A Tradition of Stewardship
A Commitment to Service

Alice Hughey
Acting Agency Director

Karen L. Smith, M.D., M.P.H.
Public Health Officer

2344 Old Sonoma Road
Building G
Napa, California 94559

PUBLIC HEALTH DIVISION

HHSA EMERGENCY OPERATIONS PLAN (EOP) – APPENDIX 5

OUTBREAK/EPIDEMIOLOGIC RESPONSE PLAN

NAPA COUNTY HEALTH AND HUMAN SERVICES AGENCY (HHSA)

Intentionally Blank Page

RECORD OF CHANGES, UPDATES AND REVISIONS			
Plan Section and Page #.	**Description of Change**	**Date**	**Signature**
	Updated to reflect the State of California's Medical/Health Emergency Operations Manual and related guidance for the MHOAC program and to reflect the recently developed Napa County Mass Casualty Incident Plan	June 2012	**Dr. Jennifer Henn**
Overall	The wording in various sections of the document was simplified to provide concise instructions or clear descriptions.	September 2013	**Dr. Jennifer Henn**
2.1, 2.2, 2.4, 2.6	Updated the "Outbreak Investigation" section to better reflect the steps undertaken during the investigation process.	September 2013	**Dr. Jennifer Henn**
3	Deleted the "Outbreak Investigation Kit"	September 2013	**Dr. Jennifer Henn**
3.5.2	Deleted Table 2 – Community Containment Issues	September 2013	**Dr. Jennifer Henn**
3.6	Deleted section, "Community Mitigation Strategies (Community Containment CDPH Alert System)"		**Dr. Jennifer Henn**
3.8.8	Deleted entire section, "Staffing for Monitoring Teams"	September 2013	**Dr. Jennifer Henn**
3.8.18, 3.8.20, 3.8.21, 3.9	Deleted Sections: • "EOC Public Information Officer", • "Daily Briefings For Law Enforcement", • "HHSA DOC Operations" and • "Risk Communications and Public Education."	September 2013	**Dr. Jennifer Henn**
4.4.5	Inserted verbiage on Data Security"	September 2013	**Dr. Jennifer Henn**
4.4.7	Added an entire section on "Surveillance"	September 2013	**Dr. Jennifer Henn**
Overall	Applied the following standard language	October 2013	**Dr. Karen**

	throughout the document: • "Health Officer" (not Public Health Officer) • "Public Health Division (PHD)" instead of "Napa County Public Health" • Used the term "case" or "cases" instead of "patient" or "patients", where appropriate		**Smith**
2.4	Added the Health Officer roles and responsibilities	October 2013	**Dr. Karen Smith**
2.6.3	Updated the Confidentiality for clarity	October 2013	**Dr. Karen Smith**
Cover Page	Updated Alice Hughey's name as the Acting Agency Director	October 2013	**Dr. Karen Smith**
3.7.3	Inserted language describing information sharing of epidemiologic surveillance information with MHOAC program	December 2013	**Dr. Jennifer Henn**
4.4.4	Inserted language describing descriptive statistics to be shared with MHOAC program during outbreak investigation	December 2013	**Dr. Jennifer Henn**

CONTENTS

1. OUTBREAK RESPONSE PLAN INTRODUCTION

The Outbreak/Epidemiological Response Plan describes activation, authorities, policies and procedures to manage the public health response to a significant communicable disease outbreak. The plan describes the following coordinated actions:

- **OUTBREAK INVESTIGATION**
    - Receive reports, gather epidemiological information
    - Analyze information to track disease spread
    - Determine appropriate outbreak response
- **OUTBREAK RESPONSE**
    - Issue guidance to the medical community
    - Issue Health Officer Orders
    - Activate disease control interventions
    - Provide risk communication for the public
    - Coordinate medical response
    - Obtain resources

1.1 PURPOSE

The purpose of the plan is to describe:

- Public Health procedures for outbreak investigation
- Health Officer authorities and responsibilities in outbreak response, including disease control interventions, beyond single case management including:
    - Community containment, social distancing
    - Isolation and quarantine
    - Mass prophylaxis
    - Risk communication

- Coordination and communication between the Napa County Health and Human Services Agency (HHSA) Public Health Division (PHD), the County Office of Emergency Services (OES), other County departments and local, state and federal agencies and departments
- Activation and operational flow of activities necessary for outbreak investigation and outbreak response
- Coordination with hospitals to activate Alternate Care Sites (ACS)
- Coordination with County departments to provide support during outbreak response, if necessary

1.2 SCOPE

This plan describes coordination within the PHD and HHSA with other county departments and with the California Department of Public Health (CDPH). The plan describes roles and responsibilities of the PHD and other county departments when disease control interventions are required in response to a significant and rapidly spreading communicable disease outbreak.

This plan does not include procedures for routine, on-going public health case management, isolation and quarantine or infection control measures.

The plan does not include procedures for surveillance, including enhanced surveillance or syndromic surveillance. These procedures are included in the PHD Epidemiology and Surveillance Response Plan (Section 4 of this document) and in the Annex H-Appendix 5: Attachment E Pandemic Influenza Response Plan.

Planning Assumptions:

1. Outbreak investigation and response require activation of public health resources (personnel, equipment and supplies) and coordination with other county departments and agencies, hospitals, medical care providers, local, State and Federal agencies and departments.
2. The Health and Human Services Agency Department Operations Center (HHSA DOC) and the Operational Area Emergency Operations Center (Op Area EOC) will be activated when additional resources are needed to activate and manage the outbreak response.
3. PHD outbreak investigation and outbreak response operations are organized using the California Standardized Emergency Management System (SEMS), the Incident Command System (ICS)/NIMS and the California Emergency Operations Manual (EOM).
4. The least restrictive means possible will be used to control disease spread and the PHD will primarily focus on gaining voluntary compliance with outbreak interventions, including isolation and quarantine.
5. The PHD will work closely with physicians, hospitals, health care facilities and health care providers to coordinate outbreak interventions.

6. Appropriate legal actions will be taken in cases of non-compliance with Health Officer Orders and due process will be ensured.
7. Risk communication will be activated and public health informational materials distributed to achieve voluntary compliance with outbreak interventions, including community containment, social distancing, mass prophylaxis, and isolation/quarantine.
8. The needs of access and functional needs populations during an outbreak will be addressed.
9. Law enforcement (police) will enforce orders given by the Health Officer.
10. Curfews and other restrictions on movement may be required.
11. Individuals will be cared for at home unless they require intensive treatment at a hospital.
12. In large-scale disease outbreaks with rapidly spreading disease:
    - Mass prophylaxis may be necessary, if a vaccine or pharmaceutical agent is available.
    - Home isolation and quarantine may be necessary.
    - Law enforcement (police) will enforce orders given by the Health Officer.
    - Curfews and other restrictions on movement may be required.
    - Hospitals may be overwhelmed and treatment may be at Alternate Care Sites.
    - Individuals will be cared for at home unless they require intensive treatment at a hospital.
    - The 911 system may triage calls and transportation to the hospital may not be by ambulance and may be by unconventional means, e.g. buses.
    - Ill patients may be transported out of the area for treatment.
    - Delayed burial may be necessary.

1.3 RELATED PLANS

Related response procedures can be found in the following HHSA Emergency Operations Plans:

- Department Operations Center (DOC) Plan
- Countermeasure Distribution Plan
- Strategic National Stockpile (SNS) Plan

- Medical Surge Plan
- Epidemiology Response Plan (Section 4 of this Plan)
- Crisis Emergency Risk Communication Plan (CERC)
- Fatality Management Plan

1.4 LEGAL AND PROCEDURAL FRAMEWORK

In a declared public health emergency, the Health Officer has legal authority to take actions necessary to protect the public health (see Attachment C, Legal Authorities). Operational decisions and coordination of countywide response may be assisted by activation of an EOC Policy Group. The Policy Group may include:

1. EOC Incident Commander
2. Health Officer
3. County Executive Officer
4. Health & Human Services Agency Director
5. EOC Section Chiefs
6. Public Information Officer
7. Information Systems Director
8. Office of Emergency Services Manager
9. Others as required.

2. OUTBREAK INVESTIGATION

2.1 OUTBREAK INVESTIGATION PURPOSE

The purpose of any outbreak investigation is to determine what factors are associated with illness and what measures can be undertaken to prevent further illness. This is achieved through epidemiologic and environmental investigations.

The HHSA Public Health Division may become aware of a suspected disease outbreak from several sources including:

- On-going 24/7 epidemiological surveillance and disease reporting
- Calls and reports from hospitals, skilled nursing facilities, schools, churches, laboratories, physician offices, corporations, congregate care homes
- Enhanced or syndromic surveillance programs established to monitor disease syndromes/symptoms in the population
- Alerts from other local jurisdictions, the California Department of Public Health, federal agencies, or the media

2.2 OUTBREAK INVESTIGATION OBJECTIVES

Disease outbreak investigation addresses the public health response to reports of unusual disease in the community.

