

# Surveillance of Vaccine Preventable Diseases in Alaska

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September 2012



# What is Surveillance?

- “The ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health.”

– *MMWR, July 27, 2001*



# Types of Surveillance

- Passive Surveillance
  - Reports from providers
    - Telephone
    - Fax
  - Reports from laboratories
    - ELR
    - Fax
- Sentinel surveillance
  - Influenza-like illness
- Active Surveillance

# Role of Health Care Providers in Surveillance Activities

- Know which diseases are reportable
- Report all confirmed and suspect cases
  - Timely
  - Complete
  - Don't rely on other providers or laboratory personnel to report
- Notify SOE regarding any unusual cluster of illness

# AK Infectious Disease Report Form

Patient Information		
Last Name _____	First Name _____	MI _____
Date of birth ____/____/____ (mm/dd/yyyy)	Sex: <input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Transgender	Pregnant: <input type="checkbox"/> No <input type="checkbox"/> Yes EDC ____/____/____ <input type="checkbox"/> Unknown
Race: <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Alaska Native/American Indian <input type="checkbox"/> Native Hawaiian/Pacific Islander	<input type="checkbox"/> Asian <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____	Ethnicity: <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic <input type="checkbox"/> Unknown
Physical Address _____	City _____ State _____	PO Box _____ Zip Code _____
Phones (home) _____	(cell) _____	(work) _____
Disease Information		
Name of Disease _____		
Was the diagnosis laboratory confirmed? <input type="checkbox"/> Yes <input type="checkbox"/> No		Specimen collection date: ____/____/____
Type of Specimen:	<input type="checkbox"/> Stool <input type="checkbox"/> Serum <input type="checkbox"/> CSF <input type="checkbox"/> Blood <input type="checkbox"/> Other _____	
Name of Medical Facility _____	Phone _____	
Attending health care provider _____	Laboratory Name (if known) _____	
Reported by: _____	Date Reported: ____/____/____	
Fax reports to (907) 561-4239 – please verify fax has been transmitted. If line is busy, please fax again or call the RTR to make a report. Rapid Telephonic Reporting System (RTR): (907) 561-4234 or outside Anchorage (800) 478-1700 This form is also available online at <a href="http://www.epi.alaska.gov/pubs/conditions/crForms.htm">http://www.epi.alaska.gov/pubs/conditions/crForms.htm</a>		



# Reportable Infectious Diseases in AK

Acquired immunodeficiency syndrome (AIDS)

**Anthrax**

**Botulism**

Brucellosis

Campylobacteriosis

Chancroid

*Chlamydia trachomatis* infection

Cholera (see *Vibrio*)

Cryptosporidiosis

Cyclosporiasis

**Diphtheria**

Echinococcosis

*Escherichia coli* O157:H7 infection

Giardiasis

Gonorrhea

*Haemophilus influenzae* invasive disease

**Hemorrhagic fever**

Hepatitis (type A, B, or C)

Human immunodeficiency virus (HIV) infection

Legionellosis (Legionnaires' disease or Pontiac Fever)

Leprosy (Hansen Disease)

Listeriosis

Lyme disease

Malaria

**Measles**

**Meningococcal invasive disease**

Mumps

**Paralytic shellfish poisoning**

Pertussis (whooping cough)

**Plague**

**Poliomyelitis**

Prion diseases

Psittacosis

Q fever

**Rabies**

Rheumatic fever

**Rubella**

Salmonellosis

**Severe acute respiratory syndrome (SARS)**

Shigellosis

**Smallpox**

*Streptococcus agalactiae* (Group B streptococcus)  
invasive disease

*Streptococcus pneumoniae* (pneumococcus),  
invasive disease

*Streptococcus pyogenes* (Group A streptococcus)  
invasive disease and streptococcal toxic  
shock syndrome

**Suspected novel strains of influenza virus**

Syphilis

**Tetanus**

Trichinosis (trichinellosis)

Tuberculosis

**Tularemia**

Typhoid fever

Varicella (chickenpox)

*Vibrio* infection, including cholera

West Nile virus infection

Yellow fever

Yersiniosis

An unusual number or clustering of diseases or other conditions of public health importance

