PRACTICAL EXPERIENCE OF IMPLEMENTING NATIONAL FOOD SAFETY EMERGENCY RESPONSE PLANS

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1. Review of national food safety policy in Thailand
3. Case study for drill tabletop training exercise in northeastern provinces to make understanding in FSER plan, IHR 2005, INFOSAN and role in each authority
4. Outcome from the training exercise
5. Road Map
Food Safety Policy & Plan of Thailand

National Policy

2003-2009
Kitchen of the World
“to protect public health & facilitate trade”

2010-2012
National Strategic Policy on Food Management (Food Safety Incident Management)
- Food Quality & Safety
- Food Security
- Food Education
- Empowering implementation

2012-2015
Food Quality & Safety for Global Consumers And Healthy for Thai People
- Risk based management
- Integrated implementation
- Information networking
- International cooperation
- Food Safety Best Practice Promotion ..
Public Health Policy Direction

Focus on food safety, nutrition, food-borne diseases and chronic diseases.

- National Strategic Plan (2012-2015) will strengthen on integrated implementation
  (BFSES established)
  Networking among agencies from farm to table to promote incident management system.
- Health Care and Public Health Protection
  > 20 years
  (FSOC established)
  > 10 years
Why...FSER plan done in Thailand

- Thailand has joined the meeting in Abu Dhabi, UAE in 2010 and advocated as a working group for developing Food Emergency Response Plan (FSER) under Food and agricultural organization of the united nation (FAO) supported.
- Thailand also is a volunteer country to develop the national FSER plan and implementing the plan.
Development of FSER plan

- Most of Thai people in cities nowadays have been changed their diet style to ready to eat, ready to cook and street foods
- Thailand has only fragmented response plans in each major Ministries without an integrated response plan
- FAO/WHO has developed a framework for developing of FSER plan that is consistent with the “Risk Analysis Concept”
- FAO/WHO guide for application of risk analysis principles and procedures during food safety emergencies

“FSER plan is needed to be enforced preparedness, recognize and rapidly response to food safety in emergency/crisis events”
Outline of the Thai FSER plan

- There are **seven** chapters in the Thai FSER plan, in the following:
  1. **Introduction** – essential background, relevance laws and existing food safety systems.
  2. **Definition and Scope** – meaning, criteria and how to determine the “food safety emergency”?
  3. **MACG and Procedure during Emergency Situation** – MACG, support units, and **their roles and responsibilities**.
  4. **Incident Identification** – information sources, verification and evaluation of data, samples used for laboratory testing, and how to do when we executed the plan?.
  5. **Incident Management** – notification in emergency, management options and when to scale down and closure the event?.
  6. **Post-incident Review and Evaluation** – what things we need to do after the event?.
  7. **Communications** – how to process in communication?.
CASE STUDY
THE OUTBREAK OF FOOD POISONING
AT A BOARDING SCHOOL,
FROM RAW MATERIAL

Case study for Food Safety Emergency Response Plan (FSER) and Food Safety Rapid Response team (FRRT) Development complies with IHR 2005 and INFOSAN
Background

• The Food safety rapid response team (FRRT) which it is an operational team in FSER plan has been established.
• Case study on food poisoning outbreak in a boarding school has been developed to be a tool for writing SOP and FSER plan development for provincial level.
• The table top exercise for this case study was done in 22-23 January 2013.
• FSER has been implemented into 2 provinces (Udon Thani and Nong Khai) during 2012.
Objectives

1. To link between Surveillance team and food safety authority.
2. To use the case study as a tool to implement FSER and FRRT into existing system
3. To set up a network of risk communication during food safety emergency events.
Methodology for case study

- Review the investigation of Food Poisoning outbreak
- Table Top exercise: Divide participants into 3 groups (3 provinces)
- FSER implementation by using the questionnaires
### Case Report

| Case investigation reports of mobile health unit | 111 |
|ospital record review | 16 |
| active case findings | 5 |

**Total** | 132 |

Admitted cases: OPD cases  
37 : 95  (28% : 72%)

### Case Definition

A member of this school who had at least 1 of the following symptoms:
- abdominal pain
- nausea/vomiting
- Diarrhea

between 9 - 11 Feb. 2012
Results

132 cases

Teacher attack rate 9.75% (4/41)

Student attack rate 15.7% (127/810)

