PTIN Food Safety Incident Management Workshop

Big Sky, Montana, USA
14-15 May 2011

Asia-Pacific Economic Cooperation (APEC)
Food Safety Cooperation Forum (FSCF)
Partnership Training Institute Network (PTIN)
Australia’s National Food Incident Response Protocol

National Food Incident Response Protocol
A guide for the coordination of Australian government agencies responsible for food safety and food issues in the event of a national food incident

Version: July 2009
How Does the Protocol Work?

Three phases:

- **ALERT**
- **ACTION**
- **STAND DOWN**

A food incident is identified by a government agency. The Notifying Agency provides details of the incident to the Central Notification Point who circulates them to the Food Incident Contact Officers.

FSANZ convenes a teleconference with jurisdictions to consider the extent of action required at a national level.

Response is escalated and de-escalated as required.

Agency Food Incident Controllers are identified for each Participating Agency.

The affected jurisdiction manages the incident under their response framework.

A nationally coordinated response is no longer required, though jurisdictions may still be active.

The actions taken and the Protocol are reviewed.
Food Incidents

...WHY CAN’T IT EVER BE BRUSSELS SPROUTS?..
Incidents:

- 2007 – 01: *Clostridium botulinum* type A, nachos
- 2007 – 02: plastic contamination, chocolate bars
- 2007 – 03: wheat gluten
- 2007 – 04: apple juice contamination
- 2007 – 05: *Listeria monocytogenes*, meat products
- 2008 – 01: cyanogenic glycosides, vegetable crackers
- 2008 – 02: metal contamination, meat and frozen products
- 2008 – 03: Contaminated baby formula from China
- 2008 – 04: Contaminated pork from Ireland
- 2009 – 01: Hep A linked to consumption of semi-dried tomatoes
- 2009 – 02: Cassava RTE chips
- 2010 – 01: Bonsoy milk suspected link to thyroid dysfunction
- 2010 – 03: *Listeria* in melons
- 2010 – 04: Sibutramine in weight loss products
- 2011 – Japan Nuclear Reactor Contamination
Hepatitis A linked to semi-dried tomatoes: the Australian story

Dr Paul Brent
Dr Barbara Butow

Food Standards Australia New Zealand

APEC FSCF Incident Management Seminar
May 14th – 16th
Montana USA
Outline

- Elements of the incident
  - Chronology
  - Semi dried tomato industry
- Challenges
- Lessons learnt
Hepatitis A in Australia

- Incidence of HAV declined since 1990’s

<table>
<thead>
<tr>
<th>Years</th>
<th>Average notifications per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991-2000</td>
<td>1,974</td>
</tr>
<tr>
<td>2003-2008</td>
<td>300</td>
</tr>
</tbody>
</table>

- In 2008, 55% of cases acquired overseas (travel-associated)

- HAV incident 2009: 622 cases, 70% locally acquired.

Source: OzFoodNet
Chronology of events

2009

February
- First wave of cases notified (Vic and SA)

March
- Protocol triggered
- 1st trade-level recall
- Media release
- OzFoodNet MJOI begins
- Protocol triggered

April
- Media release
- Teleconference 2
- Number of new cases slowing
- Challenges with traceback
- Testing of product discussed

May
- Teleconference 3
- Links to particular Vic supplier
- Identification of French laboratory
- Contacted FBIA to disseminate info to importers
- MJOI stood down

June

July

August

September
- Teleconference 4
- HAV RNA positive test results (multiple samples)
- Discussed national industry consultation
Tomatoes cited for hepatitis

Michael Owen, SA political reporter | The Australian | May 23, 2009 | 12:00AM

A NATIONAL food contamination alert has been issued after South Australian health authorities linked a semi-dried tomato product to a surge in hepatitis A cases.

The authorities yesterday said there had been a spike in hepatitis A cases in Queensland, Victoria and South Australia since late March.

