Attachment 4

Department of Public Health
Surge Report

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07/11/2007 12:57 PM
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To PHARMACY_MMA-L@list.nih.gov
cc
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Subject Medicare Rx Update

Planning for Emergency Response... with Community Pharmacies

In the aftermath of Hurricane Katrina, the Centers for Medicare & Medicaid Services (CMS) partnered with community pharmacies to successfully assist victims and evacuees at hundreds of evacuee sites with virtually no drug supply shortages or other logistical difficulty, even in light of the very difficult operating environment. Applying the lessons learned from the Katrina response, CMS has established an Emergency Prescription Assistance Program (EPAP) that will utilize the existing pharmaceutical supply chain infrastructure as the distribution mechanism for future emergency responses.

The EPAP... A Pharmacy Network for Disasters of National Significance

In the coming days, CMS (through Argus Health Systems, Inc.) will be establishing a national network of pharmacies specifically for emergency response. Once established, any participating network pharmacy can respond to a federally declared event of national significance utilizing existing pharmacy systems and infrastructure to efficiently process prescriptions for drugs and limited durable medical equipment (DME) for the EPAP.

In short, this program will operate much like a third party insurance program by providing pharmacists with specific instructions on how to handle prescriptions for victims of disasters of national significance; how to bill these claims for reimbursement, and how much they can expect in reimbursement.

How will it work?

In the event of disaster of national significance, the Federal Emergency Management Administration (FEMA) will identify individuals or groups of individuals who may be eligible for the EPAP and that information will be communicated to pharmacies through Argus. Upon activation of the EPAP system, disaster victims may present at any network pharmacy to fill a prescription written for a covered medication to treat an acute condition, to replace maintenance drugs that the individual may have lost in the emergency or to obtain certain covered DME. Pharmacies will be required to check for existing coverage at the point of sale prior to billing the EPAP. If the disaster victim does not have private third party prescription drug coverage or other federal or state prescription drug coverage (e.g., Medicaid) they will be eligible for EPAP coverage.

How often will the EPAP be Activated?

While it is impossible to predict on an annual basis how often the EPAP will be activated, we want to stress that this is for disasters of national significance. While Presidential Declarations (emergency or major disasters) have averaged around 50 per year, FEMA would only activate the EPAP in a very limited number of events of national significance (e.g., major hurricanes or other disasters). If the past is any indication, this system probably won't be activated more than once or twice a year for most years.

CMS and Argus will be working with pharmacy industry groups including the NCPDP Emergency Preparedness Committee, along with leading technology companies such as RxHub, SureScripts, RelayHealth and others to incorporate their planning and unique capabilities into the EPAP procedures and processes. Please watch for further communication on this program... more details will be coming to pharmacies from Argus directly in the very near future.

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Sign upfor the**PHARMACY_MMA-L** list to receive the Medicare Rx Update

MEMORANDUM

Date: 05/14/07

To: Virginia Herold
From: Ralph Orlandella

SUBJECT: Disaster Surge Meeting

Hi Giny

The last Surge meeting I participated in went extremely well. They definitely listened to and used the input from the Board. This meeting was primarily a summary session used to develop of final draft for the stakeholders review at the next meeting.

I printed a copy of the Draft Copy. Don't let the size of the document scare you. The majority of the pages are planning lists for the health care facilities.

The first section of the document covers the process for acquiring supplies, pharmaceuticals and equipment prior to a surge.

The second section covers planning for storage both pre-surge and during a surge. This section includes inventory management, environmental factors, security and transport.

The third section covers recommendations for "staging". This section applies to equipment and supplies more than pharmaceuticals.

The fourth section covers licensing and regulatory implications impact. They relied greatly on the statement of the Board of Pharmacy as an example of what needs to be done in a surge. (Found on pages 87-89). Most of the pharmacy topics are found on page 35 through page 38.

Overall I believe this surge document is very good. I still have a small problem in that it appears the surge seems to focus almost exclusively on the acute care setting. I really could not find a definition of "Alternate Care Facility" (ACF). This may be defined by one of the other work groups. I imagine pharmacies would be considered an ACF but there was no discussion of this in my work group.