Cook attack rate 16.67% (1/6)
Symptoms of cases at the boarding school
9 - 11 February 2012

(N = 116)

- Abdominal pain: 94.8%
- Diarrhea: 74.1%
- Nausea/vomiting: 50%
- Fever: 14.7%
- Mucous stool: 1.7%
Menu on Monday (9/2/2012)

**Breakfast**
- Chicken soup (chicken, rice)

**Lunch**
- Noodle (pork ball, squid, vegetable, slice pork)
- Dessert (coconut milk, taro roots)

**Dinner**
- Fried cabbage (cabbage, pork)
- Pork ball curry (coconut milk, pork ball, tomato)
## Results of rectal swab culture

<table>
<thead>
<tr>
<th>Organism</th>
<th>Case</th>
<th>Control</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <em>Salmonella spp.</em></td>
<td>34</td>
<td>10</td>
<td>74.5 (44/59)</td>
</tr>
<tr>
<td>2. <em>Staphylococcus aureus</em></td>
<td>5</td>
<td>2</td>
<td>11.9 (7/59)</td>
</tr>
<tr>
<td>3. <em>Vibrio alginolyticus</em></td>
<td>1</td>
<td>-</td>
<td>1.7 (1/59)</td>
</tr>
<tr>
<td>4. <em>Vibrio fluvianalis</em></td>
<td>7</td>
<td>-</td>
<td>11.9 (7/59)</td>
</tr>
<tr>
<td>5. No growth</td>
<td>56</td>
<td>46</td>
<td>63.3 (102/161)</td>
</tr>
</tbody>
</table>

**Total** 103 58
Environmental inspection

**Food** - inadequate cooked Pork balls

**Kitchen** - appropriate sanitation

**Drinking water** from refinery machine which gets water from Metropolitan water

**Bathing and cleaning water** from Chao Praya River **positive of Non-O1 V. cholera 1/3 samples during 19, 20, 24/3/98.**
Conclusion

Contaminated Food – noodle with pork balls (lunch)  
- Pork ball curry (dinner)

Common component – Pork ball

Organism – *Salmonella* spp.

Mode of transmission - inadequate boiling
Results of Investigation

- Surveillance and Rapid Response Team (SRRT) found that the affected pork ball and pork meat came from the same farm and factory.
- Pork ball and pork meat had been sold out to the retailers in many provinces of northeastern part of Thailand and people of neighboring country (Lao PDR).
- Epidemiological reported that there were many cases occurring in other provinces and Lao PDR.
Questions and Answers of case study

Incident Identification

- Q 1: Did this event scale up to be Public Health Emergency of International concerns?
- Q 2: Did SRRT and FS authorities require notifying national IHR and INFOSAN focal point?
- Q 3: Did Public health authorities assign the surveillance for this event?
- Q 4: What were the reasons of execute FSER?
Decision Tree Considered “Food Safety Emergency”

- When a food safety event detected by the National Food Control System, the event should be decided by using “Decision tree for the assessment and notification of events that may constitute a Food Safety Emergency Response”. In the decision tree, we will answer in 2 questions, that:

Q1

“Consider for hazards and impact”

- Q1.1 Intentional contamination
- Q1.2 Significant hazards
- Q1.3 Impact in epidemiology

Q2

“Consider for risk to Public Health/International spread (according to IHR, 2005: PHIEC)”

- Q2.1 Require urgent actions to PH
- Q2.2 Unusual/unexpected
- Q2.2 International spread
- Q2.2 Risk to trade, social and politic
Decision tree for the assessment of the FSER plan

Start: Food Safety Emergency is detected

Q1: Consider for cause of the Emergency

Q2: Consider for impact of the Emergency

If not, can be used the normal food control system

Result: Notify and execute the Thai FSER plan

Event detected by the National Food Control System

Q1.1: Is the event an intentional contamination?

Yes

Q1.2: Is the hazard risk and severity and/or unknown?

Yes

Q1.3: Is the outbreak impact (epidemiology)?

Yes

Q2.1: Is the public health impact serious and require an urgent action?

Yes

Q2.2: Is the event, hazard uncontrolled, unusual or unexpected?

Yes

Q2.3: Is there a significant risk to illness/death that national and/or international spread?

Yes

Q2.4: Is there a significant impact to national/international trade, social and political?