The fundamental reasons for investigating outbreaks are to:

- Prevent additional cases in the current outbreak
- Reassure the public
- Minimize economic and social disruption
- Prevent future outbreaks
- Contribute to knowledge and understanding of a disease

Outbreak investigations include the following activities:

1. Confirm the outbreak (confirm the diagnosis) and establish a preliminary causal hypothesis
2. Identify infected individuals and their contacts; refer for medical care and/or prophylaxis as appropriate

3. Systematically review known causal factors and prioritize to guide potential control measures

4. Employ control measures early, including:

    - Work to identify and remove source of outbreak
    - Provide health education to minimize disease spread
    - Issue infection control and clinical guidelines to healthcare providers
    - Use isolation and quarantine, as indicated, to help control transmission
    - Utilize environmental health and occupational health services

5. Conduct analytical study (e.g. case control) as appropriate

6. Continue surveillance for additional cases

7. Communicate findings of the investigation to partner agencies, healthcare personnel and the media as appropriate

2.3 24/7 COMMUNICABLE DISEASE REPORTING

California Code of Regulations (CCR), Title 17, § 2500 lists diseases and conditions that physicians, health care providers, and hospitals must report to the local Public Health Department within a specified time period following a suspected or confirmed diagnosis.

The HHSA PHD maintains an on-going system to receive and analyze communicable disease reports. Procedures for 24/7 communicable disease reporting are described in Attachment A of this plan.

2.4 OUTBREAK INVESTIGATION ROLES AND RESPONSIBILITIES

Health Officer

- Provide overall coordination and oversight of outbreak investigations and response
- Provide regular updates on outbreak and response to local government officials
- Serve as lead spokesperson for the media
- Issue Health Officer legal orders as indicated

Communicable Disease Unit

- Oversee notifiable conditions reported to the PHD and, in consultation with the Health Officer, conduct initial investigation of potential outbreaks
- Interview cases and contacts

- Provide guidance on lab testing and specimen collection
- May provide testing materials and assist with specimen collection in some circumstances
- Assist with submission of human specimens and food samples to Napa-Solano-Yolo-Marin Public Health laboratory for testing
- Maintain communication with local healthcare professionals
- Implement control and prevention measures to stop outbreak from spreading
- Provide educational information about infectious conditions
- Coordinate with Environmental Health specialist, Epidemiologist, Microbiologist/Public Health Laboratory and Public Health staff in other jurisdictions as necessary

Epidemiologist

- In consultation with the Health Officer, assist in confirming the outbreak and establishing the preliminary causal hypothesis
- Serve as lead investigator or primary coordinator in an outbreak investigation (CD PHN may also assume this responsibility), including development of questionnaires, assisting with interviews as needed, analysis of data, and providing recommendations for control
- Facilitate and guide the steps in an outbreak investigation
- Maintain communication channels between programs, agencies, counties, and CDPH
- Coordinate a hot wash following the outbreak response and ensure that an outbreak report or HSEEP compliant AAR is completed as appropriate
- Coordinate with PHD Communicable Disease PHN, Environmental Health Specialist, Microbiologist/Public Health Laboratory and CDPH staff as necessary

Environmental Health (as indicated)

- Conduct inspection of food facilities, recreational pools/spas, water systems, etc.
- In coordination with the epidemiologist, identify and address food or water safety issues that may have contributed to the outbreak
- Interview managers and food handlers about any illness experienced
- Collect food and environmental samples
- Obtain menu of food items served
- Enforce restrictions and exclusions of ill food handlers from work
- Coordinate with PHD Communicable Disease PHN, Epidemiologist, Public Health Officer and appropriate state agencies as needed

Microbiologist (Local Lab)

- Test human specimens to verify or confirm the diagnosis of the outbreak
- Conduct further sub typing or laboratory analysis, if appropriate
- Coordinate with reference laboratories at state or federal laboratories
- Coordinate with PHD Communicable Disease PHN, Health Officer, and/or Epidemiologist

The Health Officer, Director of Nursing (DON) and Immunization Coordinator may provide additional oversight and guidance during an outbreak response.

2.5 OUTBREAK ACTION PLANNING

Prior to activation of an action planning team or, in events of a larger scale, the DOC or EOC, the Public Health Division (PHD) may be able to monitor the situation through surveillance and determine response actions based on the severity of illness, number of local cases and guidelines issued in response to nationwide or global spread of the disease[1].

The Health Officer convenes a meeting of key public health personnel to prepare an action plan[2]. Depending on the situation, Environmental Health and EMS staff may also participate in this meeting or in the subsequent activities. This action plan may be prepared in any non-routine disease outbreak. The action plan assigns initial responsibility for situation monitoring, surveillance, communication with healthcare providers, public information, critical resource inventory, infection control and case management.

The action planning process anticipates future response requirements, including, for example, the need to activate the DOC and/or EOC, the need to activate a vaccination or prophylaxis campaign and/or the need for school dismissal. The action plan format is described below.

Key Public Health Division personnel who meet to prepare an outbreak-specific initial Action Plan are:

1. Health Officer – Assembles Public Health Division staff and initiates action planning
2. Director of Public Health Nursing (DON)
3. Health Educator
4. Communicable Disease Unit /Epidemiologists
5. Emergency Preparedness Manager

[1] In past response activations, guidelines have been issued by the Centers for Disease Control (CDC), the World Health Organization (WHO) and the CA Department of Public Health.

[2] The action plan format was originally prepared and adopted by the Public Health Division for use in July 2010 in response to a statewide Pertussis outbreak.

6. Maternal and Child Health Coordinator
7. Immunization Coordinator

Sample Action Plan		
Action	**Description**	**Lead Responsibility**
Surveillance	Monitor cases and hospital capacity. Use resulting data to determine the need for county healthcare surge.	Epidemiologist, Communicable Disease (CD) Unit
Risk Communication/Public Information	Monitor statewide and nationwide public information and provide local guidance.	Public Health Educator(s)
Healthcare Provider Information	Monitor statewide and nationwide public information and provide local guidance.	Health Officer DON Epidemiologist CD Unit
Critical Resources	Inventory needed supplies, e.g. antivirals and N-95 masks.	Health Officer CD Unit EP Manager
Infection Control & Case Management	Consider potential activation of home isolation, quarantine, school dismissal, social distancing. Develop case interview and tracking tools as needed.	Health Officer DON Epidemiologist CD Unit
Vaccination/prophylaxis	Consider potential activation of vaccination/prophylaxis operations.	Health Officer DON Epidemiologist CD Unit IZ Coordinator

Monitor the situation. IF the following occurs :

✓Surveillance – Illness/case data indicates need for response activation.

✓ Healthcare providers and the public require information and guidance.

✓ Allocation and distribution of critical resources is needed.

✓ Social distancing/school dismissal may be needed to control spread of disease.

✓ CDC and CDPH indicate a vaccine will become available for distribution.

→ **Consider activation of DOC/EOC.**

2.6 ACTION PLANNING TEAM TRIGGERS

The decision by the Health Officer to activate an action planning team is based on:

- Severity of reported illnesses
- Number of cases or sick population
- Potential for disease spread
- The particular pathogen, if known
- The level of community concern and media interest

The Health Officer or her designee is assigned the role of Action Planning Team leader. The Action Planning Team Leader:

- Activates initial team notification and communication and assembles the Action Planning Team
- Reviews the following information with the team:
  - The epidemiology of the disease
  - Specimen collection and available laboratory tests
  - Investigation priorities
  - Regulations pertinent to the disease situation
- Determines schedule for future meetings of the team

A lead is also assigned within each action planning area (as shown in the sample plan above) and is responsible for ensuring that tasks assigned during the action planning meeting are accomplished.

2.6.1 INFECTION CONTROL AND CASE MANAGEMENT ACTIONS

As with routine outbreaks, public health nurses, clinic nurses and communicable disease investigators perform the following activities:

1. Follow-up cases, suspected cases, and contacts
2. Conduct source case investigations in collaboration with the Epidemiologist and Environmental Health as needed
3. Assess suspects/exposed contacts for symptoms
4. Refer symptomatic individuals to care sites including hospitals, clinics, physicians' offices, field treatment sites, or alternate care sites

5. Follow-up with symptomatic individuals/ family members to ensure access to medical care

6. Refer non-symptomatic individuals to prophylaxis clinics as needed/ appropriate

7. Instruct individuals of need for isolation as appropriate

8. As indicated, conduct daily follow-up with non-symptomatic exposed individuals to assess for symptoms

    - If symptomatic, refer or arrange transport to a care site as needed

9. Instruct patients/family members on appropriate infection control measures, decontamination of rooms, equipment, vehicles, clothing, etc.

10. Participate in the enforcement of isolation/quarantine orders as issued by the Health Officer Reference: Quarantine and Isolation for Potential Causative Agent

2.6.2 EPIDEMIOLOGY AND SURVEILLANCE SURGE CAPACITY

Additional epidemiology and surveillance staffing support may be met through use of Cal STAPH students (graduate students at UC Berkeley who are members of the Student Assistance for Public Health group) or through Napa County Medical Volunteers/Medical Reserve Corp members.

The PHD has an MOU with the CalSTAPH student group to provide epidemiology support in the event of a large outbreak or disaster. To request assistance from CalSTAPH, an agency request form should be completed by going to www.calstaph.org (or clicking here).

