

# **Inyo County Health and Human Services - Health Division**

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## **Government Authorized Alternate Care Site (GAACS) Plan**



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# INTRODUCTION

## Purpose and Authority

The purpose of this plan is to provide a scalable framework and operational tools for the activation and management of Government Authorized Alternative Care Site(s) (GAACS) resulting from an incident that overwhelms the capacity of local hospitals to meet the overall goal of minimizing mortality and morbidity. Although there are frequent references to pandemic influenza, the concepts described and the Appendices provided can be utilized for all medical and health mass care emergencies and hazards (all-hazards approach).

As the demand for healthcare services increase and existing healthcare facility assets become exhausted, the local and/or state government will have to step in and establish GAACS(s) to decompress the load on the healthcare system and absorb it until the local system recovers from a Healthcare Surge Event.

Plan objectives include:

- providing a Concept of Operations for GAACS(s), including definitions, activation, and Command and Control
- define and describe the scope of care in a GAACS
- provide criteria and procedures for clinical triage for GAACS admission and discharge
- provide direction and procedures for clinical evaluation and treatment in the GAACS, to include infection control
- define and describe staff roles, responsibilities, and training requirements for the GAACS
- provide policies and procedures for GAACS operations, including triggers and procedures for opening and closing
- provide procedures for internal and external communications for GAACS operations
- provide site selection criteria, proposed sites and facility assessments, and procedures for the opening of a GAACS
- provide supply and inventory policy and procedures
- provide direction and procedure for security, transportation, and morgue operations and functions
- describe ethical considerations related to a GAACS

This plan is issued under the joint authority of the Inland Counties Emergency Medical Agency (ICEMA) Director and the Inyo County Public Health Officer (California Health and Safety Code, Division 2.5, Article 4, Section 1797.150) requiring the development of medical and health disaster plans for the Operational Area (OA), which is Inyo County.

Under the CDPH Pandemic Influenza Response Plan, responsibility for identifying and planning for GAACS's resides with the LHD. The determination of who will operate or be authorized to operate a GAACS will be based on the availability of public and private resources from within and outside the OA.

The California Emergency Services Act recognizes the role of the State and its political subdivisions to mitigate the effects of an emergency. Under this authority, local governments can contract with local public and private entities to establish and operate GAACS's in order to mitigate the effects of man-made or natural catastrophic disasters. CDPH acknowledges that most local governments are not currently providing direct patient care, and that successful planning for a GAACS is a community planning responsibility depending on the expertise of existing healthcare providers, local law enforcement and other government and private resources. Although LHD's are responsible for planning and coordinating a GAACS, other government entities such as the Inyo County OES and ICEMA, along with private entities, may play a significant or primary role in the setup and operation of a GAACS.

## **Background**

Medical surge capacity refers to the ability to evaluate and care for a markedly increased volume of patients – challenging or exceeding the normal capacity of a hospital and the healthcare system. Individual hospitals plan for and routinely handle surge requirements resulting from seasonal fluctuations in respiratory ailments, environmentally based conditions, and community incidents. In Inyo County, as throughout most of California, the hospitals routinely operate at or near capacity. Moderately-sized incidents are handled in accordance with the Inyo-Mono Multi-Casualty Incident Plan (MCI Plan) and the Inyo County Field Treatment Site Plan (FTS Plan), both approved by the Emergency Medical Care Committee (EMCC) and the Inland Counties Emergency Medical Agency (ICEMA). These plans will guide the triage, treatment, tracking, and transport of patients. Patients are transported to hospitals throughout the region to avoid overloading any single hospital. However, very large-scale incidents or widespread disease outbreaks may overwhelm the capacity of all hospitals and other healthcare providers in the region, and require the opening of GAACS(s). Responding to such incidents requires the close coordination and cooperation of hospitals, community clinics, governmental agencies, and other healthcare entities along the continuum of care.

A GAACS will be established only when it is anticipated that all other healthcare resources are exhausted and when the system's ability to transport patients to acute care facilities outside of the affected area is inadequate to meet the demand. The services provided at a GAACS will vary, based upon resource availability and event specific patient needs. Since a GAACS, except for a mobile field hospital, will operate in a non-healthcare facility, it cannot fully replicate a hospital setting. The objective for establishing a GAACS is to manage the patient load until the local healthcare system (e.g., hospitals, clinics, and long term care facilities) can manage the needs of patients.

For surge planning purposes in California, a government-authorized Alternate Care Site is defined as:

**A location that is not currently providing healthcare services and will be converted to enable the provision of healthcare services to support, at a minimum, inpatient and/or outpatient care required after a declared catastrophic emergency. These specific sites are not part of the expansion of an existing healthcare facility (i.e., extensions of general acute care hospitals, clinics, or long term care facilities), but rather are designated under the authority of the local government.**

A government-authorized Alternate Care Site **DOES** include mobile field hospitals, schools, shuttered hospitals, stadiums, arenas, churches, and other facilities not currently licensed to provide healthcare services that, under the authority of local government, are designated as an Alternate Care Site to help absorb the patient load after all other healthcare resources are exhausted.

A government-authorized Alternate Care Site **DOES NOT** include sites that are established as part of an expansion of existing healthcare facilities, such as tents set up for patient care in the parking lot of a hospital or sites set up for patient triage by Emergency Medical Services, such as field treatment sites.

**A government-authorized Alternate Care Site will be established only when it is anticipated that all other healthcare resources are exhausted.** The services provided at a government-authorized Alternate Care Site will vary, based on resource availability and event-specific patient needs. Since an Alternate Care Site, except for a mobile field hospital, will operate in a non-healthcare facility, it cannot fully replicate a hospital setting.

The objective for establishing a government-authorized Alternate Care Site is to manage the patient load until the local healthcare system (e.g., hospitals, clinics, and long term care facilities) can manage the demands of patients. In planning for an Alternate Care Site, it is important to consider event-specific needs for patient care to understand the types of Alternate Care Site that will need to be established. The Alternate Care Site Planning Team should consider three basic criteria:

- Patient type
- Level of care
- Facility type



### Patient Type

While it is difficult to predict the patient needs that will present at an Alternate Care Site, general assumptions can be made based on the type of catastrophic emergency. In any scenario, basic patient care requirements of an Alternate Care Site will need to accommodate the variety of types of patients that present. These requirements can be classified by three patient types:

- Inpatient/Outpatient: Patient presents with inpatient care requirements or general outpatient care requirements.
- Critical: Patient presents with complex and/or critical care requirements, such as surgery or intensive care unit needs.
- Supportive: Patient presents with palliative care requirements or an existing condition with maintenance care requirements (e.g., renal failure, diabetes).

### Level of Care

**The level of care at an Alternate Care Site will differ from that typically provided by existing healthcare facilities, because that care will be driven by resource availability.** An Alternate Care Site, at a minimum, must have the ability to provide both inpatient/outpatient healthcare services in order to meet patient demands and alleviate the existing healthcare system during a healthcare surge. By providing basic inpatient/outpatient services, the Alternate Care Site will be able to treat less ill patients who can be transferred from nearby hospitals, thereby creating capacity at the hospital for more critical patients.

An Alternate Care Site may also need to care for patients with critical and supportive needs. For example, patients may present at an Alternate Care Sites with severe dehydration. These patients will require inpatient monitoring and treatment with intravenous fluid to prevent further complications, such as seizures or permanent brain damage. The Alternate Care Site established to treat these types of patients will require specific supplies, equipment and staff, and will be dependent on resource availability during a healthcare surge.

### Facility Type

When selecting a site for an Alternate Care Site facility, planners should consider that at a minimum, the facility must have the ability to provide both inpatient/outpatient healthcare services. For government-authorized Alternate Care Sites, suggested facilities include but are not limited to: arenas, football fields, churches, gyms, community centers, parking lots, fairgrounds, medical shelters, shuttered hospitals, mobile field hospitals and campus dormitories.

## **Project Oversight**

The Public Health Division of Inyo County Health and Human Services Department produced a draft plan, which was then released to partners and stakeholders for input and guidance. This included representatives from local hospitals, clinics, Inyo County Health and Human Services Agency, EMS providers, ICEMA, and the Office of Emergency Services (OES). The Health Division, EMCC, and ICEMA provided overall direction and final approval of the document.

## Liability

1. Government Code §8659: Any physician or surgeon (whether licensed in this state or any other state), hospital, pharmacist, nurse, or dentist who renders services during any state of war emergency, a state of emergency, or a local emergency at the express or implied request of any responsible state or local official or agency shall have no liability for any injury sustained by any person by reason of such services, regardless of how or under what circumstances or by what cause such injuries are sustained; provided, however, that the immunity herein granted shall not apply in the event of a willful act or omission.
2. Civil Code, §1714.5: There shall be no liability on the ... county, city or any other political subdivision of the State of California, who owns or maintains any building or premises ... which have been designated or are used as mass care centers, first aid stations, temporary hospital annexes, or as other necessary facilities for mitigating the effects of a natural, manmade, or war-caused emergency, for any injuries arising out of the use thereof for such purposes sustained by any person while in or upon said building or premises as a result of the condition of said building or premises or as a result of any act or omission, ...except a willful act
3. The Emergency Services Act (ESA) authorizes the Governor during a “state of emergency” to suspend any regulatory statute, or statute prescribing the procedure for conduct of state business, or the orders, rules, or regulations of any state agency, where the Governor determines and declares that strict compliance would in any way prevent, hinder, or delay the mitigation of the effects of the emergency. The authority to suspend statutes is unique to the Governor. Local governing bodies and officials acting under a proclaimed local emergency do not have this power.
4. Civil liability for Non-Governmental Organizations (NGOs) during a declared emergency would depend upon whether the NGO was functioning as a disaster service organization, i.e., all of its employees are functioning as disaster service workers. If so, the employee's would be immune to liability under Civil Code section 1714.5. Also, the Governor could issue orders that require NGOs to carry out certain functions, and they would not have liability under Civil Code section 1714.6.
5. Government Code §8659, under the California Emergency Services Act states that any physician or surgeon (whether licensed in this state or any other state), hospital, pharmacist, nurse, or dentist who renders services during any state of war emergency, a state of emergency, or local emergency at the express or implied request of any responsible state or local official or agency shall have no liability for any injury sustained by any person by reason of such services, regardless of how or under what circumstances or by what cause such injuries are sustained; provided, however, that the immunity herein granted shall not apply in the event of a willful act or omission.

6. The Good Samaritan Statutes under Business & Professions Codes §2395, 2395.5, 2396 and 2398 state that no licensee, who in good faith renders emergency care at the scene of an emergency, shall be liable for any civil damages as a result of any acts or omissions by such person in rendering the emergency care. “The scene of an emergency” as used in this section shall include, but not be limited to, the emergency rooms of hospitals in the event of a medical disaster. “Medical disaster” means a duly proclaimed state of emergency or local emergency declared pursuant to California Emergency Services act.
7. Per Business & Professions Code §4062(b), under a declared emergency, the pharmacy board has the authority to waive the application of the act if it will aid in the protection of public health or the provision of patient care.
8. The Board further encourages its licensees to assist in any way they can in any emergency circumstance or disaster... The Board expects licensees to apply their judgment and training to provide medication to patients in the best interests of the patients with circumstances on the ground dictating the extent to which regulatory requirements can be met in affected areas... Finally, the board also expects to allow use of temporary facilities to facilitate drug distribution during a declared disaster or state of emergency.
9. In the event of the waiver, the State of California Board of Pharmacy would communicate this information to the Office of Emergency Services (OES) for them to distribute the information. Information would also be posted on their website at [www.pharmacy.ca.gov](http://www.pharmacy.ca.gov) and communicated via phone @ (916) 574-7900.

## **Assumptions**

1. A large-scale natural or man-made disaster or attack is likely to produce casualty numbers that overwhelm routine medical response resources.
2. The primary patient surge assumptions expected for pandemic influenza are that 25% of the population will become ill, 4.4% of those who become ill will be candidates for admission to an acute care hospital, 15% of those admitted will require an intensive care unit (ICU) level of care, and 7.5% of those admitted will require ventilator support. For Inyo County (estimated population of 18,000), this would mean:
  - 4,500 persons ill
  - 198 persons hospitalized – average length of stay would be 7-10 days
  - 30 requiring ICU care
  - 15 requiring ventilator respiratory support

These projections were derived using Flu Surge 2.0 software developed by the Centers for Disease Control and Prevention (CDC), and assumes a pandemic midway between the mild 1968 influenza pandemic and the severe 1918 influenza pandemic. While healthcare surge conditions would exist throughout the pandemic, the greatest need for surge capacity is expected to occur in 2 to 3 waves lasting 6 to 8 weeks over an 18 to 24 month period. The highest demand is projected to occur in week 5 of the first wave.

Using this model, the California Department of Public Health (CDPH) has determined that the State of California would need a total of 58,723 surge beds. Based upon this projection, Inyo County would need to provide 29 surge beds.

These surge numbers could increase or decrease based upon the severity of a pandemic. In addition, the ability of a hospital to surge will become lessened by employee illness/absenteeism and fatigue as a pandemic persists over many months. Furthermore, these numbers do not take into consideration a visitor population, or a surge of persons presenting from Southern California looking for a “safe haven”. Historically, pandemics start in large urban coastal areas approximately two weeks before arriving in the more remote, rural, inland counties of the Eastern Sierra.

3. Surge bed capacity in hospitals is limited. The two acute care hospitals in Inyo County are potentially capable of surging an additional 37 beds (Northern Inyo Hospital– 25, Southern Inyo Hospital– 12). CDPH has established a requirement for 29 surge beds for Inyo County. This includes licensed beds, licensed surge beds (ER, etc.), and non-licensed beds on the hospital campus (clinics), and assumes a waiver of staffing ratios by the Licensing and Certification (L&C) Branch of CDPH.
4. With the occurrence of “scarce resources”, existing hospital resources will need to be directed to care for the more seriously ill or injured. The goal is to do the most good for the most people – as well and as rapidly as possible. This implies a shift away from individual care to population care, with emphasis on the prompt recognition and isolation of those needing immediate care utilizing triage protocols.
5. Assistance from outside of the impacted area, if available, may be needed to care for lower acuity patients.
6. A system to rapidly expand health care delivery services is necessary to treat a large affected population. This will include systems of triage (from immediate to palliative), and different levels of care (from ICU to austere). Those who are less sick, or the terminally ill, will be sent home or to GAACS(s) if they are without sufficient self-care resources. Skilled staffing for these patients will be in very short supply if available at all.
7. This expanded health care delivery system is developed and used in conjunction with local emergency management, emergency medical services, and public health

agencies.

8. The Public Health Officer (or designee) has determined that a Healthcare Surge Event exists or is imminent.
9. Consideration has be given to outside resources such as the California Mobile Field Hospital program, California Disaster Medical Assistance Teams (Cal-MATs), and Federal Disaster Medical Assistance Teams (DMATs) while considering the need to establish GAACS(s).
10. Northern Inyo and Southern Inyo Hospitals have:
  - exhausted or will soon exhaust all available areas within the existing facility for housing inpatients, including all surge areas and beds
  - exhausted alternate methods of transferring or re-directing patients into available hospital beds, including through regional and statewide mutual-aid programs
  - activated the Hospital Incident Command Center to coordinate surge operations and resources
11. Based upon the hospital surge capacity, the unknown severity of a pandemic, visitor populations, and “refugees” from Southern California, Inyo County should plan on operating 25-50 bed GAACS’s in both the north and south areas of the county.

**See Appendix A: Acronyms**

**See Appendix B: Pandemic Influenza: Ethical Considerations**

# Concept of Operations

## Overview:

- This crosswalk provides a comparison of the various functions within the healthcare continuum, in order to better understand how a GAACS fits into the continuum of care in a disaster. The text below provides the location name, considerations for proposed definitions, and potential reasoning for activation. Please note, the criteria described under “Reasoning for Site Activation” do not all have to be met in order to activate the site; activation may occur based upon many considerations.

## Crosswalk:

Location Name	Definitional Considerations	Reasoning for Site Activation
<b>Field Treatment Site</b>	<p><b>Definition:</b> A temporary site for triage, emergency medical treatment, and management and care of casualties in a field setting usually when permanent medical facilities are limited, overwhelmed, or unavailable. Stabilized patients requiring acute inpatient care are transported to receiving facilities when available.</p> <p>FTSs are generally intended to operate for up to 48 hours or until injured patients stop arriving.</p> <p><b>Activation and Lead:</b> Activated by EMS (EF-8) for onsite field incidents, may also be activated by Operational Area EOC Medical Health Branch (EF-8).</p>	<ul style="list-style-type: none"> <li>• A casualty incident expected to exceed local emergency or hospital capacity.</li> </ul> <p>Delay in arrival of sufficient levels of medical aid</p> <p>A protracted, large-scale response with multiple casualties</p> <p>A planned event where the provision of medical treatment is anticipated, not necessarily when resources are overwhelmed.</p>
<b>Medical Shelter</b>	<p><b>Definition:</b> A temporary shelter which provides sufficient medical care to ensure that sheltered individuals maintain their usual level of health when displaced during an incident. These sites are typically located outside the impact zone and serve individuals from the impacted community with needs that require skilled medical care, but do not require hospitalization, or have an acute emergency medical condition.</p>	<ul style="list-style-type: none"> <li>• Displacement of a large population with medical needs</li> <li>• The immediate needs of the incident exceed the ability to accommodate the impacted population in “like facilities”</li> <li>• A need to reduce the strain on the overall healthcare system when resource requirements exceed resource capability</li> <li>• A higher level of medical skill, resources or infrastructure is required by individuals within a</li> </ul>

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**Activation and Lead:** Typically activated by public health (EF-8) with support from social services and select non-governmental organizations (EF-6)

General Population Shelter(i.e. those requiring continuous monitoring)

- The immediate needs of the incident do not allow for the appropriate level of activation of the emergency plans or agreements and contingencies are

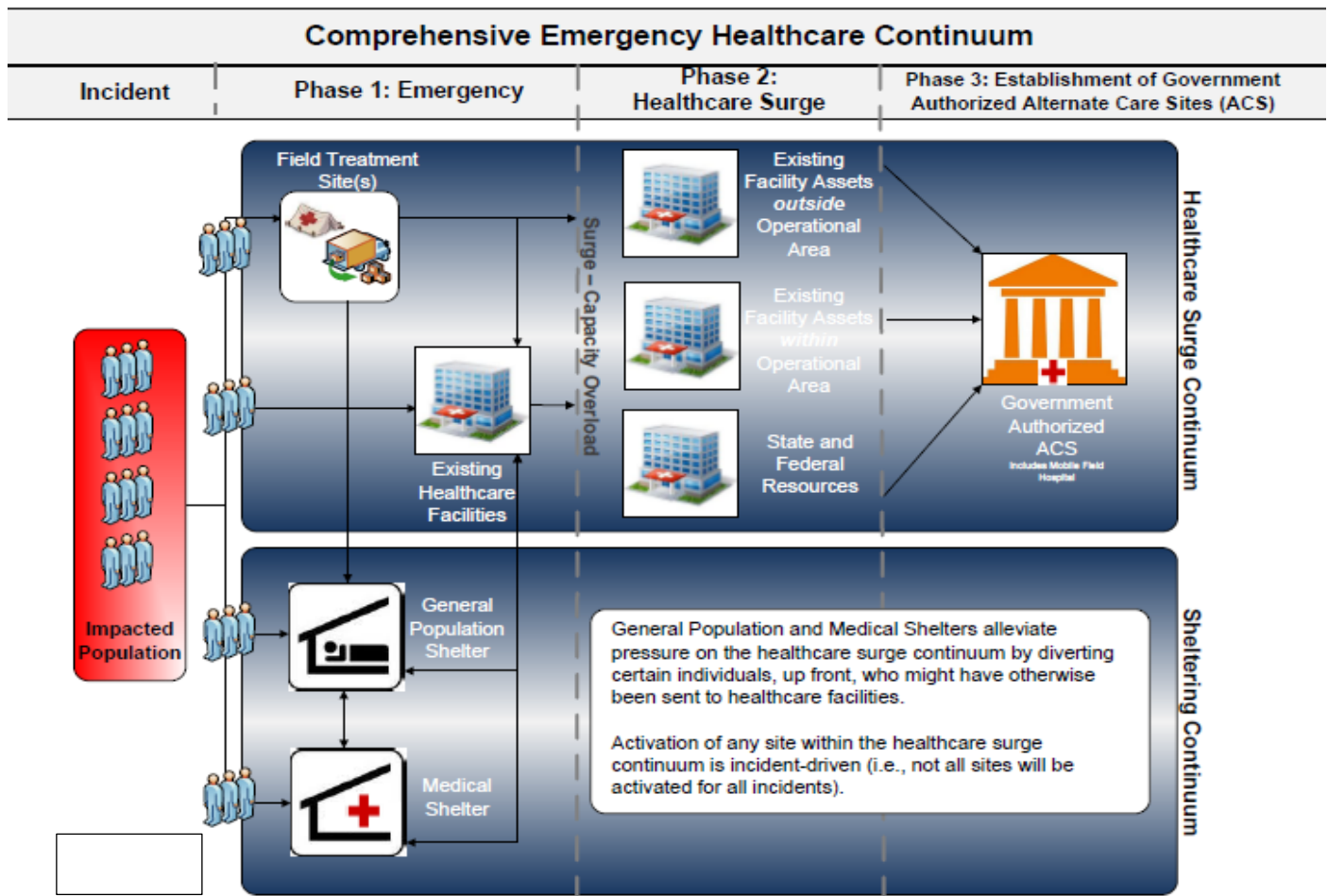
**Government  
Authorized  
Alternate Care  
Site**

**Definition:** A location that is not currently providing healthcare services and will be converted to enable the provision of healthcare service to support, at a minimum, inpatient and/or outpatient care required after a declared catastrophic emergency. These sites are not part of the expansion of an existing healthcare facility, but rather are designated under the authority of the local government. A Government Authorized Alternate Care Site may be a Mobile Field Hospital.

**Activation and Lead:** Typically activated by public health and/or State EMS Authority (EF-8) utilizing a public-private partnership and CALMAT teams.

The overall healthcare system has exhausted all available resources through surge, additional capacity still required

- Incident creates need for an increased localized acute



## Definitions:

- Surge capacity:
  - a measurable representation of a healthcare system's ability to manage a sudden or rapidly progressive influx of patients within the currently available resources at a given point in time (American College of Emergency Physicians, 2004)
  - the maximum delivery of services that a system can provide if all available, or potential, resources – e.g., beds, equipment, supplies, pharmaceuticals, personnel – are mobilized.
  - Surge capacity is directly related to resources:
    - Material – supplies and equipment including, but not necessarily limited to beds and ventilators, and a broad variety and varied inventory of other healthcare instruments, devices and pharmaceuticals



- Staff – who are cross trained, who are willing to report to work even during an event that might affect them and/or their families personally, and involves alerting and notification, training (ICS and HICS), and PPE.
- “Healthcare Surge Event”: means an event proclaimed by the Health Officer or designee, subsequent to a significant event or circumstances, that the healthcare delivery system had been impacted, resulting in an excess in demand over capacity and/or capability in hospitals, clinics, long-term care facilities, public health department, other primary and secondary care providers, resources, and/or emergency medical services. The Health Officer uses the situational assessment information provided by the healthcare system partners to determine overall local jurisdiction/Operational Area medical and health system status. (CDPH 2008) In the Eastern Sierra, there is always the possibility of significant impact on demand for local services brought on by the influx of large numbers of self-evacuees from an event elsewhere such as in Southern California, who may be injured, have been exposed and may become ill, or need decontamination. In general, there are two types of events:
  - Acute: e.g., chemical attacks, explosive events, earthquakes – will usually be defined by the following characteristics: hard hitting, immediate local impact, the majority of casualties in a very short time frame, injury rather than illness, an incident scene, trauma resulting in impairment to the healthcare system itself, and incident specific PPE recommendations for first responders and first receivers, and no time to plan once the incident/event has occurred.
  - Chronic: e.g., a biological attack, a radiological release, a pandemic, a large evacuation caused by a natural disaster such as flood or fire – will usually (but not always) display the following operational characteristics: slower moving, a gradually expanding impact, increasing effects, exponential increases in casualties, a surprised (and sometimes overwhelmed) healthcare system, time to do additional planning and adaptation to an evolving scenario, incident specific PPE recommendations for first responders and receivers, the possibility of mutual aid not being available (as in a pandemic).
- “Standard of care in a Healthcare Surge Event”:
  - The degree of skill, diligence, and reasonable exercise of judgment in furtherance of optimizing population outcome during a healthcare surge event that a reasonably prudent person or entity with comparable training, experience, or capacity would have used under similar circumstances.
  - A shift to providing care and allocating scarce equipment, supplies, and personnel in a way that saves the largest number of lives in contrast to the traditional focus on saving individuals – a shift from patient-based outcomes to

- population-based outcomes – often also called “austere care”
- Level of care driven by resource availability, requiring the use of triage in the face of “scarce” or inadequate resources relative to increased demand – does not include ICU care, self-care, or palliative care, unless the individual does not have adequate resources at home, and capability and capacity at a GAACS allows

## **Activation of the GAACS Plan**

This plan will be activated based upon the professional judgment of the Inyo County Medical/Health Operational Coordinator (MHOAC) Program (Health Officer or designee). Considerations may include some or all of the following:

- current/anticipated status of pandemic influenza (Pandemic Severity index category 4 or 5) as indicated by the World Health Organization (WHO), the CDC, or CDPH
- need to “decompress” the demand on the hospital for inpatient services by those needing routine supportive care
- gap between surge need and the capacity and availability of healthcare resources – materiel and/or personnel – in hospitals, long-term care facilities, community clinics, other primary and secondary care providers, or emergency medical services

The MHOAC Program will utilize input from others in making a situational assessment of the potential need to activate this plan. Information may include the status and availability of medical and health resources within the OA, and recommendations on the capacity, level of care, and triage criteria needed in a GAACS(s). Individuals may include some or all of the following:

- Chief of Medical Staff, or designee
- Director of Nursing, or designee
- CAO or designee
- ED Physician or ED Manager, or designee
- Clinic Supervisor or designee
- Outpatient physicians
- EMS providers

The number of GAACSs activated can be scaled to meet local surge needs. In addition, the level of care to be provided at GAACSs can be enhanced or reduced based on local needs

and resources. All of this will be in continual flux as an epidemic or event runs its course. Frequent communication between the GAACS Manager(s), the Health Department DOC, and the MHOAC in the EOC, will be important in matching resources with current or anticipated need.

In extreme cases, a GAACS may need to be closed unexpectedly. It is not appropriate to continue to operate a GAACS if the staff members are subjected to an unstable or unsecured work environment. Inherently disaster work is risky; however, it is the responsibility of the local government to assure that adequate pre-event precautions are developed.

Some possible de-activation/closure scenarios include:

- Fire in the facility, or something similar that necessitates rapid evacuation. A trigger would be a fire alarm plus the smell of smoke or sight of flame (alarm by itself may be insufficient due to false alarms). Discharge/release all patients that can be safely released, and transfer all others to another replacement facility. Evacuation to a nearby building as a temporary shelter.
- Civil unrest, gunfire, or other extreme security event. At the earliest sign, pre-stage increased security, fire equipment and personnel, and busses to evacuate staff. GAACS Manager will have briefed staff on pre-arranged signal and location for evacuation. Upon being given the signal, all staff would immediately evacuate (without patients), and only return when order has been restored, as determined by law enforcement and the GAACS Manager.
- Governmental/societal failure. This might happen if there is insufficient food, power, water, or staff to properly maintain the GAACS. Since this would most likely happen over a period of time, inform the patients, give them the option of staying or leaving, and release the staff. Some staff may also elect to stay on their own with whatever patients also stay.

## **Command and Control**

With the activation of this plan, a request will be made by the Health Officer or designee for a declaration of local emergency, and activation of the Inyo County Operational Area (OA) Emergency Operations Center (EOC). The MHOAC Program, functioning in the Inyo County EOC as the Medical/Health Branch Director in the Operations Section, shall coordinate all activities with the Inyo County EOC Manager/Director.

The National Incident Management System (NIMS), the Standardized Emergency Management System (SEMS), and the Hospital Incident Command System (HICS) will be utilized to manage the activation of this plan and the operation of GAACS(s).

Initial decisions that need to be made include but are not limited to:

- location of site(s) – see list of possible sites for which facility assessments have been completed in Appendix ??????????????????
- operational period, usually 12 hours, keeping in mind that in many cases such as pandemic influenza, the site may be operational 24/7 for 8 to 14 weeks for the first wave of pandemic influenza and then for an additional 8 to 12 weeks during a second wave.
- number of staff assigned (will depend on the patient volume and acuity of illness/injury)  
Relevant staffing will include the following functions in a NIMS/SEMS/HICS compliant org chart:
  - o management team, including a GAACS site director (most likely non-medical), who reports to the Medical/Health Branch Director in the OA EOC
  - o medical care personnel to develop and ensure clinical care treatment guidelines have been developed, and to provide care
  - o facility and security (electricity, HVAC, water, sanitation, secure access, etc.)
  - o resource needs, including personnel, supplies, and equipment

The MHOAC will:

- Determine when the healthcare system within the OA meets the criteria for a Healthcare Surge Event, through a situational assessment with above partners, to include the # of beds needed, austere care standards, triage criteria, and allocation and coordination of scarce medical and health resources
- Coordinate with the OA OES and EOC in the selection , securing, activating, and continuing operation of GAACS(s)

The local hospitals, long-term care facilities, clinics, and provider will:

- Communicate resource needs and surge status to the MHOAC
- Participate with the MHOAC in the situational assessment as requested
- Assist the MHOAC in management activities associated with GAACS operations, as requested, and as able

The OA EOC will:

- provide support and coordination to the MHOAC Program (which functions in the Medical/Health Branch of the OA EOC) in activation, operation, and demobilization of GAACS(s)

**See Appendix C: Sample Organizational Charts**

**See Appendix D: Communication and Resource Requesting Flow Charts from the California Public Health and Medical Emergency Operations Manual (EOM)**

# **Communications**

## **Overview**

The communication plan describes types of tactical communication and mechanisms for communicating within a GAACS, and between GAACS(s), DOC, EOC, healthcare facilities and providers. This does not address risk communications with the public. This is addressed in the Health Emergency and Crisis Emergency Risk Communication (CERC) Plan, which is a separate annex to the Preparedness and Response Plan.

The flow of communication both within and out of the GAACS will follow NIMS/SEMS/ICS procedures and organizational structures. It is recognized that clinical care providers within the GAACS will require the flexibility to communicate with other GAACSs and healthcare facilities and providers in order to provide clinical care.

Patient transfers, personnel requests, equipment needs, etc., must be processed in the individual GAACS, and then on to the Health Department DOC and/or the OA EOC for approval and processing, depending on the magnitude of the event and the nature of the request. The majority of on-site communication is accomplished through face-to-face discussions.

Secure and reliable communication links inside each GAACS, and from GAACS's to the ICHD DOC and/or the OA EOC, are critical to the successful implementation of any POD plan. In addition, key POD operations, including inventory management and data entry, may require computer support and secure internet access for web-based services. IC IT support staff has been briefed on probable requirements for communication and internet service in the different POD locations.

## **Communication Methods**

Standard communication will use existing functional telephone lines and the Internet. Inyo County Health and Human Services has access to a satellite telephone that may be used if land-based telephone systems are non-functional or overloaded. The satellite telephone functions independent of telephone lines and is designed to communicate with either normal telephones or other satellite telephones. The satellite phone may be utilized when other modes of communication are unavailable, non-functional, or overwhelmed. All sites will be equipped with "walkie-talkie" handheld radios and/or Ham radios for a back-up means of communications. All Health Division emergency First Responders/Essential Personnel have Verizon or Cellular One cellular phones. A G.E.T.S. card is also available for use – this card opens up a phone line for dedicated use if all land lines are full. All transport vehicles will be equipped with cell phones, "walkie-talkies", or Ham radios. Further alternate sources of communications may include volunteer HAM radio operators, runners, and radio.

The main communication methods are listed below:

- GAACS
  - Existing phone/fax lines
  - Cell phones, satellite phones, and radios (include frequencies to be used and all systems should be compatible)
- Command centers (DOC, EOC, Inyo County Sheriff's Office)
  - Existing phone/fax lines
  - Cell phones, satellite phones, and radios (include frequencies to be used and all systems should be compatible)
- Security
  - Radios (include frequencies to be used and all systems should be compatible), cell phones, satellite phones
- Transportation
  - Radios(include frequencies to be used and all systems should be compatible)
  - Cell phones

## **Communications Security**

It is unlikely that local GAACS operations will need a secure, encrypted communications system. Staff utilizing two-way radios will be instructed to be cautious in what is aired in conversation. Conversations could reveal sensitive, private, and personal information to unauthorized listeners and potentially jeopardize or interfere with local GAACS activities. All communications will be precise to maximize the availability of communication channels. Communication should take place using "cleat text" (plain English!) rather than codes wherever possible. Specific guidelines include:

- Local GAACS staff will communicate with DOC/EOC using assigned radio frequencies/channels, cellular phones, satellite phones, computers, and other communication devices available.
- Information flow, including the monitoring of real-time information among different response organizations and/or functions for supporting the overall operation, will use ICS forms and agreed upon mutual aid notification protocols/procedures will be used for transfer of information.
- Verbal reporting will be used for immediacy and done using "clear text" via radio, phone, runners, or face to face. Written reports will be preferred and used primarily to ensure directions are understood and to capture a record of information for documentation/historical purposes. Written reports will be done using standardized forms, preferably ICS forms.

## **Responsibilities**

A Communications Coordinator at each GAACS is responsible for ensuring that GAACS staff are able to communicate with the DOC, EOC, healthcare facilities, and vehicle operators.

These responsibilities include equipment maintenance and repair, and maintaining and keeping phone numbers, e-mail addresses, and radio frequency information current.

**See Appendix D: Communication and Resource Requesting Flow Charts from the California Public Health and Medical Emergency Operations Manual (EOM)**



# **Staffing and Training**

## **Activation**

The EOC has overall responsibility for coordinating GAACS staffing. Representatives from the EOC Law Enforcement Branch, Inyo County Personnel (ICP), and HHS (i.e. PH, Environmental Health (EH), Behavioral Health (BH), and Social Services (SS)) will meet at the selected facility(s) to inspect and create an action list prior to opening. American Red Cross (ARC) staff and volunteers will not function within a GAACS due to the nature of the health emergency. Health department staff will not be sufficient for staffing of GAACS(s). The broader healthcare community, governments, community volunteers, and mutual aid must provide human resources to ensure adequate staffing of all GAACSs.

## **Operations**

Staffing for ACS operations will flow from several sources to the EOC's Human Resources (HR) Branch in the Logistics Section. The HR Branch will activate County employees as needed to serve as Disaster Service Workers (DSW) at GAACS facilities. The Law Enforcement Branch in the Operations Section will coordinate security and coroner staff. Through the Care and Shelter Branch, ICHR will provide staffing for non-medical operations and overall GAACS management. The Logistics Section (HR Unit) at the Health Department DOC will coordinate with the Medical/Health Branch to provide the necessary medical and non-medical staff (e.g. DSW) to meet patient care needs; this includes EH, PH, MH, EMS and other staff as necessary. The ICHD DOC will coordinate the activation and deployment of medical and non-medical volunteers to assist at GAACS facilities. The PH Division will coordinate all spontaneous unaffiliated volunteers (SUV's), both medical and non-medical, and is responsible for managing all medical aspects of an ACS.

Staff will be retained from the following sources:

- 1) Local – through Inyo County OA EOC Logistics Section
  - Inyo County Public Health
  - Command and General Staff Positions
  - Nurses
  - Other medical and non-medical personnel
- 2) Inyo Unit of the Disaster Healthcare Volunteers (DHV) of California The activation and requests for credentialed DHV will be coordinated through the Inyo County MHOAC, or designee.
  - Physicians

- Nurses
- Pharmacist
- EMS personnel
- Communications – amateur radio operator
- Others

3) Region VI

- Medical/Health Mutual Aid Resources through the RDMHS/C Program

4) State

- California Medical Assistance Team (Cal-MAT), 40 personnel
- Hospital Administrative Support Unit (HASU) – admin personnel
- Mission Support Team (MST) – logistical support personnel

5) Federal

- Disaster Medical Assistance Team (DMAT) - A group of professional and para-professional medical personnel (supported by a cadre of logistical and administrative staff) designed to provide medical care during a disaster or other events.

## Site - Specific Staffing

**Staffing Requirements:** All GAACS positions have an applicable Job Action Sheet

Position	Agency to Fill	Ideal <sup>1</sup>	Minimum to Open ACS
<b>Manager/Incident Commander</b>	OA EOC, Logistics	1	1
<b>Safety Officer</b>	OA EOC, Logistics	1	1
<b>Operations Section Chief</b>	OA EOC, Logistics	1	1
<b>Logistics Section Chief</b>	OA EOC, Logistics	1	-
<b>Planning Section Chief</b>	OA EOC, Logistics	1	-
<b>Finance Section Chief</b>	OA EOC, Logistics	1	-
<b>Medical Operations Group Supervisor<sup>2</sup></b>	ICHHD	1	1
<b>Patient Care Unit Leader<sup>2</sup></b>	ICHHD	1	1
- Physicians or physician extenders (e.g. Physician Assistant, Nurse Practitioner)	ICHHD, DHV, other	2-4	1 on-site or on-call
- Registered Nurses	ICHHD, DHV	4-6	1
- Care extenders: LVNs, CNAs, EMTs, paramedics	DHV, fire depts., EMS providers	10	5 (1:20 ratio)
- EKG Technicians (if unavailable, can be performed by RN or medic)	DHV	2	-
- Phlebotomists (if unavailable, can be performed by RN or medic)	DHV	2	-
- Respiratory Therapists (if unavailable, can be performed by RN or medic)	DHV	2	-
<b>Mental Health Unit Leader</b>	MH	1	-
- Mental Health Workers/Social Workers, if available	MH, DHV	2	-
- Clergy/Religious Volunteers	FBO's	2	-
<b>Pharmacy Unit Leader<sup>3</sup></b>	DHV	1	1
<b>Non-Medical Operations Group Supervisor</b>	OA EOC, Logistics	1	1
<b>Patient Record Unit Leader</b>	OA EOC, Logistics	1	1
<b>Facilities Unit Leader</b>	OA EOC, Logistics	1	1
- Maintenance and Janitorial Staff	OA EOC, Logistics	8	8
<b>Food Services Unit Leader</b>	OA EOC, Logistics	1	1
- Cooking and Serving Staff	OA EOC, Logistics	12	12
<b>Security (sheriff, police, private, national guard)</b>	Sheriff	2	2

### Notes:

<sup>1</sup> As defined by CDPH recommended ratio per 100 patients for ACS providing acute care

<sup>2</sup> Minimum qualification is Licensed Registered Nurse

<sup>3</sup> Minimum qualification is Pharmacy Technician

Other notes:

- Staff ratios may be adjusted in accordance with available human resources
- Staff numbers may be adjusted for anticipated quantity of GAACS's and anticipated quantity of patients
- training approach and content may be adapted to local resources and anticipated scope of clinical care at GAACS's

## **Staff Scheduling and Support**

Operations Section Chief at the GAACS facility will create staffing schedules based on available staff, patient volume, operational period, etc., and will request personnel, as needed, through the EOC.

Typical recommendations are for 12 hour Operational Periods. Staff will be provided all meals on-site during their shifts. As resources allow, staff may have access to a nearby hotel for lodging between 12-hour shifts. Each GAACS site will provide psycho-social support through resources provided by the OA EOC and HHS. Staff members will supply their own attire, and should bring several changes of clothing with them. Any recommended PPE will be supplied by ICHD. Requests for resources needed for staff family support will be directed to the GAACS Manager or designee.

## **GAACS Staffing Ratios and Estimates**

The GAACS medical staffing will be adjusted based on patient acuity and the scope of clinical care to be provided at the GAACS. This will be determined by the Public Health DOC Manager and the Health Officer.

## **Training Specifications**

It is essential to determine the number and type of staff required to operate a GAACS prior to opening. This is the resource most likely to be lacking during a major event and one that will require collaboration with partners in the community, region, state, and nation. The recruitment of staff requires the determination of:

- The number of different types of staff required
- The various roles in which staff will function
- The level of support that staff can expect to receive while working at the GAACS

All positions in the GAACS will be given a functional role that is fully described in this plan and is linked to a Job Action Sheet (JAS), consistent with NIMS/SEMS/ICS/HICS. HICS JAS can be found at:

[http://www.emsa.ca.gov/hics/job\\_action\\_sheets.asp](http://www.emsa.ca.gov/hics/job_action_sheets.asp)

Much of the training for GAACS staff will be conducted in a “just-in-time” fashion. Training sets for GAACS staff should include the following:

### **GAACS General JIT Training for all GAACS Staff**

- ID badges: process, policy
- Physical layout, e.g., “wards”, isolation areas, palliative care areas, pediatric areas, family waiting areas
- Locations of emergency exits, bathrooms (staff, patients)
- Common policies/procedures
- GAACS telephone and communication directory
- Policy and arrangements for meals and breaks
- Check-in, check-out procedure

- Security
- Transportation to and from the GAACS for patients
- Communication within the GAACS (staff, patients, families, visitors)
- Bilingual issues
- Communication with the public and the media (PIO)
- Cell phone etiquette
- Attire for staff
- Basic principles and implementation of ICS/SEMS/NIMS/HICS, including forms
- Chain-of-command principles
- Deceased/palliative care issues
- Protocols for missing persons (staff, children, family members)
- Medical privacy issues (HIPAA)
- Military time
- Staff support (family, food, child care, lodging, transportation)

### **Pre-Event Clinical Operations Training for Clinical GAACS staff**

- Oxygen safety
- Basic reporting requirements (child abuse, elder abuse)
- Blood borne pathogen exposure policy and procedures
- PPE appropriate for the agent/event
- Location and process for utilization and disposal of patient care supplies
- Transportation of patients within the GAACS (gurneys, wheelchairs)
- Effective communication and communication equipment use
- Forms (ICS, HICS)

### **Pre-Event Clinical Skills Training**

- Basic care (non-RN clinical staff in the GAACS): communication skills, basic infection control, body mechanics, client comfort, positioning, and bed making, personal hygiene, nutrition, health status, crisis intervention/grief
- Venipuncture/phlebotomy
- Nasopharyngeal swabs
- DSW roles
- PPE – basic and advanced
- Communication in difficult situations (transfer to palliative care, death)
- Charting/shift management
- Basic system physical Assessment skills
- Wound care
- Infection control practices (isolation, secondary infections)
- Suctioning technique/equipment
- IV therapy (starting, equipment, flow rates, implementation of standing orders)
- Respiratory therapy (evaluating respiratory status, adjusting oxygen delivery)

- Legal issues/documentation
- Drug review (formulary, administration procedures, implementation of standing orders)
- Pain management
- Pediatrics (all aspects – meds, IV, hydration, nutrition, fever, respiratory status, assessment, family, development, pain assessment)

### **Non-Medical JIT Training**

Training will be implemented to expand non-medical patient care roles and services as needed.

### **Use of Family Members in Patient Care**

Family members will be encouraged to participate in patient care with appropriate training, as space allows. Family support will be requested for cleaning, feeding, and monitoring of sick family members, as feasible.

### **Mental Health Considerations**

Mental health needs of patients and families need to be addressed. Appropriate GAACS staff will coordinate with the ICMH to provide mental health support. This may be peer-based or group counseling, based on potentially-limited available resources. Critical Incident Stress Management (CISM) gatherings for GAACS staff should be planned as well.

### **ACS Management**

All administrative forms and procedures for intake, registration, triage, clinical care, tracking, charting, family unification and discharge will be utilized and implemented according to pre-established procedures.

### **Site-Specific Functions**

- Prepare facility to receive patients, including:
  - Clean facility: floors, walls, carpets, fumigation if needed
  - Develop a regular cleaning schedule during site operation
  - Check all environmental system
  - Ensure water, air, and septic are functioning
  - Create clinical and administrative staff area
  - Prepare for disposal of hazardous materials and other medical waste
  - Establish communications with the DOC and Medical/Health Branch of the OA EOC
- Security
  - Ensure the security of existing inventory and GAACS caches

- Control access into and within the GAACS
- Identify and track patients, staff, and visitors
- Determine if traffic control is warranted on GAACS campus
- Follow lockdown and evacuation procedure
- Implement security procedures for fatalities as needed

**See Appendix E: Job Action Sheets**

**See Appendix F: Staff Support and Resilience**

**See Appendix G: Workers Compensation**



# **Clinical Standards, Protocols and Operations**

## **Overview**

This section provides criteria and procedures for clinical triage for admission to a GAACS; defines and describes the scope of care in a GAACS; and provides direction and procedures for clinical evaluation and treatment in the GAACS.