# Reportable *Vaccine Preventable* Diseases in AK

- ❑ Influenza
- ❑ Hepatitis A
- ❑ Hepatitis B
- ❑ Pertussis
- ❑ Tetanus
- ❑ Diphtheria
- ❑ Varicella
- ❑ Measles
- ❑ Rubella
- ❑ Mumps
- ❑ Poliomyelitis
- ❑ Pneumococcus
- ❑ H flu type b (Hib)
- ❑ Meningococcus



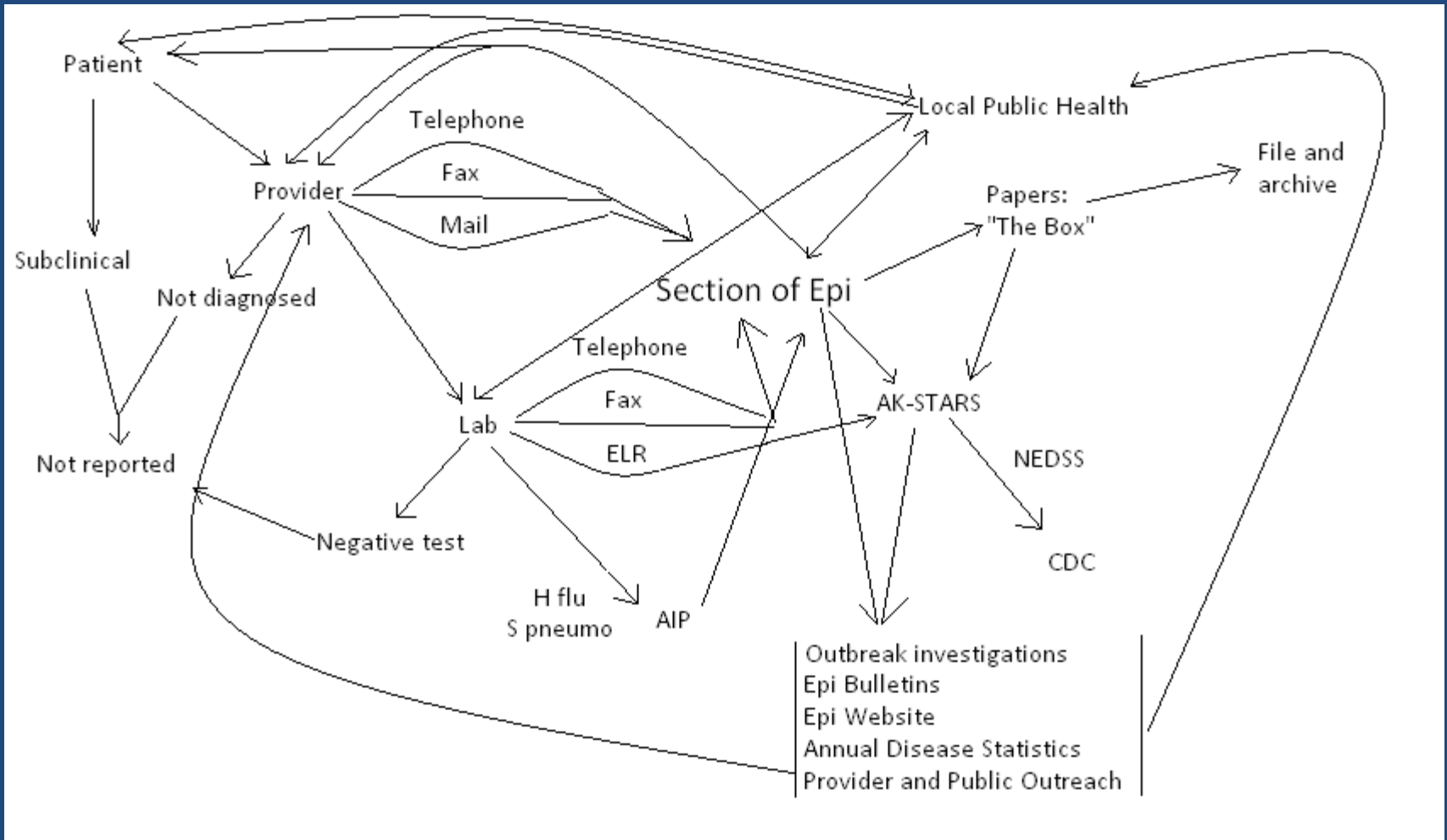
# Who Takes the Reports?

