Infectious Disease Surveillance and Epidemiologic Follow-up
Part 1: Surveillance

MAVEN and Supporting Infrastructure

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Today is Part One: Infectious Disease Surveillance
- Focus on How Diseases are Reported and How Information is Collected.
- Privacy and Security
- How do we define a Confirmed or Probable case of a reportable Infectious Disease?

Next Time is Part Two: Infectious Disease Epidemiology
- The importance of Shoe-Leather Epidemiology in identifying and investigating cases and outbreaks in your local community.
- From Data to Intervention: How good data leads to action.
Learning Objectives

- Define disease surveillance
- Explain what surveillance data is used for
- Describe infectious disease reporting and response roles (Medical Providers, Labs, LBOH, & MDPH)
- Detail the infectious disease reporting responsibilities of local boards of health (LBOH) and Massachusetts Department of Public Health (MDPH)
- Summarize the purposes of the Massachusetts state laws and regulations related to disease surveillance
- Explain what a case definition is and the differences among confirmed, probable, and suspect cases
Key Acronyms and Surveillance Terms

Introduction to the Bureau of Infectious Disease and Laboratory Sciences (MDPH)
  - Division of Epidemiology
  - Division of Surveillance, Analytics, and Informatics

Privacy and Security

Infectious Disease Reporting in MA
  - Legal Requirements
  - The Role of Local Health in Disease Reporting

Infectious Disease Surveillance – an Overview
  - Goal of Disease Surveillance
  - Surveillance System
  - Using Surveillance Data

Electronic Lab Reporting

The MAVEN System

Case Definitions
  - Case Classification manual
  - Routine and Immediate Diseases

Your Data

Review & Resources

Looking Ahead to Part 2: Epidemiology
Surveillance Acronyms

- **BIDLS**: Bureau of Infectious Disease and Laboratory Sciences
- **CMR**: Code of Massachusetts Regulations
- **CRF**: Case Reporting Form
- **DSAI**: Division of Surveillance, Analytics, and Informatics
- **eCR**: Electronic Case Reporting
- **ELR**: Electronic Lab Reporting
  - **LOINC**: Logical Observation Identifiers Names & Codes
    - Lab Test
  - **SNOMED**: Systematized Nomenclature of Medicine
    - Lab Test result
- **LBOH**: Local Board Of Health
- **MAVEN**: Massachusetts Virtual Epidemiologist Network
- **MDPH**: Massachusetts Department of Public Health
- **MGL**: Massachusetts General Laws
- **SME**: Subject Matter Expert
- **VG**: Virtual Gateway - user management for accounts and portal access
Key Vocabulary

- **Clinical Diagnosis**: People who have a clinical diagnosis from a provider (but no test).

- **Deduplication**: Correcting a duplicate report by merging two MAVEN records together.

- **Epi Link**: Exposure to confirmed case or specific situation. Someone may have an epidemiological link to someone. (ex., household contacts may have an epi link to a confirmed case.)

- **Event**: A record in MAVEN. (Could be a contact event, a case, cluster, etc.).

- **Question Package**: A relevant grouping of questions in MAVEN (like clinical or vaccine-related questions).

- **Variable**: A question in MAVEN.

- **Wizard**: MAVEN tool in an event that pulls most critical variables from different question packages into one place for quick review and data entry.
Division of Epidemiology

- Staff of 50 epidemiologists and research analysts
- Prevents infectious, communicable diseases statewide, 24/7, to include
  - Enteric diseases, zoonotic diseases, bioterrorist agents, bloodborne infections, vaccine-preventable diseases, respiratory diseases, healthcare associated infections, antibiotic resistant organisms, emerging infections
- Controls outbreaks and morbidity caused by these diseases
- Monitors the occurrence and patterns of these disease, including emerging infections in Massachusetts
- Are a resource to the citizens of Massachusetts
  - Responds to calls from healthcare providers, local health jurisdictions, the general public
  - Develops educational materials
  - Provides technical assistance to local health partners
- Monitors disease statistics, community by community and statewide
- Reviews most diseases reported to the Division of Surveillance, Analytics, and Informatics
Division of Surveillance, Analytics and Informatics (DSAI)