## **Key Assumptions for an Influenza Pandemic**

The following assumptions underlie the proposed clinical standards, protocols and operations:

- Approximately 50 – 60% of the patient population will need intravenous hydration
- Approximately 50 – 60% of the patient population will likely require oxygen
- The average length of stay will be approximately 7 days

## **Proposed Approach**

GAACS's are sites that are not normally providing healthcare services, and are not part of the expansion of an existing healthcare facility. Therefore, they do not include tents set up for patient care in the parking lot of a hospital, or sites set up for patient triage by the pre-hospital EMS system known as Field Treatment Sites. GAACSs are designated under the authority of local government when the existing healthcare delivery system is unable to accommodate the existing or anticipated patient volume resulting from an incident or event. All GAACS are operated utilizing operational procedures, communication links, and organizational structures fully compliant with ICS/SEMS/NIMS/HICS.

The clinical services and the level of care provided at a GAACS will vary, based on:

- The nature, severity, and evolution of the event
- The particular needs of patients
- The specific location and facility
- the availability of resources, especially personnel

While it may be difficult to predict the patient needs that will present at a GAACS, general assumptions can be made based upon the type of catastrophic emergency. In any scenario, basic patient care requirements of a GAACS will need to accommodate the variety of types of patients that present. Patients can be classified in many ways, but, in general, we will consider these types:

- a. patients who do not need outpatient or inpatient care, and who may or may not have the resources to care for themselves at home (Those with resources should be sent home)

- b. uncomplicated patients without significant co-morbidities who need inpatient care such as oxygen or hydration
- c. patients with chronic co-morbidities who have maintenance care requirements that they are unable to handle themselves
- d. patients with complex or critical care requirements requiring surgery or intensive care (These should be sent to the hospital)
- e. patients with palliative care requirements who are expected to die

The level of care – and therefore the type of patient able to be cared for (usually types b, c, and e above) – will differ from that typically provided at existing healthcare facilities. The level will be driven by resource availability, specifically, not “space” or “stuff”, but “staff”. Of course, the types of supplies needed will also be driven by the types of providers available, and therefore, the level of care and types of patients being cared for.

The types of providers available to use in a GAACS will vary greatly depending on local resources and the ability to draw in other mutual aid. For the purposes of helping to establish a level of care which is able to be provided in different communities and situations at a GAACS, providers can be grouped into 4 levels:

- Non-medical
- Medical level I: a person with no medical training but with a propensity to learn and the opportunity to receive JIT training
- Medical level II: a person with prior medical training, with certification or licensure, that can provide directed care (CNA, LVN, RN, pharmacist, phlebotomist, etc.)
- Medical level III: a person with prior medical training, with certification and licensure, with assessment skills (PA, NP, M.D.)

Ideally, the GAACS will have sufficient resources to meet patient needs (including types b, c, and e above) in order to alleviate the pressure on the existing healthcare system during a medical surge. The GAACS should be able to treat less ill/injured patients who can be transferred from nearby hospitals, thereby creating capacity at the hospitals for more critical patient.

The standard of care during a healthcare surge is defined as the utilization of skills, diligence, and reasonable exercise of judgment in furtherance of optimizing population outcomes that a reasonably prudent person or entity with comparable training, experience or capacity would have used under the circumstances. Under normal conditions, providers are responsible for employing appropriate health and medical resources and responses to improve the health status and/or save the life of an individual patient. However, during a healthcare surge, the standard of care will shift from focusing on patient-based outcomes to population-based outcomes, also known as “austere care”. According to a report, *Altered Standards of Care in Mass Casualty Events*, (AHRQ, April 2005), providers should anticipate “a shift to providing

care and allocating scarce equipment, supplies, and personnel in a way that saves the largest number of lives in contrast to the traditional focus on saving individuals.”

Assuming Medical level II personnel are available, clinical care at a GAACS is designed for adolescents and adults ages 10 and up who cannot be cared for at home, but who are not sick enough to meet criteria for hospital admission, or who cannot be admitted to a hospital because no hospital beds are available. The level of care provided at a GAACS will be less comprehensive than that offered in an acute care setting, and will primarily focus on hydration, oxygenation, and basic nursing. The GAACS will also ideally offer palliative care for those expected to die, who are unable to provide sufficient supportive resources in the home setting.

It is anticipated that the majority of those admitted to a GAACS (staffed by Medical level II personnel) will be adults without co-morbid conditions who can be cared for using standard orders. Persons with asthma on metered dose inhalers, with heart failure, with diabetes on insulin, and women who are pregnant will be cared for in a GAACS with special orders. The staffing, level of care and equipment available at a GAACS will preclude patients with diagnoses or conditions requiring a higher level of care. For example, patients weighing more than 300 lbs. cannot be cared for at a GAACS because the cot weight limit is 300 lbs. A person with cirrhosis and ascites will need more careful fluid management than can be provided at a GAACS. A person who is withdrawing from alcohol or drugs will need higher staff ratios than can be provided at a GAACS.

### **Triage guidelines for admission to the GAACS**

In the early stages of an event, the Health Officer, along with representatives from the medical community, will meet in order to establish specific and acceptable criteria particular to the event for admission to the GAACS. Guidelines will address hospital admission criteria, GAACS admission criteria, and criteria for patients who should remain at home.

#### **Apply Triage Guidelines at Intake**

Patients may arrive at a GAACS in one of the following ways:

- Triaged and referred by an outpatient physician
- Discharged from a hospital or hospital emergency department
- Brought by ambulance from home or other location
- Transported by self or relative from home or other location

Although the goal is for all patients to receive medical evaluation per the specific triage guidelines developed for the event, and to be determined as eligible for care at a GAACS prior to their arrival, it is anticipated that some patients will have had no such evaluation.

Patients entering a GAACS for care are evaluated by the Intake Unit Leader in the triage area of the GAACS as follows:

- Use the triage guidelines to ensure that the patient is appropriate for the level of care available at the GAACS.
- Complete an intake assessment form to document that the patient meets criteria for admission to the GAACS. Patients who have already been assessed using these criteria at a hospital triage center will be re-assessed as their clinical status may have changed. The intake assessment form also serves as the admission history and physical exam in the patient's chart if the patient is admitted.
- After triage evaluation, the patient will either
  - 1) Be admitted to the GAACS for standard care, or
  - 2) Be discharged to home with home care instructions, or
  - 3) Be transferred to an acute care hospital for a higher level of care. Transportation may be by private vehicle or by ambulance (See Transportation).
- The Intake Unit Leader may consult the physician if unable to determine the appropriate disposition for the patient.

## Admission and intake process

Assuming that Medical level II personnel are available, standing order templates are provided for uncomplicated patients. For each admitted patient, the triage unit leader determines which standing order template is appropriate. Patients are treated utilizing the guidance of one of the following five standing orders. If patient's needs fall outside of the existing templates (e.g. patient has heart failure and diabetes), the physician tailors an existing template.

### Standardized Orders

- **General Standard Orders:** The standing orders for an adult patient without asthma, heart failure, diabetes, pregnancy or another co-morbid condition are to ensure adequate oxygenation, hydration, and nutrition. The treatment team will assess each patient at least once per 12 hour shift, taking vital signs, doing a lung exam, assessing hydration and nutritional status, taking a brief history, and making an overall assessment as to whether the patient has improved, remained stable, or worsened since the last assessment. Assessment of hydration status includes assessment of blood pressure, heart rate, urine output, mucous membranes and subjective symptoms.
- **Standing Orders for Asthma:** Patients with asthma on metered dose inhalers (MDI) will be treated under the "Standing Orders for Asthma" and admitted to the acute section of the GAACS. These orders are identical to the standard Standing Orders except that they include orders for evaluation and treatment of mild and moderate asthma exacerbation. The treatment team will assess the patient's respiratory status and work of breathing to determine if they are having a mild or moderate asthma exacerbation. Patients with asthma on MDIs and oral steroids may need to be assessed more often than every 12 hours.

- **Standing Orders for Heart Failure:** Patients with Heart Failure will be treated under “Standing Orders for Heart Failure” protocol, and admitted to the acute section of the GAACS. These orders are identical to the standard Standing Orders except that they require more frequent assessment if the patient is dehydrated and receiving IV fluids, the hydration orders are somewhat different, and Lasix has been added to the medication list. Because the patient may need to urinate more frequently if receiving Lasix, every effort should be made to cohort these patients close to a bathroom if ambulatory, or provide them with bedpans and urinals and provide more frequent nursing checks. These patients will need more frequent assessments of both hydration and respiratory status than the standard patient – every 2 hours while receiving IV fluids.
- **Standing Orders for Diabetes:** Patients with Diabetes requiring insulin will be treated under “Standing Orders for Diabetes” protocol, and admitted to the acute section of the GAACS. These orders are identical to the standard Standing Orders except that they require blood glucose monitoring and insulin injections. Because type 1 diabetics with an infection are at risk of developing ketoacidosis, closer monitoring of hydration status and aggressive hydration may also be necessary. Whenever possible, diabetics should be cohorted within the acute section to make it easier to provide care.
- **Standing Orders for Pregnancy:** Women who are pregnant, regardless of week of pregnancy, will be treated under the “Standing Orders for Pregnancy” protocol, and admitted to the acute care section of the GAACS. These orders are similar to the standard Standing Orders, except that the parameters for calling the MD are different, and some of the standing medications have been changed. Pregnant patients who develop hyper or hypo tension will need to be transferred to an acute care hospital.
- **Standing Orders for Palliative Care:** Patients may be placed in palliative care after a period of treatment for their medical condition. They are cared for in a special section of the GAACS, ideally with more privacy and room for any family members in attendance. The goal of care is to ensure the patient’s comfort.

Once the patient is evaluated and orders are assigned, the patient is admitted to a GAACS bed.

## Admission Protocols

The Triage Unit Leader (RN, NP) completes the Admitting Orders and marks the acuity level (acute, subacute, or palliative) and the need for oxygen (yes/no). The patient completes and signs the Consent for Admission and Treatment Form. Patients are admitted to one of the areas in the GAACS, based on the needs of the patient:

- Acute areas for more severely ill patients or patients with more complicated co-morbid conditions.
- Subacute areas for less severely ill patients or patients who need treatment consistent with standing orders.

Areas may be further designated by certain specialties as the need and space dictates:

- Adult: for adult patients
- Pediatric/family: for pediatric patients, or families with children and adults being admitted
- Palliative: for patients who are most likely beyond the limits of GAACS medical care, and there is no room at the acute care hospital, and they do not have sufficient supportive resources at home
- Isolation: for patients who need to be isolated from the rest of the GAACS population (e.g., diarrhea outbreak, influenza, skin infections, etc.)

Note that not all types of areas (wards) may exist at any point in time. Ward typing is determined by the Treatment Unit Leader based on need at the time. A clerical staff person in the Triage Unit assembles a chart. Each chart is flagged with the Ward assignment. The patient is given an admission wrist-band with name and patient number.

Patients who bring personal medications (recorded on the Admitting Orders) with them to the GAACS take their medications with them to their assigned bed. They will be given a Medication Tracking Sheet-Family to track these medications and to enhance communication with the Treatment Team.

### **Bed and Patient Tracking**

The availability and assignment of GAACS beds, especially if there is more than one GAACS open at any given time, must be controlled centrally. In the case where the ICHD runs a DOC, bed tracking can be controlled at the DOC through a computer based system. Individual patient tracking occurs at the GAACS site, but the patient data are entered into a computer based system and sent to the DOC. If computers are not available, the same information will be communicated through other redundant, interoperable, and available communication tools.

Once the Triage Unit recommends a bed-type, the patient is assigned a bed. Bed tracking is accomplished through the use of a spreadsheet or paper based chart. This system will assist in the identification of actual numbers of patients in each GAACS, number and type of available beds, throughput, etc. Hard copy versions of the bed availability forms will also be maintained should internet access be compromised. This level of tracking does not include medical records tracking or coordination, only the population and disposition of those registered in GAACSs.

The GAACS Manager and the ICHD DOC will monitor bed availability in the GAACS. Patient demographic data will be collected from the time the patient is assigned to a GAACS through discharge. This information is then transferred to the DOC where patient flow and bed availability is tracked across all GAACSs. Daily scheduled queries are conducted to facilitate patient transfers, discharges, and admissions. Based on this information, patients are assigned to GAACSs from the ICHD DOC, and then the GAACS is advised of patients that will be routed to their facility. The system may also be

used to coordinate patient transfers and non-critical patient logistics between the GAACS and DOC.

Once admitted to a ward/area, the patient is logged into a Patient Disposition Log that is maintained in each area. The log includes the name and ID number of the patient, the date admitted into that area, and the bed number within the area. Any further movement of the patient within the GAACS will be tracked by the GAACS Managers. If the patient is moved to another area, or another bed in the same area, the Patient Disposition Log should state what area s/he was transferred to.

### **Medical record and charting documentation**

Due to high patient volume and high patient-staff ratios, chart documentation is kept to a minimum. The patient chart is transferred with the patient to his/her assigned bed. The chart includes the following documentation:

- |  |   |
|--|---|
| ▪ Intake Assessment                      | ▪ Daily Patient Assessment Flow Sheet   |
| ▪ Patient Registration Form              | ▪ Tracking Medication Brought From Home |
| ▪ Admitting Orders                       | ▪ Patient Disposition Log               |
| ▪ Insulin Blood Glucose Monitoring Sheet | ▪ Medication Administration Record      |
| ▪ Medication Order Form (Prescription)   | ▪ Change Order                          |
| ▪ Standing Orders                        | ▪ Discharge Form                        |
| ▪ Consent to Treat                       |   |

### **Daily evaluation and treatment procedures**

A Treatment Team led by the highest Medical level person available is responsible for ongoing patient assessment and treatment. The Treatment Team assesses the patient on admission, and at least once per 12 hour shift and records findings on the Daily Patient Assessment Flow sheet.

The Treatment Team follows one of the Standing Order templates (routine standing orders, or orders tailored for heart failure, asthma, diabetes or pregnancy) as determined upon Admission. Any changes to the orders on admission or subsequently (diet, hydration, oxygenation or medications) will be recorded on the Change Orders form. The supervising Medical Level 3 practitioner authorizing the order must date and sign the order.

All medications from the standing order template (whether routine or from one of the special categories) and any changes or additions from the Change Orders must also be recorded on the Medication Flow Sheet. The only exception to this is that insulin is recorded along with blood sugars on the Insulin and Blood Glucose Monitoring sheet. The Treatment Team administers standing order and over the counter medications from the supplies at the GAACS. If a medication is required that is not in the supply area, the Treatment Team completes a Pharmacy Order Form and sends it with a runner to an

identified source. All medications that the patient is on will be recorded on the Medication Administration Record and placed in the patient's chart.

The Treatment Team will conduct patient evaluations at least once per 12 hour shift, and more frequently if patient's clinical status is changing. The twice daily assessment includes vital signs, hydration status, nutritional assessment, respiratory and mental status. The Treatment Team marks overall assessment as either improved, stable or worsened, and indicates whether patient should stay, be discharged to home, or be transferred to the hospital. Any changes needed in patient's care will be marked on the Change Orders.

### **Transfer Dispositions**

The Treatment Team determines when a patient's clinical status is sufficiently changed such that they need to be discharged or transferred to a different level of care.

If a patient's assessment is marked "improved" and disposition is marked "d/c home" on the Daily Patient Assessment Flow Sheet, patient will be assessed more frequently (every 4-6 hours) to ensure continuous improvement prior to discharge home. If a patient is flagged as "transfer to hospital", then GAACS supervising physician must be consulted, transportation arranged, and evaluations performed more frequently (every 4-6 hours). If a patient's condition is worsening and the physician determines that the patient is not benefiting from therapies available at the GAACS, AND determines that the patient is not likely to benefit from more aggressive care offered at an acute care hospital, then the patient may be offered palliative care at the GAACS.

### **Family Care Giving Guidelines**

Family members in attendance may assist the Treatment Team in the care of their family member according to GAACS guidelines.

- Any family members or friends to arrive at a GAACS to help care for a patient will be given a handout on Visitor Guidelines and GAACS Etiquette, which includes a description of what visitors can and cannot assist with.
- DOs: Family members may assist with bathing, toileting, linen changes, feeding, and oral hydration. If a patient has brought medications from home, they may assist patient in taking them, and may record the medication and doses on a Medication Administration Record. If medications are dispensed by the GAACS staff, family member may assist patient in swallowing medications, but a member of the Treatment team must record medications taken in the Medication Flow Sheet. Family caregivers will be provided with gloves and masks as supplies permit.
- DON'Ts: Family members may not monitor or change settings on IVs or oxygen, take vital signs, or write in the medical record. No smoking or alcohol or other drugs are permitted inside the GAACS.



## **Formulary and Medication Administration.**

A formulary should be pre-determined and pre-stocked, consistent with the anticipated medication needs for the medical surge.

- Each GAACS will have a pharmacy onsite which will be in a locked room. Up to 2 weeks of formulary will be kept at the GAACS. Within the pharmacy, staff will track volume of medications and determine when to re-order from offsite supplies. They will NOT track medications by patient. Narcotics and medications that require refrigeration will be ordered on a STAT basis, one dose at a time, and filled immediately. The exception to this procedure is palliative care which will require easier access to controlled substances and other non-Standard Order (S.O.) drugs. These will be stored at appropriate quantities in the GAACSs locked cabinet.
- One to two days of over the counter meds and S.O. medications will be placed in a central location in each GAACS. These medications will be stored in a locked location. The staff will monitor and restock these medications as needed.
- Controlled substances, injectables and non-S.O. medications will be kept in the GAACS locked pharmacy location and will require an order (See Pharmacy Order Form). When the order is filled, the medication for that patient will be stored in the locked area, in a bin marked for that bed/patient.
- Pharmacy orders can either be stat (runner will wait for pharmacy to fill) or drop off to fill (runner will return at a later date and check the ward's med pick-up box). If non-stat request, the Pharmacy Order Form can be placed into a Pharmacy In-Box.

## **Discharge criteria and discharge procedures**

Patients may be discharged home, to the hospital, to palliative care, or to the morgue area.

### **Patients are discharged to home when they meet the following criteria:**

- Off of oxygen or back to pre-GAACS oxygen use for 4 – 6 hours, and
- Off of intravenous fluids and able to take fluids by mouth for 4 – 6 hours, and
- Able to care for self or caregiver available at home

Upon determination of discharge to home, staff completes the Patient Discharge Form and transfers the patient to the discharge area. The patient is given home care guidelines and emergency resource information. Patients who are sent home (or otherwise transferred) with medications (such as those patients in the middle of a course of antibiotics who may not be able to otherwise access meds) are given "Drug Information Sheets" and a pre-printed label is attached to an envelope with the meds. The patient is identified as "discharged to home" in the patient tracking system.

### **Patients are transferred to a hospital when the following criteria are met:**

- Hospital bed is available, and

- Patient in worsening respiratory distress and/or respiratory failure is developing (O2 saturation <92%, RR > 30), or
- Acute life-threatening medical event (e.g. myocardial infarction) that only acute hospital care can address

The most senior practitioner on duty must evaluate patients eligible for transfer to hospital and prioritize which patients will be transferred first. Patient remains in the Treatment area with chart until the ambulance transport arrives and moves the patient for transport. Transportation unit arranges ambulance transport to hospital. The patient is discharged to the hospital and is identified as “discharged to hospital” in the patient tracking system.

**Patients are transferred to the palliative care section of the GAACS when they meet the following criteria:**

- Patient is not likely to survive the illness/injury, and
- Patient is in respiratory distress or pain

The triage criteria that determine which patients will receive potentially life-saving interventions in an acute care hospital will change as the event progresses. The physician on duty will evaluate patient’s condition and apply any relevant Health Officer GAACS treatment policies to decide which patients will be transferred for palliative care. The caregiver will assist with transfer of decedent to the morgue after the senior healthcare practitioner signs off on chart.

## **Visitor Guidelines**

The GAACS is a small facility with limited space for visitors. Nevertheless, family members and significant others can provide comfort and assistance for patients in the GAACS. Guidelines will include:

- Visitors are at least 13 years of age
- Visitors are currently healthy and not showing any symptoms of infection
- Visitors check in and wear required identification
- No more than 1 visitor per patient at any time (exceptions may be made for palliative care patients)
- Visitors refrain from disrupting treatment unit staff
- Visiting hours 8am to 8pm
- Visitors wear required personal protective equipment
- Visitors assist the patient as appropriate

Exceptions can be made at the discretion of the GAACS Manager.

## **Housekeeping and Environmental Services**

All patients are provided with meals appropriate for their condition. Those patients able to eat meals are served meals at scheduled times. Sheets are also paper and

disposable. The Environmental Services Unit Leader is responsible for ensuring that all trash is disposed consistent with infection control procedures.

**See Appendix H: Pandemic Influenza Triage Flow Chart**

**See Appendix I: Triage**

**See Appendix J: Intake Assessment**

**See Appendix K: Patient Registration Form**

**See Appendix L: Consent for Admission and Treatment**

**See Appendix M: Admitting Orders**

**See Appendix N: General Standing Orders**

**See Appendix O: Standing Orders for Asthma**

**See Appendix P: Standing Orders for Heart Failure**

**See Appendix Q: Standing Orders for Diabetes**

**See Appendix R: Standing Orders for Pregnancy**

**See Appendix S: Standing Orders for Palliative Care**

**See Appendix T: Tracking Medications from Home**

**See Appendix U: Patient Disposition Log**

**See Appendix V: Daily Patient Assessment Flow Sheet**

**See Appendix W: Change Orders**

**See Appendix X: Insulin and Blood Glucose Monitoring Sheet**

**See Appendix Y: Medication Order Form (Prescription)**

**See Appendix Z: Medication Administration Record**

**See Appendix AA: Patient Discharge Form**

# Infection Prevention and Control within a GAACS

## Overview

Infection control includes measures such as personal protective equipment (PPE) for staff and visitors; environmental cleaning to prevent contamination and the spread of disease; and proper disposal of biohazardous waste.

## Key Assumptions

The following assumptions underlie the development of infection control guidelines within a GAACS:

- Supplies of personal protective equipment (PPE) may be limited during a pandemic.
- Both standard and droplet precautions should be followed by healthcare workers who are caring for influenza patients.

## Proposed Approach

In general, the personal protective equipment recommendations for healthcare workers staffing a GAACS are the same as for those working in an acute care hospital. The primary differences between pandemic influenza infection guidelines for acute care and for a GAACS are twofold: (1) There is no isolation room in a GAACS, so this cannot be used as an infection control tool; and (2) no aerosol-producing procedures are anticipated to occur in a GAACS, thus there will not be a need for PAPRs (Powdered, Air-Purifying Respirator). Because supplies of personal protective equipment (PPE) may be limited during a pandemic, guidelines are included for PPE under ideal conditions and when supplies are limited.

## Infection Control Guidelines for a GAACS

### Personal protective equipment (PPE) for GAACS staff

The Health Officer will work in collaboration with the medical and healthcare community in identifying necessary PPE in the context of acceptable practices and available resources. A MHOAC Resource Inventory has already pre-identified local availability of these resources. The use of masks (N95 or surgical), gowns, gloves, and eye-covering will be considered depending on the suspicion or identification of a contagious agent and the specifics of the event.

- **Masks.** When indicated, N95 respirators should be worn by all health care workers when performing patient care. An N95 mask may not be worn by more than one individual.
  - **N95 plentiful –**

- Wear an N95 mask when performing direct patient care or within 6 feet of an influenza patient.
  - Wear one respirator for rounds in a single area.
  - Change respirator more frequently if it becomes moist.
  - Do not leave respirator dangling around the neck (acts as a fomite).
  - Upon touching or discarding a used respirator, perform hand hygiene.
- **N95 in short supply –**
- Protect the respirator from external surface contamination when there is a high risk of exposure to an agent (i.e. by placing a surgical mask or cleanable faceshield over the respirator so as to prevent surface contamination but not compromise the device's fit).
  - Use and store the respirator in such a way that the physical integrity and efficacy of the respirator will not be altered.
  - Practice appropriate hand-hygiene before and after removal of both the respirator and, if necessary and possible, appropriately disinfect the object used to shield it.

**Gowns.** Wear a standard isolation gown for patient care activities. Because patients are cohorted into such close areas in a GAACS, the gown does not need to be changed between patients, unless it becomes wet, and/or damaged, thus losing protective qualities.

**Gloves and hand care.** Wear gloves if hand contact with respiratory secretions or potentially contaminated surfaces is anticipated. Change gloves after each patient encounter and perform hand hygiene. Decontaminate hands before and after touching the patient and after touching the patient's environment or the patient's respiratory secretions, whether or not gloves are worn. When hands are visibly soiled or contaminated with respiratory secretions, wash hands with soap (either plain or antimicrobial) and water. If hands are not visibly soiled, use an alcohol-based hand rub. If gloves are in short supply, priorities for glove use will be established. Reserve gloves for where there is likelihood of extensive patient or environmental contact with blood or body fluids, including during suctioning. Latex-free gloves should be made available: nitrile, vinyl, or other synthetic materials are appropriate.

**Eye covering.** Goggles, faceshields or other eye covering is not necessary for routine contact with patients. However, if sprays or splatters of infectious material (for example, patient is vigorously coughing, vomiting, or bleeding) are likely, goggles or face shield should be worn as for standard precautions.

## **Personal protective equipment (PPE) for GAACS visitors**

Consider the use of surgical masks for visitors who are assisting with caregiving. Gowns may not be necessary for visitors unless the visitor is a family member or friend who is assisting with the clean up of body fluids. Gloves may not be necessary unless visitors are likely to be in contact with respiratory secretions, but hand hygiene guidelines are important. Eye coverings are not necessary for visitors.

## **Environmental cleaning procedures within the GAACS**

Cleaning materials, areas to be cleaned, and routine and spill clean-up procedures will be identified.

Most, if not all, housekeeping surfaces need to be cleaned only with soap and water or a detergent/disinfectant, depending on the nature of the surface and the type and degree of contamination. The actual physical removal of microorganisms and soil by wiping or scrubbing is probably as important, if not more so, than any microbial effect of the cleaning agent used. Housekeeping surfaces can be divided into two groups – those with minimal hand contact and those with frequent hand contact (“high touch surfaces”).

- “Minimal hand contact surfaces” (e.g. floors and ceilings): These surfaces can be cleaned with standard cleaning supplies (whatever facility has on hand and routinely uses) or standard water and detergent, or water and soap. They do not require decontamination.
- “High touch surfaces” (e.g. doorknobs, bedrails, light switches, wall areas around the toilet, edges of privacy curtains) should be cleaned and/or disinfected more frequently than surfaces with minimal hand contact. Sodium hypochlorite solutions are inexpensive and effective broad-spectrum germicidal solutions. The only downside is that they may be corrosive to certain surfaces with repeat use. Unless facility has an EPA-registered chemical germicide that can be used, dilute sodium hypochlorite will be used. If surface is non-porous, use a 1:100 dilution of bleach in water for decontaminating surfaces (worker should wear gloves and goggles). All visible organic matter must be removed first.

For clean-up of spills of blood or body fluids, first clean up all visible organic matter. When no trace of blood or body fluids are visible, then use an EPA-registered germicide or 1:100 dilution of bleach in water to decontaminate surface where spill occurred.

## **Procedures for disposal of biohazardous waste**

Biohazardous waste includes any material that is contaminated with blood or body fluids. Sharps (needles, IVs) should be disposed of immediately in sharps containers. Other biohazardous waste (gloves, gowns, bed linens with blood, stool or vomitus) should be placed in a red biohazardous waste bag.

An excellent resource called “Infection Prevention for Alternate Care Sites” produced for the Advisory Committee on Immunization Practices in 2009 is available at:

[http://www.apic.org/downloads/ACS\\_11-10-09.pdf](http://www.apic.org/downloads/ACS_11-10-09.pdf) (downloaded 6/13/11)

**See Appendix BB: Recommendations for Control of Norovirus in GAACSs**

# Fatalities/Morgue

## Key Assumptions

The following assumptions underlie the recommendations for dealing with fatalities within a GAACS:

- Mortuary services within the county may become unable to process all of the fatalities during an event, requiring temporary morgue sites.
- The Medical Examiner/Coroner's Office will determine the layout of a temporary Morgue with consideration for the physical condition of the remains, the number of remains, and the number of personnel needed to perform such morgue functions such as administration, logistics, refrigeration, and operations.
- Immediate transport of remains from GAACSs to the usual place where mortuary services are carried out may not be possible.
- A portion of the patients admitted to a GAACS will not survive (In an influenza pandemic, up to 10% of patients in a GAACS may not survive.)
- The GAACS facility will have a separate room that meets the requirements for a temporary morgue.

## Approach

If the event is of an overwhelming magnitude, a separate Temporary Morgue and Examination Center may have to be established for processing of remains for identification purposes prior to transportation to mortuary services as appropriate. A Temporary Morgue may be established at the GAACS when the Medical Examiner/Coroner's Office is unable to process the volume of human remains during a pandemic. The Medical Examiner/Coroner's Office will determine where to establish a Temporary Morgue and/or Examination Center depending upon the size and nature of the incident.

Working with the Medical Examiner/Coroner, the GAACS Site Manager will identify which morgue functions will be required given the number of fatalities in the GAACS. The required room would be based on the type of functions occurring in the Temporary Morgue, which could include some or all of the following operational areas:

- Receiving
- Photography
- Fingerprinting
- Pathology
- Storage
- Transportation

Working with the Medical Examiner/Coroner, the GAACS Manager will identify and secure the necessary equipment and supplies consistent with the recommended morgue functions.



Establishment of a Temporary Morgue requires assessment of the need to request activation of the Disaster Mortuary Operational Response Team (DMORT). The DMORT website [www.DMORT.org](http://www.DMORT.org) contains suggestions for equipment and supplies. At a minimum, the Temporary Morgue requires body bags, toe tags, identification sheets, cameras, and bags to store personal property. If autopsies are conducted in the Temporary Morgue, additional tools would be required and DMORT would be involved.

Staffing of the Temporary Morgue staff will depend on the operational functions that are to be performed. It may include office personnel, investigators, autopsy technicians, and pathologists. In addition security personnel would be necessary to secure the perimeter and control and document entrance and exits to the morgue.

Transport of bodies out of the GAACS Temporary Morgue is a function of the local Medical Examiner/Coroner and not part of the GAACS responsibilities. However, it is important that GAACS staff be familiar with the procedures for body removal. This would include Medical Examiner/Coroner chain of custody policies, and modes of transportation as arranged by the Medical Examiner/Coroner.

**See Appendix CC: Managing Increased Numbers of Deaths in a Pandemic Influenza**  
**See Appendix DD: Notification and Activation of the Mass Fatality Plan**

# Facilities

## Assumptions

The following assumptions inform the recommendations for GAACS facilities:

- GAACSs will have a close relationship with hospitals, and thus to the extent possible should be in close proximity to a hospital.
- The size of the local area, both in terms of potentially affected population and geographic area, will dictate the number and geographical distribution of the GAACSs.
- Early communication and partnership with facility owners is necessary for successful identification and operation of potential facilities.
- Although GAACSs can be designed to accommodate varying levels of surge capacity which will be dependent upon the needs within the jurisdiction, we will make the assumption that each GAACS will have a capacity of 50 beds.
- The recommendation calls for the use and transformation of existing buildings.
- There may be conflicting demands for the use of existing facilities from other organizations such as Red Cross and Social Services for shelters. The OA EOC will make a final determination of usage.

A “Facility Profile for Use as Field Treatment Site, Alternate Care Site, Point of Dispensing and/or shelter” tool has been developed and applied to each potential facility. This takes into account the physical and functional requirement for a GAACS, the layout of a 50 bed patient area, and other potential required facility areas (restrooms and showers, access for emergency vehicles, proximity to hospital, security, etc.) it also includes an interior layout, as well as a map of the facility.

**See Appendix EE: Sample 50 Bed GAACS Layout**

**See Appendix FF: Sample MOU for Facility Use**

**See Appendix GG: Facility Profile Template**

# Equipment and Supplies

## Key Assumptions

The design of the GAACS equipment and supplies list is based on several assumptions:

- Patient census: Certain assumptions were made as to available hospital beds, number of anticipated GAACS patients, number of GAACS facilities available (each with a maximum capacity of 50 beds), etc.
- Overall level of care: a GAACS is not designed as an “overflow hospital”. It is designed to provide intermediate-level care in the event that hospitals are overwhelmed during a pandemic. There will be no privacy or amenities, and very minimal individualized medical care. This is sometimes called “austere care”. The result is a “cookie-cutter” environment and associated medical supplies.
- Staffing: it is assumed that most currently employed medical professionals will be working at their current place of employment during a large scale event, so that the GAACS staff would mostly consist of DHV’s such as retired medical professionals, medical staff who do not normally work in a patient care environment, and non-medical staff. Many will fit into the category of SUV’s (spontaneous unaffiliated volunteers). To compensate for this, medical protocols are simplistic; this, in turn, makes the equipment and supplies simplistic (e.g., there is no cardiac arrest/crash cart in a GAACS). It is assumed that 911 will be accessed for extenuating medical conditions, just as it would from a private physician’s office.
- Regulatory and best-practices: it is assumed that a local health emergency will be declared, resulting in the waiving of regulations and best-practices. The equipment and supplies reflect this in ways such as bulk distribution of drugs, drink coolers with oral rehydration fluids, fewer alternatives in the drug formulary, decreased charting, less medical privacy, etc.
- All-Hazards approach: an all-hazards approach is taken where possible, to make items useful for all types of events potentially creating a medical/health surge.

## Approach

A suggested GAACS inventory was created given these assumptions. Items potentially available in the OA are included in the MHOAC Resource Directory, and may be located in trailers, barrels, existing healthcare facilities, or the Health Department. Included is PPE for all staff, based on PPE guidance recommendations specific to the event, exposure level, and availability. Transportation to any GAACS will need to be arranged through the OA EOC, and adequate storage facilities at a GAACS arranged by the Site Manager.

In addition to supplies which are available within the OA, medical and/or health resources may be available through mutual aid, utilizing procedures and tools available in the California Health and Medical Emergency Operations Manual (EOM). This would include resources which may be available from neighboring jurisdictions (other jurisdictions within Region VI), state and federal pre-allocated resources (including antiviral medications and PPE), and other resources such as ventilators and mobile field hospital.

**See Appendix HH: Administrative/Logistical Supplies Needed for a 50 Bed GAACS for One Week**

**See Appendix II: Medical Supplies Needed for a 50 Bed GAACS for One Week**

**See Appendix JJ: Oxygen Delivery Alternatives**

# Security

## Key Assumptions

The security plan is predicated on the following assumptions:

- Although triage guidelines are intended to control the flow of patients to the GAACS, it is anticipated that residents may learn about the location of the GAACSs and present at the GAACSs without going through triage. Thus, an unexpected number of residents may arrive at the GAACS necessitating crowd control.
- If the medical/health surge created by the event is severe, the demand for services may overwhelm the GAACS. Without proper security, this increased demand could get out of control.
- During the event, local law enforcement may be short-staffed due to illness or injury and priorities will be on other first response functions. Thus, local law enforcement may not always be a source of security personnel for the GAACS.

## Overview

A comprehensive security plan is critical to the operation of a GAACS during an emergency. A large health or medical emergency will likely generate many casualties (illness, injury, death) as well as produce concern, fear, and the possibility of panic within the affected communities. The clustering of many ill and/or injured persons will be newsworthy and may make operations difficult due to the arrival of concerned family and the news media. The GAACS organization may become a target of citizens concerned that not enough is being done for their loved ones.

This security plan addresses the following components which are essential to the successful implementation of this GAACS Security Plan:

1. Overall security coordination
2. Security of the transportation infrastructure that supports GAACS operations, including personnel, and the receipt and movement of patients and supplies
3. A security plan template to be applied to all GAACSs
4. Personnel supporting GAACS operations, including badging and handling of volunteers
5. Site-specific facility profiles for all GAACSs

## Overall Security Coordination

The Sheriff's Office (SO) will be responsible for overall security coordination. Specifically, this will be the person and backup so designated by the SO.

Primary:

Name: \_\_\_\_\_

Contact Information: \_\_\_\_\_

Back-up:

Name: \_\_\_\_\_

Contact Information: \_\_\_\_\_

He will be responsible for managing and coordinating the security staff, identifying resources available, and supporting the activities required for the successful implementation of this GAACS Plan. This will be carried out in a NIMS/SEMS compliant structure, under the direction of the Operational Area EOC, Incident or Unified Command. Since this security response will have many moving parts, with varying jurisdictional boundaries and authorities, the coordination function of the SO is critical.

Providing security is a resource-intensive function that may rival the patient care function for the number of staff needed for successful implementation. Therefore, mutual aid resources from other public and private law enforcement support agencies within the Operational Area or OES Region may be utilized as necessary under the direction of the EOC. These may include local law enforcement, California Highway Patrol (CHP), Inyo National Forest (INF), Bureau of Land Management (BLM), California Department of Fish and Game (CDFG), National Park Service (NPS), and any other private or public, local, tribal, state, or federal law enforcement agency with assets within the Operational Area or Region. As the public may self-refer themselves to various healthcare facilities (hospitals, clinics, long-term care), security personnel from these facilities may provide additional manpower resources, but are likely to be overwhelmed. All requests for resources from out of the area will go up the chain of command through the Operational Area EOC following standard ICS/SEMS procedures.

Ultimately, collaboration between all agencies that may be involved in GAACS operations, including state and local law enforcement agencies, Cal EMA (California Emergency Management Agency), California Department of Public Health (CDPH), and the Health Department, is essential. Information exchange through redundant and interoperable communication systems will help to ensure a timely and effective response.

There are three categories of security needs that are identified for a GAACS response:

- Physical security: establishing measures to prevent or deter access to vehicles, facilities, resources, or information

- Personnel protection: establishing security measures to ensure the safeguarding of staff involved in GAACS operations and members of the public receiving care
- Law enforcement: apprehending and/or arresting those in violation of the law who may attempt to disrupt the GAACS operations

The following activities are addressed in this plan:

- Coordinating with law enforcement agencies regarding the escorting of vehicles carrying persons or medical supplies to the GAACS, including facilitation of movement through natural and human obstacles via alternate routes
- Ensuring that a landing site is secure for the transfer of patients to a higher level of care
- At the GAACS, ensuring that the facility is secure, controlling traffic, coordinating parking, conducting crowd control, and protecting staff and citizens

The SO, through its primary and back-up security coordinators, will be responsible for developing the procedures necessary to get the appropriate security staff to the right location(s) in a timely manner to support the GAACS operations. This includes not only the security unit for the first operational period, but also the ability to provide and sustain 24/7 law enforcement presence for the duration of the event or emergency. Establishing rapid activation procedures involving the various agencies and institutions will be a function of the SO and its assigned security coordinator, with support and coordination provided by the Incident/Unified Command at the OA EOC.

The SO will be the lead agency responsible for securing GAACSs. The security coordinator designated by the SO will be responsible for ensuring that an on-site command center is set up at each facility, and manned by trained security personnel on a 24/7 basis for the duration of GAACS operations at the facility.

An initial security sweep of the facility shall be performed by assigned security personnel. Additional security sweeps shall be performed as necessary upon the discovery of suspicious items or persons. At that time, security personnel will determine the necessity of specialized units (canine, bomb squad, tactical, etc.).

Traffic control will be provided under the direction of security personnel, according to their direction and procedures. Security personnel will determine the type and quantity of physical barriers necessary to control vehicular and pedestrian traffic. This will include the removal of abandoned or unclaimed vehicles on-site.

Evacuation of the facility may become necessary to ensure the safety of staff and the public at such a time that suspicious items or persons are discovered, or in the event of an emergency such as a fire or earthquake. If evacuation becomes necessary, security personnel will

manage the evacuation procedures, and their policies, guidelines, and directions will be followed.

Security personnel will maintain their own methods of communication throughout the event in coordination with OA EOC, Dispatch, and fire/EMS. Designated radio frequencies will be determined at the time of the event in the communications plan approved by the OA EOC or SO.

The safety and security of each site will require proper crowd management and flow. This will be accomplished by the use of adequate signage and personal direction from staff assigned to monitor the flow of people. Public information will be delivered through appropriate means at the time of the event. Security personnel will use stationed and roaming patrols to help ensure public and staff safety.

Staff will be required to wear colored vests, and display their credentials at all times so they are easily identifiable to the public as well as to security and other GAACS personnel. Security personnel will be in uniform, or otherwise clearly identifiable to public and staff.

Security of assets at a GAACS will be under constant security personnel supervision, or under lock down in a secured room in the facility.

All security personnel participating in GAACS operations will be capable of and expected to determine the appropriate force for the situation based on information provided to them regarding the incident. Highest priority for security will be protecting the lives of GAACS operations staff, followed by preventing loss or damage to GAACS assets. Security personnel are expected to use whatever force is necessary to achieve these goals. Situational assessment must be used to assess the risk associated with other objectives.

For localized disruptive behavior at a GAACS, security may remove a person from the facility if behavior does not respond to a warning. The person may be allowed to re-enter the facility when they are judged ready to comply with instructions, remembering that the ultimate goal is the achievement care for the maximum number of persons possible. Security personnel will be expected to use their professional judgment regarding force requirements, following their professional and agency guidelines.

The probability that adverse events/threats may follow a public health emergency or disastrous event and affect security operations is real. The security coordinator, in collaboration with the Health Department, will conduct an incident specific risk assessment for all stages of response operations in order to minimize the potential impact of these potential events. In addition to civil disturbances caused by fear and panic, this includes crimes such as theft, arson, assault, vandalism, hijacking, sabotage, a chemical spill, or secondary events such as fire, flood, or earthquakes.

### **Badging Procedures**

A credentialing system has been established by the county to ensure that all county personnel to be involved in GAACS activities have photo identification badges that will be recognized by law enforcement personnel assigned to a given vehicle, facility (GAACS), or resource (medical



and non-medical assets), or information (computers, software, paper data)). These badges will ensure that GAACS staff are granted access to vehicles, facilities, and materials as described in this plan and are able to move throughout the jurisdiction, as assigned, to carry out their duties.

Each GAACS Manager will be issued a comprehensive access roster that will serve as a list of all approved workers expected onsite. A photo identification badge will be required for each worker. Since workers will be coming from various agencies with various badging systems, the security coordinator from the SO will need to inform each facility manager of the format of all approved badges. Anyone without an approved photo ID badge will be denied access. Where there are instances in question, the on-site facility manager, along with the on-site safety/security officer, will have the final say as to whether or not a given individual may have access to a facility.

Some sites or vehicles, whether government or private, may require specific ID badges for entry. These vehicles or locations will have increased security access levels during an event, and will be determined by the SO security coordinator. The OA EOC, as part of the Logistics Section, will have a location and a system in place for registration, credentialing, identification, and just-in-time training for spontaneous (non-pre-event) volunteers. This location will be separate from any GAACS location, and will be able to generate photo ID badges of recognized format, to include name, role, location, and level of security access.

### **Site-specific facility profiles for GAACSSs**

A separate facility profile has been performed for the following GAACSSs:

This profile, along with additional incident specific coordination between the SO and the Health Department, will provide the basis for addressing the following issues:

1. Security and vulnerability assessment of location and facility strengths/weaknesses
2. Interior physical security of location (physical openings, ceilings/walls, emergency power, lighting)
  - a. Security sweep prior to facility use/occupancy by staff or asset
  - b. Establishment of law enforcement officer posts
  - c. Access control to locations within the facility
  - d. Crowd control inside the facility
3. Exterior physical security of location (perimeter, lighting, parking, landscaping)
  - a. Specialized unit needs (canine, explosive ordnance disposal, tactical, traffic, etc.)

- b. Additional physical barriers (necessity and/or identification of source)
  - c. Additional lighting (necessity and/or identification of source)
  - d. Staging area for personnel and vehicles
  - e. Vehicular traffic control (ingress and egress)
  - f. Crowd control outside of the facility
  - g. Access control to facility
- 4. Command and management
  - a. Establish command center for law enforcement
  - b. Determine radio channels
  - c. Ensure communication and coordination between law enforcement organizations
  - d. Establish sufficient number of law enforcement officer assignments
- 5. Evacuation plans
- 6. Security breach plans

# Transportation

## Key Assumptions

The following assumptions underlie the proposed approach to patient transportation.

- Based on the impact to the 911 and inter-facility transport ambulance system during the event, ambulance resources that typically support patient movement will be very limited.
- The local transportation infrastructure may be compromised due to employee absences and/or transportation closures.