The PHD also has a medical volunteer and medical reserve corp unit. The Disaster Healthcare Volunteer (DHV) system

2.6.3 CONFIDENTIALITY

All staff involved, paid and volunteer, in an outbreak investigation have the responsibility of maintaining confidentiality of the individuals involved in the outbreak. Only the Health Officer has the authority to release identifying information and will provide any such approval in writing. Identifying information will never be released unless authorized by the Health Officer and needed to properly conduct the outbreak investigation and protect the public's health. Public Health staff are required to complete annual compliance training, which includes relevant privacy and security laws and regulations. While outbreak investigations are a Public Health function and are HIPAA exempt, protected health information will only be released on order of the Health Officer.

Volunteers brought in to assist with the outbreak on a short term, emergency basis will receive brief training on privacy and security from the outbreak team lead or designee. This training will

be documented using a sign-in sheet with volunteer and trainer names and signatures. Volunteers will also sign Napa County's confidentiality agreement and complete the Employee Emergency Contact Information sheet.

3. OUTBREAK RESPONSE WITHIN ICS STRUCTURE

3.1 INTRODUCTION

Outbreak investigation tracks the course of disease spread and provides the Public Health Officer with information needed to determine and plan for appropriate outbreak response. Potential disease control actions that may occur during activation of the EOC/DOC include:

OUTBREAK RESPONSE ACTIONS	
ACTIVATE DISEASE CONTROL INTERVENTIONS:	Community containment, social distancing Isolation and quarantine Mass prophylaxis Risk communication
ISSUE LEGAL ORDERS:	Isolation or Quarantine Boil Water Order, Unsafe Water Alert
ISSUE GUIDANCE TO PHYSICIANS (Health care providers, medical community):	Outbreak reporting requirements Treatment and support Infection control Disposition of patients Personal Protective Equipment (PPE)
ISSUE GUIDANCE TO HOSPITALS, CLINICS, SKILLED NURSING FACILITIES:	Infection control Bed status reporting Triage guidelines Isolation guidelines Personal Protective Equipment (PPE)
MEDICAL RESPONSE COORDINATION:	Hospital medical surge Use of Alternate Care Sites (ACS)
ISSUE GUIDANCE TO THE PUBLIC:	Infection control/hygiene How to get treatment How to treat at home

3.2 OPERATIONS CENTERS

Outbreak response to a rapidly spreading disease may require activation of Health and Human Services Department Operations Center (HHSA DOC), the Operational Area Emergency Operations Center (Op Area EOC), and City EOCs.

The HHSA DOC is activated to:

- Coordinate continued outbreak investigation and case monitoring in the community and at hospitals
- Determine appropriate outbreak interventions and prepare Health Officer Orders and risk communication information, as required
- Provide PHD guidance to physicians, health care providers, and contact persons at hospitals, skilled nursing facilities and other congregate care settings
- Coordinate the use of hospital resources and activate Alternate Care Sites (ACS), if necessary (HHSA DOC Operations Section, Medical Branch)
- Coordinate support services to home isolation and quarantine individuals/families. (EOC Logistics Section and HHSA DOC Operations Section, HHSA DOC Care & Shelter Branch).
- Coordinate with Emergency Medical Services (EMS) (HHSA DOC Medical Branch) for patient transport
- Coordinate resources needed to support outbreak interventions including community containment, mass prophylaxis, and isolation and quarantine
- Provide risk communication to the public.
- Coordinate public health staffing and medical volunteers

The Operational Area EOC is activated to:

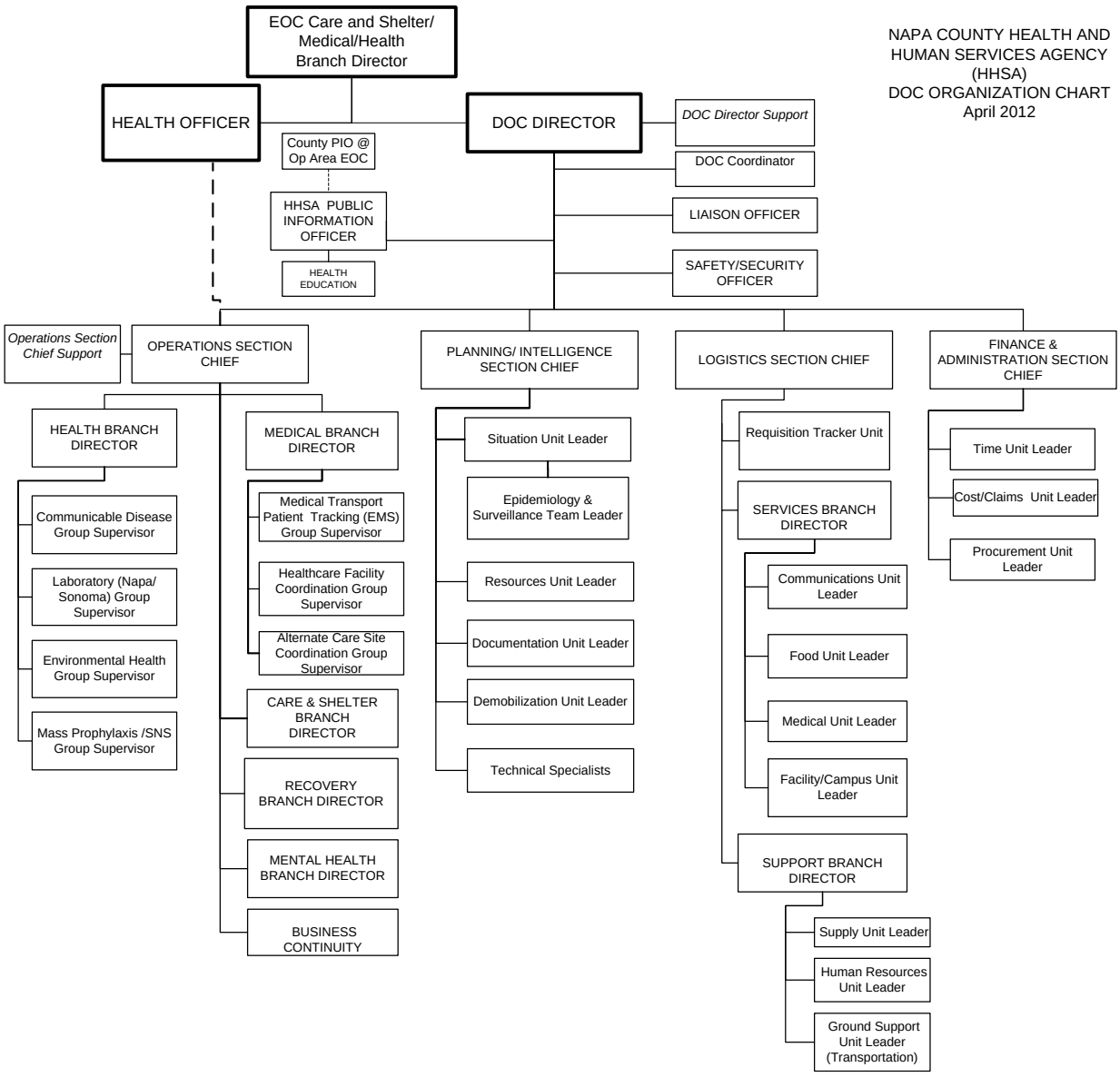
- Manage proclamations, declarations
- Issue Emergency Alert System broadcasts
- Coordinate mutual aid, including medical mutual aid by the Medical Health Mutual Aid Coordinator (MHOAC)
- Coordinate law enforcement support (Operations Section, Law Enforcement Branch)

- Obtain additional resources to support outbreak interventions (Logistics Section)
- Coordinate transportation (Logistics Section, Transportation Branch)
    - Mass dispensing site worker transport
    - Mass dispensing shuttle buses to sites
    - Secure transport of SNS pharmaceuticals and supplies

3.3 HHSA DEPARTMENT OPERATIONS CENTER (DOC)

When the HHSA DOC is activated, the Incident Command System (ICS) organization chart for outbreak response is shown below. The needs of the response will dictate which positions are activated. An organization chart that includes the response structure for vaccine and medical prophylaxis can be found in the HHSA Pandemic Influenza Response Plan.

NAPA COUNTY HEALTH AND HUMAN SERVICES AGENCY (HHSA)
DOC ORGANIZATION CHART
April 2012



3.4 RESPONSE ACTIVATIONS

The following response plans and DOC/EOC ICS activations may be required in a situation involving rapid disease spread and large-scale outbreak response:

1. Activate the HHSA Countermeasure Distribution Plan for priority prophylaxis and prophylaxis of the entire population, if a vaccine or antibiotic/antiviral is available and indicated

2. Activate the MCIP/Mass Casualty Plan to triage 911 calls for transport to hospitals, Alternate Care Sites (ACS) associated with hospitals, or other designated facilities

3. Activate the HHSA Medical Surge Plan

4. If necessary, establish Alternate Care Sites (ACS) for patient treatment if hospitals are overwhelmed.

5. Activate the HHSA/DOC Care and Shelter Branch to coordinate support services for persons in home quarantine or isolation

6. Activate the EOC Mass Fatality Branch to coordinate temporary morgue facilities and disposition of remains

7. Activate the Operational Area EOC Law Enforcement Branch to maintain public safety, provide security to health/medical field sites, assist with detentions, and enforce Health Officer Orders for isolation, quarantine and public venue closures, as necessary

8. Activate the Operational Area EOC Logistics Section to coordinate supplies, equipment, communication, transportation and facility operations related to outbreak response

3.5 MASS PROPHYLAXIS

Procedures to activate and manage mass prophylaxis are described in the Napa County HHSA/ Public Health Division Countermeasure Distribution Plan and Strategic National Stockpile (SNS) Plan.