- Staff of 60 epidemiologists/informaticians, biostatisticians, research analysts
  - epidemiology and surveillance SME
  - informatics SME
    - core understanding of MAVEN model and surveillance infrastructure (elr and case reporting and syndromic surveillance)
    - Use of national standards for public health data (vocabularies and message transport, interface with IT)
- Oversee MAVEN, ELR, eCR and syndromic surveillance
  - MAVEN Help desk
- Implement national standards for epidemiologic, surveillance and laboratory data
  - ensure CDC reporting
- Centralized triage of surveillance data
- Data management
  - deduplication of persons and disease information
  - quality assurance of surveillance data
- Provide analysis and epidemiological assistance; monitor disease trends to guide public health practice
- Data, public records, and legal requests
We Partner to Bring You Our Tuesday Webinar Series: Tools for Local Health

Division of Epidemiology

- Provides guidance and instruction for disease control and response.

  Program: How do I follow up on this disease?

  Hillary A. Johnson, MHS
  Senior Epidemiology Advisor to Local Health Division of Epidemiology
  Epi Program Phone: 617-983-6800
  hillary.johnson@mass.gov

Division of Surveillance, Analytics and Informatics (DSAI)

- Oversees the MAVEN system for disease reporting.

  Informatics: Where do I see my town’s cases and document my follow-up?

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  Senior Epidemiologist – MAVEN User Management & Data Visualization Lead
  Division of Surveillance, Analytics and Informatics (DSAI)
  MAVEN Help Phone: 617-983-6801
  scott.tropppy@mass.gov
Ensuring the confidentiality of patient information is a legal requirement.

In addition, the cooperation necessary for the collection of complete and accurate data requires a trust that an individual’s right to privacy will be maintained.

Data containing personal identifiers is never released by MDPH without the individual of concern’s signed consent.
Users who have been approved for access by BIDLS, completed their required training, and have taken the Privacy/Confidentiality are granted access to the system.

MAVEN contains highly sensitive information.

Role based security for users - jurisdiction determines access to cases.

This is in accordance with 105 CMR 300.120(A).

Reminders:
- Do not share your username or password for MAVEN with anyone.
- Do not extract data to an external systems, such as Google docs, that may be accessible to people without authorized use.
Disease surveillance, reporting, and control are required by law under M.G.L. c.111 and c.111D.

105 CMR 300.000: Reportable Diseases, Surveillance, and Isolation Quarantine Requirements

What is reportable by whom?

- Disease surveillance, reporting, and control are required by law under M.G.L. c.111 and c.111D.

105 CMR 300.000: Reportable Diseases, Surveillance, and Isolation Quarantine Requirements

What is reportable by whom?

Mandated Response to Infectious Disease Reports

- 24/7 response
- Coordination with 351 local boards of health
- Approximately 90 notifiable diseases
  - measles, meningitis, hepatitis A, Lyme disease, STDs, diarrhea in a food handler, BT agents, unusual clusters, emerging infections (COVID-19)

A list of reportable diseases can be found on mass.gov
Local Boards of Health

351 towns/cities

- range in size from 75 residents (Gosnold, 1874) to 675,647 (Boston, 1625)
- cities and towns are autonomous from DPH operating independently as a function of their individual town/city (decentralized public health system)
Local Health Role

- Report cases to and coordinate follow up with MDPH.
- Conduct case investigation and implement disease control measures.
- Document data in MAVEN (question packages)
- Communicate/Share cases from other communities to that LBOH or MDPH.
- Establish relationships with healthcare providers and surrounding boards of health.
- Health Education
What Is Infectious Disease Surveillance?