The three states last night warned consumers not to eat semi-dried tomatoes purchased loose and unpackaged from supermarkets, independent stores and cafes.

South Australian wholesaler Siena Foods was yesterday recalling its semi-dried tomatoes in oil with garlic and herbs from stores.

Michael Marcelli, a spokesman for the family-owned company, said it received its product from

The three states last night warned consumers not to eat semi-dried tomatoes purchased loose and unpackaged from supermarkets, independent stores and cafes.

South Australian wholesaler Siena Foods was yesterday recalling its semi-dried tomatoes in oil with garlic and herbs from stores.

Hygiene error

Adelaide Now, 8 Jun 2010

Abortion patients 'deliberately infected'

Adelaide Now, 1 Jun 2010

More test positive for hepatitis C

Adelaide Now, 31 May 2010

Doctor regulation questioned after scandal

Adelaide Now, 8 May 2010

SA Health epidemiologists and food investigators this month linked the increase of hepatitis A cases in the three states to the contamination of the Siena product, which is packaged in Victoria and possibly Queensland.

"Investigations are continuing and the advice we are getting from epidemiology is the outbreak is ongoing," Dr Buckingham said yesterday. "A national incident response process has been triggered."

Acting South Australian Health Minister Jane Lomax-Smith said the SA Health scientists had identified the hepatitis A spike sooner than it was recognised in other parts of the country.

"They've done a brilliant job in recognising the cause and how it occurred," she said.

Chronology of events

2009

- **2nd wave of cases**

**October**

- **Teleconference 5**
  - Discuss new cases (mainly Vic)
  - Vic Health meetings with SDT industry
  - Vic commission CSIRO work

- **WA media release**
- **Teleconference 7**
  - Discuss proposal for national standard
  - Tas media release

**November**

- **WHO notified through IHR**

- **Teleconference 6**
  - Vic ‘Notice of Order’ (traceability and processing requirements)

- **Trade level recall, Vic**

- **Teleconference 8**
  - Discussed proposed national standard
  - Discussed industry notice

- **Teleconference 9**
  - Further testing of product

- **Notified of outbreak in France**

- **Notified of outbreak in Netherlands**

**December**

- **Vic media release**
- **MJOI re-opened**

- **Teleconference 6**
  - Vic ‘Notice of Order’ (traceability and processing requirements)

- **Vic Health meetings with SDT industry**

- **Vic commission CSIRO work**
Hepatitis A notifications during outbreak period

As of 30 Aug, 2010
Source: OzFoodNet

<table>
<thead>
<tr>
<th>Week and year of onset</th>
<th>Number of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>20</td>
</tr>
<tr>
<td>2010</td>
<td>30</td>
</tr>
</tbody>
</table>

Legend:
- Overseas
- Sporadic
- Suspected
- Confirmed
Challenge #1: semi-dried tomato industry in Australia

- Mainly small, family-owned businesses
- No national industry body
- Either
  1. Dry and dress locally grown tomatoes
  2. Purchase frozen semi-dried tomatoes from Australian or imported sources, and then dress; or distribute to other companies for dressing
Semi-dried tomatoes

1. Fresh tomatoes cut, placed on drying racks
2. Dried (time/temp dependant on product)
3. Dressed (addition of canola oil or vinegar, herbs, spices, salt..)
4. Packed (bulk container or sealed packs for consumers)
5. Vacuum-packed and/or frozen (≤2 year shelf life)
Challenge #2: Source of contamination

Production?

Processing?