3.6 RISK COMMUNICATION

Procedures to activate and manage risk communication and materials used in risk communication are described in the Napa County HHSA Crisis Emergency Risk Communication Plan (CERC).

3.7 NON-PHARMACEUTICAL INTERVENTIONS (NPI)

Non-pharmaceutical intervention (NPI) measures are also termed community containment, community interventions, social distancing or community mitigation measures.

These terms refer to focused and/or community wide measures to increase social distance between individuals who are well and unexposed, from individuals who have been exposed to or infected by a communicable disease.

The objectives of community containment are:

- Reduce the overall risk of transmission of a communicable disease at the population level by limiting social interactions and preventing inadvertent exposures
- Reduce the risk of exposure by separating and/or restricting the movement of persons suspected to have a communicable disease that poses a significant public health threat to the community
- Reduce the risk of transmission of a communicable disease by restricting the movement of persons who may have been exposed to an infectious disease, but are not yet ill

During the severe acute respiratory syndrome (SARS) outbreak in 2003, CDPH distributed the following list of community containment measures. These measures would be taken in the U.S. in response to SARS activity or in response to another communicable disease with person-to-person transmission and ineffective control measures. The Health Officer determines the appropriate community containment measures depending on the outbreak type and extent.

SARS OUTBREAK COMMUNITY CONTAINMENT MEASURES

Consider measures such as:

- Fever/symptoms monitoring before public gatherings or entrance to public places
- Community-wide “shelter in place” or “snow day” strategies
- Community-wide triage system for persons with fever (e.g. call centers to screen outpatients before office presentation, fever evaluation centers, triage to designated centers)
- Cancellation of public events
- Closing of public places and schools
- Restriction of mass transit
- Social distancing at places of employment
- Distribute products/education materials on hand hygiene and ‘Cover Your Cough’
- Distribute or encourage use of masks for selected essential personnel
- Disseminate information on restrictions in the quarantine zone (e.g. print/broadcast media; posters, leaflets, flyers door-to-door).
- Distribute information on quarantine rationale, procedures, restrictions to neighboring zones/communities
- Coordinate orders for community-wide restrictions
- Enforcement which may include fines, penalties, barricades, visible signs of boundary enforcement
- Identify alternative means of supplying essential services; provided focused and community-wide reassurance re: restoration of these services

3.7.1 PROCEDURE FOR NON-PHARMACEUTICAL INTERVENTIONS

The Health Officer determines when it is necessary to limit the movement of individuals through isolation, quarantine or other community containment measures. Quarantines against other jurisdictions may require consent from the California Department of Public Health (CDPH).

The Health Officer, in coordination with the Director of HHSA and other County officials, may also achieve social distancing by canceling public gatherings and closing public venues such as movie theaters and schools. This is accomplished through a Health Officer Order. Social distancing/non-pharmaceutical interventions will only be enacted after careful consideration and, whenever possible, in consensus with regional health officials (such as through special meetings of the Association of Bay Area Health Officials) and the California Department of Public Health in order to provide unified guidelines and messaging.

The following procedure is used to limit movement:

1. The Health Officer, in consultation with appropriate County, regional and state officials, determines the need for closure of public assembly or large-scale (group or area-wide) quarantine or isolation

2. Health Officer Orders are issued

3. The HHSA DOC Communicable Disease Group supervisor activates Isolation/Quarantine Monitoring Teams to monitor compliance as needed

4. The HHSA DOC and EOC coordinate to provide support services to those in quarantine or isolation

5. The Operational Area EOC Law Enforcement Branch is activated for enforcement

6. The Health Officer issues protocols to protect those providing enforcement and support services

7. Just-in-time training and fit-testing are provided by each agency/facility to their staff and volunteers

8. EMS coordinates transportation of quarantined persons who become ill to hospitals or Alternate Care Sites as appropriate given current surge demand

9. The EOC activates the Legal Officer to coordinate with the District Attorney and Courts to ensure due process for many individuals in group or area-wide quarantine or isolation

3.7.2 ISOLATION AND QUARANTINE – INTRODUCTION AND LEGAL DEFINITIONS

Isolation and quarantine are public health control measures designed to protect the public by limiting contact between persons who are, or may be, contagious and others who are susceptible to infection[3]. Both isolation and quarantine may be conducted on a **voluntary basis** or **compelled on a mandatory basis** through legal authority.

A. Communicable Disease – An illness due to a specific microbiological or parasitic agent or its toxic products which arises through transmission of that agent or its products from an infected person, animal, or inanimate reservoir to susceptible host, either directly or indirectly though an intermediate plant or animal host, vector, or the inanimate environment (17 CCR § 2500 (a) (7)).

B. Isolation – Isolation is defined as separation of infected persons from other persons for the period of communicability in such places and under such conditions as will prevent the transmission of the infectious agent (17 CCR § 2515).

C. Strict Isolation – If the disease requires strict isolation, the Health Officer shall ensure that instructions are given to the patient and members of the household, defining the area within which the patient is to be isolated and stating the measures to be taken to prevent the spread of disease (17 CCR § 2516)

D. Modified Isolation – If the disease is one in which only a modified isolation is required, the local Health Officer shall issue appropriate instructions, prescribing the isolation technique to be followed. The isolation technique will depend upon the disease. (17 CCR § 2518).

E. Quarantine – Quarantine is defined as the limitation of freedom of movement of persons or animals that have been exposed to a communicable disease for a period of time equal to the longest usual incubation period of the disease, in such manner as to present effective contact with those not so exposed. (17 CCR § 2520).

In order to receive state funding, Health Officers must provide: "Communicable disease control, including availability of adequate isolation facilities, and the control of acute communicable

[3] Sections of this plan are excerpted from the National Association of City and County Health Officials (NACCHO) publication, Issues to Consider – Isolation & Quarantine, January 2006

diseases..., based upon provision of .... appropriate preventive measures for the particular communicable disease hazards in the community" (17 CCR §1276(c)). To fulfill this requirement, Health Officers are authorized to control contagious, infectious, or communicable disease and may “take measures as may be necessary” to prevent and control the spread of disease within the territory under their jurisdiction (H&S §120175).

3.7.3 HHSA DOC OPERATIONS BRANCH ACTIONS RELATED TO ISOLATION AND QUARANTINE

1. Assign staff as needed to the Health and Medical Branches
2. Assist the Health Officer to prepare health alerts and health orders for isolation/quarantine and social distancing measures
3. In coordination with the Epidemiology and Surveillance Unit (Planning), monitor disease spread and, with the Health Officer, determine social distancing measures to control the spread of disease
4. In coordination with the Epidemiology and Surveillance Unit (Planning), communicate information related to the spread of disease (# of cases, Epi Curve, case demographics, etc) to the MHOAC program (see Epidemiology and Surveillance Response Plan for more detail)
5. With the Health Officer, prepare advisories for the use of Personal Protective Equipment (PPE) and other infection control protocols. This includes daily briefing information for law enforcement officers and Emergency Medical Service workers
6. Identify needs of isolated or quarantined patients in homes and congregate care facilities
7. Instruct individuals of need for isolation as appropriate and provide them with Health Officer Orders as needed
8. As indicated, conduct daily follow-up with non-symptomatic exposed individuals to assess for symptoms
9. If quarantined persons become symptomatic, refer or arrange transport to a care site as needed
10. Instruct cases/family members of cases on appropriate infection control measures, decontamination of rooms, equipment, vehicles, clothing, etc.

11. Maintain regular contact with hospitals and provide guidance on infection control and isolating or cohorting of patients

12. Monitor hospital capacity

13. Submit resource requests and situation reports in accordance with procedures outlined in the California Department of Public Health and Medical Emergency Operations Manual

14. In coordination with the Epidemiology and Surveillance Unit (Planning), provide situation status updates to healthcare partners, including hospitals and clinics

15. Provide mental health and other health or social services personnel with protocols for personal protection if contact with cases in home or hospital isolation is necessary

16. Monitor the availability of a vaccine or antibiotic to control disease spread

17. When vaccine/antibiotic becomes available, as directed by the Health Officer, activate the Countermeasure Distribution and Strategic National Stockpile (SNS) Plans

3.7.4 LOCATIONS FOR ISOLATION

The preferred location for cases who are isolated is in the home or at a hospital when acute care is needed.

In some cases, persons in home isolation may become too ill to remain in the home. Similarly, persons in quarantine may develop symptoms indicative of active disease and require removal to a different site for isolation[4]. Monitoring by Public Health/Monitoring Team within the ICS structure determines when a higher level of care is required and when persons in quarantine who develop symptoms will be transitioned to a hospital or other facility. Monitoring Teams advise the Communicable Disease Control Unit of the need to transfer a patient. Refer to the HHSA Medical Surge Plan for information on Alternate Care Sites in Napa County.