- Definition
  - The routine collection, analysis, interpretation and distribution of data

- Goal
  - Reduce morbidity and mortality through the control and/or prevention of disease

- Systematic and ongoing
Goal of Disease Surveillance

- Reduce morbidity and mortality:
  - Timely reporting of infectious diseases
  - Interrupting disease transmission to susceptible persons
  - Identifying, investigating, and controlling outbreaks
  - Interpreting data, and disseminating findings
Using Surveillance Data

- To follow up on cases and identify contacts
- To implement control measures
  - isolation and quarantine
  - post exposure prophylaxis
  - vaccination
- To identify high-risk groups
  - e.g. health care workers, nursing homes
- To rapidly detect increases in disease occurrence
- To monitor disease trends over time
- To allocate resources & guide public health policy and action
How Do We Find Out About a Case?

- Some disease events in MAVEN will be created by an Epi at MDPH if a provider calls MDPH with an ill patient they suspect has a particular disease.
  - Part of the investigation will be ensuring the correct tests are collected to rule in or rule out the disease.
    - Ex: Measles, Rubella, Invasive Meningococcal Disease

- Most disease events are created AFTER a positive lab test result is sent electronically to MDPH (and uploaded to MAVEN).
  - Ex: Hepatitis A, COVID-19, Vibrio
### Electronic Laboratory Processing
#### 2021 Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital clinical laboratories transmitting ELR</td>
<td>90*</td>
</tr>
<tr>
<td>Commercial laboratories transmitting ELR</td>
<td>17*</td>
</tr>
<tr>
<td>Percent of laboratory reports &amp; Casetivity sent via ELR</td>
<td>98%</td>
</tr>
<tr>
<td>Electronic laboratory reporting throughput</td>
<td>~ 25,000,000</td>
</tr>
</tbody>
</table>

- currently at X10 prior to pandemic
- Includes mult-drug resistance (susceptibility)
- Includes negative results
HL7 message

- FHS|\&|Lab Facility^2.16.840.1.114222.4.1.220759^ISO|Lab Facility^05D0000000^CLIA|MA-MDPH^2.16.840.1.113883.19.3.2^ISO|MA-MDPH^0000000^CLIA|20200603130950-0800||MA-MDPH||MA-MDPH:20200603130950-0800
- BHS|\&|Lab Facility^2.16.840.1.114222.4.1.220759^ISO|Lab Facility^05D0000000^CLIA|MA-MDPH^2.16.840.1.113883.19.3.2^ISO|MA-MDPH^0000000^CLIA|20200603130950-0800||MA-MDPH||MA-MDPH:20200603130950-0800
- MSH|\&|Lab Facility^2.16.840.1.114222.4.1.220759^ISO|2.16.840.1.113883.19.3.2^ISO|MA-MDPH^0000000^CLIA|20200603131238-0800||ORU^R01^ORU_R01|D-4861207191202006032112953627|P|2.5.1||NE|NE|USA|||^PHLabReportNoAck^2.16.840.1.113883.9.10^ISO
- SFT|Lab Facility|1.0|Lab Facility|Binary Id Unknown
- PID|1|110596808|Lab Facility&2.16.840.1.114222.4.1.220759&ISO|Mouse^Mickey|19870501|M|2028-9|Asian^CDCREC|3.1.0|00 Fake street^Disney^MA^02130^USA^H||^PRN^PH^1|617^9834370|||2186-5|Not Hispanic or Latino^CDCREC|3.1.0
- ORC|RE|3631467|Lab Facility^2.16.840.1.114222.4.1.220759^ISO|3631467^Lab Facility^2.16.840.1.114222.4.1.220759^ISO|CM|1962476994^Mouse^Minnie|NPI&2.16.840.1.113883.4.6&ISO|Ordering Facility^D|00 Main St.^Tunes^MA^02130^USA^O|WPN^PH^1|617^9834370|25 Fake Street^Building E23^Tunes^MA^02130^USA^O
- OBR|1|3631467|Lab Facility^2.16.840.1.114222.4.1.220759^ISO|3631467^Lab Facility^2.16.840.1.114222.4.1.220759^ISO|94309-2|LN||20200522075702-0800|||1962476994^Mouse^Minnie|NPI&2.16.840.1.113883.4.6&ISO|2020052302065409-0800||F
- OBX|1|CWE|94309-2|SARS coronavirus 2 RNA:PrThr:Pt:XXX:Ord:Probe.amp.tar|LN|1|260415000|Not detected|SCT||Not detected|N|Normal^HL70078|2.5.1|||F|05D0000000|Performing Lab Facility^CLIA|2.16.840.1.114222.4.1.220759&ISO|||2020052302022020-0800|||Testing Institute^D|2.16.840.1.113883.19.4.6&ISO|XX|22D0000001|320 Fake St.^Tunes^MA^02130^USA^B
- SPM|1|D-4861207191&Lab Facility&2.16.840.1.114222.4.1.220759&ISO|D-4861207191&Lab Facility|2.16.840.1.114222.4.1.220759&ISO|697989009|Anterior nares swab (specimen)|SCT|373067005|No (qualifier value)^SCT|3.1.0|20200522075702-0800|20200522075703-0800
- BTS|1
- FTS|1
MAVEN Labs