## Approach

This approach puts responsibility for transportation of patients to the GAACS primarily in the hands of the patients, regardless of whether they are arriving from home or a health care facility. Ambulance transport is reserved for emergency transfers from the GAACS to the hospital.

The majority of patients will be transported to GAACSs using their own means of transportation. Upon referral to a GAACS, patients will be provided with directions to the assigned GAACS. The goal is for a family member or friend to drive the patient to the GAACS. Patients coming from being triaged at a local hospital will also be required to provide their own transportation.

Patients who are in need of transfer from a GAACS to an acute care hospital will be moved during scheduled daily ambulance transports. These transports will occur during low 911 system volume times or may be disbursed throughout the day, whichever method best supports the stability of the 911 system. Emergency transfers from a GAACS to an acute care hospital will be managed by contacting the 911 communication center at the time of the event. Due to system volume issues, it will not be possible to maintain an ambulance on standby at each GAACS.

The local jurisdiction must maintain a transportation infrastructure to support the daily delivery of supplies to GAACSs, as well as services such as repair and maintenance. Personnel may need to be transferred from one GAACS to another or from a GAACS to home. Transportation services such as buses and taxis may be accessed for personnel movement as necessary. The transportation infrastructure must be supported by resources from the OA EOC and coordinated utilizing ICS/SEMS/NIMS compatible procedures, including resource ordering requests as outlined in the EOM.

It is possible that patients may need to be moved to and from GAACSs to standard (non-medical) shelters managed by Social Services and/or the American Red Cross. Non-ambulance transportation may need to be provided for those who are unable to provide their own method of movement from one location to another. The OA EOC is responsible for the non-medical aspects of caring for the non-medically fragile and will thus have responsibility for providing this non-medical transport.

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## Appendix A:

### Acronyms (needs to be completed)

AED	Automated External Difibrillator
APC	Advanced Practice Center
ARC	American Red Cross
CDC	Center for Disease Control
CDPH	California Department of Public Health
CISM	Critical Incident Stress Management
DHV	Disaster Healthcare Volunteers
DOC	Director of Communications
DSW	Disaster Service Workers
ED	Emergency Department?
EH	Emergency Hospital?
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operation Personnel?
GAACS	Government Authorized Care Site
ICHHD	Inyo County Health Department
ICS	Incident Command System
JITT	Just In Time Training
LTC	
MH	Mental Health
MRC	Medical Resource Coordinator?
NIMS	National Incident Management System
OES	Office of Emergency Services
Pan Flu	Pandemic Influenza
Patient	Person under medical care
PH	Public Health
PPE	Personal Protective Equipment
SCCPHD	Santa Clarita County Public Health Department?
SEMS	Standard Emergency Management System
Staff	Personnel, Employee, Workforce
Surge	Increase, Challenging or exceeding normal capacity
SUV	Spontaneous Unaffiliated Volunteers
Visitor	Guest

## **Appendix B:**

### **Pandemic Influenza: Ethical Considerations**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic)

#### **Introduction**

In any disaster, the primary ethical obligation of public health officials is to plan. In response to the potential for pandemic flu, the ICHD has developed a plan for the design and implementation of GAACS's. This tool provides an overview of ethical considerations germane to pandemic flu preparation and planning.

#### **Purpose**

The purpose of this tool is twofold:

(1) To address some of the ethical considerations underlying the planning and development of the GAACS Plan and,

(2) To aid disaster planners in Inyo County to incorporate ethical deliberations into pandemic planning. The tragedy of a pandemic will be exacerbated if ethical questions are ignored. Preparedness, justice as fairness, autonomy, and the 'common good' are suggested as guiding principles. Medical science and public health can provide information valuable to decision making; they are insufficient as the sole basis in a crisis. Urgent medical needs, scarcity of resources, and panic must not drive decision making. Planning involves assumptions about core values, guiding principles, and individual and local needs.

Other salient considerations are beyond the scope of this document, but should be incorporated into disaster planning efforts:

- Duty of health care professionals to provide care
- Provision of legal protection for these health care professionals
- Restrictions of individual freedoms, social distancing, isolation, and quarantine.

The "common good" refers to interests of a group or collective. This is defined by having in common certain attributes (e.g., location in geographically-defined community, specific disease risk) that create a commonality of interests. Herein, the term reflects an understanding that in case of an influenza pandemic, all human beings are part of single, collective that has a 'common good'.

(Kinlaw & Levine, CDC, 2007:4).

#### **Ethical Preparedness: Background**

Public health emergencies raise serious ethical issues central to societal and individual well-being and the public perception of fairness. In 2003, the outbreak and aftermath of Severe Acute Respiratory Syndrome (SARS) brought attention to the importance of establishing an ethical framework for decision making well in advance of any foreseeable medical disaster.

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This event exposed the problems that may arise when ethical presuppositions are not explicitly identified, e.g., the loss of public trust, poor hospital staff morale, confusion about roles and responsibilities, stigmatization of vulnerable communities, and misinformation. (Thompson, 2006: 2).

The often cited Canadian report, *Stand on Guard for Thee*, by the University of Toronto Joint Centre for Bioethics, was written after the SARS crisis of 2003. It illustrates an important set of ethical considerations to be used in preparing and planning for pandemic influenza. As the SARS crisis worsened and more restrictions were imposed, people became increasingly concerned about whose values should guide the decision-making processes in a public health emergency. People are more likely to accept decisions made by their leaders if the decision-making processes are reasonable, open and transparent, inclusive, responsive, and accountable, and if reciprocal obligations are respected. The report suggests that a previously established ethical framework can assist public health officials and government leaders to make better-informed decisions in a quickly overwhelming health crisis, like pandemic flu. It may also serve to increase public trust and morale, alleviate fear, and reduce the amount of disseminated misinformation. (University of Toronto, 2005: 4).

### **Pandemic Influenza: Planning**

The Centers for Disease Control (CDC) addressed ethical issues in pandemic planning in their February, 2007 document, "Ethical Guidelines in Pandemic Influenza." The goal was to inform public decision making regarding pandemic influenza. Preserving the functioning of society is the over-riding, guiding principle in pandemic influenza management. The CDC designates the following for priority in distribution of vaccine, antivirals, and other scarce resources:

Individuals essential to:

- Provision of health care
- Public safety
- Functioning of key aspects of society

(Kinlaw & Levine, CDC, 2007: 3)

Diverse stakeholders must affirm, determine who is considered *key*, and establish a distribution strategy. This hierarchy is in contrast to the historical approach proposed during inter-pandemic years, i.e., to minimize serious influenza associated complications, including hospitalizations and death.

To foster public commitment and trust in a disaster plan, three primary ethical obligations must be met:

1. To have a plan that maximizes preparedness
  2. To implement that plan fairly, paying particular attention to the formal requirement of justice to treat all human beings equally, or if unequally, then fairly based on a defensible standard.
-

3. To have an open, transparent planning and implementation process. This involves seeking input from stakeholders and providing clear rationale for allocation decisions. (Kinlaw & Levine, CDC, 2007: 3).

### **Implementation of GAACS's**

A flu pandemic will not be 'hit and run,' but will occur in waves over a period of a year or more. The GAACS Plan assumes the worst case scenario for the worst case pandemic, i.e., demand for hospital beds, respiratory support, and basic medical care will far outstrip the supply. Health care needs will consume available human and material resources; many dilemmas will have no best outcome.

Children under 10 years of age may not be able to be admitted into an GAACS. This is due to the need for standard orders in GAACS's and the expected lack of experienced pediatric nursing personnel and pediatricians. Further preparedness requires provisions for treating infants and children when no pediatric beds are available in local hospitals.

(Mass Medical Care During an Influenza Pandemic, 2007).

### **Triage Guidelines: Scarcity of Resources**

In pandemic planning, as in medicine in general, the allocation of scarce medical resources is one of the most difficult ethical issues confronting the health care system. Rationing occurs daily; the need escalates during a disaster. Because rationing is inevitable, it must be done in a manner that is fair, transparent, respectful of persons, inclusive, accountable, proportional, and minimizes harm. Current public expectations about access and the level of health care provided must change in light of the realities of a public health crisis.

Fairness is important on two levels: (1) the process by which decisions are made must be fair (procedural justice); and, (2) the distribution of scarce human and material resources must be fair (distributive justice).

Proportionality requires that restrictions to access to health care resources, limitations on individual liberty, and actions taken to protect the public from harm not exceed that which is necessary to maximize lives saved, protect societal functioning, and respond to the actual level of risk.

### **Fair Process (Procedural Justice)**

When resources are scarce, procedural fairness requires that a triage protocol be developed for guidance and consistency in resource allocation. From the point of view of procedural justice, the principle of distribution is not so much the concern as is the just application of that principle.

The primary objectives for the establishment of GAACSs are congruent with fair process:

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- Decompression of acute care hospital beds (receiving site for hospital discharge patients who are unable to be cared for at home), and
- Used instead of acute care hospital inpatient beds (inpatient care; moderate-acuity and palliative care). (Mass Medical Care, 2007: 8).

During GAACS admission triage, patients will be assigned to either an acute or sub-acute ward, based on medical acuity, presence of co-morbid conditions, and level of nursing care.

*Note: the intent of GAACSs is to provide low-level supportive medical care to large numbers of ill patients who, under normal circumstances, may be treated as hospital inpatients. Basic medical care may or may not include oxygen by nasal cannula and intravenous (IV) fluids. (Mass Medical Care, 2007: 8).*

If treatment proves ineffective, a patient may be placed in palliative care within the GAACS. For those unlikely to survive, the GAACS provides palliative care, facilitating patient comfort, family presence, and dignified death.

Due to the volume of patients that might be expected in GAACSs, treatment is governed by standard orders vs. patient-specific. The majority of GAACS patients are likely to be adults without co-morbid conditions. A patient determined to be ineligible for GAACS admission will either be sent home with home care instructions or transferred to a hospital for a higher level of care. (Mass Medical Care, 2007).

GAACSs embody fair process in the following ways:

- Maximize medical benefit to the overall patient population,
- Minimize harm to moderate-acuity patients,
- Seek a fair, efficient, and consistent distribution of scarce medical resources through a common triage protocol. This protocol will be active at all entry points, i.e., physician's offices, emergency departments, 911 response, and GAACSs. This uniform protocol (based on a modified pneumonia severity index calculation) forms the basis of a fair allocation process that assures consistency across people, access points, and time. In formulating explicit inclusion and exclusion criteria, the Clinical Triage Guidelines provide *clarity* and *transparency* to the medical decision making process. Medically similar cases are treated the same; medically unlike cases are treated differently, fulfilling the formal principle of procedural justice.

### **Fair Distribution of Human and Medical Resources (Distributive Justice)**

In its discussion of allocation of resources, the CDC recommends that criteria for distribution should be clearly specified well ahead of the need to implement them. Allocation criteria should be directed at maximizing fairness (equity) in the distribution process. Equity in distribution of resources should take into account other checks ('side constraints') grounded in ethical principles of respect for persons, non-maleficence, and justice. The following questions should be asked to ensure fairness in distribution:

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- What scarce goods are involved in the distribution plan? (e.g., drugs, antivirals).
- Who/what agency will decide prioritization and distribution? (interpretation of rules)
- Who is eligible to be a recipient? (e.g., local residents, visitors, etc.)
- What morally relevant criteria will be employed to assign higher or lower priorities to individuals or groups of individuals within goal of preserving societal functioning? (e.g., determining key services; order of priority within essential service groups) (Kinlaw & Levine, CDC, 2007: 6-7).

The GAACS plan follows the recommendations of the National Vaccine Advisory Committee (NVAC) and the Advisory Committee on Immunization Policy (ACIP) to save the most lives by providing surge capacity to deal with flu sufferers who do not require traditional hospitalization. (U.S. Department of Health & Human Services, 2005). The triage protocol privileges those most likely to recover, i.e., those without significant co-morbidities.

Concentrating on saving the most lives, essentially classic utilitarianism, can produce consequences that are unjust for some. Classic utility would impose great harm on the few in order to maximize benefit to the majority. Recognizing this, the CDC recommends that the brutal effects of classic utilitarianism be modulated by the “side constraints” of justice, respect for persons, and the avoidance of harm. (Kinlaw & Levine, CDC, 2007:6).

The GAACS Triage Guidelines support the fair distribution of available medical resources by triaging patients to appropriate and available levels of care, including palliative care; this preserves scarce resources for those most likely to benefit and survive. The triage response must be proportional, denying hospital or GAACS access only when resource limitations and the common good demand it.

Despite improvements in health care over the pandemic of 1918-1919, epidemiological models project 2-7.4 million deaths globally (WHO, 2005) and 1.9 million in America. (HHS, 2006).

Those who will not survive should neither be ignored nor receive scarce resources from which they are unable to benefit, such as a hospital bed. The needs of dying persons can be met through the provision of palliative care, minimally providing family presence and relief of pain and anxiety. Families may be reluctant for social, cultural, religious, and practical reasons to have a loved one die at home. The availability of palliative care at a GAACS fulfills the ethical obligation to treat the dying as persons deserving of respect.

Health care professionals are a resource that must also be allocated. Procedures that are customarily performed by certain professionals may need to be delegated to other categories of staff. Physician duties may be delegated to nurses, physician trained assistants, and other personnel, e.g., retired health care professionals, that are not part of the customary health care team. These delegations of responsibility and authority require careful planning. Appropriate training programs should be activated in advance of the pandemic. (CDC, 2007:7-8; Mass

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Care Plan, 2007). In September, 2007, the American Nurses Association addressed specific questions in a White Paper. Issues regarding the ethics and standards that apply to decisions about care during emergencies, disasters, or pandemics are discussed. The document speaks primarily to the individual professional in a caregiver or service provider role, whether:

- At the immediate site of a disaster at the time it occurs,
- At the usual place of work when it is affected by the disaster, or
- At some other site, due to relocation of work or work in a volunteer program/unit. (American Nurses Association, 2007).

### **GAACS Admission**

Questions related to admissibility of patients into the GAACS will constitute a significant ethical concern. Limited resources and stringent admission criteria will likely mean that not all patients who apply for admission can be accepted into GAACSs. When patients fail to meet the GAACS eligibility criteria and are turned away, respect for persons requires that some process for appeal of the decision not to admit to a GAACS should be available. Ethical preparedness includes procedures whereby individuals could fairly and rapidly initiate an appeal process.

Bed space may still be insufficient, even after basic eligibility requirements for GAACS admission have been met. Further prioritization of patients will be needed. The American egalitarian instinct for fairness naturally inclines us toward seeking a fair, or equitable, distribution of the “scarce resource” of GAACS access.

Making distinctions on the basis of social worth may be necessary in the event of pandemic flu. Failure to make these sorts of distinctions (giving priority, for example, to doctors, EMS workers, law enforcement personnel, vaccine scientists, firefighters, bus drivers, and sanitation workers) could translate into a high level of injustice accompanied by social chaos. This would exacerbate an already complicated situation. Prioritizing certain essential personnel, while unfair during non-pandemic conditions, may be the best way to minimize, and ideally avoid, further social breakdown during a flu pandemic. (Kinlaw & Levine, CDC, 2007:6).

Whichever prioritization categories are used, conversations about how to fairly rank individuals who meet the basic GAACS eligibility requirements should be initiated in advance of a pandemic. Such conversations should be carefully reasoned, transparent, and open to substantial public input. This will help ensure that the process is as fair as possible and avoid unnecessary discrimination. Moreover, a process that is transparent and open will help to bring the public “on board,” contributing to public understanding of and cooperation with any resulting prioritization rules or guidelines.

### **Other Issues/Considerations**

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In addition to operational planning for disasters, planners must consider the effects of repetitive stress and overlooked trauma in staff that respond to rescue and care for victims of pandemic flu. Responders helping people in distress may experience *compassion fatigue*. This is an extreme state of tension and preoccupation with the suffering of those being helped to the degree that it is traumatizing for the helper. In contrast to the person receiving help, the helper is traumatized via their own efforts to empathize and be compassionate. Poor self-care and extreme self-sacrifice may ensue; symptoms in the helper may be similar to post-traumatic stress disorder (PTSD).

(Compassion Fatigue: an Expert Interview, 2005:1).

The full implications and recommendations regarding compassion fatigue are beyond the scope of this document. However, these issues have been incorporated into operational planning for GAACSSs. This is partly accomplished via appropriate, scalable numbers of mental health staff and personnel training in critical incident debriefing who are experienced and trained to work with staff in disaster situations. Mechanisms should be instituted to promote and monitor ethical principles of self-care, maintain wellness, and reduce secondary traumatic stress reactions for disaster responders.

## **Next Steps**

The GAACS Plan seeks to provide the greatest medical benefit in the worst possible pandemic, in light of mandates for fairness in resource allocation and respect for persons. It recognizes that both planning and implementation will be riddled with difficult decisions affecting people's survival and freedom at a time when the usual and customary rules and principles of medicine and ethics are suspended.

The need for pandemic preparedness extends beyond operational plans to include the underlying ethical values salient to their implementation. Tough choices need to be made during any crisis; a framework for ethical decision making should steer decision making, provide consistency across contexts, and encourage accountability. A shared ethical framework may help to mitigate the unavoidable painful consequences of triage and social distancing decisions during a pandemic. Key questions include:

- How to make an ethical framework operational on a local level?
- If shared values and principles are to guide decision making, how ought this happen in a transparent and accountable way?

The application of an ethical framework is also pivotal. Key decision makers and first responders need training in the same way that they need disaster-preparedness drills. Hands-on "ethics drills," based on case studies, could increase preparedness for difficult decision making on the front lines of a public health disaster.

- Inherently controversial subjects such as determination of social worth, and even triage protocols, should be thoroughly and publicly scrutinized *before* a crisis. Public trust is essential to the successful planning and implementation of disaster plans.
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- Clear mechanisms should be developed for public education and comment before, during, and after the planning process. Diversity must be included in stakeholder discussions. Heavier burdens are more likely on the poor and marginalized.

These suggestions for ethical next steps build on the significant work already done by governmental agencies, both nationally and globally. The GAACS Plan should be seen as a living document, subject to change before, during, and after a pandemic in light of new information and realities.

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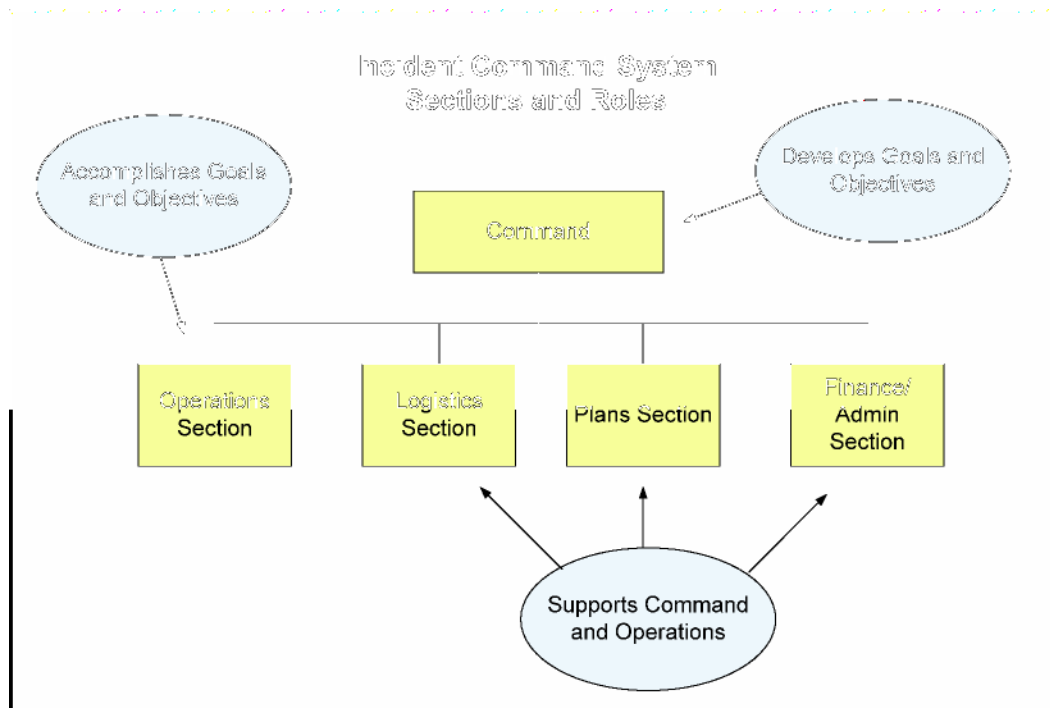
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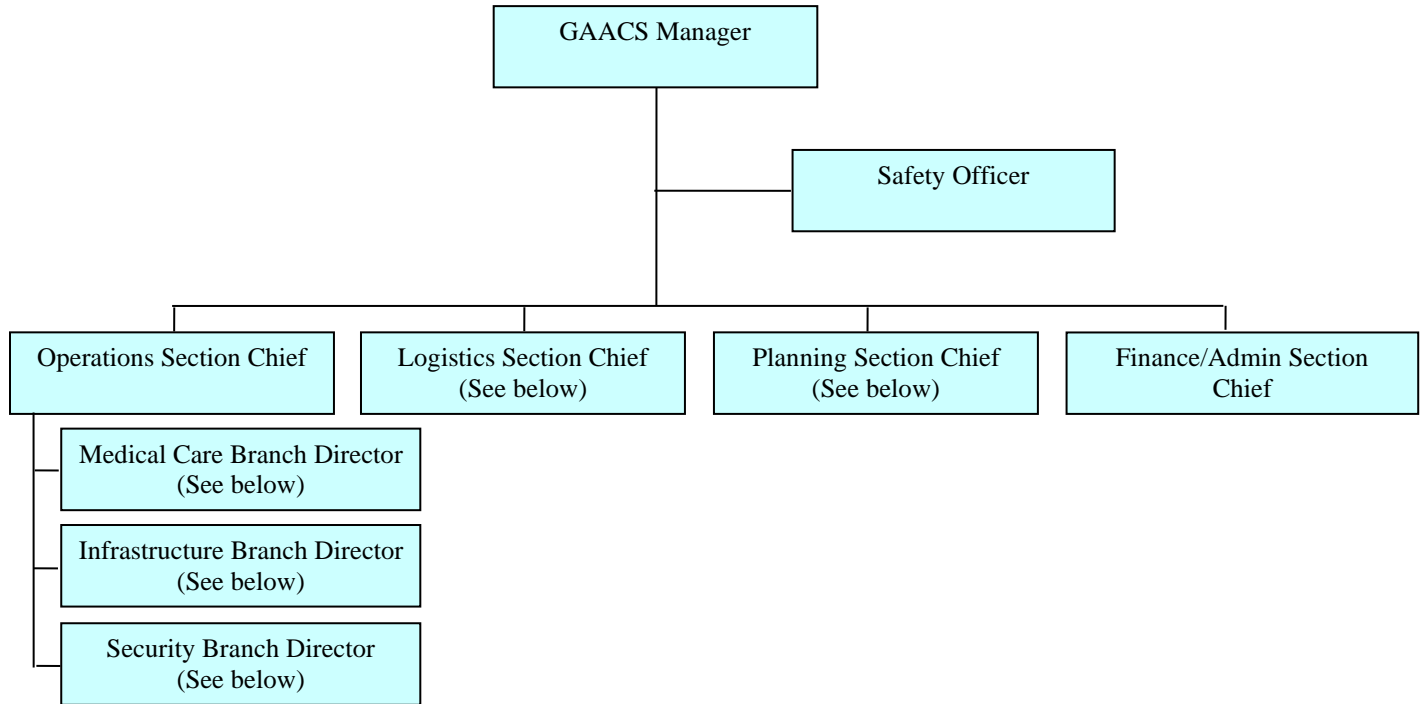
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## Appendix C:

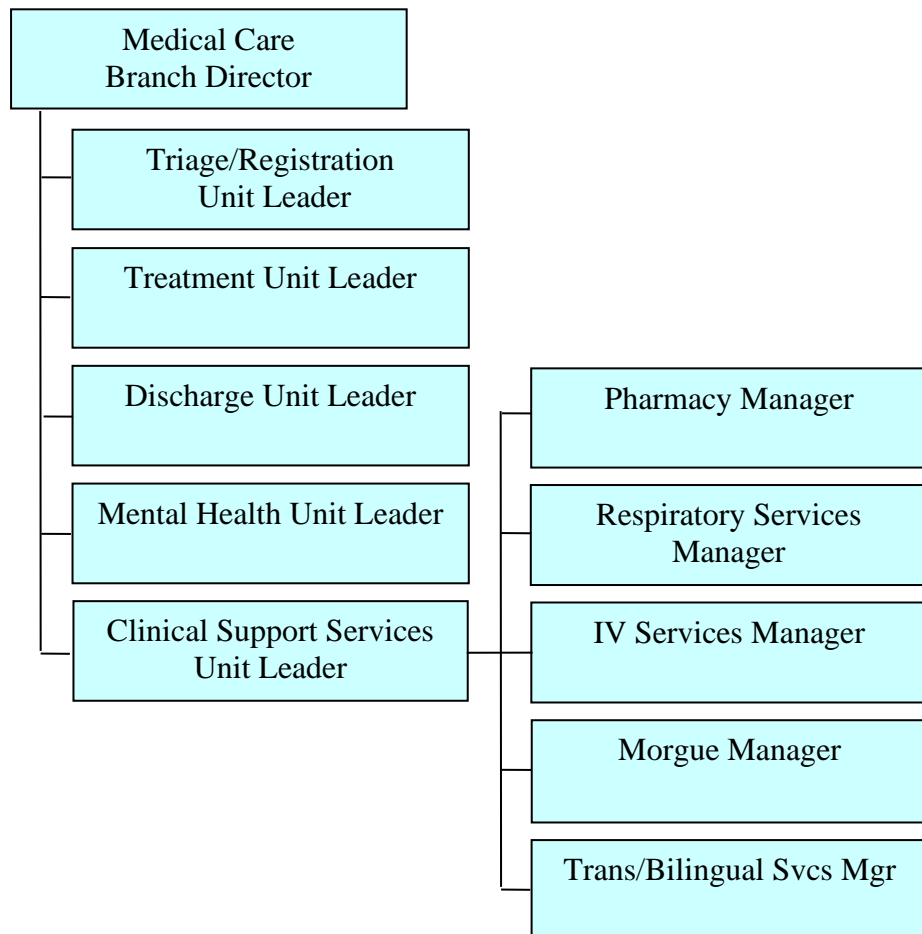
### Sample Organizational Charts



## General Staff

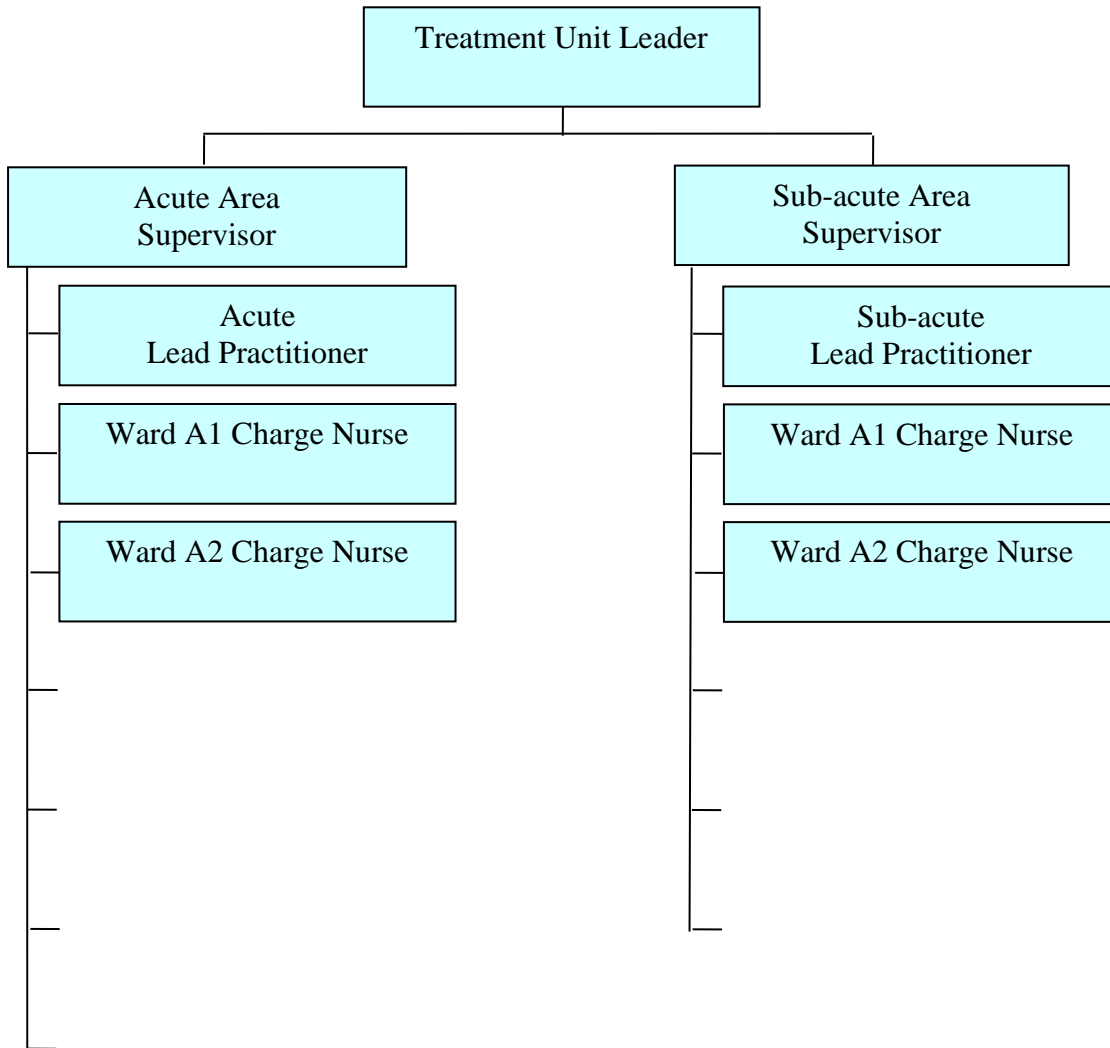


## Operations Section – Medical Care Branch





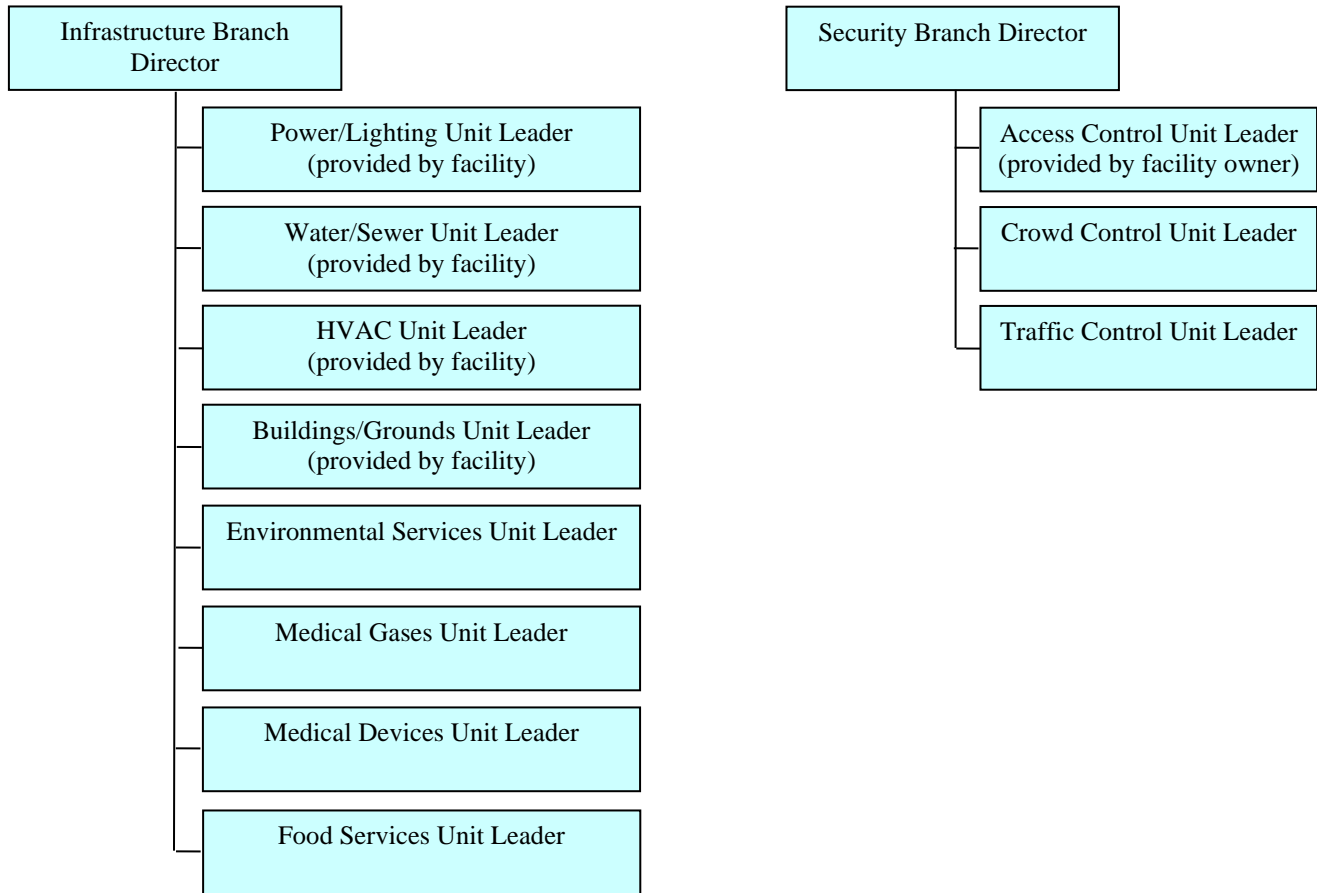
## Operations Section – Medical Care Branch – Treatment Unit



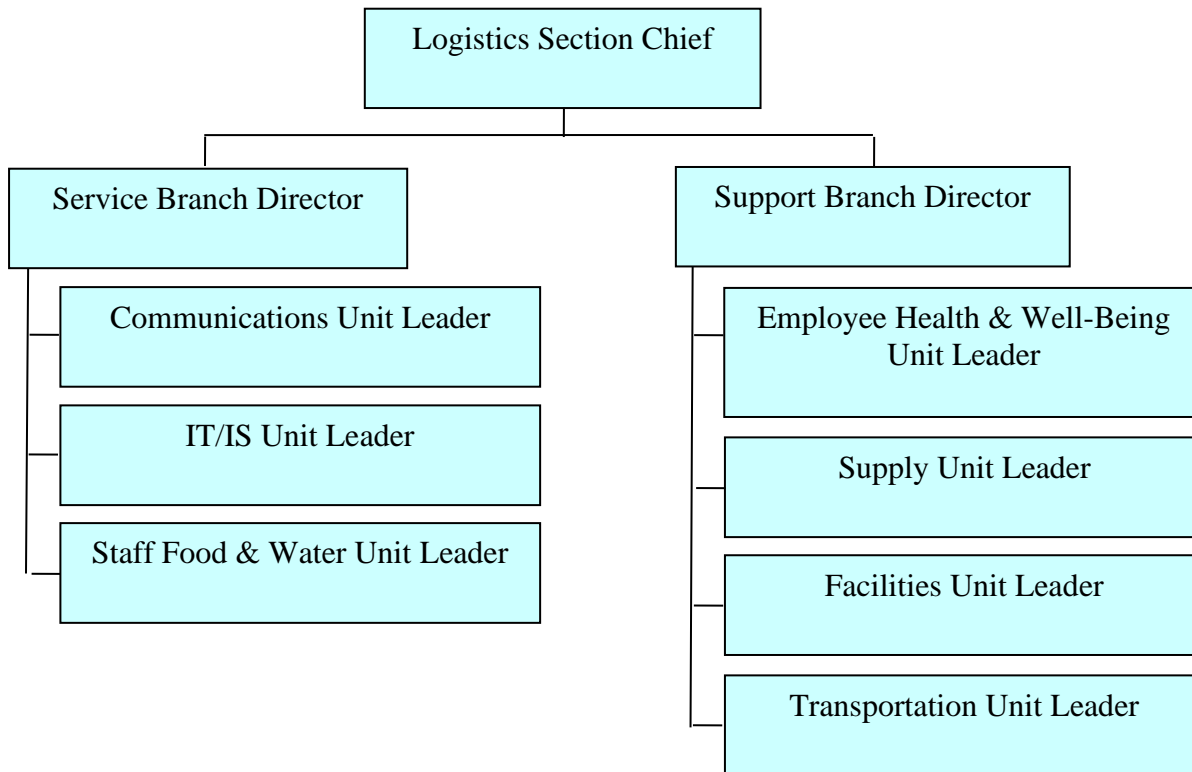
NOTE: Each ward could be designated as Acute or Sub-acute. Acute indicates higher availability of oxygen, suction, overall staff numbers and experience, and generally more sophisticated standing orders or protocols. Each ward could also be designated as Adult, Pediatric (or Family), Isolation, or Palliative; each designation would have slightly varying staffing, protocols, etc. Designations would depend upon the need and available resources.

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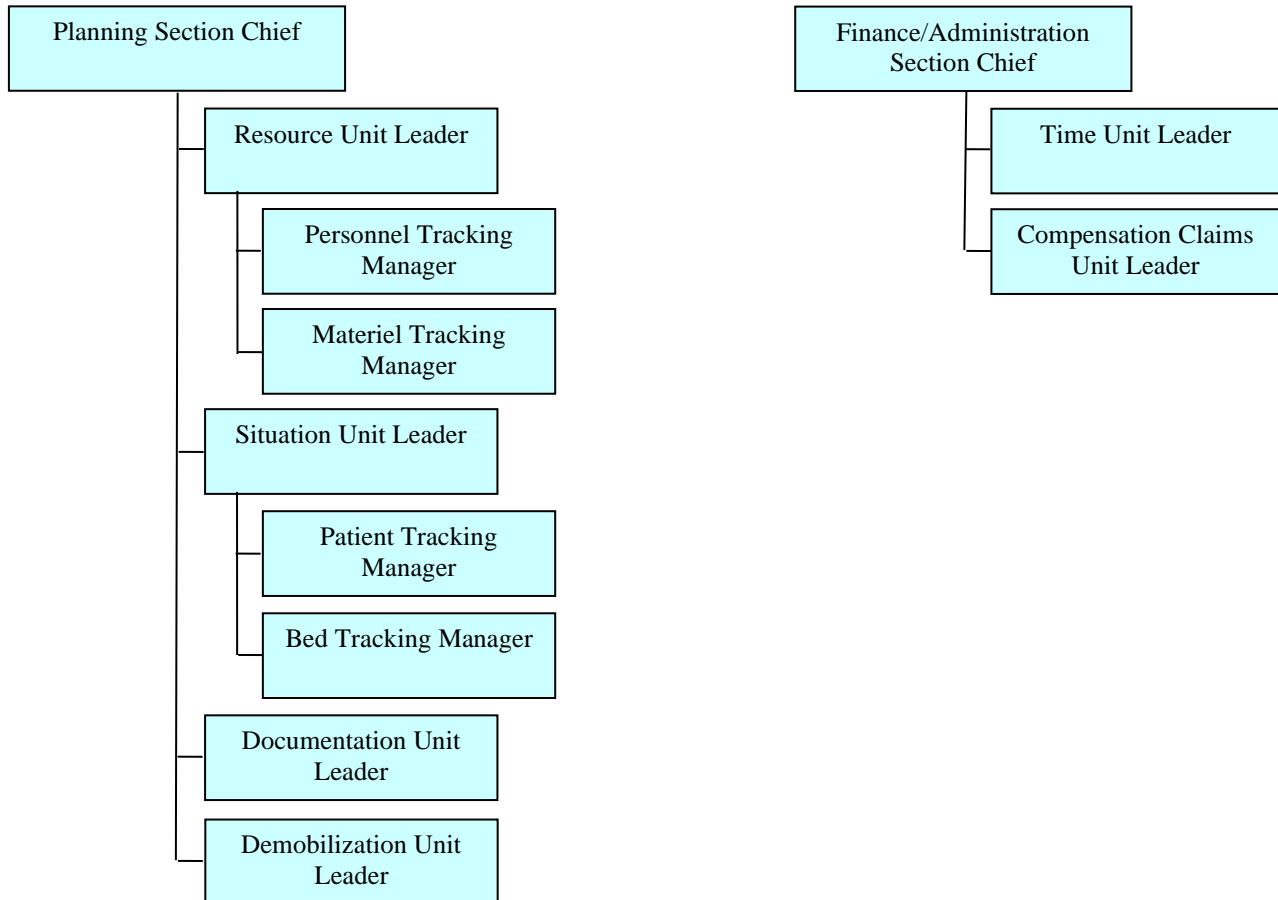
## Operations Section – Infrastructure and Security Branches