- All reports triaged to appropriate program
- Reportable VPDs go to ID/TB program
  - 2 MDs
  - 1 DVM
  - 5 nurse epidemiologists
  - 1 nurse manager
  - Database manager
  - Administrative staff
  - Pharmacy staff
  - PHAP





# Surveillance Information Flow Chart



# Report Management

- Triage incident case reports
- Routine reports
- Urgent/emergent reports
  - Interviews, gather records, case finding
  - Take public health action, as needed
    - Vaccinate
    - Antibiotic prophylaxis
    - Isolation

# Data Management

- Input information into surveillance databases
  - AK-STARS
  - STD-MIS
- Classify cases
  - Confirmed
  - Probable
  - Suspect
  - Not a case

# AK-STARS



Case Investigation   System Administration   Reports   Logout

Case Investigation >> New Search

Name of Saved Search

Default Search

Case Type :  
 SELECT ALL  
 Human Case  
 Non Human Case

Disease Name:  
 Unspecified Secondary Syphilis  
 Varicella (Chickenpox)  
 Vibrio Parahaemolyticus

Disease Name #2:

Disease Class :  
 SELECT ALL  
 All

Case Classification :  
 Confirmed  
 Deleted  
 Not a Case

Investigation Status :  
 SELECT ALL  
 Active

Supp  
 SEL  
 App

Outbreak Y/N :  
 SELECT ALL  
 No  
 Yes

Outbreak Name :  
 Marriott MCH Scratchfest

Outbreak # :

Onset Date (mm/dd/yyyy):  
 09/27/2012 to

## YTD Disease by Geographic Area and Timeframe For A Given Year

Year: 2012  
 Through Month: September  
 Geographic Breakdown: by Regions  
 Report Type: Counts  
 Case Classifications: [Confirmed]  
 Investigation Status: Not Selected  
 Reportable Conditions: Pertussis

Region	Jan	Feb	March	April	May	June	July	Aug	Sept	Total
Gulf Coast	0	1	0	0	0	0	0	8	0	7
Southwest	0	0	0	0	1	2	1	5	0	9
Anch/Mat-Su	6	3	3	2	6	9	4	26	9	68
Southeast	0	0	0	0	0	0	0	3	0	3
Statewide	0	0	0	0	0	0	0	2	0	2
Interior	0	1	0	3	0	2	15	15	0	36
<b>Total</b>	<b>6</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>7</b>	<b>13</b>	<b>20</b>	<b>57</b>	<b>9</b>	<b>128</b>

# Data Interpretation and Dissemination

- Weekly electronic reports to CDC via NEDSS
- Analyze data and report to stakeholders
  - Epi Bulletins
  - Website reports
- Immunization work group teleconference with IZ and ID programs, Muni, ANTHC, AIP bimonthly

# Unique VPD Surveillance Considerations

- Vaccination status of patient(s) and contacts
- Vaccine coverage rate in potentially exposed population
  - VacTrAK
  - RPMS
- Timeliness and completeness of passive and active surveillance
  - Vaccination
  - Antibiotic prophylaxis



# Alaska VPD Surveillance Strengths

- Experienced PH personnel at state and local level
- PHNs assist with surveillance at the local level
- Improved use of case definitions for reporting
- Electronic reporting
  - Improves timeliness and completeness
- Collaboration with state public health laboratory

# Opportunities for AK VPD Surveillance Improvement

- IZ and ID programs are relatively separate
- Report paperwork is still quite cumbersome
- Providers and public health would like more easily accessible information on disease incidence trends



# Next Steps

- Regular meetings between IZ and ID programs
- Reduce paper forms
- Work with IT to improve database functions
  - Sync up AK-STARS with VacTrAK
  - Improve data input interface and searchability
- Disseminate more timely and meaningful data
  - Disease maps
  - Web-based tools (e.g., Instant Atlas, IBIS) to report incidence numbers by region

Thank you!