- Majority of labs feed into MAVEN via electronic lab reporting
  - Based on LOINC (labs) and SNOMED (result) codes
  - Race/Ethnicity/Gender
  - Demographics
  - Lab Test
  - Results
  - Susceptibilities (when applicable)
MAVEN: General Features

- Complete data capture in a single integrated system for all 90 diseases
  - production since 2006 - full integration by 2019
  - continued enhancements
- Real-time information sharing with local health
- Electronic laboratory and case reporting (ELR/ eCR) interface

MAVEN is not a medical record system it is a surveillance system!
3 diseases/events for the same person, but in the system as 3 different, unrelated events.

3 events linked together by the person. Appropriate demographic information on the case is shared across diseases/events for a single case.
MAVEN: Person Based

Maven Disease Surveillance Suite - TEST

### Event Summary

<table>
<thead>
<tr>
<th>Basic Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Case ID</td>
<td>100000487</td>
</tr>
<tr>
<td>Event</td>
<td>Salmonellosis</td>
</tr>
<tr>
<td>Name</td>
<td>Scott Troppy</td>
</tr>
<tr>
<td>Birth Date</td>
<td>05/30/1981</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td>Home Phone</td>
<td>(617) 888-8888</td>
</tr>
<tr>
<td>Mobile Phone</td>
<td>(617) 777-7777</td>
</tr>
<tr>
<td>Investigation Status</td>
<td>Open</td>
</tr>
<tr>
<td>Linked Events/Contacts</td>
<td>1 (View)</td>
</tr>
<tr>
<td>Attachments</td>
<td>0 (Add)</td>
</tr>
</tbody>
</table>

### Notifications

**Event/Status/Date/Type Notifier**
- Event Status: Confirmed
- Event Date: 03/25/2009
- Event Type: Lab Test Date

**Concerns**
- Please document first date contact was attempted with case in the QP#3 (Clinical)

**Workflow Status**
- Event ID is in workflows [View List]

**LIST-CDIFF Cross Product Notifier**
- Giardiasis 100000020, dated 01/01/2005 (View)

**Case Classification**
- Age at time of event: 47.81
- Age unit: Years

Click on Name to view other events associated with...
Scott is one person in MAVEN but has three events
MAVEN Features

- Security: Roles and Groups
- Deduplication
  - person level (by weighted algorithm)
  - disease event level (by event time periods)
- Automated triage and prioritization of information
- Workflow management
  - streamlines business processes for triaging and prioritizing case investigation and surveillance
- Disease specific question packages
  - reports and data extracts for analysis, including COVID-19 case data for tracking purposes
Who uses MAVEN?

- MDPH staff
- Local Health
- Infection Preventionists (IP)
- Refugee Health Assessment Sites
- TB clinics
- Other select public health partners
Workflows are where cases are placed as they enter the system. When you update certain fields in the Administrative Question Package (steps 1-5) the events move through the different workflow to assist you in managing the case investigation.