Other facilities for isolation may be designated and may include, but are not limited to:

- Hotels, motels
- Empty office buildings or industrial buildings
- School gymnasiums or other college campus facilities
- Private clinics, surgery centers, medical offices

[4] Ibid

- Skilled nursing or long term care facilities

Necessary evacuations and transport of ill and exposed individuals are coordinated by the EOC Operations Section, Fire Branch and Emergency Medical Services with assistance of the EOC Logistics Section, Ground Transportation Unit.

3.7.5 LOCATIONS FOR QUARANTINE

Based on the situation, the Health Officer will consider three main options for quarantine of contacts: home quarantine, quarantine in designated facilities, and working quarantine.

Home quarantine -- Home quarantine is most suitable for contacts with a home environment that can meet their basic needs and in which unexposed household members can be protected from exposure.

- Persons in home quarantine must be able to monitor their own symptoms (or have them monitored by a caregiver) with limited assistance from Public Health staff.
- As is the case for isolation, a home should be evaluated for suitability before being used for quarantine. The Monitoring Team Lead will prepare a form to assess suitability for home isolation and quarantine. The criteria will depend on the disease agent.
- Household members require no specific precautions as long as the quarantined person(s) remains asymptomatic. However, because the onset of symptoms can be insidious, it may be prudent for the quarantined person(s) to minimize interactions with other household members to prevent exposure during the interval between the development and recognition of symptoms. Precautions might include 1) sleeping and eating in a separate room, 2) using a separate bathroom, 3) wearing a surgical mask when in a room with others, and 4) practicing good cough etiquette.
- Persons in quarantine may be assessed for symptoms by either active or passive monitoring.
- Persons who develop symptoms must immediately notify Public Health to arrange for medical evaluation. Public Health will monitor for developing symptoms. Persons with symptoms should be separated from others in the household.
- Household members not quarantined may go to school, work, etc., without restrictions unless the quarantined person develops symptoms. If the quarantined person develops symptoms, household members should remain at home in a room separate from the symptomatic person and await additional instructions from health authorities.
- Household members can provide valuable support to quarantined persons by helping them feel less isolated and ensuring that essential needs are met.

Quarantine in designated facilities -- Contacts who do not have an appropriate home environment for quarantine (e.g. students in a dormitory setting) may be quarantined in facilities designated for this purpose.

Facilities designated for quarantine should meet the same criteria listed for home quarantine. . In general, these sites include:

- Hotels, motels
- Empty office buildings or industrial buildings
- School gymnasiums or other college campus facilities
- Private clinics, surgery centers, medical offices
- Skilled nursing and long term care facilities

Working quarantine -- This restriction applies to healthcare workers or other essential personnel who have been exposed to patients and may need to continue working (with appropriate infection control precautions) but who are quarantined either at home or in a designated facility during off-duty hours. When off duty, contacts on working quarantine should be managed in the same way as persons in quarantine at home or in a designated facility.

3.7.6 ISOLATION AND QUARANTINE MONITORING

Persons in isolation must be monitored for progression or resolution of the infection so that services can be implemented or isolation discontinued as appropriate. Those in quarantine must be monitored for the development of symptoms requiring transition to isolation and, as necessary, an increased level of medical care.

Monitoring for compliance with isolation and quarantine restrictions is also required for these measures to be effective in preventing further transmission of disease. Implementation of more restrictive interventions is given consideration when non-compliance is detected[5].

The HHSA DOC Communicable Disease Group will activate Isolation/Quarantine Monitoring Teams to:

- Monitor individual cases and assign teams for case management of individuals requiring isolation or contacts requiring quarantine
- Provide care instructions and hygiene information to isolated cases and care givers in the home
- Provide information and instructions to exposed or ill contacts identified during contact tracing
- Refer ill cases to physician and/or hospital care

The following monitoring activities were suggested by the CDC during the SARS outbreak. They are included here to describe the types of monitoring required during isolation and quarantine response:

1. Active Monitoring – Direct contact, by phone or in person, with the HHSA DOC monitoring team member at least once a day to assess the affected person for symptoms and address any needs. More frequent monitoring (two times each day) can reduce the interval between the onset of symptoms and the institution of precautions. Active monitoring may include random checks by phone or in person of isolated or quarantined persons to assess compliance with Health Officer Orders and treatment.

2. Passive Monitoring – Relies on the affected person to contact PHD/HHSA DOC monitoring team member if symptoms develop.

3. Enhanced Activities: Quarantine of Contacts- During a large outbreak or in situations of high-risk exposures (e.g., if transmission from a particular case has been demonstrated

by emergence of secondary cases among one or more contacts), consideration should be given to managing contacts with activity restrictions in addition to active monitoring.

This combined approach is referred to as quarantine. The purpose of quarantine is to reduce transmission by 1) separating contacts of cases from others, 2) monitoring contacts for symptoms, and 3) instituting appropriate infection control precautions as soon as symptoms are detected.

3.7.7 MONITORING TEAMS

The HHSA DOC Communicable Disease Group Supervisor assembles teams to monitor patients in isolation and case contacts in quarantine. Napa County Medical Reserve Corp members or Medical Volunteers may be activated for this purpose. Because of the limited number of staff available, monitoring will be conducted primarily by telephone. The Health Officer will determine when it is necessary to deploy a monitoring team to a home, hospital or alternate care site to monitor patients.

Monitoring staff deployed to homes, hospitals or alternate care sites will be provided with appropriate Personal Protective Equipment (PPE) with fit testing, if needed, and information on necessary precautions. The health of monitoring staff will be monitored by the Communicable Disease Group Supervisor. Staff will be referred to a hospital or physician for necessary treatment if symptoms arise.

Based on the disease agent and disease spread, the Health Officer will determine criteria or standards for:

- Type of monitoring (e.g., active, passive, or enhanced; via telephone or in-person)
- Need to change containment status: quarantine to isolation, home to hospital isolation or the lifting of health order
- Adequacy of the place of isolation or quarantine
- Frequency of monitoring

Monitoring will include an assessment by phone or in person of:

- Compliance with any Health Officer Order(s)
- The patient's understanding of when to seek medical care and the procedure by which this should happen
- The patient's understanding of signs and symptoms of the disease, how it is transmitted and appropriate precautions
- The patient's understanding of how to self monitor and to whom to report
- A clinical assessment of disease specific signs and symptoms

- A psycho/social assessment to determine if essential needs are met

The Communicable Disease Group Supervisor or Monitoring Team Lead will prepare and the Health Officer will approve monitoring forms and information to provide to patients and contacts. A telephone survey form will be provided to Monitoring Team staff monitoring patients by telephone.

Patient confidentiality and privacy regulations will apply, although the Health Officer and the California Department of Public Health may waive certain restrictions if necessary to manage monitoring and data from large groups of individuals.

Information and data is reported to the Communicable Disease Group Supervisor and evaluated by the Plans Section, Epidemiology/Surveillance Team. Follow-up actions are determined by the Communicable Disease Group Supervisor and/or the Health Officer and may include:

- Transfer to a hospital or other facility for treatment
- Removal from isolation
- Transfer to isolation from quarantine
- Dispatch a Monitoring Team member to attend to specific needs

3.7.8 MONITORING DOCUMENTATION

The following documentation is recommended for isolation or quarantine monitoring[6]:

- Symptom logs for passive (self) monitoring (filled in by the patient)
- Disease specific instructions for patients and healthcare workers
- Checklist for assessment of active monitoring in the home or at the work site
- Form for recording results of clinical evaluation of active monitoring
- Guidelines and instructions for persons in working quarantine
- Instructions for supervisors of persons in working quarantine
- Checklist to evaluate homes for isolation or quarantine
- Guidelines for monitoring compliance

The Health Officer must approve discharge of patients who have been in isolation at a hospital. The Health Officer also must approve the transfer of ill patients.

3.7.9 Actions in the Case of Non-Compliance

When Monitoring Staff encounter non-compliant cases and case contacts, the following actions are taken:

- Prepare non-compliance report(s) and send to Communicable Disease Control Group Supervisor
- The Health Officer determines when to move from less restrictive to more restrictive actions to obtain compliance
- The Health Officer determines the appropriate action to take:
    - Issue Health Officer Order
    - Contact law enforcement to assist to detain the non-compliant individual
    - Provide for due process
    - Provide transport to a more restrictive isolation location
    - Other

The Health Officer and County Counsel determine when assistance of law enforcement is required. Coordination at the EOC with the Operations Section, Law Enforcement Branch is needed to:

- Communicate the Health Officer's legal authorities
- Assist when it is necessary to limit an individual's movement or when it is necessary to impose group quarantines
- Coordinate with the District Attorney and Courts to ensure due process in all non-compliance cases
- Assist the Courts in multiple due process proceedings

3.7.10 Hospital and Congregate Care Response

The DOC Communicable Disease Group Supervisor may assign staff to monitor isolation and quarantine response involving hospitals and congregate care facilities and to ensure that proper reporting is taking place. The teams:

- Monitor to ensure that hospital discharge is in compliance with Health Officer Orders
- Ensure that reports are provided to the Health Officer and Communicable Disease Group Supervisor concerning the status of cases, employees and deviations from work-site quarantine

- Provide guidance for hospital staff to use when providing information at discharge or transfer of patients to homes or other care settings
- With the Health Officer, prepare guidance on disease management and laboratory specimen submission for distribution to hospitals, Alternate Care Sites, skilled nursing facilities and field treatment sites (Napa County will follow guidance issued by state and federal health authorities)
- Distribute isolation/quarantine treatment protocols to hospitals and Alternate Care Sites

The Communicable Disease Control Group and Healthcare Facility Coordination Group will work with each facility to:

- Ensure that case reporting to the HHSA DOC, including appropriate epidemiological information, is completed in a timely manner
- Ensure that each facility regularly reports their status, including patient census, capacity, staffing and resource needs

3.7.11 HOSPITAL RESOURCE REQUESTS

Hospital capacity for treatment of severely ill patients and for isolation may be rapidly overwhelmed during a disease outbreak. Access to hospitals or sections/wings of hospitals may be limited or restricted to minimize disease spread.