## Logistics Section



## Planning and Finance/Administration Sections

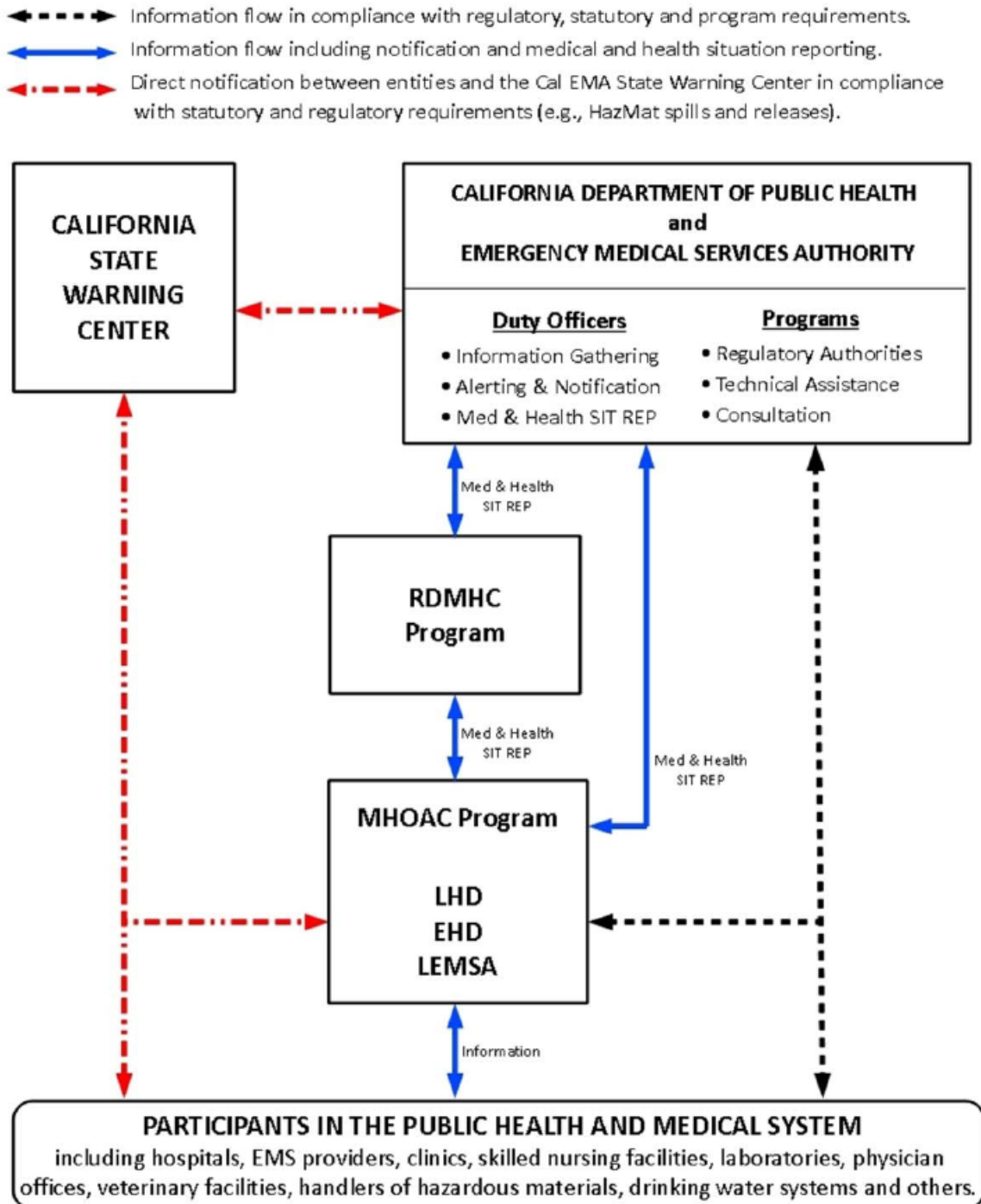





## Appendix D:

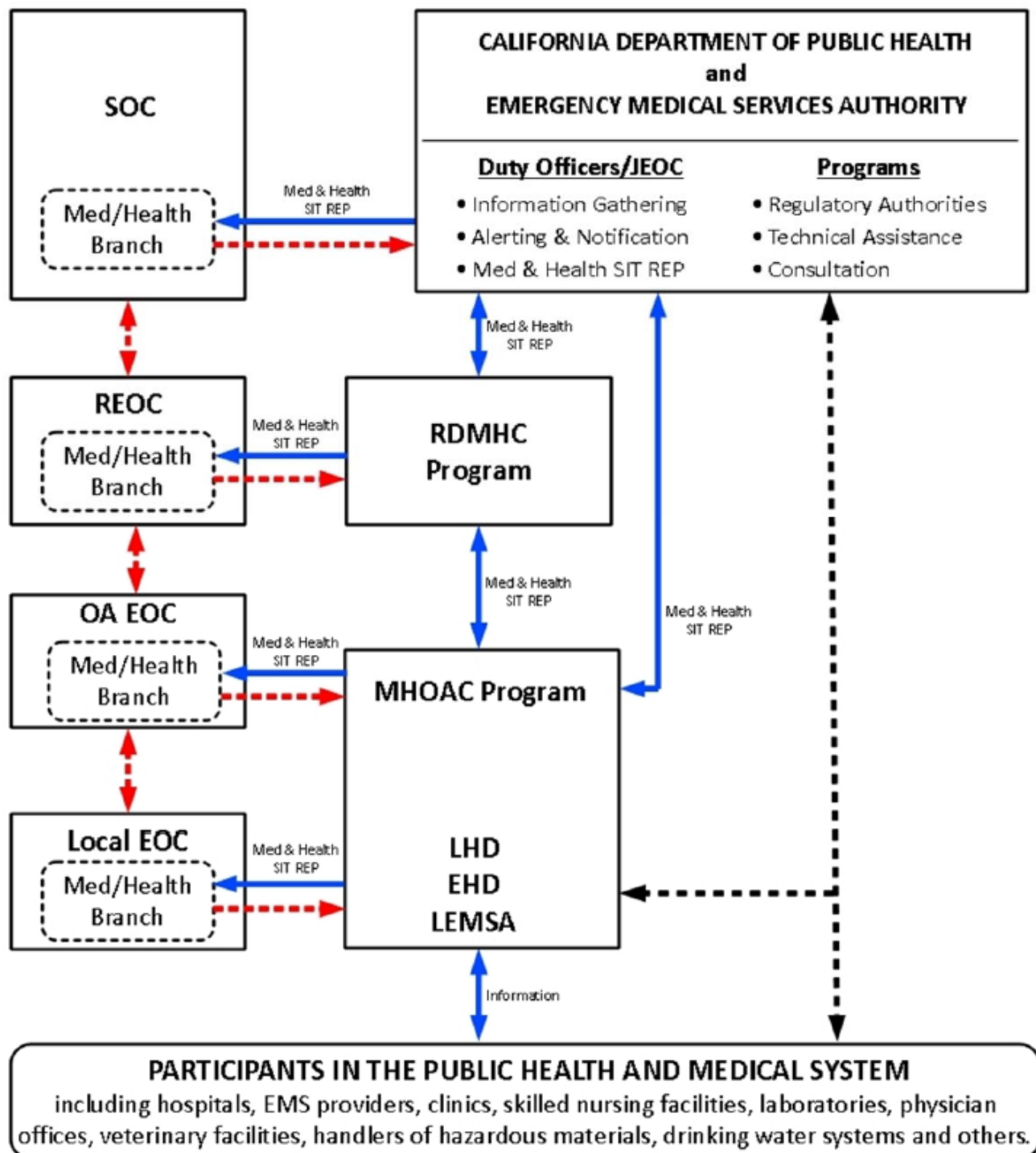
### Communications and Resource Requesting Flow Charts

(from the California Public Health and Medical Emergency Operations Manual (EOM))

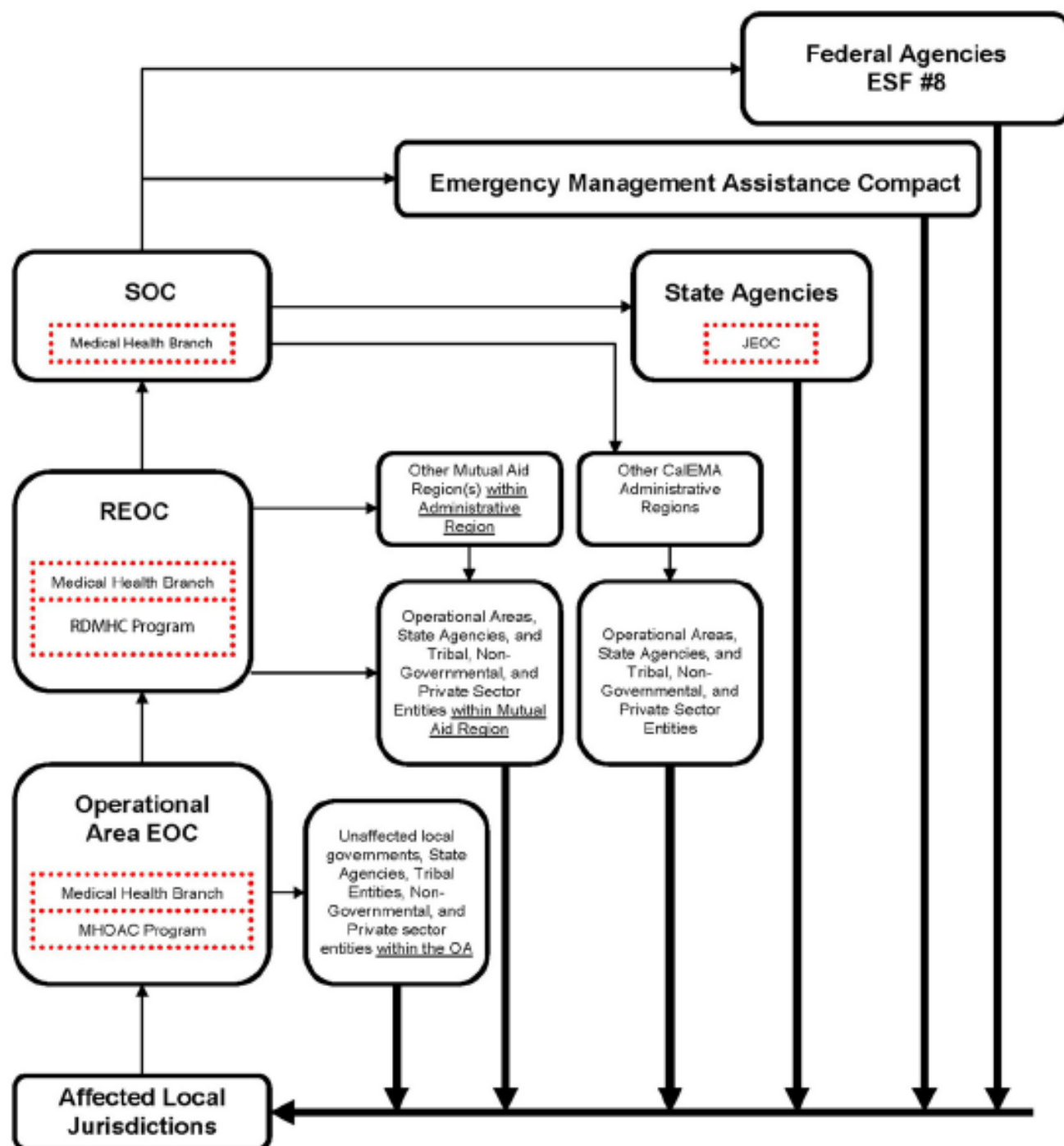
FIGURE 2. Information Flow during Unusual Events



 Information flow in compliance with regulatory, statutory and program requirements.  
 Notification and health & medical situation reporting.  
 Emergency management incident reporting, inclusive of medical & health situation reporting.



**FIGURE 8. Flow of Resource Requests and Assistance during Emergencies.**



The EOM is available at:

[http://www.emsa.ca.gov/meetings/2011/06-22-11/08B\\_EOMAttach.pdf](http://www.emsa.ca.gov/meetings/2011/06-22-11/08B_EOMAttach.pdf) (accessed 6/27/11)

**Appendix E: Job Action Sheets**  
(from the Contra Costa County ACS Plan, 2010)

<b>JOB ACTION SHEET</b>	<b>GAACS MANAGER</b>
<b>FUNCTION:</b>	Ensure efficient operation of the GAACS
<b>AGENCY TO FILL:</b>	ICHHD
<b>REPORT TO:</b>	OA EOC Medical/Health Branch
<b>REPORTS TO YOU:</b>	Safety Officer
	Operations Section Chief
	Logistics Section Chief
	Planning Section Chief
	Finance Section Chief
	Security
<b>ACTIVATION:</b>	
ICS Forms 201, 202, 203, 207	Establish Incident Action Plan including briefings, objectives, organization assignment list and chart
	Conduct walk-through of GAACS location with representatives from PH, EMS, EH and facility; identify items necessary to open the GAACS and assign as appropriate
	Follow the site layout diagram created during site assessment, if available
	Confirm incoming resources with EOC; order additional resources as needed
	Assign a Safety Officer
	Assign an Operations Section Chief to manage medical and non-medical operations
	Assign a Logistics Section Chief to track resources requested and received
	Assign a Planning Section Chief to coordinate patient tracking and situation reports
	Assign a Finance Section Chief to track staff time on-site and resource requests needing payment
	Request Security through EOC to ensure the safety of GAACS staff, patients, resources, and decedents
	Assign additional positions as needed
	Establish communications with OA EOC Medical/Health Branch and ICHHD DOC
<b>OPERATIONS:</b>	
	Ensure command staff have the tools and resources necessary to carry out their duties
	Establish a command post/administration area following the site layout diagram
	Coordinate with command staff and liaison(s)
ICS Form 214	Provide briefings to OA EOC and ICHHD DOC as needed
<b>DEMOBILIZATION:</b>	



	Ensure command staff is knowledgeable of procedures for rapid demobilization due to fire, civil unrest, lack of resources, etc.
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	For planned closure, conduct an initial walk-through with command staff once all patients have been discharged from the GAACS (or will be shortly); identify items necessary for GAACS closure and assign as appropriate
	Conduct a pre-inspection walk-through to ensure facility is in original condition
	Coordinate a final walk-through with facility representative; complete procedures and sign-off for transferring facility back to owner/representative
ICS Form 224	Complete performance evaluations for command staff following NIMS guidelines
	Ensure CISM gatherings are available for all staff
	Develop an After Action Report and Improvement Plan

<b>JOB ACTION SHEET</b>	<b>SAFETY OFFICER</b>
<b>FUNCTION:</b>	Ensure safe operations for staff and patients
<b>AGENCY TO FILL:</b>	ICHD
<b>REPORT TO:</b>	GAACS Manager
<b>REPORTS TO YOU:</b>	Deputy Safety Officer(s), if any
<b>ACTIVATION:</b>	
ICS Forms 208, 215A	Coordinate with Security to ensure the safety of staff and patients
	Conduct walk-through of GAACS location; identify any safety concerns and address as appropriate
	Coordinate with Security when additional law enforcement is necessary
<b>OPERATIONS:</b>	
	Provide on-going staff and patient safety at GAACS facility
	Ensure any safety concerns are addressed promptly
	Coordinate with command staff as needed
<b>DEMOBILIZATION:</b>	
	Address any safety item prior to turning facility back to owner
	Ensure all biohazard waste is properly removed and disposed
	Work with environmental health services to clean and disinfect the GAACS to meet all health standards necessary for closure
ICS Form 224	Complete performance evaluations for direct reporting staff, if any, following NIMS guidelines

<b>JOB ACTION SHEET</b>	<b>OPERATIONS SECTION CHIEF</b>
<b>FUNCTION:</b>	Manage medical and non-medical operations
<b>AGENCY TO FILL:</b>	ICHHD and HHS
<b>REPORT TO:</b>	GAACS Manager
<b>REPORTS TO YOU:</b>	Medical Operations Group Supervisor
	Non-Medical Operations Group Supervisor
<b>ACTIVATION:</b>	
	Establish two Group Supervisors, Medical Operations and Non-Medical Operations
	Coordinate with all partners on GAACS activation
	Develop staffing schedule (based on availability and patient volume) for medical and non-medical operations in coordination with Group Supervisors and support from the OA EOC Human Resources Branch, Medical/Health Branch and ICHD DOC
	Follow the site layout diagram created during site assessment, if available
	Assign additional positions as needed
<b>OPERATIONS:</b>	
ICS Form 215B	Ensure Medical and Non-Medical Operations Group Supervisors have the necessary resources, including staffing, to meet their objectives
	Coordinate with partners on GAACS operations
	Coordinate with GAACS Manager, Section Chiefs, and Group Supervisors
	Provide briefings, such as daily census, to GAACS Manager as needed
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Coordinate with partners on shelter demobilization
	Ensure Group Supervisors are knowledgeable of procedures for rapid demobilization
	For planned closure, support command staff to identify items necessary for GAACS closure and assign as appropriate following procedures
	Participate in a pre-inspection walk-through to ensure facility is in original condition
ICS Form 224	Complete performance evaluations for direct reporting staff following NIMS guidelines
	Ensure all paperwork is completed and turned in to the Planning Section Chief

<b>JOB ACTION SHEET</b>	<b>LOGISTICS SECTION CHIEF</b>
<b>FUNCTION:</b>	Request, track and receive resources
<b>AGENCY TO FILL:</b>	ICHD and HHS
<b>REPORT TO:</b>	GAACS Manager
<b>REPORTS TO YOU:</b>	Unit Leaders (e.g. Communications, Supply, Support), if any
<b>ACTIVATION:</b>	
	Coordinate with partners on GAACS activation procedures
	Identify what medical resources are necessary
	Identify what non-medical resources are necessary
	Request necessary resources
	Follow the site layout diagram created during site assessment, if available, including traffic and patient flow patterns
	Establish secure area for medical supply cache
	Assign additional positions as needed
<b>OPERATIONS:</b>	
	Manage inventory of medical and non-medical supplies and equipment
	Distribute supplies as requested by Operations
	Coordinate with partners on GAACS logistics procedures and resource support
ICS Form 205	Ensure all sections can communicate with each other and GAACS Manager and Logistics Section Chief can communicate with EOC; provide radio training as needed; maintain inventory of equipment used
	Provide briefings, such as daily census, to GAACS Manager as needed
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Coordinate with partners on shelter demobilization
	Arrange for cleaning of non-disposable supplies and equipment, repack for transport and storage
	Ensure disposable medical supplies are disposed of properly as well as any other trash or biohazard waste
	Participate in a pre-inspection walk-through to ensure facility is in original condition
ICS Form 224	Complete performance evaluations for direct reporting staff following NIMS guidelines

<b>JOB ACTION SHEET</b>	<b>PLANNING SECTION CHIEF</b>
<b>FUNCTION:</b>	Document the GAACS, especially patient tracking, oversee and assign personnel, and support GAACS demobilization
<b>AGENCY TO FILL:</b>	ICHD
<b>REPORT TO:</b>	GAACS Manager
<b>REPORTS TO YOU:</b>	Unit Leaders (e.g. Documentation), if any
<b>ACTIVATION:</b>	
ICS Form 211	Coordinate with partners on GAACS documentation procedures
	Follow ARC sign-in and out procedures for all staff assigned to GAACS
	Assign personnel to support GAACS operations, logistics, finance, and planning as needed; provide orientation for new arrivals
	Assist GAACS Manager to prepare an Incident Action Plan
	Track needs for when the GAACS is demobilized
	Assign additional positions as needed
<b>OPERATIONS:</b>	
	Continue tracking needs for when the GAACS is demobilized
	Document patient arrivals in collaboration with registration process
	Document patient dispositions in collaboration with Patient Care Unit Leader
	Complete and communicate Patient Tracking Form to GAACS Manager and OA EOC and ICHD DOC
	Provide situation reports to GAACS Manager
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Ensure all paperwork is completed, especially patient care and dispositions
	Have all GAACS staff check-out and report any injuries or other issues needing follow-up
	Return all borrowed or rented equipment and unused supplies; reconcile mutual aid resources
	Participate in a pre-inspection walk-through to ensure facility is in original condition
	Schedule/Complete a final walk-through with facility representative; complete procedures and sign-off for transferring facility back to owner/representative
ICS Form 224	Complete performance evaluations for direct reporting staff following NIMS guidelines
	Ensure all paperwork is completed and turned over to OA EOC and ICHD DOC for storage

<b>JOB ACTION SHEET</b>	<b>FINANCE SECTION CHIEF</b>
<b>FUNCTION:</b>	Track GAACS staff time and resource requests needing payment
<b>AGENCY TO FILL:</b>	
<b>REPORT TO:</b>	GAACS Manager
<b>REPORTS TO YOU:</b>	Unit Leaders, if any
<b>ACTIVATION:</b>	
ICS Form 211	Coordinate with partners on shelter financial procedures
	Follow procedures for tracking staff time on-site
	Approve purchases and coordinate payments for resource requests following procedures
	Assign additional positions as needed
<b>OPERATIONS:</b>	
	Track staff time on-site
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Ensure staff time is reported to the appropriate agency for reimbursement, if available
	Identify billing and/or cost recovery opportunities for care provided
	Approve work necessary to return GAACS location back to pre-incident condition or better
	Turnover GAACS financial paperwork to county financial services
ICS Form 224	Complete performance evaluations for direct reporting staff, if any, following NIMS guidelines

<b>JOB ACTION SHEET</b>	<b>MEDICAL OPERATIONS GROUP SUPERVISOR</b>
<b>FUNCTION:</b>	Manage medical operations
<b>AGENCY TO FILL:</b>	ICHHD
<b>QUALIFICATIONS:</b>	Licensed Registered Nurse or higher
<b>REPORT TO:</b>	Operations Section Chief
<b>REPORTS TO YOU:</b>	Patient Care Unit Leader
	Mental Health Unit Leader
	Pharmacy Unit Leader
	Other positions, as needed
<b>ACTIVATION:</b>	
	Identify medical operations staffing needs and coordinate staffing schedule with Operations Section Chief with support from the EOC Human Resources Branch, Medical/Health Branch, and ICHD DOC
	Assign Patient Care Unit Leader to coordinate medical needs of GAACS patients
	Assign Mental Health Unit Leader to coordinate behavioral health needs for patients and stress counseling for staff
	Assign Pharmacy Unit Leader to coordinate medication requests, tracking, and dispensing
	Assign additional positions as needed
	Identify and request medical supplies and equipment to meet medical operations' responsibilities
<b>OPERATIONS:</b>	
ICS Form 215B	Identify resources, including staffing, to meet on-going medical operations service demand
	Ensure staff know infection control procedures and receive PPE, as available
	Coordinate with OA EOC Medical/Health Branch and ICHD DOC
	Provide briefings, such as daily census, to Operations Section Chief as needed
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Ensure all patients are discharged to the most medically-appropriate destination
	Coordinate with Logistics Section Chief for return of durable medical equipment and proper disposal of biohazard waste
ICS Form 224	Complete performance evaluations for direct reporting staff following NIMS guidelines
	Ensure all paperwork is completed and turned in to the Planning Section Chief

<b>JOB ACTION SHEET</b>	<b>PATIENT CARE UNIT LEADER</b>
<b>FUNCTION:</b>	Coordinate medical needs of GAACS patients
<b>AGENCY TO FILL:</b>	ICHD
<b>QUALIFICATIONS:</b>	Licensed Registered Nurse or higher
<b>REPORT TO:</b>	Medical Operations Group Supervisor
<b>REPORTS TO YOU:</b>	Physicians, Nurses, Care Extenders, Phlebotomists, Respiratory Therapists, other licensed HCW's
	Team Leaders, if any
<b>ACTIVATION:</b>	
	Identify patient care area following site layout diagram created during site assessment, if available
	Coordinate staffing request with Medical Operations Group Supervisor as needed to support patient care operations
	Provide necessary criteria to aid the EOC HR Branch in confirming staff requested are qualified for positions needed
	Assign additional positions, such as team leaders as needed
	Identify and request medical supplies and equipment to meet medical operations' responsibilities in coordination with Medical Operations Group Supervisor
<b>OPERATIONS:</b>	
	Ensure delivery of healthcare to GAACS patients
	Develop patient care teams as necessary to provide optimal patient care with resources available
	Coordinate with ICHD DOC and OA EOC on medical operations
ICS Form 215B	Coordinate resources required, including staffing, to meet on-going medical operations service demand with the Medical Operations Group Supervisor
	Provide necessary updates for the briefing reports prepared by the Medical Operations Group Supervisor
	Manage a "turn-over" briefing at each change in staffing
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Ensure all patients are discharged to the most medically-appropriate destination in cooperation with the Medical Operations Group Supervisor
	Coordinate with Logistics Section Chief for return of durable medical equipment and proper disposal of biohazard waste
	Coordinate with Patient Record Unit Leader to ensure all patient medical charting is completed and delivered to ICHD for storage
ICS Form 224	Complete performance evaluations for direct reporting staff following NIMS guidelines
	Ensure all paperwork is completed and turned in to the Planning Section Chief



<b>JOB ACTION SHEET</b>	<b>MENTAL HEALTH UNIT LEADER</b>
<b>FUNCTION:</b>	Coordinate behavioral health needs for patients and stress counseling for staff
<b>AGENCY TO FILL:</b>	MH/HHS
<b>REPORT TO:</b>	Medical Operations Group Supervisor
<b>REPORTS TO YOU:</b>	Mental Health Workers, Social Workers, Clergy/Religious Volunteers
	Team Leaders, if any
<b>ACTIVATION:</b>	
	Identify mental healthcare area, preferably private, following site layout diagram created during site assessment, if available
	Coordinate staffing request with Medical Operations Group Supervisor as needed to support mental health operations
	Provide necessary criteria to aid the EOC HR Branch in confirming staff requested are qualified for positions needed
	Assign additional positions, such as team leaders as needed
	Identify and request supplies and equipment for any special needs mental health patients in coordination with Medical Operations Group Supervisor
<b>OPERATIONS:</b>	
	Ensure delivery of healthcare to GAACS patients
	Develop optimal mental health services with resources available; this may include peer-based and group counseling
	Coordinate with ICHD DOC on mental health needs as necessary
ICS Form 215B	Coordinate resources required, including staffing, to meet ongoing mental health needs with the Medical Operations Group Supervisor
	Provide necessary updates for the briefing reports prepared by the Medical Operations Group Supervisor
	Manage a "turn-over" briefing at each change in staffing
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Ensure all patients are discharged to the most appropriate destination in cooperation with the Medical Operations Group Supervisor
	Plan CISM gatherings for all staff
	Coordinate with Logistics Section Chief for return of supplies and equipment
	Coordinate with Patient Record Unit Leader to ensure all mental health patient charting is completed and delivered to ICHD for storage
ICS Form 224	Complete performance evaluations for direct reporting staff following NIMS guidelines
	Ensure all paperwork is completed and turned in to the Planning Section Chief

<b>JOB ACTION SHEET</b>	<b>PHARMACY UNIT LEADER</b>
<b>FUNCTION:</b>	Coordinate medication requests, tracking, and dispensing
<b>AGENCY TO FILL:</b>	ICHHD
<b>QUALIFICATIONS:</b>	Pharmacy Technician or RN (if pharmacy tech not available)
<b>REPORT TO:</b>	Medical Operations Group Supervisor
<b>REPORTS TO YOU:</b>	Assistants, if any
<b>ACTIVATION:</b>	
	Identify secure, pharmacy area following site layout diagram created during site assessment, if available
	Coordinate pharmacy security needs with Security
	Identify and request pharmaceutical needs in coordination with Medical Operations Group Supervisor
	Request necessary climate control equipment (e.g. refrigerator) to store temperature-sensitive medications
	Inventory medications
<b>OPERATIONS:</b>	
	Ensure GAACS patient medication requests are filled in a timely manner
	Track medication inventory
	Coordinate on-going medication ordering with the Medical Operations Group Supervisor
	Coordinate prescription needs with on-site/on-call physician or physician extender
	Ensure on-going security of pharmaceutical with Security
	Provide necessary updates for the briefing reports prepared by the Medical Operations Group Supervisor
	Provide a "turn-over" briefing at each change in staffing
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Ensure all unused medications are returned
	Coordinate with Logistics Section Chief for return of any equipment
	Coordinate with Patient Record Unit Leader to ensure all patient medication documentation is completed and delivered to ICHD for storage
ICS Form 224	Complete performance evaluations for direct reporting staff, if any, following NIMS guidelines
	Ensure all paperwork is completed and turned in to the Planning Section Chief

<b>JOB ACTION SHEET</b>	<b>NON-MEDICAL OPERATIONS GROUP SUPERVISOR</b>
<b>FUNCTION:</b>	Manage non-medical operations
<b>AGENCY TO FILL:</b>	ICHD/HHS/OA EOC
<b>REPORT TO:</b>	Operations Section Chief
<b>REPORTS TO YOU:</b>	Patient Record Unit Leader
	Facilities Unit Leader
	Food Services Unit Leader
	Other positions, as needed
<b>ACTIVATION:</b>	
	Identify non-medical operations staffing needs and coordinate staffing schedule with Operations Section Chief with support from the EOC Human Resources Branch
	Assign Patient Record Unit Leader to coordinate medical records of GAACS patients
	Assign Facilities Unit Leader to coordinate facility needs and liaison with facility representative as needed
	Assign Food Services Unit Leader to coordinate meal preparation
	Assign additional positions as needed
	Identify and request non-medical supplies and equipment to meet non-medical operations' responsibilities
<b>OPERATIONS:</b>	
ICS Form 215B	Identify resources, including staffing, to meet on-going non-medical operations service demand
	Coordinate with partners on non-medical operations
	Provide briefings to Operations Section Chief as needed
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Ensure all patient records are securely transferred to ICHD for storage
	Coordinate with Logistics Section Chief for return of durable equipment and proper disposal of waste
	Support Facilities Unit Leader in returning the facility back to original condition before transferring control back to facility owner/representative
ICS Form 224	Complete performance evaluations for direct reporting staff following NIMS guidelines
	Ensure all paperwork is completed and turned in to the Planning Section Chief

<b>JOB ACTION SHEET</b>	<b>PATIENT RECORD UNIT LEADER</b>
<b>FUNCTION:</b>	Coordinate medical records of GAACS patients
<b>AGENCY TO FILL:</b>	ICHHD/HHS
<b>REPORT TO:</b>	Non-Medical Operations Group Supervisor
<b>REPORTS TO YOU:</b>	Assistants, if any
<b>ACTIVATION:</b>	
	Identify secure area to maintain patient records
	Identify and request record-keeping supplies and equipment as needed
<b>OPERATIONS:</b>	
	Coordinate on-going patient record keeping
	Provide copies of patient records for patients being transferred to another facility
	Provide updates to Non-Medical Operations Group Supervisor as needed
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Coordinate with Patient Care, Mental Health, and Pharmacy Unit Leaders to ensure all patient medication documentation is completed and delivered to ICHD for storage
ICS Form 224	Complete performance evaluations for direct reporting staff, if any, following NIMS guidelines
	Ensure all paperwork is completed and turned in to the Planning Section Chief

<b>JOB ACTION SHEET</b>	<b>FACILITIES UNIT LEADER</b>
<b>FUNCTION:</b>	Coordinate facility needs and liaison with facility representative as needed
<b>AGENCY TO FILL:</b>	ICHD/HHS/OA EOC
<b>REPORT TO:</b>	Non-Medical Operations Group Supervisor
<b>REPORTS TO YOU:</b>	Assistants, if any
<b>ACTIVATION:</b>	
	Review site layout diagram created during site assessment, if available
	Participate in initial facility walk-through
	Coordinate any layout changes as identified during the walk-through of the GAACS location
	Operate all facility mechanical systems with facility representative to ensure proper operation
	Identify and coordinate facility repairs and cleaning as needed
	Request necessary resources, including staffing, supplies and equipment as needed
<b>OPERATIONS:</b>	
	Develop on-going cleaning schedule
	Document facility damage and repairs
	Coordinate repairs and ensure they are handled timely
	Coordinate with facility representative as necessary
	Provide updates to Non-Medical Operations Group Supervisor as needed
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Participate in initial walk-through, develop action items necessary to return facility original condition or better
	Participate in final walk-through with facility representative
	Provide facility representative documentation of any repairs
ICS Form 224	Complete performance evaluations for direct reporting staff, if any, following NIMS guidelines
	Ensure all paperwork is completed and turned in to the Planning Section Chief

<b>JOB ACTION SHEET</b>	<b>FOOD SERVICES UNIT LEADER</b>
<b>FUNCTION:</b>	Coordinate meal preparation
<b>AGENCY TO FILL:</b>	ICHD/HHS/EH/OA EOC
<b>REPORT TO:</b>	Non-Medical Operations Group Supervisor
<b>REPORTS TO YOU:</b>	Assistants, if any
<b>ACTIVATION:</b>	
	Inspect cooking facilities at GAACS location, test all equipment
	Identify additional cooking supplies and equipment necessary
	Coordinate food requests
	Request staffing resources as needed
<b>OPERATIONS:</b>	
	Provide up to three hot meals daily for GAACS patients and staff, as feasible
	Ensure adequate staffing, including food-handling certifications as needed
	Establish on-going food delivery service
	Provide updates to Non-Medical Operations Group Supervisor as needed
ICS Form 214	Maintain Activity Log
<b>DEMOBILIZATION:</b>	
	Properly dispose of or return unused food products
	Ensure cooking facilities are in original condition or better
	Coordinate any repairs with Facilities Unit Leader
ICS Form 224	Complete performance evaluations for direct reporting staff, if any, following NIMS guidelines
	Ensure all paperwork is completed and turned in to the Planning Section Chief

## **Appendix F:** **Staff Support and Resilience**

(Modified from the CDPH GAACS Operational Tools Manual)

The following are issues that the GAACS Planning Team should consider for its staffing plans and strategies:

1. Some staff will not be able to report to work because they or their loved ones may have been directly involved in the incident.
  2. Some staff will refuse to report to work because of concerns about their own and their family members' safety and health. In the case of a biological incident, they may have fear of contracting the disease or bringing the disease home.
  3. Many staff will have concerns about childcare. The normal childcare provider may not be able to provide these services in an incident. These same concerns apply to staff that may be caring for their parents or others. There should be options available for childcare/eldercare so that staff is free to report to work.
  4. Some staff may have concerns about the shelter and care of their pets. Consideration should be made for pet care during healthcare surge. Designated kennel or housing provisions should be considered for GAACS staff members.
  5. The GAACS should consider the provision of rooms for staff for rest and sleep and personal hygiene needs (blankets, pillows, sheets, showers, towels, soap, shampoo, etc.). In the case of a biological incident, there may be implementation of work quarantine in addition to staff working longer shifts or not being able to go home. The GAACS planning team and management may also want to consider what is available in local hotels, churches and other such organizations for sleeping accommodations and showers.
  6. The GAACS should consider areas for staff to eat and have refreshments.
  7. Staff may be away from home for extended shifts and need to communicate with family members and other loved ones. The GAACS should consider the availability of telephones to call home and computer access for e-mail.
  8. For staff working extended shifts or not able to go home, there may be the need for laundry services or the provision of scrubs. Staff members should also consider having an "emergency kit" with personal items such as underwear, socks, toiletries, a supply of medications, etc. readily available.
  9. Staff should have a "family plan" so that everyone in the family knows what will need to happen and who is responsible for various duties if a family member who works at the GAACS needs to work longer shifts or is quarantined at the healthcare facility.
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<sup>1</sup> State of Wisconsin. Guidelines for Managing Inpatient and Outpatient Surge Capacity, Recommendations of the State Expert Panel on Inpatient and Outpatient Surge Capacity. November 2005.

10. The GAACS should also give consideration for back-up of essential services such as food services, laundry, housekeeping and other services, especially if these services are out-sourced and the incident affects the ability of the contractor to continue to provide these services and if the surge of patients and visitors overwhelms the capacity of these contractors.
11. The GAACS should consider a back-up system for notifying staff should the telephone lines be down or the circuits busy.
12. The GAACS should consider pre-identifying staff persons who will manage and supervise volunteers and in which areas or departments the healthcare facility is likely to use volunteers.
13. Job descriptions should be available for all positions so that staff can receive “just-in-time” training by reading the job descriptions.

Based on these recommendations, the following support provisions should be considered by the GAACS Planning Team:

- Behavioral/mental care for staff
  - Behavioral/mental care for dependents
  - Dependent care (children and adults)
  - Meal provisions for 3-7 days
  - Water for 3-7 days
  - Pet care
  - Designated rooms for rest/sleeping
  - Designated restrooms
  - Personal hygiene provisions (blankets, pillows, sheets, showers, towels, soap, shampoo, etc.)
  - Designated eating areas
  - E-mail/telephone access to communicate with family
  - Clothing or laundry services for staff and dependents
  - Emergency kits (personal items such as underwear, socks, toiletries, a supply of medications, etc.), staff store at the place of work
  - Family emergency plan
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# GAACS Policy for Workforce Resilience during Disaster

## Purpose

This policy offers guidelines for dealing with needs and training to optimize workforce resilience in the event of a disaster. A GAACS will adopt a modified version of this policy based on the event specific staffing. It is important that the intent of this policy is carried out when staffing a GAACS in order to provide proper support, protection and training to staff and volunteers. The term “worker” is used to refer to facility personnel during a time of healthcare surge, which could consist of paid employees or volunteers.

## Rationale

The response to a disaster will pose substantial physical, personal, social and emotional challenges to healthcare providers. During an influenza pandemic, however, the occupational stresses experienced by healthcare providers are likely to differ from those faced by workers in the aftermath of other disasters. Globally and nationally, a pandemic might last for more than a year, while disease outbreaks in local communities may last 5 to 10 weeks. Workers and their families will be at personal risk for as long as a disaster continues in their community. Therefore, special planning is needed to help employees maximize personal resilience and professional performance.

## **Worker Needs**

### Physical:

- Rest areas for each department are located \_\_ (list departments and areas) \_\_.
- Provisions for showers are \_\_\_\_\_.
- Food will be served or provided \_\_ (where and how often) \_\_.
- Healthcare in case of illness or injury will be provided \_\_ (where and when) \_\_.
- Transportation to and from work will be provided \_\_ (situation and contact) \_\_.

Additional Considerations for Pandemic Influenza: Describe what will happen if worker too sick to be at work.

### Personal:

- Telephones for personal calls are located \_\_ (include rules) \_\_.
  - Televisions, radios and internet access for keeping apprised of events are located \_\_\_\_\_ (include rules) \_\_\_\_\_.
-

- Childcare is provided at \_\_\_\_\_.
- Care for disabled or elderly family members is provided at \_\_\_\_\_.
- Pet care is provided at \_\_\_\_\_.

Additional Considerations for Pandemic Influenza: Guide sheets are provided for workers to deal with sickness in their homes.

Emotional:

- Management will provide all workers with regular updates of status of disaster in community and response activities within the organization. Supervisors will brief workers at least once per shift.
- Managers and supervisors will be alert to recognize worker distress.
- Management will provide a stress control team to help workers deal with stress.
- Chaplain or other appropriate religious services will be offered.

Additional Considerations for Pandemic: Stress control teams will be trained in infection control precautions.

## **Training**

There are four main categories of training to be addressed in preparation for response to a disaster: training for all workers, department-specific training, training for ad hoc counselors and information packets for handout.

1. All employees will receive training in the following:
    - a. Stressors related to pandemic influenza
    - b. Signs of distress
    - c. Traumatic grief
    - d. Psychosocial aspects related to management of mass fatalities
    - e. Stress management and coping strategies
    - f. Strategies for building and sustaining personal resilience
    - g. Behavioral and psychological support resources
    - h. Strategies for helping children and families in times of crisis
    - i. Strategies for working with highly agitated patients
  2. Department-specific training will be developed by department managers as appropriate to the type of services provided.
  3. If there are not enough behavioral health specialists available for response to staff needs in a disaster, (name) will provide basic counseling training to selected individuals to assist in meeting worker emotional needs.
-

4. (name) has developed information packages that will be available for distribution to workers and their families.

### **Deployed Workers**

In the event of a major disaster, especially one that lasts for weeks, workers may be deployed from their normal work site to a GAACS or even to assist at other locations in the community. Workers may be requested to use transferable skills to do work that is not in their current job descriptions or scopes of practice. For instance, a nurse may be asked to work in the laboratory to assist with drawing blood.

#### **Deployment within the GAACS:**

- Pre-deployment, workers will be briefed on stress management, coping skills and resilience.
- Supervisors will develop job description (just-in-time) training sheets that outline tasks for a borrowed worker or volunteer.
- Supervisors will ascertain competency of borrowed workers to do assigned tasks. Volunteers will be trained in the specific areas they are positioned in so adequate education is provided.
- All deployed workers have a responsibility to advise the supervisor when they have been assigned a task for which they have no training or skills. Supervisors should train the employee to the task, if appropriate, or assign the task to someone else.
- A buddy system should be established to help employees support each other.
- Workers will be trained on self-help activities.

#### **Deployment outside of the Alternate Care Site:**

Local or state government may require assistance and request that healthcare workers be deployed to other sites.       (contact person)       is responsible for coordinating all external deployment of employees.

- (Contact person) will coordinate with the Incident Command System commander to determine how many workers can be spared, and then will send a call for volunteers for deployment.
  - Pre-deployment, workers will be briefed on:
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- Status of community or agency which they are going
- Work that is expected of them
- Stress management, coping skills and resilience
- Self-help activities
- Approximate time they will be needed

## **Dependent Care**

In the event of an extended emergency response or civil disturbance where staff will remain at a GAACS for long periods, dependents, including children, elderly and disabled persons may be brought with the staff member and housed in the designated dependent care area. If no responsible person is available at home to provide care, these dependents will be housed in the dependent care area for the duration of the disturbance or until other arrangements are made. This procedure outlines the process by which a GAACS can provide for sheltering and feeding staff and volunteer dependents during a disaster or other emergency situation.

Major procedure activities include:

- Mobilization
- Safety requirements
- Staff
- Supplies
- Food
- Registration
- Medications
- Psychological support
- Documentation
- Checking out of dependent care area

### **Responsibilities:**

A dependent care unit leader should be assigned and be responsible for coordinating the Dependent Care Area activities.

### **Procedure:**

- A. Mobilization – Upon request by the operations chief or the GAACS Manager, the dependent care unit leader shall mobilize sufficient staff and resources to activate a dependent care area.
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B. Safety Requirements – Prior to activation of the dependent care area, the dependent care unit leader, with assistance from the safety and security officer, shall conduct a safety inspection of the area to remove any unsafe objects and to secure any equipment that could pose a safety hazard.

C. Staff

1. Staff and volunteers shall sign in and out when reporting to assist.
2. Staff shall monitor the area continuously for safety issues and to respond to dependents' needs.
3. If additional assistance is needed, staff will communicate those needs through the command structure.

D. Supplies – Dependent care area supplies shall be requested through the materials supply unit leader.

E. Food – Meals and snacks for dependents shall be arranged by the nutritional supply unit leader

F. Registration

1. Post signs indicating "Dependent Care Area – Responsible Adult Must Register Dependent."

2. Assign each family a family number.

3. All dependents shall be assigned a dependent number and shall register using the dependent care registration form. Establish the dependent number by adding a letter (A, B, C, D, etc.) to the family number for each dependent in a given family.

4. Apply an armband to each dependent upon arrival with name and department number.

5. Take a picture of each dependent with person responsible for them, and attach to dependent care registration form.

6. Special sign-in and sign-out procedures shall be provided for minor or incompetent dependents.

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- i. Implement a positive identification system for all children younger than 10 years of age.
  - ii. Provide matching identification for retrieving guardian to show upon release of child.
7. Tag medications, bottles, food and other belongings with dependent's name and dependent number and store appropriately.
  8. Assign each dependent to a dependent care provider and record on form.

#### G. Medications

1. Ensure that dependents taking medications have a supply to last during the estimated length of stay.
2. Arrange for a licensed nurse to dispense medications as appropriate.

#### H. Psychological Support – Arrange for the psychological support of dependents in the GAACS, as well as respond to specific incidents or individual needs.

#### I. Documentation

1. Document all care provided to individual dependents, such as medications, psychological services, toileting or dressing.
2. Document all other actions and decisions and report routinely to the dependent care unit leader.

#### J. Checking Out of Dependent Care Area

1. When dependent leaves area, compare picture with dependent and responsible person.
2. Check identification, verify name and obtain signature of responsible person picking up dependent.
3. Retrieve and send all medications and personal items with dependent.
4. Collect arm-bands.

### **Tracking Form for dependent Care**

The GAACS Tracking Form for Dependent Care allows GAACSs to track the individuals for whom they provide dependent care during a healthcare surge and to monitor the healthcare services provided to individuals while they are under dependent care.

<b>Check In Date</b>		<b>Time</b>	
<b>Check Out Date</b>		<b>Time</b>	
<b>Staff Name</b>	<b>Relationship to Dependent</b>	<b>Family Number</b>	
<b>Dependent Name</b>	<b>Age</b>	<b>Dependent Number</b>	
<b>Staff's Department</b>		<b>Extension</b>	
<b>Other Family, Relative, etc we can call in an emergency:</b>			

Name		Phone Number	
Name		Phone Number	
Special Needs Allergies  Food  Toileting  Medical Conditions			
Medications you brought:			
Name		Dose	Times to be given
Name		Dose	Times to be given
People who may pick up dependent			
Name		Relationship	
Name		Relationship	
Name		Relationship	
For Dependent Care Area Staff Only:			
<ul style="list-style-type: none"> <li>• Apply armband with name and registration number on each dependent.</li> <li>• Tag all medications, bottles, food and other belongings and store appropriately.</li> <li>• Photograph dependent with person responsible and attach photo to this form.</li> <li>• Use reverse side of this form to document care provided to this dependent.</li> <li>• Retain forms in dependent care area until GAACS is closed, then route to ICHD.</li> </ul>			
Dependent Care Providers Assigned			
Name of person picking up dependent			
Signature of person picking up dependent			
Dependent Name		Dependent Number	
Date/ Time	Type of Care Given		Notes



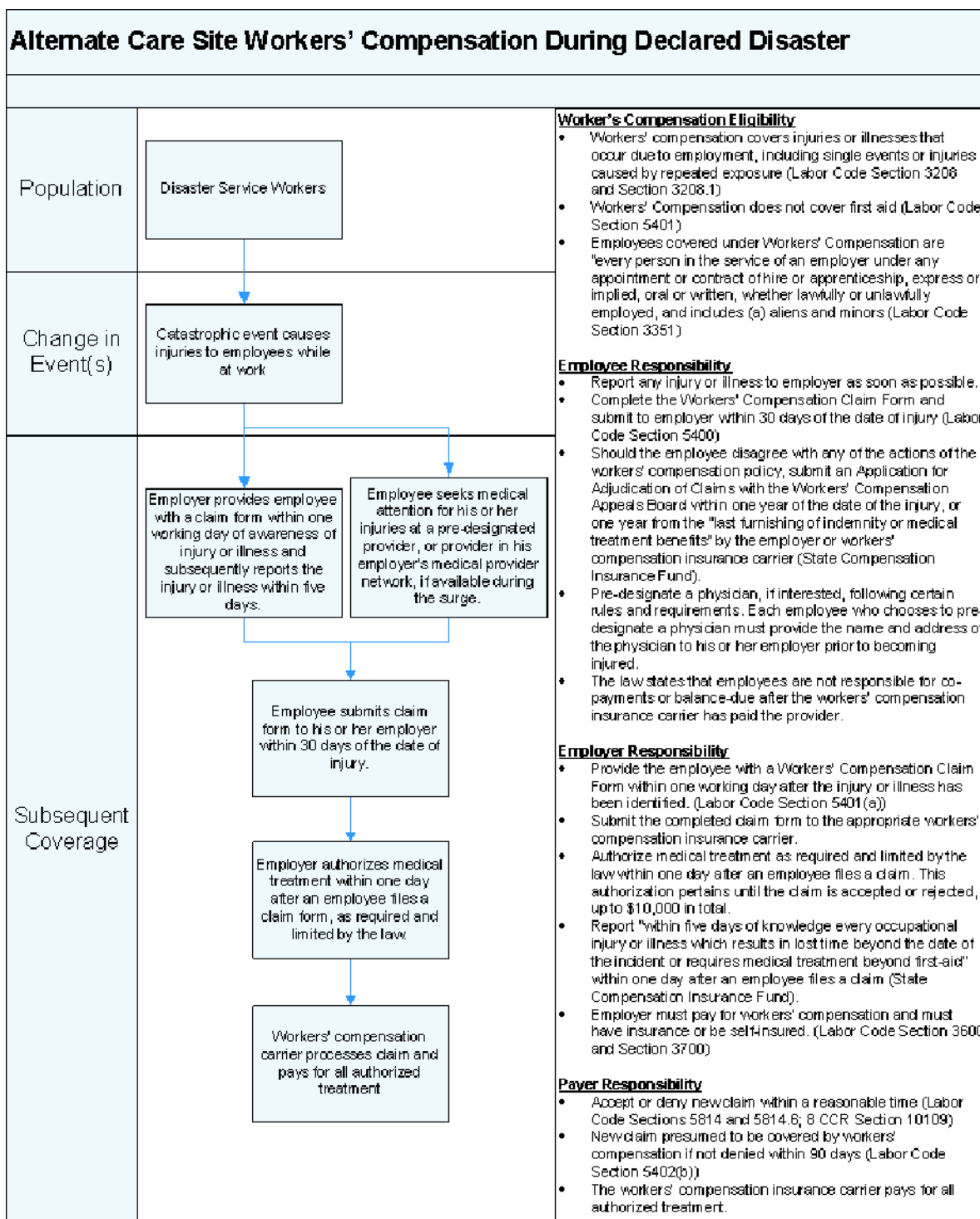


**Appendix G:**  
**Workers Compensation**  
(from the CDPH GAACS Operational Tools Manual)

This appendix includes a process flow for depicting how workers' compensation may play a role during a healthcare surge for disaster service workers, including rules and requirements for employees, employers and payers. It also includes a sample of the State of California workers' compensation claim form (DWC1) that employees injured at work can complete and submit during a healthcare surge.

