

Commonwealth of Massachusetts
 Department of Public Health
 Helping People Lead Healthy Lives In Healthy Communities

Collaboration Through Development of a New Foodborne Illness Complaint Module

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Foodborne Illness Complaints in Massachusetts

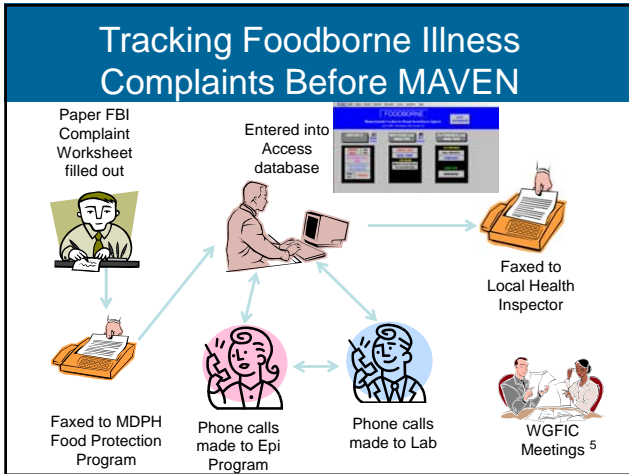
In 2014 Bureau of Infectious Disease (BID) Office of Integrated Surveillance and Informatics (ISIS) and Bureau of Environmental Health Food Protection Program (FPP) begin work on integrating a new foodborne illness (FBI) module into existing infectious disease surveillance and case management system (MAVEN)

Three Goals for the FBI Module

- 1) Act as a repository for consumer complaints regarding potential sources of foodborne illness
- 2) Link confirmed cases of disease to complaints and corresponding environmental inspections and outcomes
- 3) House meeting minutes of the Working Group on Foodborne Illness Control (WGFIG), a collaboration of epidemiology, environmental, local boards of health (LBOH), and laboratory staff working to investigate foodborne outbreaks.

MDPH WGFIG Database

- Difficult to search for events of interest
- Difficult to pull data from for analysis
- System can only be accessed within MDPH
- Unstable and difficult to maintain
- Established in 1995



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maven WELCOME TO THE MASSACHUSETTS VIRTUAL EPIDEMIOLOGIC NETWORK (MAVEN)

MAVEN is a web-based disease surveillance and case management system that enables state and local health departments to capture, transfer and share appropriate public health, laboratory, and clinical data efficiently and securely over the Internet in real-time.

MDPH Foodborne Illness Complaint Worksheet

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FBI Product Code

- The Foodborne Illness Complaint product code added in July 2014 for FPP/EPI programs
- Local Boards of Health started using in May 2015

Role Based Access (Epi, FPP, LBOH)

Event Information

Event Data	Lab Results	Concerns	Persons	Task
Question Packages QUESTION PACKAGE 1. Administrative 2. Complaint Information 3. Food History 4. Minutes				

4 Question Packages for Epidemiologists and Food Protection Program Users

Expanded Search Capabilities

Search Event

Search Criteria

Type: Normal

Event: Foodborne Illness Complaint

Event Date: [] - []

Suspect food or drink: Oysters

Name of establishment: Oysters R Good

Town of establishment: Wellfleet

Suspect food or drink:
Name of establishment:
Town of establishment:

Search Options

Sort By: []

Sort Order: Descending

Search History: []

Search Sources: []

Search Clear Create New

Results of Case Search

Event ID Person Birth Date Status Event Create Date Event Date Person ID

Search on Food/Drink, Establishment Name, or Town

Use Case #1: Consumer Complaint of a food item with no medical diagnosis

- Mother calls to report her child as sick and believes it is due to the lunch from a local fast food restaurant. Her husband who tasted the child's food became sick too. The mother is not sick at the time of the phone call. No medical diagnosis at the time of the complaint.

Use Case #2: Confirmed Event in MAVEN for Salmonella

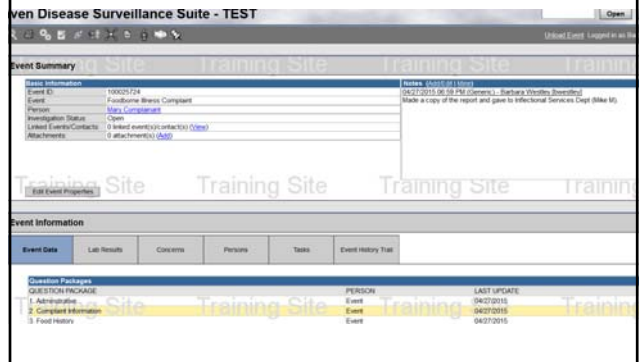
- A confirmed Salmonella event in a MAVEN workflow
- During the case investigation the Local Health Board of Health discovers that the ill person had consumed "Food X" from "Restaurant X"
- Complete the case investigation and fill out the Risk History Question Package with suspect food/drink- this prompts a requirement to complete a FBI complaint in MAVEN
- The FBI event will appear in the notification workflow for the Food Protection Program

MAVEN Risk Question Package for Enteric Events

- MAVEN prompts user to create a FBI event



MAVEN Event Created by FPP, Epi or LBOH



FPP receives notification



maven

MAVEN Workflows

- Two Food Protection Program workflows
 - Notification workflow for new complaints
 - Open disposition events currently being investigated by WGFIC

Workflow Queue	Total Count (Assigned to me)	Priority	Last Update
Food Protection Program			
FPP - Notification of newly created FBI events	0 (0)	Very High	05/13/2015 01:28 PM
FPP - Events with an open WGFIC disposition	1 (0)	Medium	05/13/2015 01:28 PM

Complainant Information

3. Complaint Information Package , [Mary Complainant](#) Foodborne Illness Complaint

Event ID: 100025724

Person completing FBI Complaint Worksheet: } Name of person creating FBI complaint

Date completed:

Affiliation:

COMPLAINANT INFORMATION

Complainant Name: } Name of Complainant

Complainant Street:

Complainant City:

Official Complainant City:

Complainant State:

Complainant Zip:

Phone:

Affiliation:

Is complainant ill?