Handling?
Semi-Dried Tomatoes: Complex Production & Distribution Chain

Country of Origin
- Farm A
- Farm B
- Farm C

Primary Processors
- Primary Processor X
- Primary Processor Y
- Primary Processor Z

Export

Multiple Countries
- Secondary Processor
- Secondary Processor
- Secondary Processor
- Secondary Processor

Consumers
- Restaurants
- Bulk distributors
- Retail stores

A.Ellis INFOSAN
Challenge #3: Nature of the hazard

- HAV is a picornavirus transmitted primarily through the fecal-oral route.
- Incubation period: Average 30 days (range 15-50 days).
- Virus is shed in feces before symptoms of illness begin.
- Illness ranges from inapparent infection to severe hepatitis.
Some unique features of hepatitis A virus

- ‘Non-enveloped’ RNA virus
  - Persists in the environment
- Requires host cells to replicate
  - Does not ‘grow’ in food/environment
- Difficult to culture in the laboratory
  - Requires use of molecular techniques to detect and characterise
Control measures

- Processing
  - Sanitisation of raw product
  - Heat inactivation

Validation studies - highly dependent on food matrix

- Prevention of faecal contamination is key
  - Inputs eg. irrigation water
  - Handling
Challenge #4: detection and interpretation of results

- Laboratory capability to detect hepatitis A virus in food(s)
  - Australia
  - Internationally

- Interpretation of results from molecular detection methods
  - Was the genetic material from an ‘infectious’ virus particle?
What worked well?
National Food Incident Response Protocol

- Triggered in May 2009
- Total of 9 teleconferences held over the course of the incident (May, 2009-March, 2010).
- Participants included:
  - Commonwealth, State and Territory health/food departments
  - Epidemiologists
  - Laboratories
  - Communicators
International collaboration

- Strong epidemiological link to semi-dried tomatoes sourced from Turkey
- World Health Organization notified in early November 2009 (International Heath Regulations)
- Information sought from other countries
  - Increased notification of specific HAV genotype ?
NFIRP Debrief

Purpose:
- Review the operation of the National Food Incident Response Protocol during the Hepatitis A in semi dried tomato incident

Outcomes:
- To identify corrective actions and recommendations for improving future responses to food incidents / emerged food issues.
Debrief recommendations

- Information sharing
- Traceability
- Breaking deadlocks
- Threshold for action
- Jurisdictional powers
- Viruses as an emerging issue
Ongoing work

- Advice to Australian Quarantine Inspection Scheme (AQIS)
- Consideration of
  - extent and scope of existing traceability requirements, and potential gaps, in the Code
  - Primary Production and Processing Standard
Lessons learnt

- The value of having the National Food Incident Protocol in place
- Importance of effective communication (national and international) throughout the incident
- The need to engage with industry early
  - Understand the production and supply chain (assist with identifying risk factors and possible control measures)
  - Responsibilities of producers, processors and importers re traceability
- Human enteric viruses an emerging foodborne disease issue
Bonsoy – a case study
Outline

- Elements of the incident
- Challenges
- Lessons learnt
The Issue

- clusters of cases of adults and children with thyroid problems associated with consumption of Bonsoy
- iodine levels of 31,000 µg/L found
- 6 teaspoons sufficient for adult to exceed tolerable daily intake
Kombu – a brown seaweed

- Kombu added to enrich flavour and enhance texture of Bonsoy

- iodine content in *Laminaria* sp. may be as high as 5307 mg/kg

- may cause thyroid dysfunction
  - hypothyroidism
  - hyperthyroidism
TIMELINE OF EVENTS - BONSOY

23rd December 2009
- First cases of thyroid dysfunction reported to public health units in Australia
- FSANZ informed
- Teleconference held with Chief Health Officers
- FSANZ issues fact sheet and media release
- Notifications provided to DAFF/AQIS, DFAT, embassies, WHO and INFOSAN notified

24 December 2009
- Bonsoy soy milk recalled

05 January 2010
- National Food Incident Response Protocol triggered
- Risk assessment carried out

22 January 2010
- AQIS implements holding order

16 March 2010
- Heng Fai seaweed recalled

1 April 2010
- Reformulated Bonsoy imported for sale in limited release

29 March 2010
- IHR notification to WHO re Heng Fai seaweed

Beverage survey commenced

Seaweed survey commenced
Actions

• Recall of product
• Communication - fact sheet and media release
• Liaison with national and international regulators
• Protocol triggered
• Survey via Food Surveillance network:
  • beverages enriched with seaweed – March 2010 – published on website
  • seaweed – April/May – published early 2011
INFOSAN EMERGENCY ALERT
28 December 2009
For the attention of INFOSAN Emergency Contact Points for Australia, United Kingdom, Germany, China (distribution limited to Hong Kong Special Administrative Region), New Zealand, Singapore and Spain.

