 06 -Skin/mucous.-CONTINUED 4

VIRUS OR VIRAL ANTIGEN	No-ill or data	Respir atory	Enceph alitis	Mening -itis	Para- lysis	CNS other unspec	GI	Hepa -tic	CVS	Urin -ary	Skin/ mucs memb
1021 ECHOVIRUS TYPE 21.....					1						
1023 ECHOVIRUS TYPE 23.....							1				
1030 ECHOVIRUS TYPE 30.....					3						
1101 POLIOVIRUS TYPE 1.....		1					1				
1102 POLIOVIRUS TYPE 2.....							4				
1103 POLIOVIRUS TYPE 3.....							2				
1104 POLIOVIRUS-VACCINAL STRAIN....							1				
1200 MOMPUS VIRUS.....		1			2						
1300 HERPES VIRUS GROUP-NOT TYPED..											3
1301 HERPES SIMPLEX VIRUS-NOT TYPED	20	2	3	2		2	1				36
1302 EPSTEIN-BARR VIRUS (EB VIRUS) ..	6										
1303 VARICELLA-ZOSTER VIRUS.....											5
1306 HERPES SIMPLEX TYPE 1.....		3	1							1	20
1307 HERPES SIMPLEX TYPE 2.....											2
1401 COXIELLA BURNETI.....	9	1									
1502 PICORNA VIRUS-NOT TYPED.....		1					3				3
1514 MOLLUSCUM CONTAGIOSUM.....											1
1521 MEASLES VIRUS.....											4
1522 RUBELLA VIRUS.....											7
1530 HEPATITIS A VIRUS.....								5			
1532 HEPATITIS B ANTIGEN.....	23							41			
1535 HEPATITIS A ANTIBODY.....								5			
1541 CHLAMYDIA A - TRIC TYPE.....	20										
1556 CMV - CYTOMEGALOVIRUS.....	17	4						2		8	
1563 CORONAVIRUS.....							1				
1564 ROTAVIRUS.....	1	1					23				1
ARBO. GROUP A											2
SINDBIS VIRUS											1
ROSS RIVER VIRUS	6	1									16
ASTROVIRUS	1						1				
DENGUE (TYPE 3)	2										
Total.....	116	70	7	11		7	48	53	7	11	104

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 1/5/80 to 14/5/80 ... 80/10
 Viral Identifications by Clinical Information Table 2.
 Code 10 -Eye; 59 -Genital; 39 -Endo/sal gland;
 38 -RES; 29 -Muscle/joint; 69 -Congenital; P8 -PUO;
 G8 -Fever/malaise; 09 -Other; A1 -SIDS ...

5

VIRUS OR VIRAL ANTIGEN	Eye	Gen-ital	Endo/sal gland	RES	Muscle/joint	Con-genital	PUO	Fever/malaise	Other	SIDS
0100 ADENOVIRUS NOT TYPED.....					1		2			
0102 ADENOVIRUS TYPE 2.....								1		
0105 ADENOVIRUS TYPE 5.....								1		
0109 ADENOVIRUS TYPE 9.....	1									
0119 ADENOVIRUS TYPE 19.....	1									
0131 ADENOVIRUS TYPE 31.....	1									
0203 INFLUENZA B VIRUS.....							1			
0204 INFLUENZA C VIRUS.....								1		
0302 PARAINFLUENZA VIRUS TYPE 2.....							1			
0903 COXSACKIEVIRUS B3.....				1						
0904 COXSACKIEVIRUS B4.....								1		1
1000 ECHOVIRUS NOT TYPED.....							1			
1101 POLIOVIRUS TYPE 1.....								1		1
1104 POLIOVIRUS-VACCINAL STRAIN.....										1
1200 MUMPS VIRUS.....			3						1	
1300 HERPES VIRUS GROUP-NOT TYPED...		1								
1301 HERPES SIMPLEX VIRUS-NOT TYPED	2	11		1						
1303 VARICELLA-ZOSTER VIRUS.....	1									
1306 HERPES SIMPLEX TYPE 1.....	1	4					1		1	
1307 HERPES SIMPLEX TYPE 2.....		71								
1401 COXIELLA BURNETI.....					2		6	16		
1502 PICORNA VIRUS-NOT TYPED.....										2
1521 MEASLES VIRUS.....									1	
1532 HEPATITIS B ANTIGEN.....									2	
1541 CHLAMYDIA A - TRIC TYPE.....	5	14							1	
1556 CMV - CYTOMEGALOVIRUS.....		1		4		5	8	6	9	
ARBO. GROUP A					2					
SINDBIS VIRUS					1					
ROSS RIVER VIRUS					58					
ARBO. GROUP B.										
Total.....	12	102	3	6	64	5	20	29	15	5

DISEASE	N.S.W.	VIC	QLD	S.A.	W.A.	TAS.	N.T.	A.C.T.	Total	CUMULATIVE TOTAL TO DATE FOR YEAR
Salmonella infections	76	84	36	57	17	2	18	1	291	1050
Shigella infections		1	6	7	8		13		35	* 174
Smallpox									—	—
Syphilis	36	6	72	13	17		60	1	205	* 853
Tetanus									—	—
Trachoma									—	—
Tuberculosis (all forms)	45	51	28	4	25		1	4	158	506
Typhoid fever									—	3+1 CARRIER
Typhus (all forms)									—	—
Vibrio parahaemolyticus infections									—	—
Yellow Fever									—	—
Yersinia enterocolitica infections									—	—

(Note: Data collected under the Notifiable Diseases Returns may bear little or no correlation to that collected under the CDI Laboratory scheme. Whilst the latter is a sampling program, the Notifiable Diseases data is dependent upon voluntary reporting by medical practitioners etc.)

* Corrections made to the Cumulative Total since last report

Gonorrhoea + 4 cases for N.T.

Hydatid disease + 2 cases for S.A.

Shigella infections - 2 cases for N.T.

Syphilis + 1 case for N.T.