Yes

Actions by usual Food Control System

Not need to notify in this stage. Reassess when more information available.

Event shall be notified and execute a Food Safety Emergency Response plan

No

No

No
Questions and Answers of case study

Incident Management

- Q5: From the structure of FSER, What should be the roles and responsibilities of each competent authority?
- Q6: What should be done for trace forward in the market and school?
National and Provincial MACG

A: National MACG

B: Provincial MACG

Have to reporting and coordinating to the national level
Operating System in Emergency

- Implementation to respond in emergencies should be based on the existing Incident Command System (ICS) and support units for food safety issue:

1. Risk Analysis (Technical)
2. MACG (Commander)
3. Supporting units for MACG

- Risk Assessment Working Group (Risk Assessment)

- Information
- Coordinator
- Communication
- Investigation and Operation
- Planning
- Logistics
- Resource Management

Food Safety Rapid Response Team (FRRT)
Questions and Answers of case study (Cont.)

• Q 7: What should be done for trace backward in the factory?
• Q 8: What is the action of food safety authority?
• Q 9: What should Point of Entry authorities do to prevent the extended of this outbreak?
• Q 10: What should be done for trace backward in the slaughter house?
• Q 11: What should be done for trace backward in the Pig farm?
• Q 12: What should be done for risk communication?
Q 12: What should be done for risk communication?

• Answers:

1. A spoke- man should be designated as in the FSER plan.

2. People should be warned and WHO five key rules (Eating hot food, using a serving spoon and washing hands) should be implemented more often.

3. INFOSAN Emergency contact point should provide information both from Thailand and from others to do the risk assessment.

4. IHR national focal point should warned IHR member countries to detect a possible FWD outbreak.
OUTCOMES
What should be accomplished in the future?

1. To set up SOP for FSER plan at provincial level
2. To specify duties, roles, and responsibilities of MACG group for risk assessment on a food-related incident across border.
3. To facilitate food rapid response team co-investigation between food safety and public health organization
4. To establish a single network for ensuring effective coordinated communication from farm to table
5. To Establish mandatory Food Recall system
Committees consider event regarding to PHEIC and FSER plan

Committee of POE / Food Safety

Food Safety Coordinator/Secretariat

Food Safety Public Health Office ↔ Epidemiological Public Health Office

Unsafe food, Outbreak, Unusual event

Risk Assessment
Is there significant risk to health

Shall it be notified and execute a FSER plan

Yes

MACG group manages/responds in emergencies

Strategies 1: Emergency Responding committee (involving agency as Chairman)

Strategies 2: Committee of country border (Chief of border control as Chairman)

Strategies 3: Food Safety Committee of Province (Governor as Chairman)

Assign plan and SOP

1. Action Unit
   1. Verify roles and create responding team (FRRT)
   2. Verify action
   3. Information management and report

2. Support Unit
   1. Resource
   2. Support
   3. Information management and report

3. Planning Unit
   1. Plan and determine goals
   2. List of experts and networks
   3. Contact and Communicate
   4. Summary and report

4. Management
   1. Money
   2. Communication
   3. Report

Evaluation and improvement of SOP and plan

Report and communicate to involve authorities

Source
Food: INFOSAN, Complains
Health: event base surveillance
Linkage Framework of Food Control, Food Safety and FBD for Public Health

Prevention / Consumer Protection

Response/Communication/Education

Epidemiological data/ Investigations /Disease control

Food Control System

Food Safety System

Food Burden Diseases

Standard Control, Legislation, Pre and Post marketing, labeling, Registration, Surveillance, Monitoring,

Risk Assessment
Hazardous / Toxin/Microbial Contamination

Risk Management
Risk Communication
Incident Management
Food Safety Emergency Response Plan (FSER+FRRT = Food Safety Rapid Response Team) at the community

- Food and water borne diseases
- Outbreaks
- Food poisoning
- Public Health Emergency Response (PHER + SRRT)
Road Map 2012 – 2016

2012 : Preparation of FSER and FRRT Implementation

2013 : Model development at two provinces

2014 : Evaluation and Extension to 8 provinces in 4 parts of Thailand on Food Safety Programme in School

(Sharing experiences to ASEAN member countries)

2015 : Extension to 31 border provinces & district level

2016 : Evaluation and Certification

(Sharing experiences to ASEAN member countries)
Khob-Khun Ka !!