DISEASE SURVEILLANCE & CONTROL LOCAL PUBLIC HEALTH PERSPECTIVE

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IMPORTANCE OF PUBLIC HEALTH INFRASTRUCTURE AT THE LOCAL LEVEL

• Essential to maintain the capacity to prepare and respond to public health threats at the local level.

• Adequate staff with training and expertise is the foundation of communicable disease prevention and control.
IMPORTANCE OF PUBLIC HEALTH INFRASTRUCTURE AT THE LOCAL LEVEL (cont.)

• California Health & Safety mandates that public health maintain programs to protect the public’s health.
  – Tuberculosis
  – Immunizations
  – STD/HIV
  – General Communicable Diseases
Disease Surveillance at the Local Level

- Control of communicable diseases is based on epidemiology; the study of the distribution, causes, and transmission of communicable diseases within the population.
- Must have the ability to conduct active as well as passive surveillance.
- Must have access to public lab services which are an essential part of diagnosis of diseases and identifying potential threats in our community.
### Multiple Reportable Diseases and Conditions

#### County of Riverside

**Department of Public Health**

**Disease Reporting Requirements**

**Diseases to be Reported Immediately by Telephone**

- Anthrax, human or animal
- Influenza, novel strain (human)
- Botulism, infant, Foetal, Wound
- Brucellosis, human
- Ciguatera Fish Poisoning (Community acquired only)
- Dengue
- Orthopoxvirus
- Domonic Acid Poisoning (Anemias: shellfish poisoning)
- Escherichia coli, Shiga toxin producing (STEC) including E. coli O157 +
- Hantavirus infection
- Hemolytic Uremic Syndrome
- Leptospirosis
- Meningococcal infection
- Paralytic Shellfish Poisoning
- Plague, Human or Animal +
- Rabies, Human or Animal +
- Salmonella Fish Poisoning
- Severe Acute Respiratory Syndrome (SARS)
- Shega Virus (detected in feces)
- Smallpox (variola)
- Smallpox (variola minor)
- Viral Hemorraghic Fevers, human or animal (e.g., Crimean-Congo, Ebola, Lassa and Marburg Viruses)
- Yellow Fever
- Occurrence of Any Unusual Disease Outbreaks of Any Disease (including Foodborne and any diseases not listed in Section 2000). Specify if institutional and/or community setting. Two or more cases from separate households + an outbreak.

**Diseases or Suspected Diseases to be Reported within One Day of Identification**

- Amebiasis +
- Babesiosis
- Campylobacteriosis +
- Chicken Pox (Only Hospitalized and Outbreaks)
- Cryptosporidiosis +
- Encephalitis +, Specific Etiology: Viral, Bacterial, Fungal, Parasitic
- Foodborne Disease
- Haemophilus Influenzae, Invasive Disease
- Hepatitis A, acute infection +
- Leptospirosis +
- Malaria +
- Meningitis, Specific Etiology: Viral, Bacterial, Fungal, Parasitic
- Pertussis (Whooping Cough)
- Polioivirus infection
- Psittacosis
- Q Fever
- Relapsing Fever
- Salmonellosis (Other than Typhoid Fever) +
- Shigellosis +
- Staphylococcus Aureus infection
- Varicella (in previously healthy people resulting in death or admission to ICU)
- Syphilis +
- Trichinosis
- Tuberculosis +
- Typhoid Fever, Cases and Carriers +
- West Nile Virus (WNV) Infection, acute +
- Yeasts +

**Diseases to be Reported within Seven Calendar Days**

- Acquired Immune Deficiency Syndrome (AIDS) (with infections, see human immunodeficiency syndrome +
- Anaplasmosis, Ehrlichiosis
- Brucellosis, Animal (except dogs)
- Chancroid
- Chlamydia Trachomatis infection +
- Cryptosporidiosis, Invasive Disease
- Coccidioidomycosis
- Creutzfeldt-Jakob Disease (CJD) and other Transmissible Spongiform Encephalopathies (TSE)
- Cytomegalovirus
- Cryptosporidiosis or Taeniaisis
- Giardiasis
- Gonococcal Infection +
- Hepatitis B (Specific acute or chronic) +
- Hepatitis C (Specific acute or chronic) +
- Herpes Simplex Infection
- Human Immunodeficiency Virus (HIV) Infection (Laboratory-confirmed cases for ages 0-94 years)
- Leptospirosis
- Leprosy (Human Disease) +
- Mumps
- Pelvic Inflammatory Disease (PID)
- Pneumocystis Carinii Pneumonia (non-AIDS Patients)
- Rocky Mountain Spotted Fever
- Rubella (German Measles)
- Rubella Syndrome, Congenital
- Tetanus
- Toxocara Infection
- Tuberculosis, Animal