<table>
<thead>
<tr>
<th>Workflow Queues</th>
<th>Total Count</th>
<th>Priority</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Online LBOH Notifications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBOH Notification for Routine disease</td>
<td>38</td>
<td>Very High</td>
<td>10/24/2019 03:44 P</td>
</tr>
<tr>
<td>LBOH Case Report Forms (CRF) are pending</td>
<td>2</td>
<td>High</td>
<td>10/24/2019 03:44 P</td>
</tr>
<tr>
<td>LBOH Needs final review</td>
<td>2</td>
<td>Medium</td>
<td>10/24/2019 03:44 P</td>
</tr>
<tr>
<td>LBOH Notification but no follow-up required</td>
<td>25</td>
<td>Medium</td>
<td>10/24/2019 03:44 P</td>
</tr>
<tr>
<td><strong>Online LBOH TB Notifications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBOH TB Labs for review</td>
<td>0</td>
<td>High</td>
<td>10/24/2019 03:44 P</td>
</tr>
<tr>
<td>LBOH LTBI Priority Follow-Up</td>
<td>0</td>
<td>Medium</td>
<td>10/24/2019 03:44 P</td>
</tr>
<tr>
<td>LBOH TB Class A/B Worksheet Complete</td>
<td>0</td>
<td>Medium</td>
<td>10/24/2019 03:44 P</td>
</tr>
<tr>
<td>LBOH TB Needs final review</td>
<td>0</td>
<td>Medium</td>
<td>10/24/2019 03:44 P</td>
</tr>
<tr>
<td>LBOH TB Outreach requested and not assigned</td>
<td>0</td>
<td>Medium</td>
<td>10/24/2019 03:44 P</td>
</tr>
<tr>
<td><strong>Shared Events</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared Cases - Cases shared by me</td>
<td>0</td>
<td>Medium</td>
<td>10/24/2019 03:44 P</td>
</tr>
</tbody>
</table>
Administrative Question
Package (Steps 1-5)

Admin Steps

- MDPH, IPs and LBOH all use this section for managing cases
- LBOH: Steps 1-5
But What IS a Case?

An ill child goes to the pediatrician with a rash…

- If we call it Measles here in MA, would California call it Measles, too?

- Are we tracking the same things?
Case Definitions

- Uniform criteria used to define a disease for public health surveillance
  - may consist of laboratory, clinical and/or epidemiologic information
  - defined as suspect, probable, confirmed as defined by criteria
- Allows public health officials to classify and count cases consistently across reporting jurisdictions for ultimate reporting to CDC
- Established by the Council of State and Territorial Epidemiologists
Only confirmed and probable cases are sent to CDC

MDPH only releases information on Confirmed and Probable cases

Once you complete your case investigation (step 4 as Yes/No) most disease events are reviewed by a MDPH epidemiologist
Complete information is important!

- **Use Cases:**
  - For example, certain Tickborne diseases
    - Need clinical information/symptoms + lab information to meet probable and confirmed case definition
  - Positive Salmonella Culture case creates a confirmed case
  - Versus a CIDT (Culture Independent Diagnostic Test) – creates a Probable case
Where do you find case classification

- **Case Classification (Event Status)** is shown in the Notifications section
- Also listed in the Administrative QP
- Certain diseases show additional co-morbidities
  - Enteric diseases
  - Hepatitis
  - COVID - Legionnaires
Case Classification Manual

- Stored on MAVEN Help
  - Case Classification Manual Sub Folder
- One for each reportable disease
  - Explains what makes a case confirmed, probable, suspect and revoked
  - List of labs that we accept for disease events

