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 (WGFIC), a collaboration of epidemiology, environmental, local boards of health (LBOH), and laboratory staff working to investigate foodborne outbreaks.

MDPH WGFIC 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
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.

- 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)

Expanded Search Capabilities

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

- MAVEN Workflows
  - Two Food Protection Program workflows
    - Notification workflow for new complaints
    - Open disposition events currently being investigated by WGFIC
**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 WGFIC meetings with Epidemiologists, Laboratorians, ISIS, and LBOH partners.
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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