Food Safety Incident Management

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Food Incident Management is One of the Key Function of Food Control Functions: defined as the collective actions and activities in place to manage specific food safety hazards, assure quality and safety of food and fair practices in the food trade.
Building a Robust & Integrated Food Regulatory Operation

- Food Incident Management
  - Includes Foodborne Illness Outbreak Management

- Compliance Verification and Enforcement:
  - Inspection Programs
  - Domestic and Import / Export Control

- Management of Food Establishments:
  - Horizontal Food Safety Regulatory Requirements
  - Pre-requisite Programs / Preventive Control Requirements

- Standard Setting
  - Additives, Contaminants, Microbiological Criteria, Veterinary Drugs, etc.

- Commodity Regulatory Program
  - Dairy
  - Fresh Fruit and Vegetables
  - Pork Value Chain
  - Processed Food Sector
  - Aquaculture Value Chain
  - Street Vendors / Wet Markets, etc.

- Food Legislation & Regulations
  - Science Foundation: Data, Tools, Competencies
  - Training, Education and Awareness, Promotion Initiatives
  - Horizontal Food Policy Requirements
    - Includes Program Aspects (Food Labelling Policy, Food Management Policy) and International Cooperation, Codex Programs, etc.
  - Effective Food Laboratory Operations in Support of Food Regulatory Programs
  - Anchoring Food Safety Regulatory Decisions in Risk Analysis

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An Effective Food Safety Competent Authority:

- Anchors its actions and operations in a robust legislative and regulatory framework that enables it to “develop, establish, implement, maintain and enforce a national food control system”.

- Bases its food safety decisions on the application of the Risk Analysis Principles.

- Ensures effective food regulatory operations both for standard setting and compliance verification and enforcement.

- Is supported by a focused:
  - Scientific capacity for risk assessment; and,
  - Laboratory operations.
Importance of Food Safety Incident Management

- Critical food regulatory function to confer credibility to the food control system.

- Maintains the preventive nature of the system.

- Food control system as robust as its ability to:
  - Address food safety incidents in a systematic and consistent manner.
Food Incidents Versus Food Emergencies

Departure from Usual Operations: Still being under control (or likely to be maintained as such)

Source: FAO-WHO Framework for Developing National Food Safety Emergency Response Plans
Definitions: Food Safety Incident / Emergencies

Codex Definition of Food Safety Emergency

- A situation, whether accidental or intentional, that is identified by a competent authority as constituting a serious and as yet uncontrolled foodborne risk to public health that requires urgent action.

Food Safety Incident Definition

- Several definitions, according to the jurisdiction:
  - **Canadian definition:** a situation that has the potential to represent a health risk and that requires investigation under ... the competent authority’s mandate.
  - **Australian definition:** any situation within the food supply chain, where there is a potential risk or perceived risk of illness associated with the consumption of a food or “foods” and which may / will require interventions.
Differentiating Food Incidents from Emergencies

INCIDENT  ----------  EMERGENCY

Hazard: Potency
Target Population
Degree of Distribution

Risk
The higher the risk, the higher the likelihood of an “Emergency”

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Incident</th>
<th>Emergency</th>
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<tbody>
<tr>
<td>The Level of Control of the Issue</td>
<td>Higher</td>
<td>Lower</td>
</tr>
<tr>
<td>The Expected Response / Deployed Resources</td>
<td>Normal</td>
<td>High Scale</td>
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</tbody>
</table>
General Operational Structure of Incident Management

**Data Collection:**
- Compliance Verification / Inspection
- Sampling
- Human Health Implications

**INVESTIGATION**
- Inspection, Laboratory Results & Epi
- Risk Assessment

**RESPONSE:**
- Decision Action
- Intervention, Communication

**Signals:** Triggers, Notifications, Other Regulatory Functions

**Conclusion of the Incident:**
- Possible Lessons Learnt – Trend Analysis

**Evaluation of Effectiveness:**
- Other Findings as May be relevant
Critical Reliance upon Trusted and Consistent Sources of Information

Responding to food safety emergencies (INFOSAN)

An increasingly interconnected global food supply means that risks posed by unsafe food have the potential to rapidly evolve from a local problem to an international emergency. Ensuring food safety is an essential component for achieving global health security and national food safety authorities must be able to share information quickly and efficiently worldwide.

Since its creation in 2004, the FAO/WHO International Food Safety Authorities Network (INFOSAN) has facilitated the rapid exchange of information across borders and between members, during hundreds of food safety incidents.

As a member-driven, global network, INFOSAN is a practical, effective and efficient tool for information sharing and assessment.

ASEAN RAPID ALERT SYSTEM FOR FOOD AND FEED

GLOBAL FOOD REGULATORY SCIENCE SOCIETY

GFORS Global Food Regulatory Science Society

Impact

160+ Member states
alerted through INFOSAN about contamination food imported to their country in 2018
Key Capacity Areas to Enable Food Incident Management

- **Capacity to Investigate:**
  - *From trigger to data collection*

- **Capacity to Integrate Results and Assess Risks:**
  - *Laboratory Capacity*
  - *Risk Assessment Capacity*

- **Capacity to Act in a Preventive Manner:**
  - *Ability to Trace and Recall Products*
  - *Ability to Communicate to Consumers and FBOs*
Benefits from a Structured Approach

Front Line Response Functions
- Data Collection,
- Implementation of Risk Management Decisions
- Communication with FBOs and Consumers

Enabling Functions
- Laboratory Functions
- Epidemiological Assessment if Needed
- Risk Assessment Function

Review Incidents, Trend Analysis and Evaluation of Performance
- Maintains Preventive Nature of the Approach
Importance to Structure: Signal Detection

- Institutional Response to:
  - Consumer Complaints
  - Industry Notification

- Ability to collect information:
  - Environmental scans.
  - Networks:
    - ARASFF, INFOSAN, RASFF, etc.

- Ability to receive and analyse public health and epidemiological information – related to foodborne illness.
Importance of Risk Assessment

**DATA**
- Focus on Data Describing National / Regional Situation
  - Food Consumption Data
  - Contaminants / Nutrients Occurrence Data

**EXPERTISE**
- Risk Assessment Capacity
  - Trained Workforce

**PROCESSES**
- Risk Assessment Procedures
- Risk Assessment Methodologies
Example of a Process Flow: HRA during Incident

**HRA Request**
- Engagement with Evaluators – Sharing the information
- Formal documented request submitted accompanied by all relevant information
- Review Evidence
- In outbreaks, CDC assesses or interprets the epidemiological information

**Weight of Evidence**
- Food Safety Investigation evidence
- Laboratory evidence
- Epidemiological evidence
- Weight is determined for the totality of evidence

**HRA**
- Situation Summary
- Analysis of Hazards Hazard ID & Hazard Evaluation
- Dose-Response / Exposure Assessment: Hazard and Exposure Characterization
- Risk Characterization

**Output**
- Determination of Health Risk (1,2, or Category 3)

**Communication**
- Provide written HRA to requestor
- Notification and relevant communication

*Based on Canadian Experience*
Importance of Structure and Continued Improvement

Executing Teams: Implementation, Coordination

Incident Management Planning Teams: Procedures, Policies

Assessing

Trials Table Top
Thank you