GAACSs can refer to these process flows for the rules and requirements that must be followed to submit claims for workers' compensation. Disaster service workers can use the sample workers' compensation claim form to document and submit their injuries for processing and payment.

# GAACS Workers' Compensation During Declared Disaster



# State of California Workers Compensation Claim Form for Disaster Service Workers

State of California  
Department of Industrial Relations  
DIVISION OF WORKERS' COMPENSATION



Estado de California  
Departamento de Relaciones Industriales  
DIVISION DE COMPENSACIÓN AL TRABAJADOR

## WORKERS' COMPENSATION CLAIM FORM (DWC 1)

## PETITION DEL EMPLEADO PARA DE COMPENSACIÓN DEL TRABAJADOR (DWC 1)

**Employee:** Complete the "Employee" section and give the form to your employer. Keep a copy and mark it "Employee's Temporary Receipt" until you receive the signed and dated copy from your employer. You may call the Division of Workers' Compensation and hear recorded information at (800) 736-7401. An explanation of workers' compensation benefits is included as the cover sheet of this form.

**Empleado:** Complete la sección "Empleado" y entregue la forma a su empleador. Quédese con la copia designada "Recibo Temporal del Empleado" hasta que Ud. reciba la copia firmada y fechada de su empleador. Ud. puede llamar a la División de Compensación al Trabajador al (800) 736-7401 para oír información gravada. En la hoja cubierta de esta forma esta la explicación de los beneficios de compensación al trabajador.

You should also have received a pamphlet from your employer describing workers' compensation benefits and the procedures to obtain them.

Ud. también debería haber recibido de su empleador un folleto describiendo los beneficios de compensación al trabajador lesionado y los procedimientos para obtenerlos.

**Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of a felony.**

**Toda aquella persona que a propósito haga o cause que se produzca cualquier declaración o representación material falsa o fraudulenta con el fin de obtener o negar beneficios o pagos de compensación a trabajadores lesionados es culpable de un crimen mayor "felonía".**

**Employee—complete this section and see note above. Empleado—complete esta sección y note la notación arriba.**

1. Name. *Nombre.* \_\_\_\_\_ Today's Date. *Fecha de Hoy.* \_\_\_\_\_
2. Home Address. *Dirección Residencial.* \_\_\_\_\_
3. City. *Ciudad.* \_\_\_\_\_ State. *Estado.* \_\_\_\_\_ Zip. *Código Postal.* \_\_\_\_\_
4. Date of Injury. *Fecha de la lesión (accidente).* \_\_\_\_\_ Time of Injury. *Hora en que ocurrió.* \_\_\_\_\_ a.m. \_\_\_\_\_ p.m.
5. Address and description of where injury happened. *Dirección/lugar dónde ocurrió el accidente.* \_\_\_\_\_
6. Describe injury and part of body affected. *Describe la lesión y parte del cuerpo afectada.* \_\_\_\_\_
7. Social Security Number. *Número de Seguro Social del Empleado.* \_\_\_\_\_
8. Signature of employee. *Firma del empleado.* \_\_\_\_\_

**Employer—complete this section and see note below. Empleador—complete esta sección y note la notación abajo.**

9. Name of employer. *Nombre del empleador.* \_\_\_\_\_
10. Address. *Dirección.* \_\_\_\_\_
11. Date employer first knew of injury. *Fecha en que el empleador supo por primera vez de la lesión o accidente.* \_\_\_\_\_
12. Date claim form was provided to employee. *Fecha en que se le entregó al empleado la petición.* \_\_\_\_\_
13. Date employer received claim form. *Fecha en que el empleado devolvió la petición al empleador.* \_\_\_\_\_
14. Name and address of insurance carrier or adjusting agency. *Nombre y dirección de la compañía de seguros o agencia administradora de seguros.* \_\_\_\_\_
15. Insurance Policy Number. *El número de la póliza de Seguro.* \_\_\_\_\_
16. Signature of employer representative. *Firma del representante del empleador.* \_\_\_\_\_
17. Title. *Título.* \_\_\_\_\_ 18. Telephone. *Teléfono.* \_\_\_\_\_

**Employer:** You are required to date this form and provide copies to your insurer or claims administrator and to the employee, dependent or representative who filed the claim within one working day of receipt of the form from the employee.

**Empleador:** Se requiere que Ud. feche esta forma y que provée copias a su compañía de seguros, administrador de reclamos, o dependiente/representante de reclamos y al empleado que hayan presentado esta petición dentro del plazo de un día hábil desde el momento de haber sido recibida la forma del empleado.

**SIGNING THIS FORM IS NOT AN ADMISSION OF LIABILITY**

**EL FIRMAR ESTA FORMA NO SIGNIFICA ADMISION DE RESPONSABILIDAD**

☐ Employer copy/Copia del Empleador

☐ Employee copy/Copia del Empleado

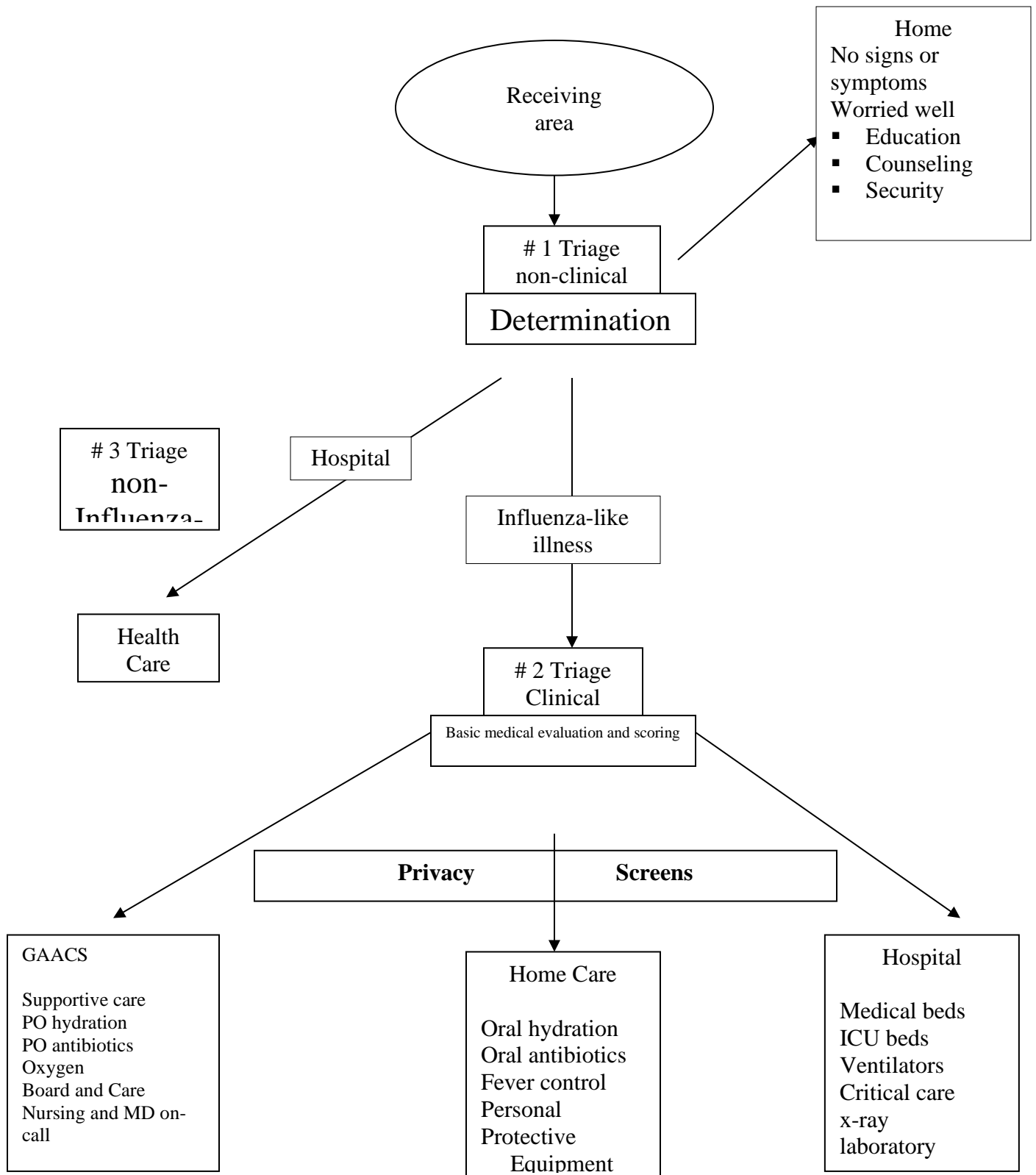
☐ Claims Administrator/Administrador de Reclamos

☐ Temporary Receipt/Recibo del Empleado

## **Appendix H:**

### **Pandemic Influenza Triage Flow Chart**

Inyo County (Oct 2008)



**Public Health ID #** \_\_\_\_\_

**Hospital ID #** \_\_\_\_\_

*Pandemic Influenza Case Record/Clinical Decision Guide*

Date/Time: \_\_\_\_\_ Language Spoken: English Spanish Other: \_\_\_\_\_

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

DOB: \_\_\_\_\_ M F Home Phone #: \_\_\_\_\_ Cell Phone # \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_

State: \_\_\_\_\_ Zip \_\_\_\_\_ County \_\_\_\_\_

If a minor, responsible party: \_\_\_\_\_

**SECONDARY ASSESSMENT (to determine co-morbid illness)**

Please review the following and check any which apply:

\_\_\_\_\_ I am pregnant.

\_\_\_\_\_ I have asthma and use medication.

\_\_\_\_\_ I have chronic lung disease and need oxygen or medications.

\_\_\_\_\_ I have chronic heart disease, such as congestive heart failure, or congenital heart disease.

\_\_\_\_\_ I have liver disease.

\_\_\_\_\_ I have kidney failure and need dialysis.

\_\_\_\_\_ I have a weakened immune system, due to underlying disease another illness or medications I take.

\_\_\_\_\_ I have a serious blood disorder.

\_\_\_\_\_ I have diabetes.

\_\_\_\_\_ I take medication to thin my blood.

\_\_\_\_\_ I take medication to lower my blood pressure.

\_\_\_\_\_ I have a neurological disorder affecting the muscles of breathing (spinal cord injury, muscular dystrophy, weakness, stiffness, cerebral palsy).

## For Staff Use Only

Time In \_\_\_\_\_

### **PRIMARY ASSESSMENT (Stage 1)**

Presenting Symptoms:

Fever Y N Date of Onset: \_\_\_\_\_

Cough or sore throat Y N Date of Onset: \_\_\_\_\_

Associated Symptoms (circle): muscle/joint pain, headache, chest pain, decreased fluid intake, vomiting

---

All other symptoms:

---

---

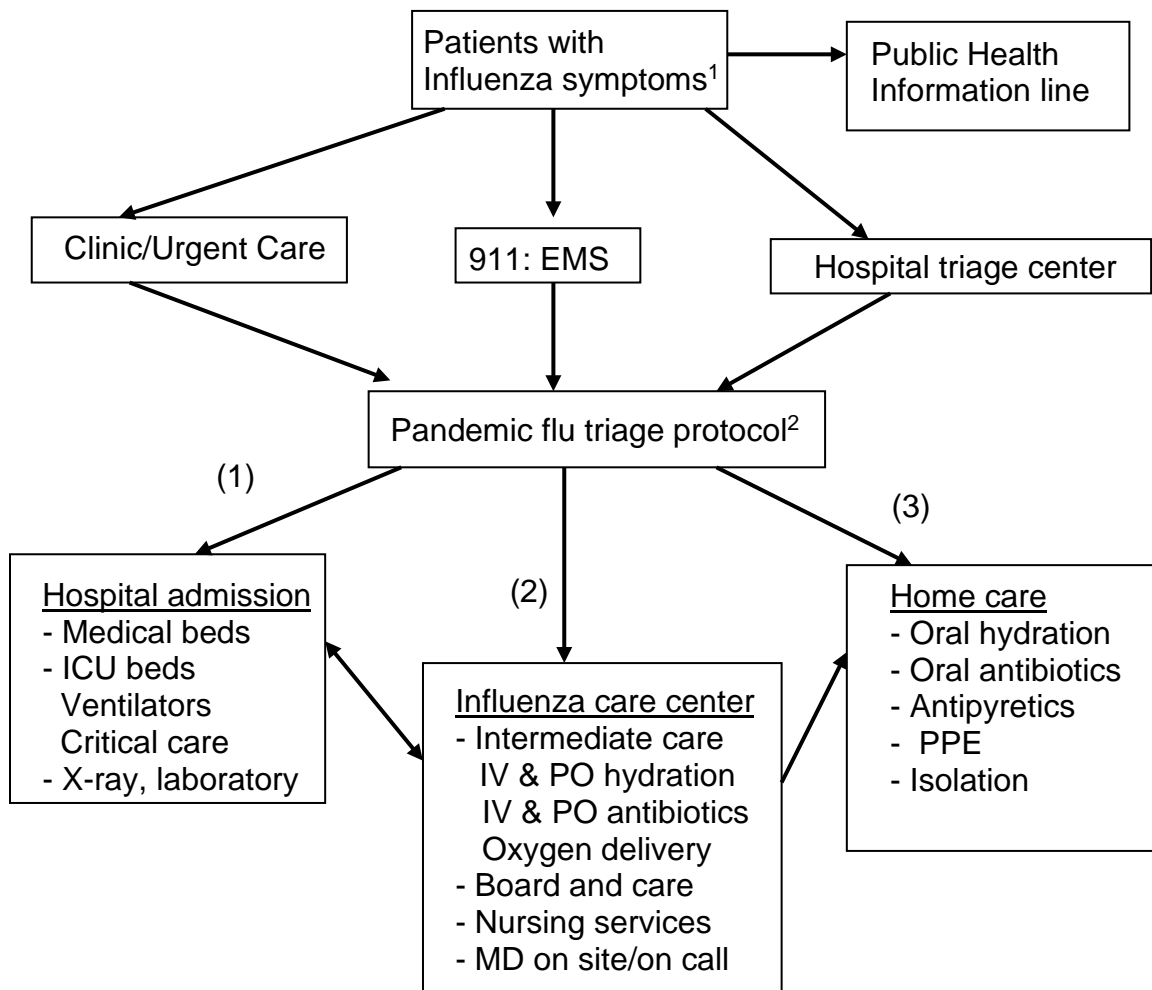
Disposition: _____	influenza-like illness – to Secondary Assessment
_____	all other symptoms – to healthcare system for further evaluation
_____	well – Home Care with Pandemic Flu handout

Date: \_\_\_\_\_ Interviewer Name: \_\_\_\_\_

## Appendix I:

### **Clinical Triage Guidelines During Pandemic Critical Resource Stage**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic, Tool #7)



#### Notes:

1. Influenza symptoms: High fever ( $T > 38$ ) plus sore throat, cough or shortness of breath. Other symptoms: weakness, malaise, myalgias, chills, headache, nasal congestion, and (sometimes) abdominal symptoms.
  2. Pandemic flu triage protocol must consider:  
Available resources: vital signs, examination, pulse oximetry  
Patient: wears respiratory mask on presentation
-



Personnel: respiratory and universal precautions

Evaluation: age, living conditions, functional status, sick contacts

Other comorbid medical conditions

A. Adults and children >10 years of age AND > 25 kg (55 pounds): modified pneumonia severity index (PSI) calculation

<u>Characteristic</u>	<u>Points assigned</u>
Highest risk age group(s) (to be determined)	+10
Significant co-morbid illness <sup>1</sup>	+10
Physical exam	
Altered mental status	+20
Respirations >30	+20
Systolic BP<90	+20
Pulse >125	+20
Room air pulse oximetry <92%	+20

(1) Admission to hospital: Score  $\geq$  50 or

- a. Toxic appearance or rapid decompensation (especially important in adolescents and in pregnant women)
- b. Significant hypoxia – O<sub>2</sub> saturation in room air < 88%

1 For purposes of these triage guidelines, significant co-morbid illness would include any of the following:

- Pregnancy
  - Asthma requiring daily use of medications, or symptomatic at presentation,
  - Chronic lung disease, requiring oxygen or medications, or symptomatic at presentation,
  - Hemodynamically significant congenital heart disease,
  - Heart failure,
  - HIV infection with CD4 count < 200,
  - Patients on systemic steroid therapy equivalent to prednisone  $\geq$ 15 mg/day for  $\geq$ 1 month,
  - Severe rheumatological or autoimmune diseases,
-

- Other immunocompromising conditions likely to result in life-threatening complications,
- Renal patients requiring dialysis,
- Cancer, currently on chemotherapy or radiation therapy,
- Severe anemia with hemoglobin concentration < 10 gm/dl,
- Hemoglobinopathies, such as sickle cell disease or thalassemia,
- Chronic neurological disorders affecting the muscles of respiration, such as spinal cord injuries, spastic quadriplegia, muscular dystrophy, etc.

(2) Admission to Influenza Care Center:<sup>2</sup>

- a. Score  $\geq 50$  and no hospital beds available, OR
- b. Score < 50 and needs closer monitoring and nursing care (for example, IV fluids, IV antibiotics, etc.), OR
- c. Score < 50 and unable to care for self or return if symptoms worsen.

(3) Discharge to home:

- a. Score  $\geq 50$  with poor prognosis and unlikely to benefit from hospitalization, or
- b. Score < 50 and able to care for self or has caregiver, and able to return if symptoms worsen.

B. Children under 10 yrs of age:

Indications for hospital admission include any of the following

- a. Fever and age < 3 months
- b. Significant tachypnea
- c. Hypoxia on pulse oximetry
- d. Chest retractions, cyanosis, intermittent apnea, nasal flaring
- e. Toxic appearance

<sup>2</sup> Persons with the following conditions cannot be accommodated at an Influenza Care Center (due to staffing ratios, equipment, or supply limitations), regardless of their score:

- Age < 10 yrs
- Weight > 300 lbs (ICC cot weight limit is 300 lbs)
- Asthma exacerbation or other condition requiring respiratory support
- Congenital heart disease on oxygen
- Unstable angina
- Pregnant with condition requiring hospital care or within one week of due date
- Cirrhosis with ascites
- Chronic renal failure on dialysis
- Acute immunosuppressing condition (acute leukemia, s/p bone marrow transplant, etc)
- Sickle cell disease
- HIV with CD4 < 200
- Mental status precluding care with minimal staffing (dementia, psychosis, delirium, suicidality, homicidality)
- Acute alcohol or drug withdrawal, or on methadone maintenance
- Severe mobility impairment (from neuromuscular disorder or otherwise)

## **Appendix J: Intake Assessment**

(from the SCCPHD APC: Medical Mass Care During An Influenza pandemic, Tool #8)

PATIENT INFORMATION		
Name:	Patient Tracking Number:	
Date/Time of Triage Assessment:		
HISTORY AND PHYSICAL EXAM		
<i>Characteristic</i>	<i>Points</i>	
<div style="display: flex; justify-content: space-between;"> <div> Age: </div> <div> Sex: </div> </div>		
<div style="display: flex;"> <div style="flex: 1;"> <i>Co-morbid conditions:</i>   <input type="checkbox"/> Pregnancy  <input type="checkbox"/> Asthma on daily meds  <input type="checkbox"/> Chronic Lung Disease on O<sub>2</sub>, meds or with Sx  <input type="checkbox"/> Congenital Heart Dz – hemodynamically sig  <input type="checkbox"/> Heart Failure  <input type="checkbox"/> HIV w/ CD4 &lt;200  <input type="checkbox"/> Systemic steroids equiv Prednisone ≥ 15mg/day - for 1 ≥ mos </div> <div style="flex: 1;"> <input type="checkbox"/> Severe rheum or auto-immune disease  <input type="checkbox"/> Life threatening immunocompromising condition  <input type="checkbox"/> Renal failure on dialysis  <input type="checkbox"/> Cancer, on chemo or radiation therapy  <input type="checkbox"/> Severe anemia (Hgb &lt; 10) </div> <div style="flex: 1;"> 10 pts for significant co-morbid condition   <input type="checkbox"/> Hemoglobinopathy (sickle cell or thalassemia)  <input type="checkbox"/> Chronic neuro disorder affecting muscles of respiration  <input type="checkbox"/> Other _____ </div> </div>		
General Appearance:		
Mental Status:	20 pts if altered mental status	
Blood Pressure:	20 pts if SBP < 90	
Pulse:	20 pts if HR > 125	
Respiratory Rate:	20 pts if RR > 30	
Pulse Oximetry:	20 pts if O <sub>2</sub> sat < 90%	
Other comments:		
<b>TOTAL</b>		
ASSESSMENT OF FUNCTION		
Able to care for self in home, or has caregiver at home?	Yes/No	
Able to get transportation back to ICC if condition worsens?	Yes/No	
ASSESSMENT OF MEDICAL NEEDS		
Needs IV fluids to maintain hydration?	Yes/No	
Needs IV antibiotics?	Yes/No	
OVERALL ASSESSMENT and DISPOSITION		
<input type="checkbox"/> <b>d/c to home</b> <input type="checkbox"/> <b>Transfer to hospital</b> <input type="checkbox"/> <b>Admit to ICC</b>		
HEALTH CARE PROVIDER INFORMATION		
Provider:	Signature:	

## **Triage Criteria**

### **□ Transfer to hospital**

- Score  $\geq 50$ , OR
- Toxic appearance or rapid decompensation (especially important in adolescents and in pregnant women), OR
- Significant hypoxemia ( $O_2$  saturation  $< 88\%$ ).

### **□ Admit to ICC**

- Score  $\geq 50$ , AND no hospital beds available, OR
- Score  $< 50$  and needs closer monitoring and nursing care (for example, IV fluids, IV antibiotics, etc.), OR
- Score  $< 50$  and unable to care for self or return if symptoms worsen.

### **□ d/c to home**

- Score  $\geq 50$  with poor prognosis and unlikely to benefit from hospitalization, OR
  - Score  $< 50$  and able to care for self or has caregiver and able to return if symptoms worsen.
-

## **Appendix K:** **Patient Registration Form**

(Modified from CDPH Surge Standards GAACS Operations Tools Manual)

Alternative Care Site Patient Registration Form	
Patient name:	Patient guardian:
Social security #:	Date:
Date of birth:	Time:
Telephone #:	
Permanent and/or temporary displacement address:	
Disaster-related medical condition:                      or                      Pre-existing condition flare up:  Comments:	
Cause of injury or illness:	
Specific services rendered:	
Documentation of care to specify moment of care or stabilization:	
Location of treatment:	
Treatment for medical stabilization:                      or                      Treatment for regular medical care:  Comments:	
Primary care provider:	
Provider:	Provider license #:  Medi-Cal/Medicare ID #:
Provider signature:	

## **Appendix L:**

### **Consent for Admission and Treatment**

(modified from the SCCPHD APC: Medical Mass care During An Influenza Pandemic, Tool #16)

#### **CONSENT FOR ADMISSION AND TREATMENT**

Inyo County Government Authorized Alternate Care Site (GAACS)

Name \_\_\_\_\_

ID # \_\_\_\_\_

Date of Birth \_\_\_\_\_

#### **STATE OF EMERGENCY**

I understand that the Health Officer has declared a state of emergency as a result of \_\_\_\_\_ (nature of emergency) in Inyo County, which includes the provision of services at GAACSs.

#### **LIMITS ON AVAILABLE HEALTH CARE**

I understand that GAACS services are limited by the available resources and that the care provided in the GAACS will focus primarily on treatment of symptoms related to this emergency, not on other diseases or illnesses which may pre-exist or complicate the care for the current emergency.

I understand that this facility is not equipped to respond to medical emergencies such as cardiac or respiratory arrest, or any emergency interventions typical of a hospital setting.

#### **TRANSFER TO HOSPITAL MAY NOT BE POSSIBLE**

I understand that all reasonable efforts to transfer care to a hospital will be attempted in the event of determination that the GAACS is unable to meet my medical needs, but that hospital admission may NOT be possible even if my medical needs exceed the scope of resources at the GAACS.

I have read and understand the above. My signature below indicates that I consent to treatment at this GAACS. I understand that I may stop treatment at any time.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_

## **Appendix M:** **Admitting Orders**

(from the SCCPHD APS: Medical Mass Care During An Influenza Pandemic - Tool #15)

PATIENT INFORMATION																																																																	
Name:			Age:																																																														
Patient Tracking Number:																																																																	
Date of admission:			Allergies:																																																														
ORDERS																																																																	
<input type="checkbox"/> General Standing Orders <input type="checkbox"/> Asthma <input type="checkbox"/> Diabetes <input type="checkbox"/> Heart Failure <input type="checkbox"/> Pregnancy <input type="checkbox"/> With the following changes as marked:																																																																	
Vitals	<input type="checkbox"/> Vital signs every ____ hours for ____ hours																																																																
Call MD	<input type="checkbox"/> if Temp _____ <input type="checkbox"/> if RR _____ <input type="checkbox"/> if O <sub>2</sub> sat _____ <input type="checkbox"/> if SBP _____ <input type="checkbox"/> if HR _____ <input type="checkbox"/>																																																																
Activity	<input type="checkbox"/> Other:																																																																
Nursing	<input type="checkbox"/> Other:																																																																
Diet	<input type="checkbox"/> Other:																																																																
Hydration	<input type="checkbox"/> Other:																																																																
Oxygenation Respiratory	<input type="checkbox"/> Other:																																																																
Medications	<input type="checkbox"/> with the following changes: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%; text-align: center;"><i>medication</i></th> <th style="width: 10%; text-align: center;"><i>dose</i></th> <th style="width: 10%; text-align: center;"><i>route</i></th> <th style="width: 10%; text-align: center;"><i>freq</i></th> <th style="width: 10%; text-align: center;"><i>prn</i></th> </tr> </thead> <tbody> <tr><td>Antipyretic</td><td style="text-align: center;"><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr> <tr><td>Sleep</td><td style="text-align: center;"><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr> <tr><td>Decongestant</td><td style="text-align: center;"><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr> <tr><td>Antihistamine</td><td style="text-align: center;"><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr> <tr><td>Anti-emetic</td><td style="text-align: center;"><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr> <tr><td>Antiviral</td><td style="text-align: center;"><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr> <tr><td>Antibiotic</td><td style="text-align: center;"><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr> <tr><td>Other</td><td style="text-align: center;"><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td style="text-align: center;"><input type="checkbox"/></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> <div style="margin-top: 5px;">             Personal Meds    <input type="checkbox"/> none  <input type="checkbox"/> Patient may continue to take personal medications:           </div>						<i>medication</i>	<i>dose</i>	<i>route</i>	<i>freq</i>	<i>prn</i>	Antipyretic	<input type="checkbox"/>					Sleep	<input type="checkbox"/>					Decongestant	<input type="checkbox"/>					Antihistamine	<input type="checkbox"/>					Anti-emetic	<input type="checkbox"/>					Antiviral	<input type="checkbox"/>					Antibiotic	<input type="checkbox"/>					Other	<input type="checkbox"/>						<input type="checkbox"/>				
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### HEALTH CARE PROVIDER INFORMATION

Admitting Provider:	Signature:
---------------------	------------

## **Appendix N:** **General Standing Orders for Adolescent or Adult Patient with** **Influenza**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #9)

INTRO: These orders define the type and level of care to be provided to all patients (adults and children 10 years and older) admitted to a GAACS who do not have a co-morbid condition that requires additional care. Patients falling under this category may be admitted to the GAACS and provided care per the following Standing Orders. Changes from these standing orders shall be noted on the Admitting Orders.

1. Admission
    - a. Admit to standard cot or bed in the sub-acute area of the GAACS
  2. Vital Signs
    - a. Record patient's weight on admission
    - b. Check other vital signs (temperature, blood pressure, heart rate, respiratory rate, and O<sub>2</sub> saturation) twice a shift (every 6 hours) for the first 24 hrs and then every 12 hrs if patient is stable, OR whenever there is an acute change in patient's clinical or mental status.
    - c. Call MD if:
      - i. Temp < 93 F
      - ii. Heart rate < 40 beats per minute or > 150 beats per minute
      - iii. Systolic BP < 90 mmHg or > 190 mmHg
      - iv. Respiratory rate < 10 breaths per minute or > 30 breaths per minute, or respiratory distress
      - v. O<sub>2</sub> saturation < 92% on 4 liters nasal cannula
      - vi. Patient is unarousable.
  3. Activity
    - a. Out of bed or cot as tolerated
    - b. Assist patient as needed
  4. Nursing
    - a. Record whether patient has voided or eaten q 12 hr shift
  5. Diet
    - a. Regular diet
-



## 6. Hydration

		Euvolemic	Mild Dehydration	Dehydration
Clinical Presentation		Moist mucous membranes Normal skin turgor Normal urine output	Dry mucous membranes Poor skin turgor Reduced urine output	Dry mucous membranes Poor skin turgor Reduced urine output SBP < 100
Adults and children weighing > 65 kg (140 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 16 oz every 2 – 3 hrs	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 150 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 100 cc/hr	Give 1 liter NS bolus IV, then 150 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 100 cc/hr until patient can take p.o.	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 150 cc/hr until patient appears clinically hydrated, then maintain at 100 cc/hr until patient can take p.o.
Adults and children weighing 51 – 65 kg (112 - 140 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 16 oz every 2 – 3 hrs	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 140 cc/hr until patient appears clinically hydrated, then change to ORS p.o.

	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 95 cc/hr	Give 1 liter NS bolus IV, then 140 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 95 cc/hr until patient can take p.o.	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 140 cc/hr until patient appears clinically hydrated, then maintain at 95 cc/hr until patient can take p.o.
Children weighing 36 – 50 kg (79 – 111 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 6-8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 12-16 oz every 2 – 3 hrs	Give 750 cc NS bolus IV, then 2 <sup>nd</sup> 750 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 125 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 82 cc/hr	Give 750 cc NS bolus IV, then 125 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 80 cc/hr until patient can take p.o	Give 750 cc NS bolus IV, then 2 <sup>nd</sup> 750 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 125 cc/hr until patient appears clinically hydrated, then maintain at 80 cc/hr until patient can take p.o.
Children 25 – 35 kg (55 – 78 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 5-7 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 10-14 oz every 2 – 3 hrs	Give 500 cc NS bolus IV, then 2 <sup>nd</sup> 500 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 105 cc/hr until patient appears clinically

				hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 70 cc/hr	Give 500 NS bolus IV, then 105 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 70 cc/hr until patient can take p.o	Give 500 cc NS bolus IV, then 2 <sup>nd</sup> 500 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 105 cc/hr until patient appears clinically hydrated, then maintain at 70 cc/hr until patient can take p.o.

7. Oxygenation/Respiratory Care

- Start O<sub>2</sub> by nasal cannula if O<sub>2</sub> saturation < 92%. Titrate up to 5 liters/minute to keep O<sub>2</sub> saturation > 92%. Notify MD if O<sub>2</sub> saturation < 92% on 4 liters/minute.

8. Medications

- Fever: Give Acetaminophen as needed for temperature ≥ 101 F (38.3 C)

Weight		Dose	Route	Acetaminophen liquid 160mg/5ml	Frequency	24 hrs dose not to exceed
lbs	kg			10-15mg/kg		
36-47	16-21	240mg	po	7.5ml	every 4 hrs prn pain/fever	5 doses per day
48-59	22-26	320mg	po	10ml	every 4 hrs prn pain/fever	5 doses per day
60-71	27-32	400mg	po	12.5ml	every 4 hrs prn pain/fever	5 doses per day
72-95	33-43	480mg	po	15ml	every 4 hrs prn pain/fever	5 doses per day
>96	>44	640mg	po	20ml	every 4 hrs prn pain/fever	4000mg
>154	>70	650mg	po	2 tablets (325 mg each)	every 4 hrs prn pain/fever	4000mg

If fever does not respond to Acetaminophen (still ≥ 101 F an hour after dose), may give Ibuprofen. Do not give Ibuprofen if patient has active ulcer disease, recent history of GI bleed.

Weight		Dose	Route	Ibuprofen liquid 100mg/5ml	Frequency	24 hrs dose not to exceed
lbs	kg			5-10mg/kg		
36-47	16-21	150mg	po	7.5ml	every 6 hrs prn	4 doses per day
48-59	22-26	200mg	po	10ml	every 6 hrs prn	4 doses per day
60-71	27-32	250mg	po	12.5ml	every 6 hrs prn	4 doses per day
72-95	33-43	300mg	po	15ml	every 6 hrs prn	4 doses per day
>96	>44	400mg	po	20ml	every 6 hrs prn	2400mg
>154	>70	600mg	po	tablets	every 6 hrs prn	2400mg

- b. Sleep:
- 10-11 years: Lorazepam (Ativan) 1 mg po qhs prn.
  - ≥12 years: Lorezapam (Ativan) 2 mg po qhs prn.
- c. Decongestant
- 10-11 years old: Psuedoephedrine 30 mg po q 6 hours prn congestion
  - ≥12 years: Pseudoephedrine 60 mg po q 6 hours prn congestion
- d. Antihistamine
- Diphenhydramine 25 mg orally every 6 hours prn runny nose
- e. Antiemetic
- 10 – 17 yrs: physician must evaluate and prescribe
  - ≥18 yrs: Promethazine 25 mg po prn nausea. May repeat q 4 – 6 hrs prn nausea. If patient cannot tolerate oral medications, may give PR or IM.
- f. Antiviral
- IF patient's symptom onset has been within the last 48 hours, start Oseltamivir as follows:**

- if patient is ≤ 12 years, use Oseltamivir suspension per the table.

**OSELTAMIVIR DOSING TABLE**

Weight		Dose	Oseltamivir susp 12mg/ml
lbs	Kg		
33-51	15-23	45mg twice/day	3.75ml twice/day
51-88	23-40	60mg twice/day	5ml twice/day
>88	>40	75mg twice/day	6.25ml twice/day

- if patient is ≥12 years: Start Oseltamivir (Tamiflu) 75 mg orally twice a day for 5 days.
-

g. Smoking

- i. No smoking permitted in GAACS
  - ii. If smokes and requests relief from nicotine withdrawal symptoms, then:
    1. If patient smokes > 10 cigs/24 hrs, offer nicotine patch as follows:
      - a. Nicotine patch 21 mg qd to non-hairy skin of upper body or outer arm q am. Rotate sites each am.
    2. If patient smokes 5 – 10 cigs/24 hrs, offer nicotine patch as follows:
      - a. Nicotine patch 14 mg qd to non-hairy skin of upper body or outer arm q am. Rotate sites each am.
-

## **Appendix O:** **Standing Orders for Adult Patients with Asthma**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic, Tool #10)

These orders define the type and level of care to be provided to adolescents and adults (persons 10 years and older) admitted to a GAACS who have asthma requiring bronchodilators. Patients having a mild or moderate asthma exacerbation may be admitted to a GAACS. If patient is having a severe asthma exacerbation (patient is hunched forward, able to speak in only words or very short phrases, usually agitated, respiratory rate > 30 in adult, heart rate > 120, audible wheezing, and O<sub>2</sub> saturation <90%), they should not be admitted to or cared for in a GAACS.

### 9. Admission

- a. Admit to standard cot in the acute area of the GAACS.

### 10. Vital Signs

- a. Record patient's weight on admission
  - Check temperature, blood pressure and heart rate twice a shift (every 6 hours) for the first 24 hrs and then every 12 hrs if patient is stable.
  - Check O<sub>2</sub> saturation and respiratory rate as often as is needed, but at least every 2 hours for the first 12 hrs.
  - Check all vital signs if there is an acute change in patient's clinical or mental status.
- b. Call MD if:
  - i. Temp < 93 F
  - ii. Heart rate < 40 beats per minute or > 150 beats per minute
  - iii. Systolic BP < 90 mmHg or > 190 mmHg
  - iv. Respiratory rate < 10 breaths per minute or > 30 breaths per minute, or respiratory distress
  - v. O<sub>2</sub> saturation < 92% on 4 liters nasal cannula
  - vi. Patient is unarousable

### 11. Activity (no change from general standing orders)

- a. Out of bed or cot as tolerated
- b. Assist patient as needed

### 12. Nursing (no change from general standing orders)

- a. Record whether patient has voided or eaten q 12 hr shift

### 13. Diet (no change from general standing orders)

- a. Regular diet
-

14. Hydration (no change from general standing orders)

		Euvolemic	Mild Dehydration	Dehydration
Clinical Presentation		Moist mucous membranes Normal skin turgor Normal urine output	Dry mucous membranes Poor skin turgor Reduced urine output	Dry mucous membranes Poor skin turgor Reduced urine output SBP < 100
Adults and children weighing > 65 kg (140 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 16 oz every 2 – 3 hrs	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 150 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 100 cc/hr	Give 1 liter NS bolus IV, then 150 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 100 cc/hr until patient can take p.o.	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 150 cc/hr until patient appears clinically hydrated, then maintain at 100 cc/hr until patient can take p.o.
Adults and children weighing 51 – 65 kg (112 - 140 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 16 oz every 2 – 3 hrs	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 140 cc/hr until patient appears clinically hydrated, then change to ORS p.o.

	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 95 cc/hr	Give 1 liter NS bolus IV, then 140 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 95 cc/hr until patient can take p.o.	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 140 cc/hr until patient appears clinically hydrated, then maintain at 95 cc/hr until patient can take p.o.
Children weighing 36 – 50 kg (79 – 111 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 6-8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 12-16 oz every 2 – 3 hrs	Give 750 cc NS bolus IV, then 2 <sup>nd</sup> 750 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 125 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 82 cc/hr	Give 750 cc NS bolus IV, then 125 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 80 cc/hr until patient can take p.o	Give 750 cc NS bolus IV, then 2 <sup>nd</sup> 750 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 125 cc/hr until patient appears clinically hydrated, then maintain at 80 cc/hr until patient can take p.o.
Children 25 – 35 kg (55 – 78 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 5-7 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 10-14 oz every 2 – 3 hrs	Give 500 cc NS bolus IV, then 2 <sup>nd</sup> 500 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 105 cc/hr until patient appears clinically



				hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 70 cc/hr	Give 500 NS bolus IV, then 105 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 70 cc/hr until patient can take p.o	Give 500 cc NS bolus IV, then 2 <sup>nd</sup> 500 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 105 cc/hr until patient appears clinically hydrated, then maintain at 70 cc/hr until patient can take p.o.

15. Oxygenation/Respiratory Care (no change from general standing orders)

- a. Start O<sub>2</sub> by nasal cannula if O<sub>2</sub> saturation < 92%. Titrate up to 5 liters/minute to keep O<sub>2</sub> saturation > 92%. Notify MD if O<sub>2</sub> saturation < 92% on 4 liters/minute.

16. Medications

a. Asthma

- i. If mild asthma exacerbation (able to talk in complete sentences, not agitated, moderately increased respiratory rate, only moderate wheezing, HR <100, O<sub>2</sub> sat > 95% on room air):
  1. Albuterol MDI 2 -4 puffs q 4 – 6 hours prn chest tightness/wheezing/cough until respiratory discomfort resolves, then 1 – 2 puffs q 4 – 6 hrs
  2. Flovent MDI 2 puffs BID
- ii. If moderate asthma exacerbation (able to talk in phrases but not complete sentences, prefers to sit up rather than lie down, may be agitated, increased respiratory rate, uses accessory muscles, loud wheezing, HR 100 – 120, O<sub>2</sub> sat 91 – 95%):
  1. Albuterol 2 – 4 puffs every 20 minutes for the first hour, then 6 – 10 puffs every 1 – 2 hours until respiratory discomfort resolves.
  2. Prednisone 60 mg po qd x 2 days, then
    - 40 mg po qd x 2 days
    - 20 mg po qd x 2 days
    - 10 mg po qd x 2 days
    - 5 mg po qd x 2 days
  3. Flovent MDI 2 puffs BID

- b. Fever: Give Acetaminophen as needed for temperature ≥ 101 F (38.3 C)

Weight		Dose	Route	Acetaminophen liquid 160mg/5ml	Frequency	24 hrs dose not to exceed
lbs	kg			10-15mg/kg		
36-47	16-21	240mg	po	7.5ml	every 4 hrs prn pain/fever	5 doses per day
48-59	22-26	320mg	po	10ml	every 4 hrs prn pain/fever	5 doses per day
60-71	27-32	400mg	po	12.5ml	every 4 hrs prn pain/fever	5 doses per day
72-95	33-43	480mg	po	15ml	every 4 hrs prn pain/fever	5 doses per day
>96	>44	640mg	po	20ml	every 4 hrs prn pain/fever	4000mg
>154	>70	650mg	po	2 tablets (325 mg each)	every 4 hrs prn pain/fever	4000mg

If fever does not respond to Acetaminophen (still  $\geq 101$  F an hour after dose), may give Ibuprofen. Do not give Ibuprofen if patient has active ulcer disease, recent history of GI bleed.

Weight		Dose	Route	Ibuprofen liquid 100mg/5ml	Frequency	24 hrs dose not to exceed
lbs	kg			5-10mg/kg		
36-47	16-21	150mg	po	7.5ml	every 6 hrs prn	4 doses per day
48-59	22-26	200mg	po	10ml	every 6 hrs prn	4 doses per day
60-71	27-32	250mg	po	12.5ml	every 6 hrs prn	4 doses per day
72-95	33-43	300mg	po	15ml	every 6 hrs prn	4 doses per day
>96	>44	400mg	po	20ml	every 6 hrs prn	2400mg
>154	>70	600mg	po	tablets	every 6 hrs prn	2400mg

c. Sleep:

- i. 10-11 years: Lorazepam (Ativan) 1 mg po qhs prn.
- ii.  $\geq 12$  years: Lorezapam (Ativan) 2 mg po qhs prn.

d. Decongestant

- i. 10-11 years old: Psuedoephedrine 30 mg po q 6 hours prn congestion – hold for HR  $> 100$
- ii.  $\geq 12$  years: Pseudoephedrine 60 mg po q 6 hours prn congestion – hold for HR  $> 90$

e. Antihistamine

- i. Diphenhydramine 25 mg orally every 6 hours prn runny nose

f. Antiemetic

- i. 10 – 17 yrs: physician must evaluate and prescribe
- ii.  $\geq 18$  yrs: Promethazine 25 mg po prn nausea. May repeat q 4 – 6 hrs prn nausea. If patient cannot tolerate oral medications, may give PR or IM.

g. Antiviral

- i. **IF patient's symptom onset has been within the last 48 hours, start Oseltamivir as follows:**

- 1. if patient is  $\leq 12$  years, use Oseltamivir suspension per the table.