Hospital surge capacity plans and the HHSA Medical Surge Plan are activated to manage the increase in patients. During a surge event existing vendor contracts and local agreements/MOUs are first utilized to provide supplies, pharmaceuticals, staff, and support services to sustain on-going and isolation-specific hospital activities. When additional assistance and resources are needed, hospitals request assistance from the HHSA DOC. The DOC will verify that the facility has exhausted existing supplies and resources and then, working with the EOC Logistics Section, attempt to locate additional resources within the Operational Area (Napa County). If resources cannot be obtained within the Op Area, the Medical Health Operational Area Coordinator (MHOAC) must then submit a resource request to the Regional Disaster Medical Health Coordinator (RDMHC) to attempt to obtain needed medical supplies, equipment, and staffing within the mutual aid region. A situation report (SitRep), completed by the HHSA Plans Section, will be submitted with the resource request or as soon as possible. Additional information, as well as the resource request and SitRep form, is available in the California Department of Public Health and Medical Emergency Operations Manual (EOM). All status reports and resource requests submitted to the RDMHC will simultaneously be submitted to the EOC.

3.7.12 Napa County Medical Surge Capacity for Isolation and Quarantine

The Napa County HHSA Medical Surge Response Plan defines surge as an overwhelming increase in the number of patients demanding health care needs within the county at a level above 110 – 125% of normal capacity.

Medical surge activation criteria includes any increase in patients due to pandemic, a communicable disease emergency, or morbidities of such an incident, such that the demand for health care services exceeds routine ability to provide care.

Using the pandemic influenza scenario, the plan assumes that cohorting of patients in order to contain the infection will have to be implemented at most, if not all, healthcare facilities. This will require significant demand on space within an existing facility.

Refer to the Napa County HHSA Medical Surge Response Plan for additional information on surge capacity during communicable disease outbreak.

3.7.13 Alternate Care Sites and Field Treatment Sites

Alternate Care Sites may be needed to manage the number of cases needing isolation and treatment. Napa County has MOUs with Napa State Hospital and Veterans Home of Yountville to provide space for an alternate care sites in the event of a large outbreak or pandemic. Each facility could provide space for up to 150 patients.

The HHSA DOC in coordination with hospitals and EMS may also establish Field Treatment Sites near hospitals or in other locations when hospital resources and bed capacity are overwhelmed.

Field Treatment Sites may be designated for triaging causalities and would only be open for up to 48 hours.

Field Treatment Sites are set up and managed per procedures described in the Multiple Casualty Incident Plan (MCIP)/Mass Casualty Plan. Field Treatment Sites may be identified that have an existing hard (secure) perimeter, such as the fairgrounds or other sites that can be secured.

Options for increasing available space, for alternative use of existing space and for increasing space through use of Alternate Care Sites and Field Treatment Sites can be found in the Annex H Medical Surge Plan.

3.7.14 SUPPORT SERVICES

Isolation and quarantine operations require the possible confinement of ill people and exposed (not ill) people. HHSA DOC Care and Shelter Branch, in coordination with Communicable Disease Monitoring Teams, is responsible for coordinating provision of the following basic support services:

- Food
- Water
- Medical monitoring and treatment (includes interpreters for appropriate languages and sign; and printed information in appropriate languages and Braille)
- Mental health/psychological support (includes interpreters for appropriate languages and sign; and printed information in appropriate languages and Braille; referrals to assisting Community Bases Organizations)

Additional support services may be requested and coordinated, if possible, including:

- Caregivers/childcare
- Essential shopping
- Assistance with work or school alternate attendance arrangements
- Pet care
- Clothes and laundry services
- Faith/clergy support
- Heating/cooling
- Refuse disposal
- Access and functional needs such as, access/mobility arrangements, obtaining oxygen supplies, wheelchair battery re-charging, dialysis, medications, Braille risk communication materials, etc.
- Legal support

3.7.15 MENTAL HEALTH SUPPORT

A Mental Health Group may be activated at the HHSA DOC to coordinate mental health and clergy support to individuals in home isolation, home quarantine, and hospital isolation, hospital quarantine, at Alternate Care Sites or Field Treatment Sites. This includes support to physicians and hospital staff in prolonged quarantine. The Mental Health Group also provides crisis debriefing and mental health support to responders, morgue staff, and medical and health care staff assigned to emergency operations. Mental Health services will be provided in appropriate languages, including sign language when indicated.

The Mental Health Group determines how to provide mental health support in isolation or quarantine where person-to-person contact is limited or restricted. This may include:

- Telephone calls from counselors or clergy
- Web-site communication including private counseling chat rooms
- Distribution of mental health supportive written materials
- Distribution of faith-based written materials
- Communication through television programs and radio talk shows
- Person-to-person contact with appropriate personal protective equipment (PPE) and precautions to eliminate potential disease spread

3.7.16 ENVIRONMENTAL HEALTH SUPPORT

Environmental Health is involved in isolation/quarantine response to provide:

- Advice on disposal of biological waste (bio-hazard waste) products from hospital, home, Alternate Care Sites, and Field Treatment Sites
- Assistance to the outbreak investigation for water-borne or food-borne illnesses
- Advice on disposal or decontamination of bulk laundry items from hospitals, Alternate Care Sites, Field Treatment Sites and homes, as required

3.7.17 TRIAGE AND TRANSPORT IN ISOLATION/QUARANTINE

In isolation/quarantine response, resources for emergency medical treatment and transport to area hospitals may be overwhelmed. The following approach may be used when the Health Officer and EMS Administrator determine it is necessary to change routine protocols:

- 911 calls are triaged using questions developed by the Health Officer and EMS Administrator. The purpose of the triage is to determine:
    - The severity of illness
    - If transport must be by ambulance with basic life support (BLS) or advanced life support (ALS)
    - If transport can be by bus, car, or other means
    - Where patients will be treated (isolation required, level of care, austere medical care)
- Based on the triaged 911 call the patient is told to:
    - Self-transport by car to a specified location (hospital, clinic, alternate care facility, field treatment site)
    - Wait for an ambulance
    - Wait for alternate transportation

3.7.18 EOC LEGAL OFFICER – COUNTY COUNSEL

Isolation and quarantine operations may require assistance of the County Counsel to:

- Provide legal advice to the Health Officer during preparation of Health Officer Orders and Health Alerts
- Develop appropriate legal documentation for individuals or groups in detention or released from detention for the purpose of isolation or quarantine
- Assist the Health Officer in preparing notifications and instructions to law enforcement for detention during isolation or quarantine operations.
- Coordinate requests from isolated or quarantined individuals or groups for legal assistance through the Public Defender's Office
- Assist in petitioning the courts for a court order for isolation and/or quarantine
- Notify the Courts and others, as indicated, when isolation and quarantine orders have been issued and assist in coordination of individual or group due process proceedings

3.7.19 EOC Operations Section – Law (Enforcement) Branch

Isolation and quarantine response, and outbreak response overall, may in special circumstances involve the following activities by law enforcement:

- Advise the Health Officer on safety and security issues around detention and social distancing measures
- Assist in providing security at hospitals, alternate care sites, and Point of Distribution (POD) sites (when prophylaxis is available)
- Detain individuals not in compliance with a Health Officer Order (misdemeanor)
- Assist at jails and correctional facilities if isolation or quarantine is required
- Provide security (escort) for physicians, EMS personnel, ambulance personnel, other care providers, support personnel, or pharmaceuticals /vaccines, as required
- Conduct area evacuations and secure evacuated areas
- Evacuate and secure public assembly venues when social distancing is required by Health Officer Order
- Close and secure roads and highways, restricting or limited access to a geographic area when required by Health Officer Order
- Assist school closures, when requested by the School District(s)
- Enforce curfews when they are required by Health Officer Order

3.7.20 Amended Laws Relating to First Responders and Isolation Orders

In 2007, Section 56.10 of the Civil Code was amended; Sections 101080 and 101085 of the Health and Safety Code were amended; and Sections 101080.2 and 120176 were added to the Health and Safety Code, relating to public health.