Illness Information

ILLNESS INFORMATION

of people ill: } Number of ill/exposed

of people exposed:

Symptoms: (mark as Yes if reported for anyone)

Diarhea:

Fever:

Chills:

Burning in mouth:

Vomiting:

Bloody Stool:

Anorexia:

Nausea:

Headache:

Fatigue:

Abdominal cramps:

Muscle aches/pains (myalgia):

Dizziness:

Other symptom(s):

Symptoms

Illness Information

person name: Add New

Street Address:

City:

Official City:

State:

Zip Code:

Age:

Age type:

Occupation:

Received medical attention?

Medical Provider Name:

Phone:

Stool specimens submitted?

Medical diagnosis reported? Medical Diagnosis

Repeatable Questions allow for additional ill persons to be added

Food History

3. Food History Package , [Mary Complainant](#) Foodborne Illness Complaint

Event ID: 100025724

Subject food or drink: Add New

Date consumed:

Time consumed (i.e., 09:30 AM):

Location where consumed:

Specify meal:

Brand or Lot #:

Food available for testing?

Name of store/restaurant/manufacturer where purchased:

Facility type:

Retail Type:

Street Address:

City:

Official City:

State:

Zip code:

Inspection/notice notified:

Date:

Name of person notified:

Single vs Multiple Person Complaints

- **Single Person Complaints** are individual complaints with either a medical diagnosis or no medical diagnosis with a known suspect food/drink with a named establishment.
- **Multiple Person Complaints** are complaints that have multiple individuals linked to a single food or establishment. These also discussed at the WGFIG meetings with Epidemiologists, Laboratorians, ISIS, and LBOH partners.

WGFIG Minutes

4. Minutes Package , Scott Smith Foodborne Illness Complaint

Event ID: 100023559

Single incident? No Yes

Title: Sun's Oyster Shack, Anywhere, MA, ETIAG

Disposition: Open Closed

Date of meeting: 10/01/2014

Minutes: Investigators are currently in the process of getting all foodhandlers tested. Two foodhandlers have already tested negative including the owner. Two of five cases have yet to be interviewed, though all initially reported eating at the location of interest. Food is available for testing and is being sent to SLI. Cross contamination remains possible. Inspection reports pending, though violations have been found.

Date of meeting: 10/07/2014

Minutes: All human specimens have been tested and are negative for enteric pathogens. Food Results still pending.

Evidence for contributing factors: Yes No

Specify: Contaminated equipment Improper holding temperatures Other Food from an unapproved source Inadequate cooling Poor personal hygiene

FBI Report

FBI Complaints by Month and Year

The data in this report contain confidential information and are for internal use only. The data are current as of 09/16/2015 and are subject to change.

Number of Multiple Foodborne Illness Complaints by Month and Year

Month	2014	2015	Total
January	4	0	4
February	1	1	2
March	4	5	9
April	2	3	5
May	4	3	7
June	2	2	4
July	4	2	6
August	4	2	6
September	3	1	4
October	4	0	4
November	2	0	2
December	4	0	4
Total	30	19	57

Number of Single Foodborne Illness Complaints by Month and Year

Month	2014	2015	Total
January	26	29	55
February	25	14	39
March	43	25	68
April	26	40	66
May	16	34	50
June	33	40	73
July	33	68	101
August	47	36	83
September	42	27	69
October	23	0	23
November	19	0	19
December	33	0	33
Total	390	311	701

MAVEN Help Documents/Training Materials

MAVEN Online Help

- Expand all
- Collapse all
- General Information
- Tip Sheets
- ePostcards/Webinars
- Key Indicator Report Resources
- Foodborne Illness Complaint Resources
 - LBCH: FBI Complaint Training Tool
 - FBI Complaint Webinar
 - FBI Complaint Webinar Presentation
 - FBI Complaint Worksheet
- mSMA Documents
- Case Classification Manual

Foodborne illness complaint information has its own sub-folder in Help

Benefits of Using MAVEN to Track FBI Complaints

- Web-based system, real time notification
 - enhanced communication between WGFIC members (Epidemiologists, Laboratorians, Food Protection Program, and LBOH)
- Linking confirmed cases of illness to FBI Complaints
- More efficient tracking of FBI Complaints through MAVEN workflows
- Improved capability to extract data for analysis
- FBI Reports available for WGFIC team
- Reduced need for paper-based files (attachments)

Future Enhancements

- Create LBOH workflows and reports
- Enhance FBI Print template that would mimic the complaint worksheet in a pdf pre-populated format for external users (health inspectors/health agents)
- Easier data entry with a FBI wizard for users to create events
- Geocoding of complainants and/or establishments



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