**OSELTAMIVIR DOSING TABLE**

Weight		Dose	Oseltamivir susp 12mg/ml
lbs	kg		
33-51	15-23	45mg twice/day	3.75ml twice/day
51-88	23-40	60mg twice/day	5ml twice/day
>88	>40	75mg twice/day	6.25ml twice/day

- 2. if patient is  $\geq 12$  years: Start Oseltamivir (Tamiflu) 75 mg orally twice a day for 5 days.

h. Smoking

- i. No smoking permitted in GAACS
- ii. If smokes and requests relief from nicotine withdrawal symptoms, then:
  - 1. If patient smokes  $> 10$  cigs/24 hrs, offer nicotine patch as follows:
    - a. Nicotine patch 21 mg qd to non-hairy skin of upper body or outer arm q am. Rotate sites each am.
  - 2. If patient smokes 5 – 10 cigs/24 hrs, offer nicotine patch as follows:
    - a. Nicotine patch 14 mg qd to non-hairy skin of upper body or outer arm q am.

## **Appendix P:** **Standing Orders for Adult Patients with Heart Failure**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #11)

These orders define the type and level of care to be provided to adolescents and adults (persons 10 years and older) admitted to a GAACS who have heart failure, regardless of the cause. Patients with florid pulmonary edema with impending need for mechanical ventilation cannot be care for in a GAACS.

1. Admission
    - a. Admit to standard cot in the acute care section of the GAACS
  2. Vital Signs
    - a. Record patient's weight on admission and each morning.
    - b. Check other vital signs (temperature, blood pressure, heart rate, respiratory rate, and O<sub>2</sub> saturation) twice a shift (every 6 hours) for the first 24 hrs and then every 12 hrs if patient is stable, OR whenever there is an acute change in patient's clinical or mental status.
    - c. Call MD if:
      - i. Temp < 93 F
      - ii. Heart rate < 40 beats per minute or > 150 beats per minute
      - iii. Systolic BP < 90 mmHg or > 190 mmHg
      - iv. Respiratory rate < 10 breaths per minute or > 30 breaths per minute, or respiratory distress
      - v. O<sub>2</sub> saturation < 92% on 4 liters nasal cannula
      - vi. Patient is unarousable
      - vii. Unable to determine patients fluid status (e.g. whether they are dehydrated and to what degree)
  3. Activity
    - a. As per standing orders for uncomplicated patient
  4. Nursing
    - a. If patient is taking Lasix, ensure that patient's cot is close to a bathroom, or place urinal or bedpan within patient's reach if bed bound
    - b. Record whether patient has voided and estimate amount q 6 hrs
    - c. Record whether patient has eaten q 12 hr shift
  5. Diet
    - a. Regular diet, low sodium (< 2 grams) if available
-

6. Hydration (Note: **Heart failure patients receiving IVF must have volume and respiratory status assessed every 2 hrs while receiving IV fluids**)

		Euvolemic	Mild Dehydration	Dehydration
Clinical Presentation ( <i>may be less reliable in heart failure patients</i> )		Moist mucous membranes Normal skin turgor Normal urine output	Dry mucous membranes Poor skin turgor Reduced urine output	Dry mucous membranes Poor skin turgor Reduced urine output SBP < 100
Adults and children weighing > 65 kg (140 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 8 oz every 4 – 6 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 8 oz every 2 – 3 hrs	Give 1 liter NS IV over 2 hrs. Give 2 <sup>nd</sup> liter over 3 hrs if patient still dehydrated and respiratory status is stable. Change to D5 ½ NS + 20 meq KCL/liter @ 150 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 75 cc/hr	Give 1 liter NS IV over 3 hrs, then 150 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 100 cc/hr until patient can take p.o.	Give 1 liter NS IV over 2 hrs, then 2 <sup>nd</sup> liter over 3 hrs if patient is still dehydrated and respiratory status is stable. Change to D5 ½ NS + 20 meq KCL/liter at 150 cc/hr until patient appears clinically hydrated, then maintain at 100 cc/hr until patient can take p.o.
Adults and children weighing 51 – 65 kg (112 - 140 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 8 oz every 4 – 6 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 16 oz every 4 – 6 hrs	Give 1 liter NS IV over 2 hrs. Give 2 <sup>nd</sup> liter over 3 hrs if patient still dehydrated and respiratory status is stable. Change to D5 ½ NS + 20 meq KCL/liter @ 140 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 95 cc/hr	Give 1 liter NS IV over 2 hrs, then 140 cc/hr until patient voids dilute urine.	Give 1 liter NS IV over 2 hrs. Give 2 <sup>nd</sup> liter over 3 hrs if patient still dehydrated

			Maintain with D5 ½ NS + 20 meq KCL/liter @ 95 cc/hr until patient can take p.o.	and respiratory status is stable. Change to D5 ½ NS + 20 meq KCL/liter @ 140 cc/hr until patient appears clinically hydrated, then maintain at 95 cc/hr until patient can take p.o.
Children weighing 36 – 50 kg (79 – 111 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 6-8 oz every 4 – 6 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 12-16 oz every 4 – 6 hrs	Give 750 cc NS IV over 3 hours, then 2 <sup>nd</sup> 750 cc bolus over 4 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 100 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 75 cc/hr	Give 750 cc NS IV over 3 hrs, then 100 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 80 cc/hr until patient can take p.o.	Give 750 cc NS IV over 3 hours, then 2 <sup>nd</sup> 750 cc over 4 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 100 cc/hr until patient appears clinically hydrated, then maintain at 80 cc/hr until patient can take p.o.
Children 25 – 35 kg (55 – 78 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 5-7 oz every 4 – 6 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 10-14 oz every 4 – 6 hrs	Give 500 cc NS IV over 3 hrs, then 2 <sup>nd</sup> 500 cc over 4 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 100 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 70 cc/hr	Give 500 NS IV over 3 hrs, then 100 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 70 cc/hr until patient can take p.o.	Give 500 cc NS IV over 3 hrs, then 2 <sup>nd</sup> 500 cc over 4 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 100 cc/hr until patient appears clinically hydrated, then maintain at 70 cc/hr until patient can take p.o.

7. Oxygenation/Respiratory Care

- a. Start O<sub>2</sub> by nasal cannula if O<sub>2</sub> saturation < 92%. Titrate up to 5 liters/minute to keep O<sub>2</sub> saturation > 92%. Notify MD if O<sub>2</sub> saturation < 92% on 4 liters/minute.

8. Medications

a. Diuretic

- i. For patients who are Lasix-naïve:
  1. Lasix 20 mg po q 1 hour prn rales on exam
- ii. For patients who take Lasix occasionally:
  1. Lasix 40 mg po q 1 hr prn rales on exam
- iii. For patients who take Lasix daily:
  1. Double usual Lasix dose prn rales on exam.

- b. Fever: Give Acetaminophen as needed for temperature  $\geq 101$  F (38.3 C)

Weight		Dose	Route	Acetaminophen liquid 160mg/5ml	Frequency	24 hrs dose not to exceed
lbs	kg			10-15mg/kg		
36-47	16-21	240mg	po	7.5ml	every 4 hrs prn pain/fever	5 doses per day
48-59	22-26	320mg	po	10ml	every 4 hrs prn pain/fever	5 doses per day
60-71	27-32	400mg	po	12.5ml	every 4 hrs prn pain/fever	5 doses per day
72-95	33-43	480mg	po	15ml	every 4 hrs prn pain/fever	5 doses per day
>96	>44	640mg	po	20ml	every 4 hrs prn pain/fever	4000mg
>154	>70	650mg	po	2 tablets (325 mg each)	every 4 hrs prn pain/fever	4000mg

If fever does not respond to Acetaminophen (still  $\geq 101$  F an hour after dose), may give Ibuprofen. Do not give Ibuprofen if patient has active ulcer disease, recent history of GI bleed.

Weight		Dose	Route	Ibuprofen liquid 100mg/5ml	Frequency	24 hrs dose not to exceed
lbs	kg			5-10mg/kg		
36-47	16-21	150mg	po	7.5ml	every 6 hrs prn	4 doses per day
48-59	22-26	200mg	po	10ml	every 6 hrs prn	4 doses per day
60-71	27-32	250mg	po	12.5ml	every 6 hrs prn	4 doses per day
72-95	33-43	300mg	po	15ml	every 6 hrs prn	4 doses per day
>96	>44	400mg	po	20ml	every 6 hrs prn	2400mg
>154	>70	600mg	po	tablets	every 6 hrs prn	2400mg

- c. Sleep:
- 10-11 years: Lorazepam (Ativan) 1 mg po qhs prn.
  - $\geq 12$  years: Lorezapam (Ativan) 2 mg po qhs prn.
- d. Decongestant
- 10-11 years old: Psuedoephedrine 30 mg po q 6 hours prn congestion
  - $\geq 12$  years: Pseudoephedrine 60 mg po q 6 hours prn congestion
- e. Antihistamine
- Diphenhydramine 25 mg orally every 6 hours prn runny nose
- f. Antiemetic
- 10 – 17 yrs: physician must evaluate and prescribe
  - $\geq 18$  yrs: Promethazine 25 mg po prn nausea. May repeat q 4 – 6 hrs prn nausea. If patient cannot tolerate oral medications, may give PR or IM.
- g. Antiviral
- IF patient's symptom onset has been within the last 48 hours, start Oseltamivir as follows:**

- if patient is  $\leq 12$  years, use Oseltamivir suspension per the table.

**OSELTAMIVIR DOSING TABLE**

Weight		Dose	Oseltamivir susp 12mg/ml
lbs	kg		
33-51	15-23	45mg twice/day	3.75ml twice/day
51-88	23-40	60mg twice/day	5ml twice/day
>88	>40	75mg twice/day	6.25ml twice/day

- if patient is  $\geq 12$  years: Start Oseltamivir (Tamiflu) 75 mg orally twice a day for 5 days.

- h. Smoking
- No smoking permitted in GAACS
  - If smokes and requests relief from nicotine withdrawal symptoms, then:
    - If patient smokes > 10 cigs/24 hrs, offer nicotine patch as follows:
      - Nicotine patch 21 mg qd to non-hairy skin of upper body or outer arm q am. Rotate sites each am.
    - If patient smokes 5 – 10 cigs/24 hrs, offer nicotine patch as follows:
      - Nicotine patch 14 mg qd to non-hairy skin of upper body or outer arm q am. Rotate sites each am.
-



## **Appendix Q:**

### **Standing Orders for Adult Patients with Diabetes**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #12)

These orders define the type and level of care to be provided to all patients (adults and children 10 years and older) admitted to a GAACS who have Type 1 or Type 2 diabetes mellitus. Patients falling under this category may be admitted to the GAACS and provided care for presumed influenza infection per the following Standing Orders. Brittle diabetics with evidence of acidosis (lethargy, change in mental status) should be transferred to an acute care hospital. Modifications to these standing orders shall be noted on the Admitting Orders.

1. Admission
    - a. Admit to standard cot or bed in the sub-acute area of the GAACS
  2. Vital Signs
    - a. Record patient's weight on admission
    - b. Check other vital signs (temperature, blood pressure, heart rate, respiratory rate, and O<sub>2</sub> saturation) twice a shift (every 6 hours) for the first 24 hrs and then every 12 hrs if patient is stable, OR whenever there is an acute change in patient's clinical or mental status.
    - c. Call MD if:
      - i. Temp < 93 F
      - ii. Heart rate < 40 beats per minute or > 150 beats per minute
      - iii. Systolic BP < 90 mmHg or > 190 mmHg
      - iv. Respiratory rate < 10 breaths per minute or > 30 breaths per minute, or respiratory distress
      - v. O<sub>2</sub> saturation < 92% on 4 liters nasal cannula
      - vi. Patient is unarousable
  3. Activity
    - a. Out of bed or cot as tolerated
    - b. Assist patient as needed
  4. Nursing
    - a. Record whether patient has voided or eaten q 12 hr shift
    - b. If patient is eating, check finger stick glucose before each meal and before bed and record on the "Insulin and Blood Monitoring Sheet"
    - c. If the patient is not eating, check finger stick glucose q 4 hrs while awake (e.g. 8am, 12pm, 4pm, 8pm) and record on "Insulin and Blood Glucose Monitoring" sheet
  5. Diet
    - a. Regular diet, or diabetic diet if available.
-

## 6. Hydration

		Euvolemic	Mild Dehydration	Dehydration
Clinical Presentation		Moist mucous membranes Normal skin turgor Normal urine output	Dry mucous membranes Poor skin turgor Reduced urine output	Dry mucous membranes Poor skin turgor Reduced urine output SBP < 100
Adults and children weighing > 65 kg (140 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 16 oz every 2 – 3 hrs	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 150 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 100 cc/hr	Give 1 liter NS bolus IV, then 150 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 100 cc/hr until patient can take p.o.	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 150 cc/hr until patient appears clinically hydrated, then maintain at 100 cc/hr until patient can take p.o.
Adults and children weighing 51 – 65 kg (112 – 140 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 16 oz every 2 – 3 hrs	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 140 cc/hr until patient appears clinically

				hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 95 cc/hr	Give 1 liter NS bolus IV, then 140 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 95 cc/hr until patient can take p.o.	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 140 cc/hr until patient appears clinically hydrated, then maintain at 95 cc/hr until patient can take p.o.
Children weighing 36 – 50 kg (79 – 111 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 6-8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 12-16 oz every 2 – 3 hrs	Give 750 cc NS bolus IV, then 2 <sup>nd</sup> 750 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 125 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 82 cc/hr	Give 750 cc NS bolus IV, then 125 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 80 cc/hr until patient can take p.o	Give 750 cc NS bolus IV, then 2 <sup>nd</sup> 750 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 125 cc/hr until patient appears clinically hydrated, then maintain at 80 cc/hr until patient can take p.o.
Children 25 – 35 kg (55 – 78 lbs)	Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 5-7 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 10-14 oz every 2 – 3 hrs	Give 500 cc NS bolus IV, then 2 <sup>nd</sup> 500 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @

				105 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
	Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 70 cc/hr	Give 500 NS bolus IV, then 105 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 70 cc/hr until patient can take p.o	Give 500 cc NS bolus IV, then 2 <sup>nd</sup> 500 cc bolus over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 105 cc/hr until patient appears clinically hydrated, then maintain at 70 cc/hr until patient can take p.o.

#### 7. Oxygenation/Respiratory Care

- a. Start O<sub>2</sub> by nasal cannula if O<sub>2</sub> saturation < 92%. Titrate up to 5 liters/minute to keep O<sub>2</sub> saturation > 92%. Notify MD if O<sub>2</sub> saturation < 92% on 4 liters/minute.

#### 8. Medications

##### a. Diabetes

- i. Blood glucose monitoring (target blood sugar 70 – 110):
  1. If patient is eating, check finger stick glucose before each meal and at bedtime.
  2. If patient is not eating, check finger stick every 4 hours during day and evening while patient is awake
  3. Record glucose values on Insulin and Blood Glucose Monitoring sheet
- ii. Medication:
  1. Type I Diabetic: call MD to write standing insulin order, and cover hyperglycemia with Sliding Scale below
  2. Type II Diabetic: hold all oral agents, and cover hyperglycemia with Sliding Scale below

##### Standard Regular Insulin Sliding Scale for Blood Sugar Range:

70 – 150 mg/dl	Give 0	units of Regular Insulin SQ
151 – 200 mg/dl	Give 2	units of Regular Insulin SQ
201 – 250 mg/dl	Give 4	units of Regular Insulin SQ
251 – 300 mg/dl	Give 6	units of Regular Insulin SQ
301 – 350 mg/dl	Give 8	units of Regular Insulin SQ
351 – 400 mg/dl	Give 10	units of Regular Insulin SQ

401 mg/dl or above	Give 12	units of Regular Insulin SQ and call MD
--------------------	---------	---

For Blood Sugar 69 mg/dl or less:

3. give 4 oz fruit juice or regular soda if patient can take po.
4. if patient cannot take po, give 25 ml of 50% Dextrose IV and call MD.  
Recheck blood sugar every 15 minutes and repeat above treatment until blood sugar is above or equal to 100 mg/dl.

b. Fever: Give acetaminophen as needed for temperature  $\geq 101$  F (38.3 C)

Weight		Dose	Route	Tylenol liquid 160mg/5ml	Frequency	24 hrs dose not to exceed
lbs	kg			10-15mg/kg		
36-47	16-21	240mg	po	7.5ml	every 4 hrs prn pain/fever	5 doses per day
48-59	22-26	320mg	po	10ml	every 4 hrs prn pain/fever	5 doses per day
60-71	27-32	400mg	po	12.5ml	every 4 hrs prn pain/fever	5 doses per day
72-95	33-43	480mg	po	15ml	every 4 hrs prn pain/fever	5 doses per day
>96	>44	640mg	po	20ml	every 4 hrs prn pain/fever	4000mg
>154	>70	650mg	po	2 tablets (325 mg each)	every 4 hrs prn pain/fever	4000mg

If fever does not respond to acetaminophen (still  $\geq 101$  F an hour after dose), may give ibuprofen. Do not give ibuprofen if patient has active ulcer disease, recent history of GI bleed, renal disease or cirrhosis.

Weight		Dose	Route	Ibuprofen liquid 100mg/5ml	Frequency	24 hrs dose not to exceed
lbs	kg			5-10mg/kg		
36-47	16-21	150mg	po	7.5ml	every 6 hrs prn	4 doses per day
48-59	22-26	200mg	po	10ml	every 6 hrs prn	4 doses per day
60-71	27-32	250mg	po	12.5ml	every 6 hrs prn	4 doses per day
72-95	33-43	300mg	po	15ml	every 6 hrs prn	4 doses per day
>96	>44	400mg	po	20ml	every 6 hrs prn	2400mg
>154	>70	600mg	po	tablets	every 6 hrs prn	2400mg

c. Sleep:

- i. 10-11 years: Lorazepam (Ativan) 1 mg po qhs prn.
- ii.  $\geq 12$  years: Lorezapam (Ativan) 2 mg po qhs prn.

d. Decongestant

- i. 10-11 years old: Psuedoephedrine 30 mg po q 6 hours prn congestion
- ii.  $\geq 12$  years: Pseudoephedrine 60 mg po q 6 hours prn congestion

e. Antihistamine

- i. Diphenhydramine 25 mg orally every 6 hours prn runny nose

- f. Antiemetic
- 10 – 17 yrs: physician must evaluate and prescribe
  - $\geq 18$  yrs: Promethazine 25 mg po prn nausea. May repeat q 4 – 6 hrs prn nausea. If patient cannot tolerate oral medications, may give PR or IM.

g. Antiviral

- IF patient's symptom onset has been within the last 48 hours, start Oseltamivir, if available, as follows:**

- if patient is  $\leq 12$  years, use Oseltamivir suspension per the table.

**OSELTAMIVIR DOSING TABLE**

Weight		Dose	Oseltamivir susp 12mg/ml
lbs	kg		
33-51	15-23	45mg twice/day	3.75ml twice/day
51-88	23-40	60mg twice/day	5ml twice/day
>88	>40	75mg twice/day	6.25ml twice/day

- if patient is  $\geq 12$  years: Start Oseltamivir (Tamiflu) 75 mg orally twice a day for 5 days.

h. Smoking

- No smoking permitted in GAACS
- If smokes and requests relief from nicotine withdrawal symptoms, then:
  - If patient smokes  $> 10$  cigs/24 hrs, offer nicotine patch as follows:
    - Nicotine patch 21 mg qd to non-hairy skin of upper body or outer arm q am. Rotate sites each am.
  - If patient smokes 5 – 10 cigs/24 hrs, offer nicotine patch as follows:
    - Nicotine patch 14 mg qd to non-hairy skin of upper body or outer arm q am. Rotate sites each am.

## **Appendix R:** **Standing Orders for Pregnancy**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #13)

INTRO: These orders define the type and level of care to be provided to pregnant women with influenza admitted to a GAACS. Pregnant women who are:

1. Within one week of their reported due date
2. Hypertensive (BP > or = 140/90)
3. With labor complaints (contractions, leakage of fluid from vagina, vaginal spotting or bleeding) should be transferred to a hospital.

### 17. Admission

- a. Admit to standard cot or bed in the sub-acute area of the GAACS.

### 18. Vital Signs

- a. Check vital signs (temperature, blood pressure, heart rate, respiratory rate, and O<sub>2</sub> saturation) twice a shift (every 6 hours), or when there is an acute change in patient's clinical or mental status.
- b. Call MD if:
  - i. Temp < 93 F or > 101F
  - ii. Heart rate < 60 beats per minute or > 150 beats per minute
  - iii. Systolic BP < 90 mmHg or > or = 140 mmHg
    1. if SPB > or = 140 mmHg, dip urine for protein
  - iv. Respiratory rate < 10 breaths per minute or > 40 breaths per minute, or respiratory distress
  - v. O<sub>2</sub> saturation < 94% on 4 liters nasal cannula
  - vi. Patient is unarousable
  - vii. Labor complaints

### 19. Activity

- a. Out of bed or cot as tolerated
- b. Assist patient as needed

### 20. Nursing

- a. Record whether patient has voided or eaten q 12 hr shift
- b. Record perceived fetal movement

### 21. Diet

- a. Regular diet
-

## 22. Hydration

	Euvolemic	Mild Dehydration	Dehydration
Clinical Presentation	Moist mucous membranes Normal skin turgor Normal urine output	Dry mucous membranes Poor skin turgor Reduced urine output	Dry mucous membranes Poor skin turgor Reduced urine output SBP < 100
Able to drink fluids	Place 1 liter of water at the bedside and instruct patient to drink at least 8 oz every 2 – 3 hrs	Place 1 liter of ORS at bedside and instruct patient to drink at least 16 oz every 2 – 3 hrs	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter @ 150 cc/hr until patient appears clinically hydrated, then change to ORS p.o.
Unable to drink fluids	D5 ½ NS + 20 Meq KCL/liter @ 100 cc/hr	Give 1 liter NS bolus IV, then 150 cc/hr until patient voids dilute urine. Maintain with D5 ½ NS + 20 meq KCL/liter @ 125 cc/hr until patient can take p.o.	Give 1 liter NS bolus IV, then 2 <sup>nd</sup> liter over 3 hrs. Change to D5 ½ NS + 20 meq KCL/liter at 150 cc/hr until patient appears clinically hydrated, then maintain at 125 cc/hr until patient can take p.o.

## 23. Oxygenation/Respiratory Care

- a. Start O<sub>2</sub> by nasal cannula if O<sub>2</sub> saturation < 94%. Titrate up to 5 liters/minute to keep O<sub>2</sub> saturation > 94%

## 24. Medications

- a. Fever:
    - i. Acetaminophen 650 mg orally every 4 hours as needed for temperature greater than or equal to 100.4 F. **Do not exceed 4000 mg in 24 hours including pain medications.**
    - ii. If patient's temperature > 102F, place patient in tepid bath if possible. If no bathtub available, provide patient with basin of water and washcloth for sponge bath
  - b. Sleep:
    - i. Benadryl 12.5 mg -25 mg p.o. q.h.s. prn insomnia.
  - c. Decongestant
    - i. Chlorpheniramine Maleate 12 mg orally every 12 hours if patient complains of congestion
-



- d. Antiviral
    - i. Start Zanamivir 2 inhalations q 12 hrs for 5 days **IF patient's symptom onset has been within the last 48 hours.**
  - e. Smoking
    - i. No smoking permitted in ICC
-

## **Appendix S:** **Standing Orders for Palliative Care**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #14)

INTRO: These orders define the care to be provided to patients (adults and children 10 years and older) admitted to a GAACS who are no longer benefiting from medical interventions offered at the GAACS, are too sick to be transferred to an acute care hospital, and for whom the supervising physician has determined palliative care is appropriate after discussion with any available family members.

1. Admission/Transfer
    - a. Admit or transfer to standard cot or bed in the palliative care area of the GAACS
  2. Vital Signs
    - a. No vital signs will be taken
    - b. Call physician if patient is not breathing, has no palpable pulse, and has fixed and dilated pupils
  3. Activity
    - a. Make comfortable in bed. Patient may do as much activity as they wish
  4. Nursing
    - a. Assist patient with toileting and bathing
  5. Diet/Hydration
    - a. Goal is to make patient comfortable. Patients unlikely to be able to eat or drink. May offer sips of liquids or ice chips as patient wishes.
  6. Oxygenation/Respiratory Care/Dyspnea
    - a. Provide air/oxygen as resources permit to promote patient comfort:
      - i. If oxygen is available in palliative care section and it promotes patient's comfort, offer oxygen at 2 – 4 liters/minute by nasal cannula.
      - ii. If no oxygen available, provide room air blow-by via nasal cannula at 2 liters/minute, if it promotes comfort for patient.
      - iii. If no air delivery source available, provide small standing fan positioned to blow air toward patient's head/face and upper body.
    - b. If patient is dyspneic, see below.
    - c. If patient has excessive respiratory secretions:
      - i. Hyoscomine (Levsin) 0.125 mg SL q 4 hrs prn, OR
      - ii. Atropine 1% ophthalmic drops 2gtt q 4 hrs SL prn.
  7. Medications
    - a. Pain/Dyspnea/Shortness of Breath:
      - i. For mild pain use acetaminophen per the table below.
      - ii. For moderate to severe pain or SOB if patient can take oral medications:
-

1. Start morphine sulfate (MSIR, Roxanol) 10 mg po or SL q 4 hr.
2. Assess level of pain/dyspnea, and if not adequately relieved, may increase by 5 mg q 1 hr (e.g. start with 10 mg po q 4 hrs, reassess in 1 hour, increase to 15 mg p.o. if still experiencing pain, then if still inadequate relief, increase to 20 mg 1 hour later, etc). Once adequate dose determined, provide that dose q 4 hours over the first 24 hours.
3. Once adequate pain control has been reached, calculate total dose needed over 24 hrs and convert to controlled release.
4. For example, Morphine sulfate 20 mg po q 4hrs = 180 mg/24 hrs. This is equivalent to Morphine sulfate controlled release (MS contin, Oramorph) 90 mg po q12 hr.

iii. If patient cannot take oral medications:

morphine sulphate-IR tabs, or oral morphine solution 20mg/ml, 15mg PR q 4 hrs, and adjust as above, OR

morphine sulfate 3mg SQ/IV q 1 hr. Titrate up q 30 mins to patient comfort. No ceiling for morphine dose.

iv If Morphine does not relieve dyspnea\SOB, add:

Lorazepam (Ativan) 2mg po/SL/SQ/IV q4 hrs prn.

(suggest a lower dose for elderly)

b. Fever: If fever is causing discomfort, may give Acetaminophen as needed. (Offer PR or liquid as an option),

Weight		Dose	Route	Tylenol liquid 160mg/5ml	Frequency	24 hrs dose not to exceed
lbs	kg			10-15mg/kg		
36-47	16-21	240mg	PO/PR	7.5ml	every 4 hrs prn pain/fever	5 doses per day
48-59	22-26	320mg	PO/PR	10ml	every 4 hrs prn pain/fever	5 doses per day
60-71	27-32	400mg	PO/PR	12.5ml	every 4 hrs prn pain/fever	5 doses per day
72-95	33-43	480mg	PO/PR	15ml	every 4 hrs prn pain/fever	5 doses per day
>96	>44	640mg	PO/PR	20ml	every 4 hrs prn pain/fever	4000mg
>154	>70	650mg	PO/PR	2 tablets (325 mg each)	every 4 hrs prn pain/fever	4000mg

c. Antiemetic

- i. 10 – 17 yrs: physician must evaluate and prescribe
    - ii.  $\geq$ 18 yrs: Promethazine 25 mg po prn nausea. May repeat q 4 – 6 hrs prn nausea. If patient cannot tolerate oral medications, may give PR or IM.
    - iii. If ineffective after 24 hours, change to prochlorperazine (Compazine) 10mg POQ 6 hrs prn nausea or vomiting. If patient cannot tolerate oral medications, may give 25 mg suppositories PR q 12 hrs prn nausea or vomiting.
  - d. Cough: Hydrocodone 5 mg with homatropine 1.5 mg/5ml (Hycodan, Hydromet) 5 ml PO q 4 hrs prn cough.
  - e. Diarrhea: Loperamide (Imodium) 2 mg tabs; 4mg (2 tabs) 1<sup>st</sup> dose, then 2 mg=1tab after each loose stool, Not to exceed 8 tabs/day.
  - f. Agitation/restlessness: Haloperidol (Haldol) 0.5 mg q 6 hrs prn agitation/restlessness: If ineffective 2 hours after the 1<sup>st</sup> dose, give 1 mg and then 1 mg q 6hrs prn.
-

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #17)

[illegible]

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #20)

[illegible]

## Appendix V: **Daily Patient Assessment Flow Sheet**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #21)

Patient's Name: \_\_\_\_\_ Age: \_\_\_\_\_

Patient's Tracking Number: \_\_\_\_\_

		GAACS day									
		Date		/ /		/ /		/ /		/ /	
		AM	PM	AM	PM	AM	PM	AM	PM		
<b>Vitals</b>	Temp										
	BP										
	HR										
	RR										
	O <sub>2</sub> sat										
<b>Mental Status</b>											
<b>Resp</b>	RA O <sub>2</sub> sat										
	O <sub>2</sub> (l/min)										
	Chest exam										
<b>Hydration Output</b>	Oral										
	IVF type/rate										
	Voiding										
<b>Nutrition</b>	Adequate										
	Not adequate										
<b>Assessment</b>	Improved										
	Stable										
	Worsened										
<b>Disposition</b>	Stay										
	d/c home										
	Trans to hosp.										

<b>Comments</b>																
<b>Provider initials</b>																



## **Appendix W:** **Change Orders**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #22)

Patient's Name: \_\_\_\_\_ Age: \_\_\_\_\_

Patient's Tracking Number: \_\_\_\_\_

	Date and Time		
	/ /	/ /	/ /
Diet	<input type="checkbox"/> d/c _____ <input type="checkbox"/> start _____	<input type="checkbox"/> d/c _____ <input type="checkbox"/> start _____	<input type="checkbox"/> d/c _____ <input type="checkbox"/> start _____
Hydration			
Respiratory	<input type="checkbox"/> O <sub>2</sub> to keep O <sub>2</sub> sat > _____% <input type="checkbox"/> d/c O <sub>2</sub>	<input type="checkbox"/> O <sub>2</sub> to keep O <sub>2</sub> sat > _____% <input type="checkbox"/> d/c O <sub>2</sub>	<input type="checkbox"/> O <sub>2</sub> to keep O <sub>2</sub> sat > _____% <input type="checkbox"/> d/c O <sub>2</sub>
Medications (Name/dose/route/frequency)			
Other			

Signature			
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(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #23)

Patient Tracking Number:\_\_\_\_\_

[illegible]

**Appendix Y:**  
**Medication Order Form (Prescription)**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #24)

**Ward #:** \_\_\_\_\_

**Bed #:** \_\_\_\_\_

**Patient's Name:** \_\_\_\_\_

**Allergies:** ☐ NKDA

**Patient's ID:** \_\_\_\_\_

☐ others \_\_\_\_\_

Medication	Strength	Route	SIG (direction)	Quantity	Day Supply

**Ordered by:** \_\_\_\_\_ / \_\_\_\_\_  
(signature) (printed name)

**CA Lic #:** \_\_\_\_\_ **DEA #:** \_\_\_\_\_

**Filled by** \_\_\_\_\_ **Date/Time filled** \_\_\_\_\_

---

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #25)

Patient's Tracking Number: \_\_\_\_\_

[illegible]

**Appendix AA:**  
**Patient Discharge Form**

(from the SCCPHD APC: Medical Mass Care During An Influenza Pandemic – Tool #27)

Patient's Name: \_\_\_\_\_ Age: \_\_\_\_\_

Patient Tracking Number: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

☐ **Patient discharged to home**

- ☐ Home care instructions provided
- ☐ Medications dispensed:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

- ☐ Patient's understanding documented

I understand the home care instructions provided to me.

\_\_\_\_\_  
Patient's Signature

\_\_\_\_\_  
Date

☐ **Patient transferred to hospital:** (Name of hospital: \_\_\_\_\_)

- ☐ Copy of chart attached

☐ **Patient left against medical advice**

☐ **Patient deceased**

- ☐ Body transferred to morgue

---

**Appendix BB:**  
**Recommendations for Control of Norovirus in GAACSS**  
(modified from <http://www.sdcounty.ca.gov/hhsa/programs/phs/documents/EMS-NorovirusControlFirstResponders1206.pdf>, accessed 7/5/11)

Noroviruses, formerly referred to as “Norwalk-like viruses,” are part of a family of viruses called caliciviruses. Infection with a norovirus can cause acute gastroenteritis characterized by diarrhea, abdominal cramps, nausea and vomiting. Norovirus illness has an incubation period of 12 to 48 hours and a duration of 12 to 60 hours. Elderly and immunocompromised patients may be sick longer. Treatment of norovirus infection is supportive consisting of maintenance of hydration and rest.

Noroviruses are spread primarily through contact with an infected person’s stool or vomitus. Although “airborne” transmission has sometimes been described, this is really contact with particles of vomitus that have been propelled long distances by someone with vigorous (often projectile) vomiting. Transmission occurs when the particles come into contact with mucous membranes and are swallowed, or when the skin is contaminated and virus is later transferred to a mucous membrane and swallowed. Foodborne transmission is a common route of infection; direct or indirect person-to-person transmission is frequent. Indirect transmission is aided by the extreme hardiness of the virus in the environment as well as its highly infectious nature. The infectious dose is believed to be as low as 10 to 100 viral particles, while approximately one million particles are excreted per milliliter of stool. Shedding occurs in both symptomatic and asymptomatic persons. Shedding occurs while the person is ill and for up to two weeks post-recovery. There is also the possibility of pre-symptomatic shedding.

Noroviruses are very common: they account for 94% of nonbacterial gastroenteritis reported to the Centers for Disease Control and Prevention (CDC) for which a cause is identified. There are estimated to be 23 million cases each year in the United States, 9.2 million of which are believed to be foodborne.

Specific recommendations for management of norovirus include:

1. Contact precautions should be observed by the provider when there is potential contact with body fluids that are not one’s own.
    - a. This would include long-sleeved gown, gloves, and a surgical mask in the presence of an actively vomiting patient or when cleaning a heavily soiled area.
    - b. If working in the facility with patients who are not vomiting, gown and gloves are sufficient.
    - c. The provider should refrain from touching their own mucous membranes unless hands have been washed first.
  2. As waterless hand rubs are not completely effective against norovirus, hand washing with soap and running water when possible, or hand hygiene with a disposable towelette, is preferred. Handwashing should be performed before patient contact and eating, and after glove removal, use of the restroom, and at the end of the shift. Bare arm and any other skin that might have been exposed during vomiting should also be washed.
-

3. If the provider has been within range of the vomiting patient, the provider's outer clothing should be changed or covered with a disposable jumpsuit prior to further patient or environmental contact when possible.
  4. If a patient has diarrhea, or especially if they have projectile emesis, the following sanitation must be done BEFORE any exposed equipment is used for another patient:
    - a. Wearing gown, gloves and a surgical mask, scrupulously clean up all vomitus and stool.
    - b. Following manufacturer's instructions for contact time, disinfect the entire area *within an 8-10 foot range of the vomiting incident* with either a double-strength phenolic, 1:10 dilution of fresh bleach, or a quaternary ammonium product that has an Environmental Protection Agency (EPA) norovirus kill claim.
    - c. If disposable supplies (e.g. dressings) have been 'exposed' and cannot be disinfected, they should be thrown away. Non-disposable equipment such as gurney straps, BP cuffs, etc. should be cleaned and disinfected.
    - d. Failure to be meticulous with cleanup may lead to norovirus remaining in the environment and subsequent employee or patient infections.
  5. Report the incident to the facility manager.
  6. Providers who become ill should not come back to work until symptom-free for 24 hours, must practice scrupulous handwashing, and if possible, should not perform food handling duties until able to return to work.
-



## **Appendix CC:**

### **Managing Increased Numbers of Deaths in a Pandemic Influenza**

(from SCCPHD APC: Managing Mass Fatalities)

What is a pandemic?

The word “pandemic” is used to describe a disease that affects people on a worldwide scale. Flu pandemics have occurred roughly every 30 to 40 years throughout history, and it has been nearly 40 years since the last influenza pandemic.

Three conditions must be met to result in a pandemic:

1. The emergence of a new influenza strain.
2. The ability of that strain to infect humans and cause serious illness.
3. The ability to spread easily among humans.

The occurrence of the avian influenza virus (H5N1) presents the possibility of this virus eventually undergoing a major change in genetic composition, allowing it to become transmissible person-to-person. It is this major genetic “shift” that creates a “novel” virus and the potential for a pandemic. Given the current high case fatality rate with H5N1, it is currently estimated that, should this virus become transmissible person-to-person, a worst-case scenario pandemic influenza will result in a case fatality rate higher than that of the 1918 Spanish flu. According to the World Health Organization, we are currently in Phase Three (of six phases) of the Pandemic Alert Period.

Many communities have developed pandemic influenza plans. However, managing the expected large numbers of deaths has not always been addressed.

These assumptions are examples of the potential impact of a worst-case scenario pandemic influenza (PI) event.

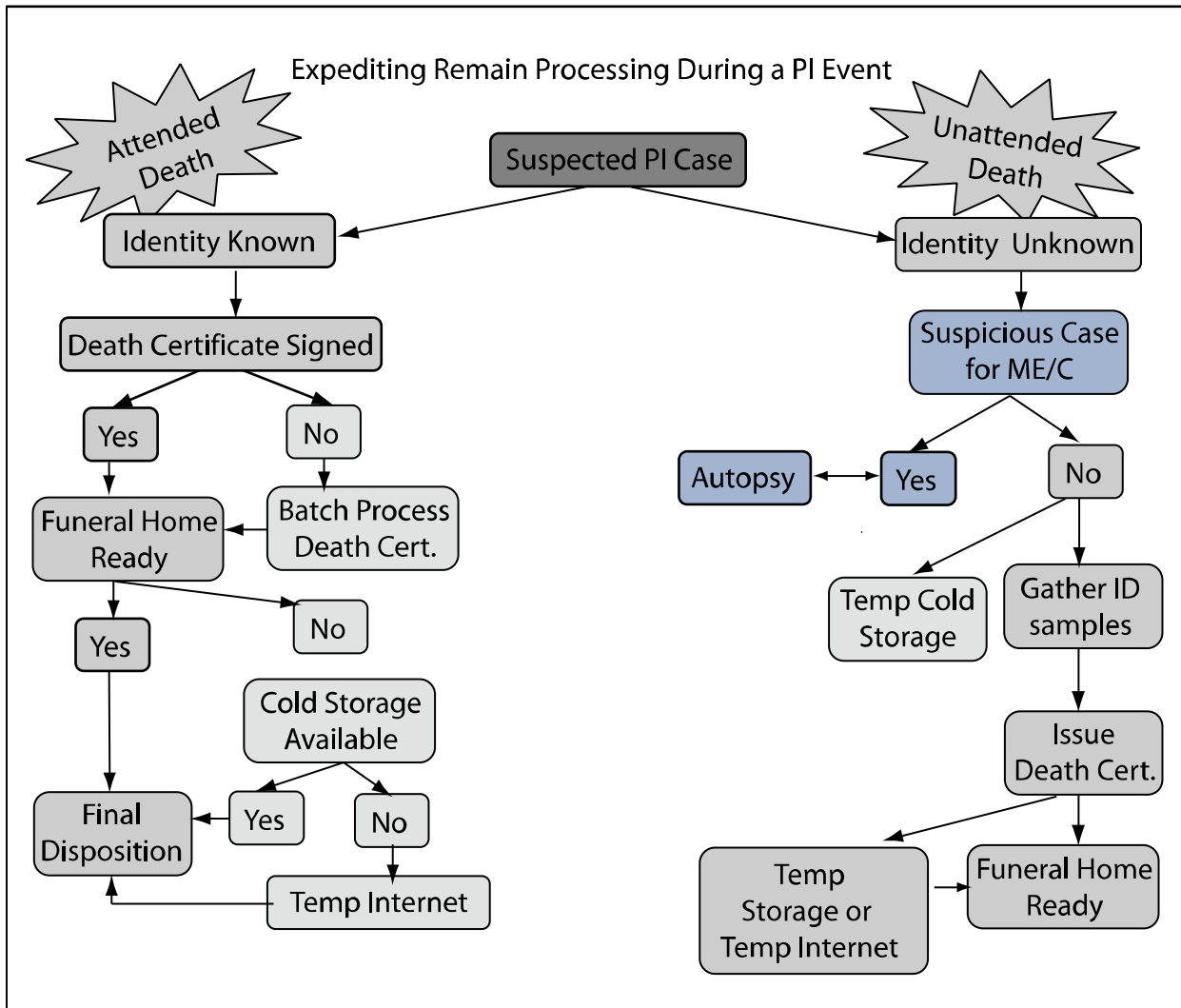
- Susceptibility to pandemic influenza will be universal.
- There may be a case fatality rate of up to 5% in addition to the average rate of deaths from other causes.
- Up to 40% of the workforce could be absent from work during peak periods.
- Mutual aid resources from state or federal agencies to support local response efforts may not be available.
- It is estimated that 50% to 75% of deaths will occur outside of a hospital or medical treatment facility.
- The death care industry could expect to handle about six months work within a six to eight week period.
- The time to complete fatality management of a PI event may exceed six months to a year.

During a pandemic, local authorities have to be prepared to manage additional deaths due to influenza, over and above the number of fatalities from all causes that are normally expected. Trigger points for different ways of working are likely to vary. For some, it will be the number of increased deaths that will be the tipping point. Limited storage space at local mortuaries and funeral homes may be the

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tipping point. For others, absenteeism might be the tipping point. It is likely that a combination of a number of pressure points would see activation of different ways of working. The trigger point at which a jurisdiction activates its mass fatality plan should be part of the pandemic planning process.

The following is a proposed flow chart for handling human remains during peak periods of a pandemic influenza.



*Source: Morgue Operations, Identification, and Command and Control of Mass Fatalities resulting from a Pandemic Influenza Event in the United States*

It is recommended that the ME/C Office, local authorities, funeral directors, private cemeteries, crematoria, and religious groups/authorities be engaged in reviewing the flow chart above and reviewing, discussing and planning for addressing the issues identified in the following table. This planning will augment existing mass fatality management plans, which will be activated during a pandemic.

## General Guidelines:

*All personnel will wear personal protective equipment as directed by the Health Officer.*

- Protecting employee health and reducing the spread of infection among workers is a priority.
- All personnel handling dead bodies in mass fatality response will also receive proper immunizations as appropriate; training in blood borne pathogens, personal protective equipment (PPE), and proper lifting techniques; and PPE as defined by existing regulations, for example:
  - Disposable, long-sleeved, cuffed gown (waterproof if possibly exposed to body fluids).
  - Single-layer non-sterile ambidextrous gloves which cover the cuffs of the long-sleeve gown.
  - Surgical mask ( a particulate respiratory if handling the body immediately after death).
  - Surgical cap and face shield if splashing of body fluids is anticipated.
  - Waterproof shoe covers if required.

Proper hand washing is *always* recommended when handling remains.

**Family Care Plans.** The ME/C, vital records system, and death care industry should encourage employees to develop “family care plans” knowing that they may not be able to be with their families for extended periods during waves of severe disease during the pandemic period.

Issues Related To Managing Increased Numbers of Deaths in a Worst-Case Scenario Pandemic Influenza	
Planning for Possible Solutions	
Emergency Operations Center and Public Health Department Actions for Managing Deceased	
<p>Consider ME/C Office and death care industry personnel as first responders.</p> <ul style="list-style-type: none"> <li>▪ Classify ME/C Office and death care industry personnel as first responders for priority prophylaxis and antivirals.</li> <li>▪ Ensure the ME/C Office’s and death care industry’s priority access to labor, supplies, personal protective equipment, vaccines, fuel, raw materials, communication bandwidth, transportation, security, temporary housing as needed, and other resources.</li> </ul> <p>Consider involving Public Health, the ME/C, and police in developing specific investigative checklists, which clarify the concepts of medico-legal determination of cause and manner of death, victim identification procedures, scene documentation, overall investigative requirements, and required PPE and personal decontamination, for all call centers and responders to unattended deaths during a PI event.</p>	

## **Issues Related To Managing Increased Numbers of Deaths in a Worst-Case Scenario Pandemic Influenza**

### **Planning for Possible Solutions**

Train all first responders in the field about the symptoms of PI deaths and the actions to take when a suspected PI event related death is found vs. when non PI event related deaths are found.

Consider establishing a dispatch/tracking system with a centralized database that is separate from emergency medical services and 911 systems to track patients and deaths. Design it so that it can be managed through family assistance and patient tracking centers. Link all first responders/health care centers/collection points/morgues/family assistance/ME/C Office/law enforcement/etc. to this system. Consider facilitating its use by private citizens.

Consider establishing a county voluntary registry of next of kin so families can register information before a disaster.

Implement reciprocal licensing of mortuary services personnel to overcome variations in state licensing of funeral directors, embalmers, cemetery, and crematory operations, and unionized labor.