**Reportable Non-Communicable Diseases and Conditions**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Disorder Characterized by Lapses of Consciousness</th>
<th>Pesticide Exposure (See Reverse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alzheimer’s Disease and Related Conditions</td>
<td>Animal Bite (See Reverse)</td>
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</tbody>
</table>

**Notes:**

- Essential to include occupation
- Must also be reported by Laboratories
- Viral Hepatitis: A or Hepatitis B
- Hepatitis A: Include occupation, Hepatitis B: If pregnant, include EDC
- Please differentiate acute hepatitis C cases in the CMIR. Chronic hepatitis C: Indicate by positive anti-HCV test in an asymptomatic patient should be shown on the report.
- Special requirements for TB:
  1. Notifiable and must be reported. In charge of reporting TB results from out of state labs.
  2. Laboratories that issue Mycobacterium tuberculosis from a patient’s specimen must confirm requirements for submission of a culture to the Public Health Lab and document body weight (only for requirements available upon request.)
  3. Active or suspected cases require approval of the health officer or designee prior to discharge/transfer from a health care facility.
  4. Please report TB skin test reactors listed below must be reported:
    a) TB Skin Test (TST): Conversions: An increase of at least 10mm of induration from <10mm to ≥10mm within two years from a documented negative to positive TST.
    b) Children three years of age or younger with a positive TB skin test (≥5 mm or greater).

Rev. 01/13
CHALLENGES FACING LOCAL PUBLIC HEALTH DEPARTMENTS

• Diminishing local resources.
  – A recent survey by the California Association of Communicable Disease Controllers (CACDC) indicated that 73% of responding local health departments (LHDs) indicated budget and/or staffing reductions impacted their ability to carry out CD control activities.
CHALLENGES FACING LOCAL PUBLIC HEALTH DEPARTMENTS (CONT.)

- Delayed response times.
- Increased follow-up by telephone rather than home visits.
- More difficult to conduct active surveillance.
- Lack of CD specific funding for local health departments.
EMERGING AND RE-EMERGING INFECTIOUS DISEASES

• Norovirus Outbreaks in long term care and correctional facilities.
• Pertussis (Whooping cough outbreaks).

Figure 1. Number and incidence of reported pertussis cases by year of onset -- California, 1947-2013*

*Includes cases reported to CDPH as of 2/4/2014
EMERGING AND RE-EMERGING INFECTIOUS DISEASES (CONT.)

• Pertussis (Whooping cough outbreaks) (cont.)
First Confirmed Whooping Cough Death Since 2010

SACRAMENTO – Pertussis, better known as whooping cough, has claimed the life of a Riverside County infant less than six months of age, the California Department of Public Health (CDPH) announced today. It’s the first confirmed death from the disease since 2010.

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**Novel Influenza**

- H1N1 Influenza Outbreak in 2009
  - Challenged local health department’s ability to conduct disease investigations. Implement control measures including mass vaccination clinics.
  - Local health department’s readiness to respond to the next Novel Influenza Outbreak is crucial for protecting the public’s health.
THREAT POSED BY MEASLES

• Immunizations are an excellent example of primary prevention.
• Significant reduction in measles morbidity and mortality.
• One case has the potential to trigger a major outbreak.
• LHDs must have resources to quickly investigate reported cases, conduct contact tracing, implement quarantine measures when indicated, and maintain surveillance for secondary cases.
Riverside and the Region

Year starts with measles outbreak
APPLICATION OF EPIDEMIOLOGICAL PRINCIPLES

• Epidemiological principles facilitate disease investigation and outbreak containment.

• Identifying the likely causative agent.

• Steps include:
  – Developing a case definition and implementing a plan of action.
APPLICATION OF EPIDEMIOLOGICAL PRINCIPLES (cont.)

– Evaluating the effectiveness of the intervention.

– LHDs must have adequate and knowledgeable public health staff to carry out the mandated responsibilities to protect our communities.
Decay of the Public Health Infrastructure

• “In 1988, Institute of Medicine described the current public health system as inadequate to protect the public health through effective, organized and sustained efforts.”

• How will the public health system be described in the next five years and beyond?

• Will we be able to carry out our mandate to protect the public’s health?
THANK YOU!