The Local Pandemic and Emergency Health Preparedness Act of 2006 added Section 101080.2 to the Health and Safety Code. This section states:

(a) The local health officer may issue, and first responders may execute, an order authorizing first responders to immediately isolate exposed individuals that may have been exposed to biological, chemical, toxic, or radiological agents that may spread to others. An order issued pursuant to this section shall not be in effect for a period longer than two hours and shall only be issued if the means are both necessary and the least restrictive possible to prevent human exposure.

3.7.21 MASS FATALITIES

During an isolation and quarantine response it is possible that the number of fatalities will require activation of a Mass Fatality Plan describing resources and procedures for disposition of corpses, management of vital records and security of possessions. Refer to the HHSA Mass Fatality Plan for further detail.

4. EPIDEMIOLOGY AND SURVEILLANCE RESPONSE PLAN

4.1 INTRODUCTION

The objective of this plan is to expand epidemiology and surveillance response capacity of the Public Health Division to respond to disease outbreaks (naturally-occurring or bioterrorism) and sentinel disease events in addition to routine disease control activities.

This plan is an annex to the Napa County HHSA Outbreak Response Plan, which is part of the Napa County HHSA Concept of Operations Plan addressing response to large-scale disease outbreaks, other public health threats and medical emergencies.

Early detection is crucial to an effective public health response in any disease outbreak. This plan is to be used to coordinate surveillance, detection and response to any public health emergency involving a bioterrorist event or large-scale outbreak. There is a separate Pandemic Influenza Response Plan, which the current plan may supplement in the event of a pandemic due to a novel influenza virus. Coordination of efforts involving Epidemiology, Public Health Nursing, Laboratory, Health Education and Environmental Health resources is described herein.

4.2 CONCEPT OF OPERATIONS

An outbreak is defined as more cases of a particular disease or condition than expected for a given time and place. A single unusual illness (*e.g.*, anthrax) or two or more cases of illness (*e.g.*, *E. coli* O157:H7) reporting a common exposure history in individuals from different households are treated as an outbreak by the Public Health Division. When an outbreak or other unusual occurrence is reported or otherwise detected, the following routinely occurs:

- The Health Officer, Epidemiologist, Communicable Disease (CD) Health Services Nursing Supervisor and Environmental Health Supervisor or their designees will be alerted and conduct a review of the event and the investigation team will be convened (in-person or by teleconference) if deemed necessary
- The outbreak investigation team will review the event and determine if further action is required to control the event as described in the Outbreak Response Plan sections 2.5 and 2.6.:
- The *Epidemiologic Response Plan* will be activated if the outbreak is suggestive of a bioterrorism event, a pandemic or if response appears to require resources beyond the Public Health Division's current capacity.

- The Epidemiologist or Public Health Nurse will complete the appropriate CDPH case report and outbreak investigation forms using CalREDIE and will complete an after-action report of outbreak investigation findings and recommendations as appropriate.

4.3 PLAN ACTIVATION

The *Epidemiologic Response Plan* will be activated at the discretion of the Health Officer when one or more of the following is reported or is otherwise detected in Napa County:

- **Any Category A disease:**
    - Anthrax
    - Botulism
    - Plague
    - Smallpox
    - Tularemia
    - Viral hemorrhagic fever

- **Any disease, syndrome, or outbreak with one or more characteristics suggestive of bioterrorism** (Source CDPH):
    - Large number of ill persons with similar disease or syndrome
    - Large number of unexplained disease, syndrome or death
    - Unusual illness in a population
    - Higher than expected morbidity or mortality with a common disease or syndrome
    - Failure of a common disease to respond to usual therapy
    - Multiple unusual or unexplained diseases in the same patient without other explanation
    - Disease with unusual geographic, seasonal or demographic distribution
    - Multiple atypical presentations of disease agents
    - Similar genetic type among agents from temporally or spatially distinct sources
    - Unusual, atypical, genetically engineered, or antiquated strain of agent
    - Endemic disease with unexplained increase in incidence
    - Simultaneous clusters of similar illness in non-contiguous areas
    - Atypical aerosol, food ,or water transmission
    - Deaths or illness among animals that precedes or accompanies illness or death in humans
    - Declaration of pandemic or pandemic believed to be imminent
    - Any disease, syndrome, outbreak, pandemic or any overt threat thereof that the Health Officer feels warrants epidemiologic investigation and/or that may utilize department-wide resources

4.4 EPIDEMIOLOGICAL RESPONSE

Once activated, the Epidemiologic Response includes the following (often simultaneous) activities:

1) Consultation & Confirmation
2) Notification
3) Coordination
4) Communication
5) Investigation
6) Contact Tracing
7) Surveillance
8) Recovery and Evaluation

4.4.1 CONSULTATION AND CONFIRMATION

The Health Officer or her designees (i.e. Epidemiologist, Public Health Nurse) will:

- Consult with local and state disease experts to reach consensus that bioterrorism or other unusual event is suspected:
    - CDPH DCDC Duty Officer (The Duty Officer is on-call 24 hours a day and is responsible for responding to all calls involving infectious disease emergencies)

      (510) 620-3434 (regular business hours)

      (800) 971-9631 (pager for evenings, weekends, holidays)

- Ensure Lab specimens are *en route* to the local public health laboratory/Laboratory Response Network (LRN)
    - Local Public Health Laboratory: Napa-Solano-Yolo-Marin Public Health Laboratory (2201 Courage Drive, Fairfield, CA, 94533)
    - State Public Health Laboratories: CDPH Microbial Disease Laboratory (MDL) or Viral-Rickettsial Disease Laboratory (VRDL) (850 Marina Bay Parkway, Richmond, CA)

- Guide health care providers in specimen collection, handling, storage and transport in consultation with the Napa-Solano-Yolo-Marin Public Health Laboratory

- Ensure that the diagnosis has been verified through appropriate laboratory tests and/or clinical history

- Establish the case definition that will be used in the initial outbreak investigation (including confirmed, probable and suspect cases), using available guidance from CDPH or CDC when possible

4.4.2 NOTIFICATION

Napa County Public Health Division uses a 24/7 communicable disease (CD) reporting system and CD reports account to monitor and respond to routine occurrences of communicable disease in the community, as well as to help detect unusual events. This system will be utilized during an outbreak or bioterrorism event and is described in Attachment A of this plan.

The CAHAN and WARN systems will be used to notify partner agencies and HHSA staff of emergencies requiring immediate action. The Public Health Emergency Communications Guide is a confidential document with specific procedures for using these systems during an emergency. This document is available to all Public Health Managers and other designated responders.

For slower moving/non-urgent events, partner agencies and staff are notified through Health Alerts (sent out through the Napa Medical Society distribution list), e-mail memos, and presentations.

4.4.3 COORDINATION

In the event of a multi-jurisdictional outbreak or bioterrorist event epidemiologic response may be coordinated by CDPH depending on the nature of the outbreak and where it originated. Local, state, and federal public health agencies participate in the epidemiologic investigation under a unified command structure consistent with SEMS/NIMS. The lead for the investigation will be determined through the unified command. If the event involves only Napa County, the Health Officer will initiate Department Operations Center (DOC) operations as needed. The Epidemiologic Response will be a part of the DOC Health and Medical Branch response, but the Epidemiology and Surveillance Unit will be located within the Planning section to allow for timely incorporation of data into an Incident Action Plan (IAP). If an outbreak does not rise to the level where it warrants DOC activation, an Action Planning Team may instead coordinate the response (see sections 2.5 and 2.6 of Outbreak Response Plan above).

The Outbreak Investigation Team, under the direction of the Health Officer, will:

- Establish unified command with CDPH (if applicable) and identify lead agency
- Coordinate investigation activities with FBI as needed
- Alert all County departments and programs with staff identified as part of investigation team
    - Public Health Nursing
    - Public Health Laboratory
    - Environmental Health
    - Emergency Preparedness, including Health Education
    - Clerical

- Request additional personnel through PH management, the DOC logistics section, or the Napa County Emergency Operations Center (EOC) as needed
    - Translators
    - Interviewers
    - Data entry personnel

- Obtain additional epidemiological support or expertise as needed ("surge capacity") through the following resources:
    - Napa County Medical Volunteers/Medical Reserve Corp
    - UC Berkeley CalSTAPH student volunteers (see procedure in section 2.6.2 of the Outbreak Plan)
    - CDPH
    - Napa County EOC mutual aid request

- Ensure that all members of the investigation team receive prophylaxis, if available

4.4.4 COMMUNICATIONS

Communicable Disease Reports

Napa County Health and Human Services contracts with an answering service to provide after-hours telephone answering and contact services. The answering service can be reached by dialing the main line for the Napa County Public Health Division (707-253-4270).The service answers calls as "Napa County Answering Service" and employs its protocol for contacting on-call personnel as follows: the primary Napa County CD duty officer will be contacted using pager, cell, and home numbers. If no response is received within 15 minutes, the next duty officer on the schedule will be called.

Communication with MHOAC program, Public Health staff and outside agencies

For public information during DOC/EOC activation, a Public Information Officer (PIO) will be appointed and a Joint Information System (JIS) will be established as necessary for the dissemination of information to the media and public. The HHSA Crisis Emergency Risk Communications (CERC) Plan provides guidelines for managing communications and risk communication materials. If the event involves multiple health jurisdictions, information will be coordinated by local PIOs, the CDPH Office of Public Affairs (OPA) and with the FBI as appropriate.