Educate behavioral health professionals, social service organizations and religious leaders regarding the process for managing human remains to ensure the process is understood and can be properly communicated to the general population in their response activities.

Advise the ME/C Office and death care industry of additional respiratory protection that is needed

- During autopsy procedures performed on the lungs or during procedures that generate small-particle aerosols (e.g., use of power saws and washing intestines) in case the decedent was infectious when he/she died.
- During embalming procedures prior to burial or cremation.

If families will be transporting loved ones who have died from pandemic influenza, provide education on general precautions for handling dead bodies. Special precautions are not required since the “body” is not contagious after death.

Track federal, state, and local laws applicable to the handling of human remains that impact the ME/C, vital records system, and death care industry. Existing laws, such as time requirements for completing death certificates and disposition permits, may need to be amended/waived. Alert all parties to waivers and modifications that impact services.

### **Step: Death Pronounced**

**Planning for Possible Solutions**

<p><b>Requirements:</b> Person legally authorized to perform this task.</p> <p><b>Limiting Factors:</b> If death occurs at home then one of these people will need to be contacted.</p> <p>Availability of people able to do this task.</p>	<p>Provide public education on what to do if someone dies, how to access an authorized person to certify death, and where to take the deceased if family or friends must transport them.</p> <ul style="list-style-type: none"> <li>Consider planning an on-call system 24/7 specifically for this task that is separate from the 911 System. Keep 911 focused on calls pertaining to life safety missions.</li> </ul> <p>ALL who interface with decedents should record official personal identification information for patients who enter their systems and maintain this information in the patient's police report and/or medical record.</p> <ul style="list-style-type: none"> <li>If a deceased patient enters the system without an official photo identification, and identity is never established, healthcare facilities should report this person to the patient's local police department. There is a possibility the deceased has been reported missing by a family member who can visually identify the decedent.</li> </ul> <p>Consult with Native Americans, Jews, Hindus, Muslims and other religious groups that have special requirements for the treatment of bodies and for funerals and involve them in planning for funeral management, bereavement counseling, and communications with their respective communities in the event of a pandemic. During the pandemic, the wishes of the family will provide guidance, however, if no family is available local religious or ethnic communities can be contacted for information.</p>
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**Step: Death Certified**

(signing of a death certificate stating the cause of death)

<p><b>Requirements:</b> Person legally authorized to perform this task.</p> <p><b>Limiting Factors:</b> Legally, may not necessarily be the same person that pronounced the death.</p>	<p>ALL who interface with the deceased should record official personal identification information (first, middle, last name &amp; suffix; race/ethnicity, color of eyes, hair, height, and weight; home address, city, state, zip &amp; telephone number; location of death and place found; place of employment and employer's address; date of birth, social security number &amp; age; and next of kin—or witness—name, contact number &amp; address).</p> <p>To ensure proper identification of the deceased, consider implementing standardized methodology for collecting samples of deceased such as a right thumbprint, DNA sample (e.g., saliva swab or blood stain card), and a facial photograph. In the case of decomposed bodies, this may also include assistance from the ME/C for identification—anthropological markers, dental impressions, and, if possible, fingerprints, etc.</p>
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**Planning for Possible Solutions**

Although these identification samples may not need to be processed, those in authority are able to substantiate the identification of the decedent at a later time should individuals question the ME/C about a decedent's identity.

Healthcare facilities may want to consider designating a single physician, familiar with patients' records, as responsible for expeditiously signing death certificates.

Consider pre-identifying "collection points" for the deceased to centralize processing and hold remains at the lowest appropriate local level. Have an authorized person certify deaths en masse and batch process death certificates of identified decedents to improve efficiency.

- At the designated collection point, trained personnel should sort bodies by cause and manner of death (identified PI cases vs. ME/C cases) to ease subsequent processing (victim identification and issuing a death certificate).
  - Attended deaths will have a known identity and may have a signed death certificate. Unattended deaths may require the ME/C to further process remains to determine identification, issue the death certificate, track personal effects, and notify next of kin.
- Establish a uniform method for numbering and tracking decedents, such as the state abbreviation, zip code, and a case number (with name if identified).

When moving, storing, and/or releasing remains and personal effects, keep detailed records like that of a chain-of-evidence for each individual body and personal effects bag.

Consider broadening the range of professionals who can certify deaths. Explore strategies that facilitate and provide oversight to the process of pronouncing death, determining cause and manner of death, completing death certificates and establishing victim identity. This may include amending/waiving the Health Insurance Portability and Accountability Act of 1996, other regulations, and codes to allow trained and credentialed non-ME/C personnel (such as police, fire and emergency medical services) and retired physicians to assist with these responsibilities during a large-scale emergency.

<b>Issues Related To Managing Increased Numbers of Deaths in a Worst-Case Scenario Pandemic Influenza</b>	
<b>Planning for Possible Solutions</b>	
	Establish a call line for ME/C consultations and physician-patient data to assist in determination of death.
<b>Step: Body Wrapped</b>	
<b>Requirements:</b> Person(s) trained to perform this task.  Body bags.  <b>Limiting Factors:</b> Supply of human and physical (body bags) resources.  If death occurs in the home: the availability of these requirements.	Clearly tag the body and pouch with the individual decedent's identifiers such as name, date of birth, SSN, location of origination, medical record number, etc. Complete labeling reduces the number of times mortuary staff needs to open pouches to confirm contents.  Consider developing a rotating six months inventory of body bags, given their shelf life.  Consider training or expanding the role of current staff to include this task.  Consider providing this service in the home in conjunction with pronouncement and transportation to the morgue.  If personal effects accompany the remains in the human remains pouches, ensure that the funeral director and family are made aware of this so that effects may be safely retrieved before cremation or burial. Funeral directors and others should sign a receipt for items as well as the body.
<b>Step: Transportation</b> (To "Collection Points" and/or the Morgue and To Temporary Storage or Burial Site)	
<b>Requirements:</b> In hospital: trained staff and stretcher.  Outside hospital: informed person(s), stretcher, and vehicle with driver suitable for this purpose.  <b>Limiting Factors:</b> Availability of human and physical resources.	Consider amending codes as needed regarding the use of volunteers, family members, etc., to transport the deceased.  In hospital: <ul style="list-style-type: none"> <li>Consider training additional staff working within facility.</li> <li>Consider keeping old stretchers in storage instead of discarding.</li> </ul> Look for alternate suppliers of equipment that could be used as stretchers in an emergency e.g., trolley manufactures.  Outside hospital: <ul style="list-style-type: none"> <li>Provide public education or specific instructions through a toll-free phone service regarding</li> </ul>

<b>Issues Related To Managing Increased Numbers of Deaths in a Worst-Case Scenario Pandemic Influenza</b>	
<b>Planning for Possible Solutions</b>	
	<p>where to take the deceased if the family must transport.</p> <ul style="list-style-type: none"> <li>Identify alternate vehicles that could be used for this purpose.</li> <li>Consider use of volunteer drivers.</li> </ul>
<b>Step: Morgue Storage</b>	
<p><b>Requirements:</b> A suitable facility that can be maintained at 34-37° F, the ideal temperature for storing and preserving human remains. It does not prevent decomposition of the decedent, which continues, albeit at a slow rate for up to six months.</p> <p><b>Limiting Factors:</b> Capacity of such facilities.</p>	<p>Pre-identify and plan for possible temporary morgue storage sites:</p> <ul style="list-style-type: none"> <li>Refrigerated trucks with temporary shelves and ramps.</li> <li>Temporary portable facilities.</li> <li>Cold storage lockers.</li> <li>Conex boxes with diesel or electrical power.</li> <li>Hangars.</li> <li>Warehouses.</li> <li>Refrigerated rail cars.</li> <li>Empty public buildings that lend themselves to cooling and proper security.</li> </ul> <p>An organized, segregated storage system will provide the public a higher level of confidence that government agencies are managing the PI event well.</p> <p>Consider ice skating rinks as a resource when all other resources have been exhausted.</p> <p>Use processes routinely used in mortuaries to track and locate deceased.</p> <p>Consider some facilities maintained at -15°/-25° C or 5°/-13° F, used in forensic institutes, especially for bodies which have not yet been identified. The body is completely frozen and decomposition totally halted.</p>
<b>Step: ME/C Office and Autopsy if Required/Requested</b>	
<p><b>Requirements:</b> Person qualified to perform autopsy and suitable facility with equipment.</p> <p><b>Limiting Factors:</b></p>	<p>Ensure that it is public knowledge—that all physicians and families are aware that an autopsy is not required for confirmation of influenza as cause of death.</p> <ul style="list-style-type: none"> <li>However, for the purpose of health surveillance, respiratory tract specimens or lung tissue for culture or direct antigen testing could be collected postmortem to confirm the early cases that start the pandemic.</li> </ul>



Issues Related To Managing Increased Numbers of Deaths in a Worst-Case Scenario Pandemic Influenza	
Planning for Possible Solutions	
<p>Availability of human and physical resources.</p> <p>May be required in some circumstances.</p>	<p>Examine the capacity, continuity of operations planning, and surge capacity of the ME/C Office in your jurisdiction.</p> <p>Shift ME/C resources to the most vital public health functions, including body recovery, abbreviated processing, temporary storage, and tracking.</p> <ul style="list-style-type: none"> <li>▪ Employ a phased operation to ensure bodies are properly identified and handled with dignity.</li> </ul> <p>Identify ways to augment staff.</p> <ul style="list-style-type: none"> <li>▪ Break down functions into tasks so that disaster service workers and volunteers are able to provide more effective assistance.</li> <li>▪ Consider requesting a volunteer category for death care professionals be added to established organized volunteer Citizen Corps and/or Medical Corps.</li> <li>▪ Provide just-in-time training for current staff who will be performing new management/oversight roles, for suitable drivers and handlers to support the human remains recovery and for other positions as practicable.</li> </ul> <p>Keep daily death cases separate from PI event cases and number them using different identifiers.</p> <p>Ensure that critical morgue supplies are stockpiled or develop a rotating six month inventory of essential equipment/supplies.</p> <p>Consider putting in place contracts and memoranda of agreement to ensure that the ME/C Office receives priority distribution of water, generators, and gasoline.</p> <p>If an autopsy is required, usual protocols based on current law will prevail.</p> <ul style="list-style-type: none"> <li>▪ Consider advocating for amending regulations regarding reportable deaths. For example, the ME/C assumes jurisdiction over deaths of persons in correctional custody, deaths in mental institutions, and sometimes in nursing care facilities, regardless of the circumstances. Consider requiring ME/C jurisdiction <i>only</i> when the cause of death is of suspicious nature during the pandemic.</li> <li>▪ Seek direction from Health Officer re: additional respiratory protection needed during autopsy</li> </ul>

<b>Issues Related To Managing Increased Numbers of Deaths in a Worst-Case Scenario Pandemic Influenza</b>	
<b>Planning for Possible Solutions</b>	
	procedures performed on the lungs or during procedures that generate small-particle aerosols (e.g., use of power saws and washing intestines) in case the decedent was infectious when he/she died.
<b>Step: Cremation</b>	
<b>Requirements:</b> Suitable vehicle and driver for transportation from morgue to crematorium.  <b>Limiting Factors:</b> Capacity of crematorium/speed of process.  Availability of authorized official to issue death certificate.  Availability of staff and resources in vital records office to certify death certificate and issue permit for disposition of remains.	Identify alternate vehicles that could be used for transport.  Examine the capacity, continuity of operations planning, and surge capacity of crematoriums within the jurisdiction.  Arrange for maintenance and inspection of equipment—ahead of periods of peak usage—with backup equipment and replacement parts stockpiled.  Consider streamlining the completion of required cremation forms.  Discuss and plan appropriate storage options if the crematoriums become backlogged.  Seek direction from Health Officer re: additional respiratory protection needed during embalming procedures to prepare for cremation for those who die from the pandemic in case the decedent was infectious when he/she died.  Examine the capacity, continuity of operations planning, and surge capacity of the vital records office.  Consider developing arrangements between crematoriums and the local registrar to expedite the filing of a large number of death certificates and applications for cremation.
<b>Step: Embalming</b>	

<b>Issues Related To Managing Increased Numbers of Deaths in a Worst-Case Scenario Pandemic Influenza</b>	
<b>Planning for Possible Solutions</b>	
	<p>Examine the capacity, continuity of operations planning, and surge capacity of funeral homes in your jurisdiction.</p> <p>Consult with funeral homes regarding availability of equipment/supplies and potential need to stockpile or develop a rotating six month inventory of essential equipment/supplies.</p> <p>Consider “recruiting” workers that would be willing to provide this service in an emergency (e.g., retired workers or students in mortuary training programs).</p> <p>Consider providing embalming and casketing services in a temporary morgue.</p> <p>Seek direction from Health Officer re: additional respiratory protection needed during embalming procedures for those who die from the pandemic in case the decedent was infectious when he/she died.</p> <p>Examine the capacity and surge capacity of the vital records office.</p> <p>Consider developing arrangements between funeral directors and local registrar to expedite the filing of a large number of death certificates and applications for disposition permits.</p>
<b>Step: Funeral Service</b>	
<p><b>Requirements:</b> Appropriate locations(s), casket or urn, funeral director.</p> <p><b>Limiting Factors:</b> Availability of caskets/urns.</p> <p>Availability of location for service and visitation.</p>	<p>Examine the capacity, continuity of operations planning, and surge capacity of funeral homes in your jurisdiction.</p> <p>Contact supplier to determine lead time for casket and urn manufacturing and discuss possibilities for rotating six month inventories—with a more that normal supply of low cost caskets and low cost alternatives.</p> <p>Consult with funeral directors to determine surge capacity and possibly the need for additional sites (e.g., use of churches, etc. for visitation).</p>

<b>Issues Related To Managing Increased Numbers of Deaths in a Worst-Case Scenario Pandemic Influenza</b>	
<b>Planning for Possible Solutions</b>	
Social distancing and/or quarantine measures that may be in effect during pandemic waves.	<p>Develop strategies for handling services when social distancing measures and/or quarantine are in effect.</p> <ul style="list-style-type: none"> <li>Consider alternatives such as video-conferences to allow for funerals to occur with relatives of the decedents having the ability to mourn but at a non-public venue.</li> <li>Be prepared to clearly explain why limitations have become necessary.</li> </ul>
<b>Step: Temporary Storage while Awaiting Burial</b>	
<p><b>Requirement:</b> Access to and space in temporary storage.</p> <p><b>Limiting Factors:</b> Temporary storage capacity and accessibility.</p>	<p>Expand capacity by increasing temporary storage sites.</p> <p>Expand capacity by increasing temporary vault sites with security features such as covered windows and locks on doors. (Note: A vault is a non-insulated storage facility for remains that have already been embalmed, put into caskets, and are awaiting burials.)</p>
<b>Step: Burial</b>	
<p><b>Requirement:</b> Grave digger and space at cemetery.</p> <p><b>Limiting Factors:</b> Availability of grave diggers and cemetery space.</p> <p>Extreme cold and heavy snowfall.</p>	<p>Examine the capacity, continuity of operations planning, and surge capacity of cemeteries in your jurisdiction.</p> <p>Identify sources of supplementary workers.</p> <p>Consider temporary mass burials where bodies will be temporarily buried in body bags in common graves in cemeteries or at a designated location until they are exhumed at a later time.</p> <p>Be prepared to make public statements regarding storage solutions, particularly the employment of long-term temporary interment.</p>
<b>Step: Family Assistance</b>	
<p><b>Requirement:</b> The ME/C Office is responsible for providing family assistance in the event of a mass fatality.</p>	<p>Identify a local agency/organization to manage family assistance during a pandemic.</p> <p>Implement a <i>virtual family assistance center model</i> that includes:</p> <ul style="list-style-type: none"> <li>Broadcasting information ‘pushed’ to families through mass media channels. Content may include: coping with death and dying at home, coping with illness and death at work, financial support, health issues, emotional and behavioral health concerns, Social Security questions, and</li> </ul>

Issues Related To Managing Increased Numbers of Deaths in a Worst-Case Scenario Pandemic Influenza	
Planning for Possible Solutions	
<p><b>Limiting Factors:</b></p> <p>The catastrophic scope of</p>	<p>legal issues.</p> <ul style="list-style-type: none"> <li>▪ “Warm Lines” established and staffed to provide a more direct line of communication with               <ul style="list-style-type: none"> <li>e: death care</li> <li>hological support.</li> <li>th providers</li> <li>omputer-based</li> </ul> </li> </ul>
<p>limitations to the provision of direct services.</p>	<p>interactions between behavioral health providers and community members needing assistance.</p> <ul style="list-style-type: none"> <li>○ May want to consider a separate fatality/missing person information telephone number to report fatalities that can incorporate this information into a national patient tracking system. Consider the National Find Family Hotline as a model.</li> <li>▪ Face-to-Face Crisis Interventions provided by trained behavioral health services professionals with appropriate PPE for those individuals with acute psychiatric reactions.</li> <li>▪ Strategies for providing psychological first aid and educational/informational materials for all response personnel.</li> <li>▪ Identify interventions and strategies for assisting at-risk and/or special populations, such as those with mental and behavioral illness or disabilities and/or with general pharmaceutical needs or medication withdrawal issues, homeless, senior citizens, immigrants, and undocumented residents.</li> </ul>

## Associated Tools

### Baron County's Pandemic Influenza Mortuary Planning Guidelines

Barron County, Wisconsin has developed a plan which consolidates and coordinates resources under a single unified mortuary command structure at a single facility known as the Unified Mortuary Preparation Facility (UPMF). In the event of a worst-case scenario pandemic, all funeral directors in the county will temporarily close their facilities and relocate to the UPMF during waves of severe disease—consolidating all resources, including staff, equipment, and supplies. Barron County's Pandemic Influenza Mortuary Planning Guidelines is included as a resource for your consideration. This resource is available at: <http://flutrackers.com/forum/showthread.php?t=47605>.

### Chart to Facilitate Local Decision Making in Determining Priorities and Regulations to Amend to Achieve Acceptable Handling of Human Remains during a Pandemic Influenza Event

The following chart was developed to assist jurisdictions in making decisions about how they may want to adapt their own regulations and priorities to achieve acceptable handling of deaths in a PI event. It begins from the moment a death is discovered/reported until the body has been transported to whatever is functioning as a morgue. The columns represent the tasks that should be completed to ensure medico-legal concerns are met regarding documentation of the death scene and transport of the body to the morgue. The rows represent a qualitative division of who may have to perform said tasks as the situation deteriorates and resources are depleted.

Chart to Facilitate Local Decision Making in Determining Priorities and Regulations to Amend to Achieve Acceptable Handling of Human Remains during a Pandemic Influenza Event							
Level of Crisis	Positive or Presumptive Identification	Pronounce (Local Authority)	Collect Death Scene info PI/non-PI/ Violent	Contain	Analysis Reporting	Track (COC) HR&PE	Transport
Tier I (Normal)	LE ME/Coroner Hospital	LE ME/Coroner Funeral Director	LE ME/Coroner Physician	Human Remains Pouch (HRP)	Public Health	Standard Operating Procedures (SOP)	Morgue Funeral Homes EMS
Tier II (Surge)	Above + Funeral Directors	Above + Non-Physician Licensed Medical Professionals	Above + Non-Physician Licensed Medical Professionals	Human Remains Pouch (HRP)	LE Physicians	Bar Code RFID	Refrigerator Trucks Temporary Morgues Private Contractor
Tier III (Crisis)	Above + Family Co-worker Neighbor	Above + Non-Physician Non-Licensed Medical Professionals	Above + Non-Physician Non-Licensed Medical Professionals	Field Exp	Family	Field Exp	Gov Workers National Guard State Militia DOD
Tier IV (Overwhelmed)	Above + Witness	Above + Deputized Volunteer	Above + Deputized Volunteer	Limited	Limited	Field Exp	Non-Gov Workers Family

*Source: Scene Operations, to Include Identification, Medico-legal Investigation Protocols and Command and Control of Mass Fatalities Resulting from a Pandemic Influenza (PI) in the United States*

This chart is presented as a starting point for discussion so that each jurisdiction can use it to arrive at whatever compromise best suits their own situation and priorities. At the time of a PI event, it will then be up to local officials to make the decision about when which functions have reached which tier.

## Resources

*The Canadian Pandemic Influenza Plan for the Health Sector, Annex I Guidelines for the Management of Mass Fatalities During an Influenza Pandemic*, Public Health Agency of Canada, February 2004 is available at: <http://www.phac-aspc.gc.ca/cpip-pclcpi/ann-i-eng.php>.

*California Mass Fatality Management Guide: A Supplement to the State of California Coroners Mutual Aid Plan*, The State of California Governor's Office of Emergency Services, September 2007 is available at:  
[http://www.oes.ca.gov/Operational/OESHome.nsf/Content/A3F586FD13D795C788256B7B0029BBFF?](http://www.oes.ca.gov/Operational/OESHome.nsf/Content/A3F586FD13D795C788256B7B0029BBFF?OpenDocument)  
OpenDocument. Click on Coroner's Mutual Aid.

*Planning for a Possible Influenza Pandemic—A Framework for Planners Preparing to Manage Deaths*, Home Office, Public Order Unit—Mass Fatalities Section, London, England is available at:  
[http://www.ukresilience.info/news/manage\\_deaths\\_guidance.aspx](http://www.ukresilience.info/news/manage_deaths_guidance.aspx).

*A Working Group Consensus Statement on Mass Fatality Planning for Pandemics and Disaster*, July 2007, Elin A. Gursky on behalf of the Joint Task Force Civil Support Mass Fatality Working Group is available at: <http://www.homelandsecurity.org/newjournal/Articles/displayArticle2.asp?article=160>.

*The Provision of Family Assistance and Behavioral Health Services in the Management of Mass Fatalities Resulting from a Pandemic Influenza in the United States*, Fatality Management Pandemic Influenza Working Group Conference White Paper, March 2006 is available at:  
[http://www.icfa.org/docs/white\\_paper2.doc](http://www.icfa.org/docs/white_paper2.doc).

*Scene Operations, to Include Identification, Medico-legal Investigation Protocols and Command and Control of Mass Fatalities resulting from a Pandemic Influenza Event in the United States*, Fatality Management Pandemic Influenza Working Group Conference White Paper, March 2006 is available at:  
<http://www.pandemicpractices.org/practices/resource.do?resource-id=176&standards-id=4>.

*Morgue Operations, Identification, and Command and Control of Mass Fatalities Resulting from a Pandemic Influenza Event in the United States*, Fatality Management Pandemic Influenza Working Group Conference White Paper, March 2006 is available at:  
[http://www.icfa.org/pdf/white\\_paperMFM.pdf](http://www.icfa.org/pdf/white_paperMFM.pdf).

*Information for Managing Pandemic Influenza Fatality Events in Virginia*, Virginia Department of Health, 4/06 is available at: <http://www.vdh.virginia.gov/medExam/PandemicFluPlanning.htm>.

## **Appendix DD:**

### **Notification and Activation of the Mass Fatality Plan**

(from the SCCPHD APC: Managing Mass Fatalities)

### ***Overview of Section***

The Notification and Activation section presents who is responsible for activating the mass fatality plan, how notification of the mass fatality incident is made, and levels of activation. Different levels of activation allow the response to be scaled to the needs of the event.

### **Key Assumptions**

The following are the key assumptions underlying Notification and Plan Activation.

- The ME/C will find out about the incident through a call from the local first responder at the incident site, various media outlets, and/or government emergency notification systems.
- The local jurisdiction's ME/C Office capacity for managing a mass fatality event determines the first activation level. Local capacity is a combination of morgue storage capacity, available personnel, and available equipment and supplies. Thresholds for levels of activation are based upon local capacity.
- The level of activation will depend on the anticipated number of deaths, the scope of destruction/level of difficulty in recovery, and whether or not there are possible biological, chemical, physical, or radiological hazards.

### **Proposed Approach**



Involve the stakeholders that have a role in ME/C surge capacity for mass fatality response. This includes hospitals (possible morgue storage space), the death care industry (possible morgue storage space, vehicles for transporting human remains, staff), local law enforcement (coroner investigation staff), the local jurisdiction's General Services Agency/Fleets and Facilities/Public Works (for facilities, transportation and drivers), and the local jurisdiction's Procurement Department (for equipment and supplies).



Identify and describe the mechanisms that are in place for notifying the ME/C of mass fatalities. Then describe how the ME/C will notify staff and other stakeholders involved in mass fatality management.



Determining activation levels requires an inventory of existing local capacity for morgue storage, personnel, and equipment/supplies. Stakeholder decisions regarding levels of activation are based on this information.



## ***Developing Your Incident Notification Plan***

### **Step 1: Confirm who is responsible for mass fatality management.**

The Coroner or Medical Examiner that is responsible for mass fatality incidents in your jurisdiction is the one that is authorized to activate the plan and carry out ME/C operations described in this guide.

This guide follows the California model—where the local or Santa Clara County ME/C is responsible for a mass fatality. Unlike other states, California does not have a State Coroner or Medical Examiner. Primary responsibility for the investigation, recovery, and management of the dead resides within the authority of the local coroner or medical examiner. If it is different in your jurisdiction, your plan needs to reflect that.

### **Step 2: Describe how the responsible ME/C will be notified.**

As the first responder at a mass fatality, local law enforcement is responsible for immediately notifying the ME/C Office per Government Code. The ME/C Office may also find out about the incident through various media outlets, and/or a government emergency notification system.

In the event of a worst-case scenario pandemic influenza, activation will be triggered by the status of the pandemic as communicated by the World Health Organization, the Centers for Disease Control and Prevention, your state department of public health, and your local health officer. Activation will occur as part of your overall emergency response structure.

At the incident site, the ME/C will complete the *Notification of Mass Disaster* form.

### **Step 3: Describe how ME/C's staff will be notified.**

Describe the notification process used in your jurisdiction. For example, the ME/C staff will be notified by landline, cell phone and/or other Emergency Operations Center notification systems.

Once all ME/C staff have been notified, the agency/organization that will manage the Family Assistance Center for the ME/C Office will be notified by landline, cell phone and/or other Emergency Operations Center notification systems.

### **Step 4: Describe how stakeholders involved in decedent operations in a mass fatality will be notified.**

The key areas of decedent operations outside of the ME/C's Office are:

- Hospitals and mortuaries for morgue storage space,
- Agencies/organizations that will provide family assistance services,
- Local Registrar for the Vital Records System for death registration and issuance of final

- disposition permits, and
- The Death Care Industry for final disposition of human remains.

Develop a system for notifying key organizations with these responsibilities in the event of a mass fatality incident.



*Recommendation:* Create a table with services, description of services, name of provider/organization and contact information (include 24/7 access phone number and e-mail address) for each of these areas of decedent operations and note where this is located in the ME/C Office in your plan. Your jurisdiction's ME/C Office may already have this information available.

## ***Developing Your Activation Plan***

### **Step 1: Determine who has the authority to activate the mass fatality plan.**



The following is an example of how you can present who has the authority to activate the mass fatality plan.

The local ME/C is responsible for a mass fatality incident and has the authority to activate the mass fatality plan.

In the event of a worst-case scenario pandemic influenza or infectious disease of similar gravity, the Health Officer will consult with the ME/C regarding activation of the mass fatality plan.

### **Step 2: Determine local surge capacity for managing a mass fatality incident.**



To determine local surge capacity, the following must be assessed:

- Morgue storage space.
- Qualified personnel that are available.
- Availability of equipment and supplies.

The following is a proposed approach for determining local surge capacity.

**Morgue Storage Capacity Assessment.** Begin to determine local capacity by determining your jurisdiction's morgue's storage capacity and its average census.

The first step is to identify your Medical Examiner/Coroner morgue capacity.

The second step is to identify all hospitals in the jurisdiction and their refrigerated storage capacity. If hospitals are willing to assist the ME/C by providing refrigerated storage space in the event of a mass fatality, note that in the chart below with an asterisk.

The third step in identifying local capacity is to identify all funeral homes/mortuaries in the jurisdiction and their refrigerated storage capacity. If they are willing to assist the ME/C by providing refrigerated storage space in the event of a mass fatality, note that in the chart below with an asterisk.

The fourth step is to determine the average number of deaths in your jurisdiction in an average week.

Once all of the information is gathered, determine the average refrigerated storage space available at any given time (the local surge capacity) by subtracting the average number of deaths in a week from the total refrigerated storage capacity.

To organize this information, you might want to create a table such as the following.

<b>Decedent Storage Capacity Information</b>		
<b>ME/C Morgue</b>		
		<b>Refrigerated Storage Capacity</b>
<b>Hospitals</b>		
<b>Name</b>	<b>Contact Name &amp; 24 Hour Number</b>	<b>Refrigerated Storage Capacity</b>
<b>Funeral Homes</b>		
<b>Name</b>	<b>Contact Name &amp; 24 Hour Number</b>	<b>Refrigerated Storage Capacity</b>
<b>Surge Capacity = xxx (total refrigerated storage capacity minus average number of weekly deaths)</b>		

It is important to recognize that hospital and funeral home refrigerated storage capacity may only be available in the beginning of a mass fatality event. Hospitals may be providing care to large numbers of patients critically injured in the incident. And, once identifications are made, the funeral homes will need their morgues for funeral service operations.

**Qualified Personnel Capacity Assessment.** The first step is to determine the ME/C Office personnel capacity. Identify a few key positions that would be needed immediately to begin human remains recovery at the incident site. The focus is on beginning human remains recovery operations since based on the assumption that regional, state, and/or federal assistance will be available once the incident site is evaluated, needs are identified, and requests are made.

The second step is to identify positions within your jurisdiction that could fill these positions to assist with a mass fatality. This may include:

- Law enforcement forensics/crime scene investigation staff as Coroner Investigators/Assistants.
- Death care industry staff to assist as Human Remains Transport Personnel and Drivers.
- General Services Agency/Fleets and Facilities/Public Works staff assistance to assist as Human Remains Transport Personnel and Drivers.

The third step is to create a table that identifies staff for a few critical positions and alternates that may be available locally in a mass fatality.

<b>Personnel Capacity Assessment to Initiate Response</b>	
<b>ME/C Personnel</b>	<b>Possible Local Alternates for ME/C Personnel</b>
Coroner Investigators	
Human Remains Transport Personnel	
Drivers	

**Equipment and Supplies Assessment.** For an assessment of equipment and supplies capacity, focus on the most critical supplies and equipment that will be needed immediately to begin human remains recovery—until Coroner’s Mutual Aid and/or DMORT are available to provide assistance.

The first step is to determine ME/C Office capacity regarding most critical supplies and equipment that would be needed immediately. This includes number of body bags, bags for personal effects, vehicles to transport human remains.

The second step is to consult with funeral homes and your jurisdiction’s General Services Agency/Fleets and Facilities/Public Works to determine the number of vehicles that meet ME/C requirements for transporting human remains that would be available. The refrigerated vehicles can be used as temporary holding morgues at the incident site.

<b>Equipment and Supplies Needed Immediately—Capacity Assessment</b>		
<b>Item</b>	<b>ME/C Office Number Available</b>	<b>Alternate Source and Number Available</b>
Body Bags		
Personal Effects Bags		
Refrigerated Vehicles to Transport Human Remains		

### **Local Surge Capacity.**



Once you have determined refrigerated storage space capacity, personnel capacity, and equipment and supplies capacity, the ME/C will need to review the information with other planning stakeholders and a decision will have to be made regarding the maximum number of decedents the jurisdiction can manage and/or that the jurisdiction believes would require activating the mass fatality plan.

Some jurisdictions may determine the local surge capacity based on what the ME/C Office thinks it can handle on its own. Others may want to utilize more local resources in determining its local surge capacity. Some jurisdictions may want to extend their assessment of local capacity by determining morgue services capacity. It will depend on the jurisdiction.

The number of decedents identified as your jurisdiction's surge capacity will become the number of anticipated decedents that will result in a level one activation of the mass fatality plan. Ultimately what you determine to be your local surge capacity should resonate with the definition of a mass fatality—any situation where more deaths occur than can be handled by local medical examiner/coroner (ME/C) resources.

### **Step 3: Determine and describe activation levels.**

Developing activation levels allows for scalability in the mass fatality response. Needs will differ for a mass fatality incident involving participation by local resources and regional mutual aid versus a catastrophic mass fatality event that will require extraordinary support from state, federal, and private resources.



Determining levels of activation requires involvement of all of the stakeholders involved in mass fatality response.

Your level one activation will be based on your local surge capacity to respond to a mass fatality incident.

The only exception will be a partial activation of the plan—the family assistance center—when family assistance is needed even though the number of deaths is less than can be handled by available local surge capacity.

All other levels of activation will be based on:

- the anticipated number of deaths,
- the scope of destruction/level of difficulty in recovery, and
- whether or not there are possible biological, chemical, physical, or radiological hazards.



Some examples of activation levels follow:

### **Level 1 Activation**

- Anticipated number of deaths is xxx *OR* anticipated number of deaths is less, but family assistance will need to be activated.
- Human remains are not contaminated by any toxic or hazardous materials and are generally intact.
- No criminal or terrorist involvement is suspected.
- The normal day-to-day ME/C Office response system is functional and requires reinforced response (e.g., additional morgue space and staff).
- Coroner Mutual Aid from at least one jurisdiction within the region is required.

### **Level 2 Activation**

- Anticipated number of deaths is xxx.
- Human remains are not contaminated by any toxic or hazardous materials and are generally intact.
- No criminal or terrorist involvement is suspected.
- The normal day-to-day ME/C Office response system is functional and a mandatory 12-hour shift is initiated.
- Coroner Mutual Aid from several jurisdictions within the region is required.

### **Level 3 Activation**

- Anticipated number of deaths is xxx.
- Human remains are fragmented, but do not require decontamination.
- The scope of destruction/level of difficulty in recovery is significant. It is difficult to locate and remove human remains.
- There is risk of biological, chemical, and/or physical hazards.
- Criminal or terrorist involvement may be suspected.
- The normal day-to-day ME/C Office response system is functional and a mandatory 12-hour shift schedule for personnel is initiated.
- Coroner Mutual Aid outside of the jurisdiction is required.

### **Level 4 Activation**

- Anticipated number of deaths is xxx.
- Human remains are fragmented or contaminated and require decontamination.

- The scope of destruction/level of difficulty in recovery is significant. It is difficult to locate and remove human remains.
- There is risk of biological, chemical, and/or physical hazards.
- Criminal or terrorist involvement is suspected.
- The normal day-to-day ME/C Office response system is functional and a mandatory 12-hour shift schedule for personnel is initiated.
- Coroner Mutual Aid (regional, state, and possibly federal—DMORT) is required.
- This may be a catastrophic mass fatality event.

### Level 5 Activation

- Anticipated number of deaths is xxx *OR* there is a worst-case scenario pandemic influenza or infectious disease of similar gravity.
- Human remains may be fragmented or contaminated and require decontamination.
- The scope of destruction/level of difficulty in recovery is significant. It is difficult to locate and remove human remains.
- Criminal or terrorist involvement may be suspected.
- There is risk of biological, chemical, physical, and/or radiological hazards.
- The normal day-to-day ME/C Office response system may not be functional. A mandatory 12-hour shift schedule for Coroner's Office personnel who are able to work is initiated.
- Coroner Mutual Aid outside of the jurisdiction (regional, state, and federal) is required. However, in the case of a worst-case scenario pandemic influenza, external assistance may be very limited or not available.
- Non-traditional death care methods, as coordinated by the Emergency Operations Center, may be required.
- This is a catastrophic mass fatality event.

### Step 4: Describe Coordinated Response.



Effective coordination among local, state, and federal responders in a mass fatality event is a key factor in ensuring successful responses to major incidents. The ME/C Office response will be

coordinated with other involved disaster response systems that may be involved, such as law enforcement, fire and rescue, public health, on-scene hospital and Emergency Medical Services personnel, the Emergency Operations Center, individual city emergency operations centers, and other state and federal resources that assist with the response. The Incident Command Structure/Unified Command, an efficient on-site tool to manage emergency response incidents and facilitate effective coordination, will be used in the event of a mass fatality.

### Step 5: Define the Operational Period.



An operational period is generally 12 hours.

## Step 6: Describe how the plan will be deactivated.



The ME/C will deactivate the mass fatality plan or parts of the plan when the ME/C Office mass fatality operations have been completed. Deactivation will be coordinated with deactivation of the Public Health Department Emergency Operations Center (DEOC) and/or the Emergency Operations Center (EOC).

Deactivation will be in compliance with SEMS and NIMS procedures.

**Demobilization.** Officers in Charge and Team Leaders at the incident site and morgue will keep notes during the mass fatality response indicating challenges, changes that were made to guidelines/procedures, unique circumstances and other pertinent information and submit these notes to the ME/C Office. The ME/C Office will compile these notes and create an After Action Report. The After Action Report will be completed no later than xxx month(s) after the mass fatality plan has been deactivated.

The ME/C Office will follow procedures for demobilization as required by organizations that have loaned facilities, refrigerated vehicles, equipment, and supplies. In the absence of specific procedures, the ME/C Office will adhere to DMORT procedures for demobilization.

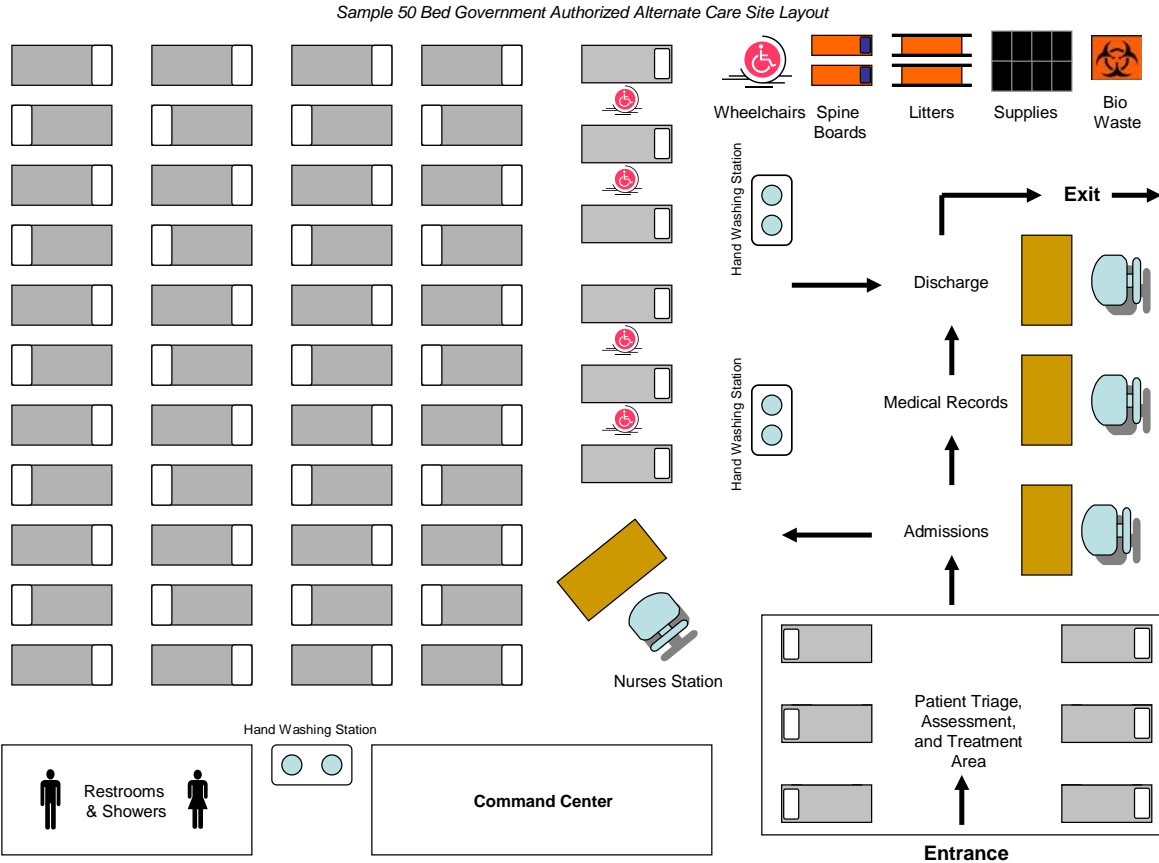
All original records pertaining to identification, postmortem documentation, and antemortem records will be transferred to the ME/C Office.

The ME/C Office will ensure that all personnel paperwork has been completed.

**Long-Term Examination Center.** A Long-Term Examination Center may continue to operate after this plan is deactivated. When the Long-Term Examination Center is deactivated, deactivation will be in compliance with SEMS and NIMS procedures and demobilization will follow procedures used for demobilization of the incident site and morgue.



**Appendix EE:**  
**Sample 50 Bed GAACS Layout**  
(from the San Joaquin County GAACS Plan, 8/7/09)



**Appendix FF:**  
**Sample MOU for Facility Use**  
(from the CDPH GAACS Operational Tools Manual)

The contractual requirements for securing premises and operating an Alternate Care Site is imperative establishing an Alternate Care Site under the authority of the local health department. Below is a sample memorandum of understanding for consideration.

\*\*\*\*\*

**(County)**  
**MEMORANDUM OF UNDERSTANDING (MOU) FOR USE OF FACILITIES**  
**IN THE EVENT OF A MASS MEDICAL EMERGENCY**

**(County), and (name of facility) agree that:**

In the event of a catastrophic medical emergency in the State of California, resources will be quickly committed to providing the necessary healthcare services. Such an event may require a facility to support the activation of an Alternate Care Site. The Alternate Care Site will serve as a site where patient care can be provided to individuals impacted by a large-scale catastrophic emergency.

**(County) and (name of facility) enter into this partnership as follows:**

1. Facility Space: (County) accepts designation of (name of facility) located at (address of facility) as an Alternate Care Site, in the event the need arises.
2. Use of the Facility: Request to use facility as an Alternate Care Site will occur as soon as possible through the local Emergency Operations Center. Designation and use of (name of facility) will be mutually agreed upon by all parties to this agreement.
3. Modification or Suspension of Normal Facility Business Activities: (name of facility) agrees to alter or suspend normal operations in support of the Alternate Care Site as needed.
4. Use of Facility Resources: (name of facility) agrees to authorize the use of facility equipment such as forklifts, buildings, communications equipment, computers, Internet services, copying equipment, fax machines, etc. Facility resources and associated systems will only be used with facility management authorization and oversight to include appropriate orientation/training as needed.
5. Costs: All reasonable and eligible costs associated with the emergency and the operation of the Alternate Care Site that include modifications or damages to the facility structure, equipment and associated systems directly related to their use in support of the Alternate Care Site facility operations will be submitted for consideration and reimbursement through established disaster assistance programs.
6. Liability: The Emergency Services Act, Government Code 8550 et seq. addresses immunity from liability for services rendered voluntarily in support of emergency operations during an emergency or disaster declared by the Governor.
7. Contact Information: (name of facility) will provide (County) the appropriate facility

24 hour/7 day contact information, and update this information as necessary.

8. Duration of Agreement: The minimum term of this MOU is two years from the date of the initial agreement. Subsequent terms may be longer with the concurrence of all parties.
9. Agreement Review: A review will be initiated by (County) and conducted following a disaster event or within two years after the effective date of this agreement. At that time, this agreement may be negotiated for renewal. Any changes at the facility that could impact the execution of this agreement will be conveyed to the identified primary contacts or their designees of this agreement as soon as possible. All significant communications between the Parties shall be made through the primary contacts or their designees.
10. Amendments: This agreement may be amended at any time by signature approval of the parties' signatories or their respective designees.
11. Termination of Agreement: Any Party may withdraw at any time from this MOU, except as stipulated above, by transmitting a signed statement to that effect to the other Parties. This MOU and the partnership created thereby will be considered terminated thirty (30) days from the date the non-withdrawing Party receives the notice of withdrawal from the withdrawing Party.
12. Capacity to Enter into Agreement: The persons executing this MOU on behalf of their respective entities hereby represent and warrant that they have the right, power, legal capacity, and appropriate authority to enter into this MOU on behalf of the entity for which they sign.