Australia has informed WHO that illness (thyrotoxicosis) in nine adults and one infant in New South Wales were linked to a soy milk product, Bonsoy soy milk. Distribution records indicate that the affected product has been exported to Australia, Germany, China (distribution limited to Hong Kong Special Administrative Region), New Zealand, Singapore, Spain, United Kingdom.
Heng Fai seaweed recall

- advice to doctors on hypothyroidism in infants
Challenges

- Not many…for a change!
  - Classic recall action
  - Agreement of jurisdictions
  - Agreed communication messages
  - Straight forward risk assessment
  - Industry compliance
  - Easy to identify and stop imports
Challenges

- Compliance issues..illicit sale of Bonsoy
- Getting ‘heads-up’ from Chief Medical Officers (to inform/co-ordinate with food authorities)

Consequential challenges....

- Consumption data
- Setting Upper Levels for natural products
- Recording and retrieval of documents and data
Lessons learnt..and put into practice

• early risk profiling – enabling action at the border by the Australian Quarantine and Inspection Service
• co-ordinated media releases
• international communication
• involvement of Food Surveillance Network early on
Reformulated Bonsoy soy milk without kombu seaweed to return to shelves

28 April 2010

Food and Health authorities today confirmed that Bonsoy soy milk, reformulated without kombu seaweed extract, could return to sale.

On the 24 December 2009, Food Standards Australia New Zealand (FSANZ) coordinated a national food recall and issued a media release advising people not to consume Bonsoy soy milk with all best before dates. This followed a cluster of nine adults aged from 29 to 47, and one child, who presented in NSW with thyroid problems.

A national medical reporting system has been established in Australia. Between 23 December 2009 and 15 March 2010, there were 50 cases of thyroid dysfunction reported to public health units in Australia that are suspected to be associated with the consumption of Bonsoy soy milk.

Bonsoy soy milk was enriched with kombu which is a seaweed product. Upon testing, the Bonsoy milk with added kombu was found to be the only product with excessively high levels of iodine. This product was also recalled in the UK, Ireland, Singapore and Hong Kong.

The levels of iodine in the Bonsoy soy milk were at a level that is likely to exceed the safe limit for iodine when as little as 30ml (one eighth of a cup) is consumed per day by an adult. The only soy milk product identified through testing to have high levels of iodine was Bonsoy soy milk.

FSANZ is also coordinating further testing of a range of beverages enriched with seaweed and other seaweed containing products. Any found to have unsafe levels of iodine will be recalled.

Food and Health Authorities remind anyone with 1 litre tetra packs of the original Bonsoy soy milk with kombu, with all best before dates, that they should not consume them and should safely dispose of them or return same to place of purchase. Anyone who has consumed the earlier batches of Bonsoy with kombu over a prolonged time who feels generally unwell should consult their doctor.

Thank you

Copyright
© Food Standards Australia New Zealand  2010

This work is copyright. You may download, display, print and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organisation. Apart from any other use as permitted under the Copyright Act 1968, all other rights are reserved. Requests for further authorisation should be directed to info@foodstandards.gov.au
Any questions?
Copyright

© Food standards Australia New Zealand 2010

This work is copyright. You may download, display, print and reproduce this material in unaltered for only (retaining this notice) for your personal, non commercial use or use within your organisation. Apart from any other use as permitted under the Copyright Act 1968, all other rights are reserved. Requests for further authorisation should be directed to information@foodstandards.gov.au.