The PHD outbreak investigation team and other staff handling communications during an infectious disease emergency will:

- Provide regular updates (hourly or as needed) on the investigation will be relayed to the Health Officer (or designee) and the Health Division PIO/JIS

- The MHOAC program will also be provided with regular updates, including descriptive statistics generated for the outbreak (age distribution, sex distribution, race/ethnicity, incubation period, breakdown of clinical symptoms, percent laboratory confirmed, hospitalization rate, case fatality rate, geographic distribution)

- Utilize media sources via PIO/JIS (see Contract Tracing Section below) to communicate requests for locating contacts to infectious disease cases as appropriate and with prior approval of the Health Officer

- Provide treatment and prophylaxis guidelines, infection control guidelines, and disease fact sheets directly to providers and healthcare facilities through CAHAN, email, and telephone as needed

- Utilize media sources and websites via PIO/JIS to recommend that persons with symptoms promptly seek health care and to advise on where to access care

4.4.5 INVESTIGATION

The epidemiologic investigation will be coordinated by the Epidemiologist in conjunction with the investigation team. The following are included in investigation:

Case Interviews

The epidemiologist is responsible for developing or modifying, as appropriate, syndromic or disease-specific questionnaires. If available, questionnaires developed by CDPH for multi-jurisdiction or multi-state outbreak investigations will be used. Early on during the outbreak investigation, hypothesis-generating interviews may be conducted with initial cases (or their contacts) to explore agent, mode and exposure location. The questionnaire may be modified as more information becomes available.

The outbreak investigation team will identify and train interviewers for phone and field interviews as needed. Volunteers will be given short PowerPoint training developed to familiarize them with Napa County privacy and security policy and will sign a confidentiality agreement.

Field interviewers will be equipped and supported with the following:

- An experienced staff person paired with inexperienced interviewers whenever possible
- A team leader to ensure staff has rest breaks, food, drinks, etc.
- Radios and/or phones and writing materials
- Translation support in person or by phone

- Appropriate PPE/Infection control precautions, including fit testing as needed
- Specimen collection kits
- Frequently Asked Questions and other informational materials (in English and Spanish) if available
- Prophylaxis if available and indicated before going out for field work
- Computers or ipad for data entry when possible

Phone interviewers will be equipped and supported with the following:

- Translation support
- Private phone areas as available
- A team leader to ensure staff has rest breaks, food, drinks, etc.
- Frequently Asked Questions and other informational materials (in English and Spanish) if available
- Computers for data entry when possible

Data Security

Confidential case data will not be stored on unencrypted flash drives or any device that has not been cleared by Napa County IT as being appropriate for storing confidential data. Staff must have written permission from a supervisor or manager to store protected health information (PHI) on a portable device such as a flash drive. PHI will not be transmitted by e-mail unless the e-mail has been appropriately encrypted and will never be transmitted by text message. Any device containing confidential information that is lost or stolen will be immediately reported by filling out an incident report located on the County's intranet site.

Napa County Communicable Disease Control staff and the epidemiologist use the CDPH CalREDIE system for disease surveillance and reporting. Each user's account is password protected and activity within the account can be audited to show the records viewed by a user. Epidemiologic and surveillance data will be de-identified and aggregated for presentation to those outside of the outbreak investigation team. Care will be taken not to present small numbers data that has been stratified according to demographic characteristics due to the risk of unintentionally identifying a case.

Case Definition

The outbreak investigation team will establish a working case definition based on initial interviews or use case definition established by CDPH or CDC and will communicate case definition updates to the Health Officer. The case definition will include person, place and time.

Case Finding (Active Surveillance/Enhanced Surveillance)

Active or enhanced surveillance may be initiated by the outbreak investigation team in instances where more complete reporting of cases is critical for control and prevention or for gaining a better understanding of the epidemiology of a disease. The following may be considered as means to increase case finding:

- Telephone hotline (or call center) established and advertised via PIO/media
    - Publicize phone number
    - Prepare to receive a large number of incoming telephone calls

- Review charts at acute care hospital to identify possible cases that have gone undetected or unreported

- Conduct case finding through potential reporting sources by distributing case definition (via CAHAN, email to Napa Medical Society and EMS providers, e-mail or phone call to hospital Infection Control Practitioners)

- Send Public Health Nurses or licensed medical volunteers, if available, to high volume areas or clinics (e.g. Queen of the Valley Medical Center, St. Helena Hospital, Clinic Ole) to assist with case finding, interviewing and reporting

Data Analysis

The primary objective of data analysis will be providing timely, comprehensive data for public health and public safety decision-makers.

The following steps will be taken to support data entry and conduct analysis:

- Ensure appropriate software (EpiInfo, Access, Excel) installed on data entry computers

- Lead epidemiologist will design database (e.g. format of line list) and direct data entry
- Under direction of lead epidemiologist, data entry personnel will be identified and trained

- Under direction of lead epidemiologist, generate epidemic curve

- Ensure fax machine available to receive forms from field staff (or other means of quickly obtaining information – phone, radio, etc.)

- Under direction of lead epidemiologist, descriptive statistics for the outbreak will be generated (age distribution, sex distribution, race/ethnicity, incubation period, breakdown of clinical symptoms, percent laboratory confirmed, hospitalization rate, case fatality rate, geographic distribution)

- Under the direction of the lead epidemiologist, epidemiological studies (e.g. case-control study) will be designed as necessary

4.4.6 CONTACT TRACING

If the disease is transmissible from person-to-person, those responsible for contact management (e.g. communicable disease unit; monitoring team) will interview contacts identified by cases and those identified through other means to confirm their contact status. All clinical and epidemiologic information will be entered into CalREDIE or other contact tracing database.

As appropriate persons identified as case contacts will be referred for vaccination, prophylaxis, isolation and/or quarantine and will be kept under active surveillance (e.g., temperature checks) by staff assigned to monitoring teams.

4.4.7 SURVEILLANCE

During an outbreak/emergency response, enhanced surveillance may be required to monitor disease activity in the community. The surveillance data sources described in this section are in addition to passive reporting that occurs routinely and active case finding described in the Investigation section above.

EMSYSTEM® Surveillance

EMSystem is a web-based program that tracks hospital bed availability and overall healthcare surge capacity. The system's polling function also assists public health departments in monitoring and tracking influenza activity in the community.

EMSystem Polling Protocol:

1. The Public Health Division Epidemiologist contacts the EMSystem administrator and describes the type of surveillance required.
2. The Epidemiologist designs a questionnaire, determines the polling frequency and identifies hospitals to be surveyed.
3. The EMSystem administrator assists the Epidemiologist to design a poll that will set off an EMsystem alert at the facility level at a specific day/time. The alert contains instructions on how to complete poll.
4. Designated hospital staff log on to EMSystem and complete the poll to stop the alert.
5. Poll data will be viewed in real time by Epidemiologist and other Public Health staff.

AMR FirstWatch Alerts

Napa County's local ambulance provider, American Medical Response (AMR), uses the FirstWatch system to provide real time data for Napa County's Emergency Medical System. The system can be used to assist with situational awareness during an event. Alert triggers can be added to the system to track and generate e-mail alerts for ambulance calls meeting specific criteria, such as calls involving breathing problems.

FirstWatch Alert Protocol

1. The Public Health Division Epidemiologist contacts the EMS manager and the appropriate FirstWatch administrator and describes the type of surveillance required.
2. The FirstWatch administrator assists the Epidemiologist to design an alert that the epidemiologist will receive by e-mail for calls that meet certain criteria.
3. The analysis tool in the FirstWatch system is then used by the epidemiologist to track alerts over time and determine when alert triggers exceed pre-established thresholds.

School Surveillance

During some responses it will be useful to monitor and document the number of students and faculty who are absent and meet a given syndrome or case definition. Keeping track of these numbers at sentinel school sites may be helpful in assessing and monitoring the situation in the community and determining whether the Health Officer should declare an epidemic thus making schools eligible to apply for reimbursement of ADA funds during increased absenteeism. Public Health Division staff will work with the Napa County Office of Education (NCOE) to recruit and train sentinel school sites. A listing of schools can be found by following the links to each school district on the NCOE website (http://www.napacoe.org/about-napa-districts), but initial contact should be made through NCOE rather than with individual schools. A minimum of four to six sentinel sites spread throughout the county reporting to Public Health will be identified. All schools in the county will be urged to monitor absences and to notify Public Health if a sharp increase in absences is observed.
Schools are provided with the following information to monitor the illness rate and potential epidemic:

- Basic surveillance instructions
- Case or syndrome definition
- Reporting form(s) to submit to the Public Health Division
- Sample tracking worksheets

4.4.8 RECOVERY AND EVALUATION

As the event is resolved appropriate recovery procedures will include:

- Ongoing surveillance of event to allow for recognition of resurgence
- Routine surveillance of other communicable disease not related to event
- Accounting of outbreak response related costs
- Hotwash and/or survey of response staff to evaluate epidemiologic response and possible areas for improvement

- After Action Report to be completed each time Epidemiology and Surveillance Response Plan is activated