Facility Official	Date
(County) Official	Date
Public Health Department Official	Date
Hospital Official	Date

**To authorize facility use, call:**

Name: \_\_\_\_\_

Daytime phone number: \_\_\_\_\_

After-hours/emergency phone  
number:

\_\_\_\_\_

**To open facility, call:**

Name: \_\_\_\_\_

Daytime phone number: \_\_\_\_\_

After-hours/emergency phone number: \_\_\_\_\_

**Alternate contact to open facility, call:**

Name: \_\_\_\_\_

Daytime phone number: \_\_\_\_\_

After-hours/emergency phone number: \_\_\_\_\_

**Appendix GG:**  
**Facility Profile Template**  
(created for Inyo County)

**Facility Profile for Use as Field Treatment Site (FTS), Alternate Care Site (ACS), Point of  
Dispensing (POD), and/or Shelter**

Inspected By: \_\_\_\_\_ Date: \_\_\_\_\_

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**General**

Type of Facility (circle): aircraft hanger, church, community/recreation center, long-term care facility, hospital, clinic, fairgrounds, local government building, military facility, private building, hotel/motel, meeting hall, school, sports facility/stadium, trailer/tent, other (describe): \_\_\_\_\_

Site Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Physical Address (#, street, town, zip): \_\_\_\_\_

Major cross street/highway: \_\_\_\_\_ GIS Coordinates: \_\_\_\_\_

Proximity (miles) to nearest hospital: \_\_\_\_\_ police station: \_\_\_\_\_ fire station: \_\_\_\_\_

Local EMS Provider: \_\_\_\_\_ Located on flood plain (circle): Y N UNK

Year Built: \_\_\_\_\_ If before 1933, earthquake retrofitted (circle): Y N

Owner: \_\_\_\_\_ MOU in place (circle): Y N Not needed

Is there the potential for mixed usage during a disaster (the owner plus the responding agency)(circle)? Y N

Has the facility been identified for use at the time of a disaster by other agencies (circle)? Y N Who? \_\_\_\_\_

Point of Contact (POC) w/key (Name - Title): \_\_\_\_\_

Work #: \_\_\_\_\_ Cell #: \_\_\_\_\_ Home #: \_\_\_\_\_

POC for facility maintenance( Name/Title): \_\_\_\_\_

Work #: \_\_\_\_\_ Cell #: \_\_\_\_\_ Home #: \_\_\_\_\_

POC for site security( Name/Title): \_\_\_\_\_

Work #: \_\_\_\_\_ Cell #: \_\_\_\_\_ Home #: \_\_\_\_\_

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**Overall suitability** of this site to support the indicated emergency response (FTS, ACS, POD, RSS, shelter long term – evacuation, shelter short term – warming, cooling), based on the following assessment of the exterior and the interior of the site/facility:

FTS (circle):	Low	Average	High
ACS (circle):	Low	Average	High
POD/RSS (circle):	Low	Average	High
Shelter long term (circle):	Low	Average	High
Shelter short term (circle):	Low	Average	High

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Potential limitations with this site (narrative): \_\_\_\_\_

**Assessment of the Exterior of the Site**

1. Is vehicle or pedestrian access to the facility perimeter controllable by a fence, wall, or other physical barrier (preferably at least 4 feet high)?  
Y      N
2. If Yes, is a gate solid and able to be securely locked? Y  
N
3. Is there a potential helicopter landing zone nearby? Y      N
4. Are there external hazards potentially useful to intruders (hiding places, items that could be used as weapons, missiles, or tools)? Y      N
5. Is there a parking lot? Y      N
  - a. # of spaces \_\_\_\_\_
  - b. # of marked ADA spaces meeting ADA requirements: \_\_\_\_\_
6. Is there ADA access to the building (ramp, etc.)? Y      N
7. Is there adequate access and entry for emergency vehicles with a gurney? Y      N
8. Is there a separate loading dock/area? Y      N
9. Are there forklifts or pallet jacks available (if Yes, circle which and indicate #): \_\_\_\_\_ Y  
N
10. Is there access to the loading dock/area for a semi-trailer truck (18 wheeler)? Y  
N
11. Is the responsibility for potential snow removal assigned? Y      N
12. Does flooding ever interfere with access to the parking and facility? Y  
N
13. Is there the ability to lock down the building (all entrances/exits/windows)? Y  
N
14. External lighting:
  - a. Is the entire perimeter lighted? Y      N
  - b. Is the parking area adequately lighted? Y      N

- c. Is the exterior of the building, especially entry points, adequately lighted? Y N
- d. Are control switches for external lighting automatic (versus manual)? Y  
N
- e. Are control switches inaccessible to unauthorized persons? Y N
- f. Do any exterior lights have an auxiliary power source? Y N

15. Describe access to the parking lot and main entrance from major roads?

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16. Can all street/road/highway access to the site be blocked off if necessary? Y N

17. Could a secure route be ensured for access by supply or emergency vehicles? Y  
N

18. Are there any facilities nearby which might pose a security threat (jail, halfway house, storage of hazardous materials, bars)? Y  
N

Describe:

19. Are there any problems with vehicular traffic congestion in the area? Y  
N

Describe:

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20. Briefly describe the type of neighborhood (i.e., residential, commercial, industrial):

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Based upon this assessment of the exterior of the site, the suitability of this site to support the indicated emergency response is:

FTS (circle):	Low	Average	High
ACS (circle):	Low	Average	High
POD/RSS (circle):	Low	Average	High
Shelter long term (circle):	Low	Average	High
Shelter short term (circle):	Low	Average	High

Comments (narrative):

**Assessment of the Interior of the Site**

1. Are all exterior doors solid core wood, metal clad, or metal? Y  
N
2. Are all exterior doors equipped with cylinder locks, deadbolts, or solid locks? Y  
N
3. Are all exterior doors equipped with intrusion alarms? Y  
N
  - a. Where does the alarm system terminate (circle):    commercial    law enforcement
4. Is the main power source dependable? Y    N
  - a. Utility company (circle):    SCE    DWP
5. Is there an auxiliary power source/generator? Y    N
  - a. # watts: \_\_\_\_\_
  - b. # gallons of fuel on hand: \_\_\_\_\_
  - c. # hours of operation without additional fuel: \_\_\_\_\_
6. Is there (circle): heat, A/C, hot water, propane tank on the premises?
7. Is interior lighting adequate in all anticipated workplaces for safe movement and tasks? Y  
N
8. Are light switches key controlled? Y    N
9. When was the facility last inspected by the fire marshal? \_\_\_\_\_
10. Did the fire marshal approve the building? Y    N
  - a. If no, why not? \_\_\_\_\_
11. Does the building have functioning fire alarms? Y    N



12. Does the building have functioning smoke detectors? Y  
N
13. Does the building have a sprinkler system? Y    N
14. Does the building have fire extinguishers? Y    N  
a. If Yes, last inspected: \_\_\_\_\_
15. Does the building have emergency fire hoses/standpipes? Y    N
16. Does the building have a functioning and inspected AED? Y    N
17. Does the building have any first aid supplies? Y    N
18. Is there a written evacuation plan (fire, flood, earthquake, etc.) for the facility? Y  
N
19. Are exits clearly marked? Y    N
20. Describe communications resources:  
a. PA system, intercom, overhead paging:  
\_\_\_\_\_
- b. Internet – dial-up, broadband, Wi-Fi:  
\_\_\_\_\_
- c. Computers available for emergency response personnel use (#): \_\_\_\_\_
- d. Phone (# lines, phones, TDD capable):  
\_\_\_\_\_
- e. FAX (# machines): \_\_\_\_\_
- f. During tests, did 2-way radios transmit and receive clearly from inside the building?  
Y                      N
21. What is the total square footage of the building? \_\_\_\_\_
22. What is the total square footage of the largest room (basketball court = 5,000 sq. ft.)?  
\_\_\_\_\_
23. How many rooms are there in the building? \_\_\_\_\_
24. According to the fire marshal, what is the maximum occupancy for the building? \_\_\_\_\_  
people

25. According to the fire marshal, what is the maximum occupancy for the largest room? \_\_\_\_\_ people

26. What is the bed capacity of the largest room (50 square feet per non-ambulatory patient)? \_\_\_\_\_ beds

27. How many stories are there in the building? \_\_\_\_\_

28. Are the doorways ADA accessible from the entrance to the largest room? Y N

29. How many functioning electrical outlets are there in the largest room? \_\_\_\_\_

30. How many restrooms are there? Men: \_\_\_\_\_ Women: \_\_\_\_\_ Unisex: \_\_\_\_\_ ADA:: \_\_\_\_\_

31. How many showers are there? Men: \_\_\_\_\_ Women: \_\_\_\_\_ Unisex: \_\_\_\_\_

32. What is the availability of tables: \_\_\_\_\_, chairs: \_\_\_\_\_, room dividers: \_\_\_\_\_?

33. Is there built-in oxygen delivery capability in the facility? Y N

34. Is there a large amount of cash retained in any office overnight, and if so, is there an adequate safe, vault, or strongbox? Y  
N

35. Are there separate rooms/areas potentially available for the following:

a. Staff rest/breakroom Y N

b. Kitchen Y N

i. Stove (#): \_\_\_\_\_ Y N

ii. Microwave (#): \_\_\_\_\_ Y N

iii. Food supply and preparation area Y N

iv. Refrigerator (#): \_\_\_\_\_ Y N

v. Freezer (#): \_\_\_\_\_ Y N

vi. Sink (#): \_\_\_\_\_ Y N

vii. Dishwasher (#): \_\_\_\_\_ Y N

viii. Waste disposal (#): \_\_\_\_\_ Y N

c. Some or all of the following rooms/areas:

---

<u>laundry</u> – separate area or room with washers and dryers	Y	N
<u>incident manager</u> – separate room able to be secured, with adequate electrical outlets, ability to transmit and receive radio communication, and Internet broadband or wireless communication, with tables or desks and chairs, room for at least 2 workstations	Y	N
<u>triage</u> – room/area near public entrance, either separate or able to be partitioned off, to setup up at least 2 stations for staff to provide initial evaluation (history, vital signs) of potentially affected individuals ( sick, injured, exposed, contaminated, etc.)	Y	N
<u>medical counseling</u> – private area/room for medical staff to counsel individuals or families regarding proposed medical intervention (prophy, vacc., Rx, placement)	Y	N
<u>medical equipment storage</u> – temperature controlled, securable room near loading dock or staff entrance able to store multiple boxes up to the volume of several pallets	Y	N
<u>secure pharmaceutical storage</u> – temperature controlled, securable room near loading dock or staff entrance able to store medications, including refrigeration	Y	N
<u>isolation</u> - separate room with ability to be separately ventilated (no shared HVAC, open windows OK), ability for privacy and tight control of ingress/egress, ability to move cots, gurney in/out, large enough for at least 5 beds	Y	N
<u>palliative care</u> –separate private room large enough for at least 5 cots and family members, able to move cots or gurney in/out	Y	N
<u>mortuary</u> – separate secured area for temporary storage of bodies in body bags, near loading dock or staff entrance	Y	N
<u>decontamination</u> – location with ability to do decontamination outside (requires ability to set up decon tent with heated water) or inside (showering), while providing privacy, management of biowaste, and protection of non-contaminated individuals (staff and public)	Y	N
<u>family</u> – separate private area for families of affected persons to rest, eat, sleep, with shower and bathroom facilities	Y	N
<u>media staging</u> – separate area near loading dock/staff entrance, with ability to be securely separated from the public, large enough to conduct interviews/briefings	Y	N
<u>service animals/pets</u> – separate room for affected persons with service animals or small pets in cages, kennels, on leash, and well controlled		Y
<u>environmental supply storage</u> – room/area to store cleaning equipment, bathroom supplies, soap and hand sanitizers, etc., able to be secured	Y	N
<u>lab specimen preparation</u> – secured room/area with table/desk/cabinet/refrigerator suitable for storage of lab equipment (specimen collection) and for packaging and refrigeration of specimens prior to shipment, separate from any food preparation area	Y	N

biohazard/waste disposal – secured room near loading dock or staff entrance able  
 to contain large bags of contaminated waste pending final disposition Y  
 N  
law enforcement holding – secured private room/area able to temporarily hold  
 individuals being detained by law enforcement  
 Y N

---

Based on this assessment of the **interior** of the site, the suitability of this site to support the indicated  
emergency response is:

FTS (circle):	Low	Average	High
ACS (circle):	Low	Average	High
POD/RSS (circle):	Low	Average	High
Shelter long term (circle):	Low	Average	High
Shelter short term (circle):	Low	Average	High

---

Comments (narrative):

**Site/Facility Map, Floor Plan, Photographs**

2/16/10

## **Appendix HH:** **Administrative/Logistical Supplies Needed for a GAACS for One Week (50 Beds)**

(from Santa Cruz County ACS Plan, April, 2010)

Administrative/Logistical Supplies Needed for Alternate Care Site for One Week												
ACS Item #	Item Description	Category	Unit Of Issue	40 bed ACS	Quantity Required Per ...							
					250 bed unit	Ward	Bed	Pt	Pt/ Day	IV Pt	O2 Bed	O2 Pt
1	Bedside Table (Box)	Admin	EA	40				1				
2	Calculator, Solar, Small	Admin	EA	1								
3	Clipboard, Letter	Admin	EA	40			1					
4	Corkboard, 3'x5'	Admin	EA	1								
5	Eraser, Whiteboard	Admin	EA	1								
6	File Box, Letter, Cardboard, w/ Lid	Admin	EA	1								
7	Folder, Manila, Letter, w/ 2 Fasteners, 3/4" capacity	Admin	EA	60				1.1				
8	Form, Log, Ward, Patient Intake/Disposition	Admin	EA	10								
9	Form, Patient, Intake Assessment Form	Admin	EA	60								
10	Form, Patient, Consent to Treat	Admin	EA	60								
11	Form, Patient, Admitting Orders	Admin	EA	60								
12	Form, Patient, General Standing Orders	Admin	EA	60				1.1				
13	Form, Patient, Standing Orders for Asthma	Admin	EA	15								
14	Form, Patient, Standing Orders for Heart Failure	Admin	EA	15								
15	Form, Patient, Standing Orders for Diabetes	Admin	EA	30								
16	Form, Patient, Standing Orders for Pregnancy	Admin	EA	15								
17	Form, Patient, Standing Orders for Palliative Care	Admin	EA	5								
18	Form, Patient, Change Order	Admin	EA	120				2				
19	Form, Patient, Daily Patient Assessment Flow Sheet	Admin	EA	420					1.1			
20	Form, Patient, Pharmacy Order Form	Admin	EA	120				2				
21	Form, Patient, Medication Administration Record	Admin	EA	210					0.5			
22	Form, Patient, Medication Tracking Sheet (self admin)	Admin	EA	210					0.5			
23	Form, Patient, Insulin and Blood Glucose Monitoring	Admin	EA	30								
24	Form, Patient, Discharge	Admin	EA	60				1.1				
25	Form, Visitor, Visitor Guidelines and Etiquette	Admin	EA	120								
26	Hole Punch, 2-hole	Admin	EA	1								
27	Marker, Whiteboard, Fine Point, Set/4	Admin	EA	1								
28	Pad, Note, Sticky (Post-It), 3"x3", 100's	Admin	EA	1								
29	Pad, Phone Msg	Admin	Pkg	100								
30	Paper Clip, Medium	Admin	Box	1000								
31	Paper Clip, Small	Admin	Box	1000								
32	Paper, Printer, White	Admin	Ream	500								
33	Pen, Ball Point (Med. Point Black)	Admin	EA	1								
34	Pen, Ball Point (Med. Point Red)	Admin	EA	1								
35	Pen, Highlighter, Yellow	Admin	EA	1								
36	Poster Board, White, 2'x3'	Admin	EA	1								
37	Push Pin, Clear, Plastic	Admin	Box	250								
38	Rubberband, Asst Sizes	Admin	Box	1000								
39	Scissors, Office	Admin	EA	1								

**Administrative/Logistical Supplies Needed for Alternate Care Site for One Week**

ACS Item #	Item Description	Category	Unit Of Issue	40 bed ACS	Quantity Required Per ...							
					250 bed unit	Ward	Bed	Pt	Pt/Day	IV Pt	O2 Bed	O2 Pt
40	Staple Remover	Admin	EA	1								
41	Stapler, Standard	Admin	EA	1								
42	Staples, Standard	Admin	Box	1000								
43	Tablet, Paper, Lined, Yellow, 100-sheet	Admin	EA	1								
44	Tape Dispenser	Admin	EA	1								
45	Tape, Duct	Admin	Roll	1								
46	Tape, Invisible	Admin	Roll	5								
47	Tray, In/Out, 5-bin, Desktop	Admin	EA	1								
48	Whiteboard, 2' x 3'	Admin	EA	1								
49	Computer, Laptop	Commo/IT	EA	1								
50	Printer, Laser, Cartridge, Black	Commo/IT	EA	1								
51	Radio, FRS	Commo/IT	EA	1								
52	Bag, Trash, 33gal	Logistics	EA	1				0.25				
53	Battery, Alkaline, 9v	Logistics	EA	1								
54	Battery, Alkaline, AA	Logistics	EA	1								
55	Battery, Alkaline, AAA	Logistics	EA	1								
56	Battery, Alkaline, C	Logistics	EA	1								
57	Battery, Alkaline, D	Logistics	EA	1								
58	Bucket, 5-Gallon w/Lid (For Germicide)	Logistics	EA	1								
59	Cabinet, Metal, Wheeled, Locking, w/ 1 Shelf, 36"	Logistics	EA	1								
60	Can, Trash, 33gal	Logistics	EA	1			0.03					
61	Cart, Oxygen Cylinder (H/K)	Logistics	EA	1								
62	Cart, Storage, Wheeled, w/ Wire Shelves, 3-sided	Logistics	EA	1								
63	Chair, Folding	Logistics	EA	1			0.25					
64	Cooler, Beverage, 10 gal	Logistics	EA	1								
65	Gloves, Utility, Nitrile Rubber, Large, Pr	Logistics	PR	1								
66	Gloves, Utility, Nitrile Rubber, Small, Pr	Logistics	PR	1								
67	Power, Cord (50' 12/3 w/3-Way End)	Logistics	EA	1								
68	Power, Outlet Box (6-Outlet, Surge, for 6 Transfor	Logistics	EA	1								
69	Refrigerator, Compact, 4 cu ft	Logistics	EA	1								
70	Shelving Unit, Plastic, 4-Shelf	Logistics	EA	1								
71	Table, Folding, 6'	Logistics	EA	1								

**Appendix II:**  
**Medical Supplies Needed for a GAACS for One Week (50 Beds)**  
 (from Santa Cruz County ACS Plan, April, 2010)

ACS Item #	Item Description	Category	Unit Of Issue (UI)	40 bed ACS							
					Bed	Pt	Pt/Day	IV Pt	O2 Bed	O2 Pt	Deat
1	Alcohol Pad, Isopropyl, 2" x 2", Sterile	Medical	EA	300		4		2			
2	Arm Board, Padded, Long	Medical	EA	4				0.25			
3	Arm Board, Padded, Short	Medical	EA	4				0.75			
4	Bag, Infectious Waste, Red, 25" x 34"	Medical	EA	15		0.25					
5	Bag, Urinary Drainage, 2L	Medical	EA	6		0.1					
79	Bandage, Kling, Sterile, 2"	Medical	EA	3		0.05					
7	Band-Aid (Coverlet Patches), 1" X 3"	Medical	EA	150		2		2			
8	Basin, Emesis	Medical	EA	15		0.25					
9	Basin, Wash, Plastic	Medical	EA	60		2					
10	Bedpan	Medical	EA	36			0.13				
11	Bedpan, Fracture	Medical	EA	14			0.05				
12	Blanket, Wool	Medical	EA	100	2.5						
13	Body Bag, 12ml	Medical	EA	2							1
14	Cannula, Nasal, Oxygen, Adult (LATEX FREE)	Medical	EA	30						1	
15	Catheter, Foley, 10Fr, (LATEX FREE)	Medical	EA	1		0.01					
16	Catheter, Foley, 20Fr, COUDE, (LATEX FREE)	Medical	EA	1		0.01					
17	Catheter, Foley, Tray, 16Fr, Closed System (LATEX FREE)	Medical	EA	3		0.05					
18	Catheter, Foley, Tray, 18Fr, Closed System (LATEX FREE)	Medical	EA	3		0.05					
19	Catheter, IV, 20G x 1 1/4", Pink (Safety Tip) (LATEX FREE)	Medical	EA	6				0.2			
20	Catheter, IV, 22G x 1", Blue (Safety Tip) (LATEX FREE)	Medical	EA	48				1.6			
21	Catheter, IV, 24G x 3/4", Yellow (Safety Tip) (LATEX FREE)	Medical	EA	6				0.2			
22	Catheter, Suction, 14FR (LATEX FREE)	Medical	EA	3		0.05					
23	Catheter, Suction, 8FR (LATEX FREE)	Medical	EA	3		0.05					
24	Commode, Portable	Medical	EA	5							
25	Connector, Oxygen Tubing, Low Pressure, Barbed	Medical	EA	30					1		
99	Cot, Aluminum, 78" x 32" x 18", 2" pad, adjustable	Medical	EA	40	1.05						
27	Cot, Heavy Duty, 71" x 34" x 15"	Medical	EA	3	0.06						
28	Crate, 5 gal, w/ hinged lid (bedside table)	Medical	EA	40	1.1						
29	Cup, Medicine, Plastic, 1oz	Medical	EA	280			1				
30	Cup, Paper, Cold Drink, 150ml	Medical	EA	560			2				
31	Cylinder, Oxygen, D, Aluminum w/ Toggle Valve	Medical	EA	1							
32	Cylinder, Oxygen, H/K (220 cu.ft.)	Medical	EA	147					0.16		
33	Defibrillator, Automatic External	Medical	EA	1							
34	Defibrillator/Monitor, Electrode, 12-lead EKG, 10's	Medical	PK	14			0.05				
35	Defibrillator/Monitor, Paper	Medical	EA	3			0.01				
36	Defibrillator/Monitor, w/ 12-lead EKG, Printer, A/C	Medical	EA	1							



ACS Item #	Item Description	Category	Unit Of Issue (UI)	40 bed ACS	Bed	Pt	Pt/Day	IV Pt	O2 Bed	O2 Pt	Deat
37	Dial-a-Flow Extension Set (LATEX FREE)	Medical	EA	63				2.1			
38	Earplug, Disposable, Pr	Medical	PR	60		1					
39	Envelope, Drug Dispensing, 2.5" x 4.6"	Medical	EA	280			1				
40	Eye Shade	Medical	EA	10		1					
41	Flashlight, Penlight	Medical	EA	1							
42	Germidice, Cidex Plus Solution, Gal	Medical	EA	1							
43	Gloves, Examination, Nitrile, Powder Free, Lrg (L)	Medical	EA	1960			7				
44	Gloves, Examination, Nitrile, Powder Free, Med (L)	Medical	EA	2240			8				
45	Gloves, Examination, Nitrile, Powder Free, Small (L)	Medical	EA	840			3				
46	Gloves, Examination, Nitrile, Powder Free, X-Lrg (L)	Medical	EA	560			2				
47	Goggle, Eye	Medical	EA	2							
48	Gown, Isolation/Protection	Medical	EA	36			0.13				
49	Gown, Patient	Medical	EA	240	5						
50	Gurney, Patient	Medical	EA	1							
51	Heparin Lock, 1" (PRN Adapter) (LATEX FREE)	Medical	EA	30				0.03			
52	Hose, Oxygen, High Pressure, 20', (Multi-Outlet M	Medical	EA	1					0.13		
53	Humidifier, Bubble	Medical	EA	8						0.25	
54	IV Administration Set, 78",w/clamp,Vented, (60 Dr	Medical	EA	63				2.1			
55	IV Extension, Tubing, 30" (LATEX FREE)	Medical	EA	63				2.1			
56	IV Starter Set	Medical	EA	63				2.1			
57	Lotion, Moisturizing, Hand, 20oz	Medical	EA	5							
58	Manifold, Oxygen, Multi-Outlet (8)	Medical	EA	3					0.13		
59	Mask, Bag Valve (Ambu Bag), Adult (LATEX FRE	Medical	EA	1							
60	Mask, HEPA, N95, Fluidshield Respirator, Large (	Medical	EA	20							
61	Mask, HEPA, N95, Fluidshield Respirator, Med (O	Medical	EA	50							
62	Mask, HEPA, N95, Fluidshield Respirator, Small (	Medical	EA	20							
63	Mask, Oxygen, Non-Rebreather, Adult (LATEX FF	Medical	EA	1						0.03	
64	Mask, Patient Isolation	Medical	EA	840			3				
65	Monitor, Blood Glucose	Medical	EA	2							
66	Monitor, Blood Glucose, Lancets, Disp	Medical	EA	100							
67	Nebulizer, Mechanical	Medical	EA	1	0.02						
68	Needle, 18G x 1 1/2", Safety Tip	Medical	EA	24		0.4					
69	Needle, 19G x 1", Filter	Medical	EA	100							
70	Needle, 22G x 1 1/2", Safety Tip	Medical	EA	24		0.4					
71	Needle, 22G x 1", Safety Tip	Medical	EA	180		3					
72	Needle, 25G x 5/8", Safety Tip	Medical	EA	24		0.4					

ACS Item #	Item Description	Category	Unit Of Issue (UI)	40 bed ACS							
					Bed	Pt	Pt/Day	IV Pt	O2 Bed	O2 Pt	Deat
73	Needle, 27G x 1 1/4", Safety Tip	Medical	EA	24		0.4					
74	Needle, Butterfly, 21G x 3/4", Safety Tip (LATEX	Medical	EA	24		0.4					
75	Pad, Chux	Medical	EA	350			1.25				
76	Pillow Case, Disposable	Medical	EA	300		4					
77	Pillow, Disposable	Medical	EA	300		1.1					
78	Pitcher, Water, Disposable	Medical	EA	280		1					
79	Pole, IV, 2-hook	Medical	EA	40	0.03						
80	Pulse Oximeter, Handheld w/ Adult/Ped/Neo sens	Medical	EA	2							
81	Regulator, Oxygen, D Cylinder	Medical	EA	1							
82	Regulator, Oxygen, H/K Cylinder (0-25LPM)	Medical	EA	24					0.13		
83	Restraints, Soft	Medical	PR	3		0.05					
84	Sanitizer, Hand, Waterless, Pump, 5 oz	Medical	EA	5							
85	Scale, Bathroom	Medical	EA	1							
86	Screen, Privacy, Folding, Wheeled, 3-panel	Medical	EA	5	0.13						
87	Screen, Privacy, Folding, Wheeled, 1-panel	Medical	EA	5	0.13						
88	Sharps Container w/ Needle Remover, 2qt	Medical	EA	1		0.06					
89	Shears, Trauma	Medical	EA	1							
90	Sheet, Bed, Disposable	Medical	EA	350			1.25				
91	Shield, Full Faceguard, Clear	Medical	EA	20							
92	Shoe Cap, Disposable, Unisex	Medical	EA	36			0.13				
93	Slipper, Disposable, Adult, Large	Medical	PR	26		0.44					
94	Slipper, Disposable, Adult, Medium	Medical	PR	40		0.66					
95	Slipper, Disposable, Adult, Small	Medical	PR	7		0.11					
96	Sphygmomanometer, Aneroid Set, Nylon Cuff w/ C	Medical	EA	3							
97	Sphygmomanometer, Aneroid Set, Nylon Cuff w/ C	Medical	EA	1							
98	Sponge, Sterile, 4" x 4"	Medical	EA	120		2					
99	Stand, Oxygen Cylinder, H/K (M-60)	Medical	EA	1					0.13		
100	Stethoscope, Single Head, Black (LATEX FREE)	Medical	EA	3							
101	Stop Cock, 3-Way	Medical	EA	3				0.1			
102	Suction Unit, Portable (LATEX FREE)	Medical	EA	1	0.13						
103	Suction Unit, Portable, Collection Jar, Canister, 12	Medical	EA	3	3.75						
104	Suction Unit, Portable, Spare Battery	Medical	EA	1	0.13						
105	Suction Unit, Portable, Tubing, Sterile, 9/32" ID x 6	Medical	EA	3	3.75						
106	Suction Unit, Portable, Yankauer Tip (LATEX FRE	Medical	EA	3		0.5					
107	Syringe, Luer-Lok, Disposable, 10cc (LATEX FRE	Medical	EA	1		0.1					
108	Syringe, Luer-Lok, Disposable, 3cc (LATEX FREE	Medical	EA	120		2					

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**Appendix JJ:**  
**Oxygen Delivery Alternatives**  
(from the SCCPHD APC: Medical Mass Care - Tool #6)

**Influenza Care Center Oxygen Delivery Options**

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**Introduction & Overview**

This document attempts to analyze the problem and solution space of providing oxygen to patients at an Influenza Care Center (ICC). Delivery mechanisms, storage, cost, maintenance, and other factors are considered.

## **Executive Summary**

This analysis concludes that the objective of providing oxygen to 60% of the patients at an ICC is attainable in a multi-year, phased approach, using high-capacity, high-pressure oxygen cylinders refilled from a liquid oxygen supply.

The initial phase consists of reducing the 60% requirement to support currently available funds, procuring an initial equipment stockpile to support the reduced requirement, and negotiating with local hospitals and gas suppliers for a liquid oxygen source. Phase 2 adds capacity over multiple years as funding becomes available. Phase 3 adds stand-alone refilling capability to each ICC, reducing or eliminating the need to transport tanks to area hospitals or industrial gas companies.

## **Overall Assumptions**

It is assumed that an ICC has a population of 450 patients, and that the objective is to provide oxygen to 60% of this population (270 patients), at a flow rate of 2-5 liters per minute (LPM). It is further assumed that this would average to a flow rate of 3.5 LPM across all patients. Finally, it is assumed that this is a short-term problem on the order of months, such that permanent infrastructure for long-term oxygen delivery is not required or practical to procure and maintain.

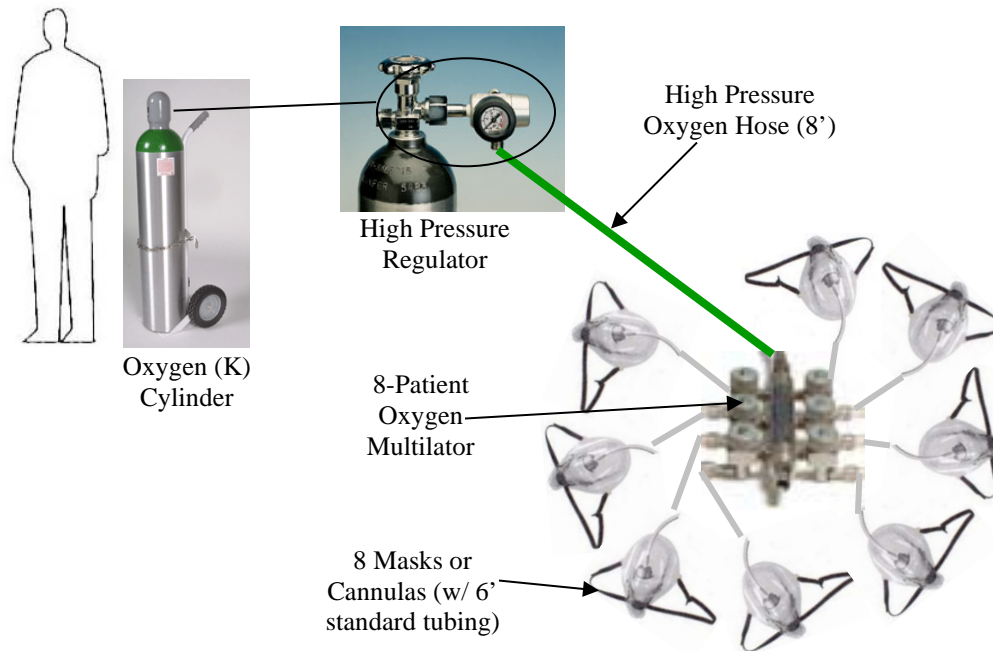
The cost of oxygen masks, cannulas and humidifiers is not included in the calculations below, as they are common to all oxygen delivery solutions.

## **Option 1: Compressed Gas**

The standard means of administering oxygen in a non-hospital (field) setting is via oxygen cylinders. This could be expanded to meet the delivery needs of an ICC as follows:

### ***Mechanism***

Use large (H- or K-size) oxygen cylinders to deliver oxygen to multiple patients at the same time. This is accomplished by connecting a high pressure regulator to the oxygen cylinder, then connecting a multi-patient oxygen manifold (typically called a multitor) to the regulator via a high-pressure oxygen hose. A multitor converts the high-pressure oxygen into low-pressure delivery, and typically controls the liter flow on a per-patient basis (i.e., each patient can receive a different flow rate). An oxygen mask or cannula is connected to the multitor via a standard barbed oxygen fitting. Multitors exist in 5-, 6-, 7-, 8-, and 9- patient models.



The ICC would be laid out with patients in groups around each oxygen cylinder and multitor, such that each patient is within 8' – 10' of the cylinder.

### ***Solution Assumptions***

Oxygen cylinder capacity varies with temperature, so it is assumed to be 72° F in an ICC. A safety margin should probably be added for a cylinder solution, but is *not* factored into the calculations here.

Oxygen cylinders are not capable of delivering 100% of their capacity (pressure decreases below the desired flow rate as the tank nears empty). So a 95% utilization factor is assumed.

For purposes of cost and logistical efficiency, it is assumed that 8-patient multitors would be used for this solution.

### ***Procurement Considerations***

A standard H or K cylinder is 9" in diameter, 51" high, and holds 6,340 liters (224 cubic feet) of oxygen. One cylinder can provide oxygen for 8 people at 3.5 liters/minute for approximately 3.75 hours. Each 8-patient oxygen system would use 7 cylinders per day. 270 patients would require 34 stations, thus requiring 238 cylinders per day. An additional 10% should be added to support refilling cycles, bringing the total requirement to 260 cylinders per ICC.

Item	Qty	Unit Cost (\$)	Extended Cost (\$)
H/K cylinder	260	200	52,000

Regulator, high-pressure, H/K cylinder	34	200	6,800
Hose, high-pressure	34	35	1,200
Multilator, 8-patient	34	600	20,400
Cart, H/K cylinder	4	200	800
Rack, 8 H/K cylinder, forklift-ready	33	500	16,500
Pallet jack	2	800	1,600
<b>TOTAL</b>			<b>99,300</b>

## ***Cylinder Refilling***

There are three options for refilling oxygen cylinders:

### **Industrial Gas Companies**

Industrial gas companies (e.g., Praxair, AirGas) are the industry standard means of filling medical oxygen cylinders. Capacity and cost issues would have to be investigated with these companies, as well as pandemic influenza staffing considerations.

### **Area Hospitals**

Hospitals distribute high-pressure oxygen within their facilities. They typically have an oxygen generator/compressor on site, or they store and convert liquid oxygen (distributed by industrial gas companies, see above). Hospitals use oxygen cylinders (usually smaller sizes) for transferring patients within the facility, and do not typically have a high-volume need for cylinders. However, they may possess the on-site ability to fill cylinders, or their existing equipment could be upgraded to obtain this functionality. Capacity and cost issues would have to be investigated with these facilities, as well as pandemic influenza staffing considerations.

### **Procure Filling Equipment**

The County could procure its own oxygen filling equipment. Some vendors provide sled-mounted equipment that could be moved to ICCs or mounted on trucks; others provide fixed-location equipment that would be installed at a permanent location (requiring the planning and implementation of a cylinder collection/distribution system to the ICC sites).



Here are some very rough price estimates for these systems. Note that these systems are not intended to be run 24x7, so a 50%-75% duty cycle is assumed.

Capacity (H/K cylinders/day)	ICC Qty Rqd	Unit Cost (\$)	Extended Cost (\$)
50	5	140,000	700,000
100	3	215,000	645,000
400	1	700,000	700,000

NOTE: hospitals commonly convert liquid oxygen to high-pressure gas for internal distribution. There may be portable equipment available to convert liquid oxygen to a high-pressure, compressed gas form for refilling oxygen tanks. If this equipment is available and cost-effective, then a liquid oxygen tanker could be used as the refill source. These tankers are readily available from industrial gas suppliers, so this may be an extremely viable and cost-effective solution to the refill problem. Alternatively, liquid oxygen tanks can be purchased and filled on an as-needed basis. (See Option 2 below for further details.)

### ***Storage Considerations***

Oxygen cylinders, regulators and manifolds require very little maintenance when in storage, perhaps limited to gasket replacement every 5-7 years. Equipment and supplies can be stored densely (packed, sealed and stacked).

Maintenance requirements for an oxygen generation plant are unknown.

### ***Staffing & Usage Considerations***

A full K cylinder weights approximately 180 lbs, so rotating cylinders is a two-person task for safety purposes (particularly when in proximity to patients). Assume 10 minutes to rotate one cylinder, or 5 tanks an hour (to allow for a rest period each hour). To rotate 238 cylinders per day, the ICC would need to have 2 2-person crews dedicated to oxygen cylinder rotation.

This does not include staff for transporting cylinders from the ICC to the refilling station, or staff to operate the refilling station.

### ***Advantages & Disadvantages***

Advantages to a compressed gas solution:

- The low-tech, low-overhead, portable, flexible nature of this solution makes it potentially useful in a variety of other settings, such as a mass-casualty “bang” event, a hospital whose oxygen system fails, etc.
- Oxygen cylinders are capable of delivering high-flow oxygen if needed for bagging a patient or operating a ventilator.
- This solution packs densely and requires little periodic maintenance, making it very amenable to long-term storage.
- Relatively low per-part costs make this solution amenable to incremental expenditures to add capacity.
- The distributed nature of this solution minimizes the impact of individual component failure.



- If refilling can be accomplished through area hospitals or industrial gas companies, then this is the most cost-effective solution.
- No electricity is required at the ICC for use of this solution. (However, high-voltage electricity is required for refilling equipment.)

Disadvantages to a compressed gas solution:

- The large number of cylinders required creates a logistical problem with respect to staffing and transportation.
- Safety concerns regarding large numbers of heavy, unstable oxygen cylinders potentially falling on staff or patients, of accidents during transport or refilling, etc.
- Training, operations, maintenance, space/land and cost of filling equipment, if this becomes part of the solution.

## Option 2: Liquid Oxygen (LOX)

A LOX solution is similar to the above compressed gas solution in that patients could be grouped around tanks of liquid oxygen. The tanks are reasonably transportable, weighing about 175 lbs when full and containing over 37,000 liters of oxygen (sufficient to last 8 patients approximately 22 hours).



Costs for this solution are not available online, but are anticipated to be more expensive than the above compressed gas solution. Companies like Puritan Bennett ([www.puritanbennett.com](http://www.puritanbennett.com)) provide LOX solutions.

### ***Solution Assumptions***

For purposes of cost and logistical efficiency, it is assumed that multi-patient multitors would be adaptable for use with this solution. Standard high-flow LOX regulators provide 15 LPM. If higher-flow regulators are not available, then a 5 LPM therapeutic requirement would limit a LOX reservoir to 3 patients, thus increasing the number of reservoirs needed for this solution. Further investigation is required.

### ***Reservoir Refilling***

There are two options for refilling liquid oxygen reservoirs:

## Industrial Gas Companies

Industrial gas companies (e.g., Praxair, AirGas) are the industry standard means of filling liquid oxygen reservoirs. A gas company could potentially deliver a tanker truck (trailer) to the ICC site, where ICC staff could refill reservoirs for a week or more from a single delivery. Another alternative is to purchase liquid oxygen storage tanks (can be truck-mounted for ICC delivery). Capacity and cost issues would have to be investigated with industrial gas companies, as well as pandemic influenza staffing considerations.



## Area Hospitals

Hospitals that use liquid oxygen for their internal oxygen system may be able to refill liquid oxygen reservoirs transported from an ICC (or could potentially refill a truck-mounted LOX tank, see above). This option would need to be investigated further. The hospital systems may be upgradeable to obtain this functionality. Capacity and cost issues would have to be investigated with these facilities, as well as pandemic influenza staffing considerations.

## Advantages & Disadvantages

Advantages to a liquid oxygen solution:

- Capable of delivering high-flow oxygen if needed for bagging a patient or operating a ventilator.
- This solution packs densely and requires little periodic maintenance, making it very amenable to long-term storage.
- The distributed nature of this solution minimizes the impact of individual component failure.
- Liquid oxygen would be readily available, thus eliminating the need for costly and logistically-complicated oxygen cylinder refilling solutions.
- Greater bedside capacity means decreased refilling labor requirement over a compressed gas solution.
- Fewer weight-related safety concerns than a cylinder-based solution.
- No electricity is required at the ICC for this solution, or for refilling reservoirs from a free-standing LOX tank.

Disadvantages to a liquid oxygen solution:

- Liquid oxygen evaporates over time, so is not suitable for long-term storage. It would take 5-10 hours to set up a liquid oxygen delivery system, assuming all the components were available in storage. This means that the equipment for this solution would not be useful to provide patient oxygen for a “bang” event. However, liquid oxygen is sufficiently available that the solution

could be used for a slightly less time-critical problem such as the failure of a hospital oxygen system (where several hours notice would be presumed).

- Safety concerns regarding flammability – the higher capacity of bedside tanks creates a greater fire/explosion hazard from a leaking tank than would exist from a leaking compressed gas cylinder.
- Increased training and technical requirements over a compressed gas solution.
- Liquid oxygen is not used as widely as compressed gas oxygen, so there is a lower range of alternative uses for this equipment. For example, it could not be as readily adapted to provide oxygen to home-care patients in a post-disaster environment where commercial tank refilling services are reduced or not available.

### Option 3: Oxygen Concentrators

Oxygen concentrators are electromechanical devices that extract oxygen from room air. Bedside-sized units are readily available.

#### ***Mechanism***

Use portable oxygen concentrators to deliver oxygen to multiple patients at the same time. This is accomplished by connecting a low-pressure, multi-patient oxygen manifold (typically called a multitor) to the concentrator. A low-pressure multitor typically does not allow for per-patient flow control, but rather simply divides the available oxygen evenly among the open valves (so a 10 LPM source divided among 3 patients provides 3.33 LPM to each patient). An oxygen mask or cannula is connected to the multitor via a standard barbed oxygen fitting.



Oxygen concentrators are electrically-powered devices, so electricity must be distributed into the ICC for this solution. Each concentrator draws 5 amps, so 3 devices could be plugged into a standard 15-amp circuit. This means that a high-voltage electrical distribution system must be installed into the ICC, similar to the way in which electricity is routed at trade shows, conventions, concerts, etc. A series of electrical distribution boxes would be connected by high-voltage cable to an electrical source (possibly a large generator in the parking lot, if the ICC facility could not provide sufficient power). The generator would be diesel-powered, requiring a diesel fuel tank or truck for refilling 1-2 times per day.



## ***Procurement Considerations***

A 10 LPM bedside concentrator could provide oxygen for 2-5 patients (2 patients at 5 LPM, 5 patients at 2 LPM). For procurement considerations, we translate the 3.5 LPM assumption into an assumption of 3 patients per 10 LPM concentrator. Therefore 270 patients would require 90 concentrators.

Item	Qty	Unit Cost (\$)	Extended Cost (\$)
Oxygen concentrator (10 LPM)	90	2,000	180,000
Multilator, low-pressure, 5-patient	90	150	13,500
Power Distribution Panel	15	900	13,500
Power Cable, 100' 8/4	25	300	7,500
Ramp, Protector, Power Cable	100	80	8,000
TOTAL			222,500

## ***Maintenance & Storage Considerations***

Oxygen concentrators require periodic maintenance during storage. This means that storing oxygen concentrators is more complicated than other oxygen solutions, because the devices must be tested and serviced on a periodic basis. Further investigation is required to more fully understand and estimate the impact of this.

## ***Staffing & Usage Considerations***

Oxygen concentrators require regular maintenance during operations. This is technical work requiring a trained engineer, and is not suitable for on-the-job training of disaster workers. The electrical requirements of an oxygen concentrator solution require an electrician to be on-site at an ICC at all times. Further analysis by a qualified electrician is required to more fully understand and estimate the electrical considerations and requirements of this solution.

## ***Advantages & Disadvantages***

Advantages to an oxygen concentrator solution:

- Eliminates the need for compressed gas or liquid oxygen, which dramatically reduces the logistical considerations for this solution.
- Lowest risk solution from a safety perspective – no hazard from compressed or liquid oxygen, falling tanks, etc. Minor electrical fire hazard, and trip hazard for electrical cables throughout ICC.

Disadvantages to an oxygen concentrator solution:

- Since electrical power is required for this solution, and will likely be provided by a single source (i.e., a generator or the facility power feed), a power failure will cause oxygen delivery failure to all patients. Single point of failure for this solution.
- Oxygen concentrators are not capable of delivering high-pressure/flow oxygen for a ventilator or for bagging a patient.
- Potentially the most expensive solution.
- Highest maintenance cost of any solution, and most technically demanding solution.
- Not readily usable for other situations requiring oxygen use – power consumption too high for built-in wall power in most buildings, too long to set up electrical distribution grid and acquire generator to be useful for “bang” event.

## **Conclusion & Recommendation**

Each ICC should probably have some capacity of high-pressure, compressed-gas oxygen in cylinders, to be used to power a ventilator or bag a patient on a temporary/emergency basis, and to be used for the most serious patients in the event of failure of the established oxygen delivery mechanism.