# Case Classification Example

<table>
<thead>
<tr>
<th>MUMPS</th>
<th>IMMEDIATE NOTIFICATION</th>
<th>IMMUNIZATION PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Event Name:</strong></td>
<td><strong>MUMPS</strong></td>
<td><strong>Lifelong immunity</strong></td>
</tr>
<tr>
<td><strong>Event Time Period:</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **CDC Event Classification (2012):** | **Confirmed** | - A positive mumps laboratory confirmation for mumps virus with reverse transcription polymerase chain reaction (RT-PCR) or culture in a patient with an acute illness characterized by any of the following:
  - Acute parotitis or other salivary gland swelling, lasting at least 2 days
  - Aseptic meningitis
  - Encephalitis
  - Hearing loss
  - Orchitis
  - Oophoritis
  - Mastitis
  - Pancreatitis

| **Probable** | - Acute parotitis or other salivary gland swelling lasting at least 2 days, or orchitis or oophoritis unexplained by another more likely diagnosis, in:
  - A person with a positive test for serum anti-mumps specific immunoglobulin M (IgM) antibody, OR
  - A person with epidemiologic linkage to another probable or confirmed case or linkage to a group/community defined by public health during an outbreak of mumps. |

| **Suspect** | - Parotitis, acute salivary gland swelling, orchitis, or oophoritis unexplained by another more likely diagnosis, OR
  - A positive lab result with no mumps clinical symptoms (with or without epidemiological link to a confirmed or probable case). |

| **Massachusetts Event Classification:** | **Confirmed** | - Meets CDC criteria for a confirmed case of mumps, OR
  - Four-fold or greater rise in mumps-specific IgG between acute and convalescent specimens in addition to one of the acute illness symptoms described under CDC criteria for a confirmed case of mumps. |

| **Probable** | **Follows CDC event classification** |
| **Suspect** | - Parotitis, acute salivary gland swelling, orchitis, or oophoritis unexplained by another more likely diagnosis and with no testing done or non-contributory laboratory results. |
| **Revoked** | - An alternative diagnosis, OR
  - An asymptomatic patient with a positive mumps-specific IgM and documentation of testing for immunity (not suspicion of disease), OR
  - In an unvaccinated individual only, negative mumps-specific IgM test collected ≥5 days after onset of symptoms or no four-fold rise in mumps-specific IgG between acute and convalescent specimens. |
## Case Classification Example

### PERTUSSIS

<table>
<thead>
<tr>
<th>Event Name:</th>
<th>PERT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Time Period:</td>
<td>180 days (6 months)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CDC Event Classification (2020):</th>
<th>Confirmed</th>
<th>Probable</th>
</tr>
</thead>
</table>
|                                  | • Acute cough illness of any duration, with:  
  • Isolation of *B. pertussis* from a clinical specimen  
  OR  
  • Polymerase chain reaction (PCR) positive for *B. pertussis*  

<table>
<thead>
<tr>
<th>Massachusetts Event Classification:</th>
<th>Confirmed</th>
<th>Probable</th>
</tr>
</thead>
</table>
|                                    | • Meets CDC criteria for a confirmed case of pertussis  
  OR  
  • Cough illness lasting ≥2 weeks, in an individual with:  
    • Laboratory confirmation by serology performed at the Massachusetts Hinton State Laboratory Institute (FOR INDIVIDUALS ≥11 YEARS ONLY)  

|                      |  
|----------------------|---|
| Probable             | Follows CDC event classification |
Immediate Disease Events

While all diseases are important, categorization allows for a quicker response time for diseases of immediate concern. Longer response times are allowed for diseases of less immediate concern.

Immediate Disease Events

Immediate diseases are shown in red and include a telephone icon.

- Suspected and confirmed cases must be reported immediately

Diseases categorized as immediate usually have one or more of the following attributes:

- Clusters of illness
- Prompt administration of agents can protect people or prevent the spread of disease (rabies, hepatitis A, meningococcal disease)
- The disease has a high mortality rate (i.e., Eastern Equine Encephalitis)
- There is the potential that a bioterrorism agent was released (i.e., anthrax)
- Unusual disease in a group or geographic region (i.e., acute hepatitis C infection in young injection drug users)
- Enteric illness in a food handler or household contact of a food handler
Routine Disease Events

- Non-immediate diseases
  - These should be investigated within one to two business days
    - Salmonellosis
    - Human Granulocytic Anaplasmosis
    - Campylobacteriosis

- Communicable and Other Infectious Diseases Reportable in Massachusetts
  - Reportable infectious diseases and conditions are not limited to those listed below. This list includes only those which are currently reportable by clinicians and laboratories.
  - A list of reportable conditions in other states is obtained from the CDC’s list of reportable diseases and conditions
  - Reportable Diseases Primarily Detected Through Laboratory Testing
    - Please work with the laboratory to ensure complete reporting.
Case Investigation*

- Case investigation will be discussed more in **Part 2: Epidemiology**, but typically involves the following:

  - Gathering & updating additional information not in the original electronic or phone report (either from interviews or calling the reporting provider).
    - This is “Completing the Case Report Form (CRF)”
    - A completed CRF allows for an official review and final case classification. This is needed to **CONFIRM** a case, **OR** to **Revoke** one.

  - Ensuring proper control measures, including isolation of the case and quarantine of contacts when applicable.
Your Data

- Remember: Your data is only as good as the information you collect.
  - If you want to know which populations in your community are being affected by a particular disease, you must collect AND enter the data.
  - Demographics, occupation, risk factors – all are critical to identifying trends and implementing interventions.
  - Notes are great for summarizing case management activities but filling in the specific variables will allow you to analyze your data more thoroughly.

- **Wizards** can help! (check out new Tickborne wizard)
Wizards can help collect data!
Check out our new Tickborne wizard **Key Questions for Case Investigation**
Different Disease Events in MAVEN will have different relevant questions and labs. For Example:

- Vaccine-Preventable Diseases (VPDs) will have vaccine history questions. Non-VPDs will not.
- Risk Questions will differ depending on the type of disease and how it is transmitted.
  - Some may focus more on travel, others more on daily activities, etc.
Your Data

- Every disease event in MAVEN must have a Case Classification.
  - If something begins as a SUSPECT, that doesn’t mean it is actually a confirmed case.
  - Your thorough investigation will help add information to the case so that it can be ruled in or out.
    - Based upon additional information collected, MDPH will update the case to CONFIRMED or PROBABLE, or REVOKED (determine it is NOT a surveillance case)
- Noting case classification is key when reviewing your town data. There are a many investigations that will ultimately “rule out” a disease (REVOKE).
- MDPH will do a final review and determine official case classification based upon your data you have entered once you have completed the CRF.
Disease surveillance, reporting, and control are required by law in MA, and specific diseases are outlined in 105 CMR 300.000.

Medical providers, labs, LBOH and MDPH all have a role to play in ensuring complete and accurate surveillance data, which can then be used to reduce morbidity and mortality.

LBOH are responsible for the cases in their jurisdictions.

MAVEN is the infectious disease surveillance system used to identify cases in a jurisdiction and to document additional investigative data collected.

The Case Classification Manual gives explicit criteria for each disease investigation to determine if something is a confirmed, probable, or suspect case, or if it does not meet criteria and is “revoked.”
Resources

- **MDPH Division of Epidemiology:** 617-983-6800

- **MDPH Division of Surveillance, Analytics, and Informatics (DSAI):**
  - MAVEN Help Desk: MavenHelp@mass.gov
  - MAVEN Onboarding: MavenTraining@mass.gov
  - MDPH MAVEN Help Desk: 617-983-6801
  - MDPH MAVEN Fax: 617-983-6813

- MAVEN Help has Guidance Documents, the Case Classification Manual, and Previous Webinars:

- **MDPH Guide to Surveillance, Reporting, and Control:** Disease-Specific Chapters:
A Day in the Life of Local Health...

- Epi wants more info about a Salmonella case
- Dead bird disposal
- MRSA skin infection cluster
- Elected official – West Nile Virus stats
- Long-Term Care Facility: Influenza-Like Illness numbers
- Restaurant – a worker is out sick
- Measles – teen at summer camp
- Bat in bedroom has rabies
- Report of Fifth Disease
- 20/60 patrons have diarrhea/vomiting after event

What are your top three priorities?
A Day in the Life of Local Health...

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Stay Tuned for Part 2: Epidemiology

- Part 2: Infectious Disease Epidemiology for Local Health (Beyond COVID-19)
  - Tuesday, May 10, 2022, 11:00-12:30 pm