Community pharmacies and sterile compounding pharmacies will definitely have an important role in maintaining the health of the general population and the less

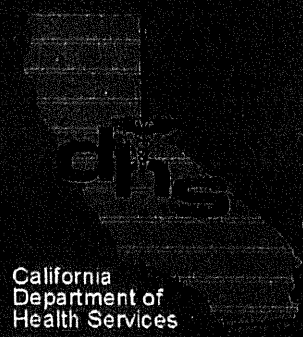
seriously injured not treated in the acute setting. This is both a challenge and an opportunity for pharmacy and the Board to develop pharmacy's role in a disaster.

One new thing this group discussed and suggested was that the Board requires completion of a Disaster Plan continuing education program as part of the license renewal process. The focus should be on the role of the pharmacist and how to adapt to the requirements of a surge setting. I don't think such a program really exists at this time. There are programs that discuss the causes of disaster, but nothing that discusses the pharmacist's role in a surge.

I hope this summary is helpful.

I will be on vacation when the surge program has its next meeting.

Ralph O



Development of Standards and Guidelines for Healthcare Surge during Emergencies

Supplies, Pharmaceuticals, and Equipment

Table of Contents

NOTE: This document is a draft output from the Supplies, Pharmaceuticals, and Equipment work team. It is the culmination of input received from multiple sources which includes ideas generated by stakeholders, reference material gathered through research, documents submitted by stakeholders, and analysis of current regulations and statutes. It is a work in progress and will continue to be refined over the next few weeks. We would like to solicit your feedback on the content of this document. The quality and effectiveness of this deliverable is ultimately decided by you, the stakeholder.

Introduction

Providing healthcare during a large scale public health emergency presents significant challenges for healthcare facilities, licensed healthcare professionals, and communities. During emergency events, healthcare systems must convert quickly from their existing patient capacity to "surge capacity" - a significant increase beyond usual capacity - to rapidly respond to the needs of affected individuals. The demands of the emergency may prevent compliance with the existing healthcare standards. Just as California has healthcare standards for use with a normal operations, it is essential that California provide guidelines that identify the extent to which existing standards can be flexed or waived for healthcare delivery during emergencies.

Surge planning for the healthcare system is a substantial and complex challenge. In a time of significant disaster, a successful plan must provide flexibility to address capacity (volumes of patients) and capabilities (types of illnesses) that emerge above baseline requirements. The issues addressed are diverse and include standards of practice during an emergency, liability of hospitals and licensed healthcare professionals, reimbursement of care provided during an emergency, operating alternate care sites, and planning considerations for surge operations at individual hospitals.

Upon completion of this project, stakeholders will have access to a *Standards and Guidelines Manual* that will serve as a reference manual on existing statutory and regulatory requirements identifying what will be flexed or modified under different emergencies; *Operational Tools* that include forms, checklists and templates to facilitate and guide the adoption and implementation of statutory and regulatory requirements outlined in the Standards and Guidelines Manual; and a *Training Curriculum* outlining intended audience, means of delivery and frequency of training that will enable adherence to the policies and overall readiness of the healthcare delivery system.

The deliverables will serve as the basis for planning and operations of healthcare facilities, providers and communities during an unexpected increase in demand for healthcare services. The deliverable will focus on eight areas: (1) Declaration and Triggers; (2) Existing Facilities; (3) Alternate Care Sites; (4) Personnel; (5) Supplies, Pharmaceuticals and Equipment; (6) Funding Sources; (7) Administrative; and (8) Population Rights.

Supplies, Pharmaceuticals, and Equipment (SP&E) Overview

There are existing processes for healthcare facilities to access, procure, store and distribute supplies, pharmaceuticals, and equipment. Each step of the supply chain is impacted in a different manner. During a surge, these processes may be altered and there needs to be an organized process that is understood so that each of the operational levels can obtain potentially scarce resources in a timely manner.
Supplies in the context of this document are durable and consumable goods which are essential in carrying out the treatment of a patient's illness or injury. Pharmaceuticals are any prescription medications, over the counter drugs and/or nutraceuticals administered to persons to diagnose, treat, or prevent disease or other abnormal conditions. Equipment is fixed or portable equipment used for diagnosis, treatment, monitoring and direct care of individuals. Acquisition in terms of this document is defined as the process of acquiring supplies, pharmaceuticals, and equipment from various sources via procurement, stockpiles, caches, and other sources. It is distinguished from procurement in that procurement is the process of obtaining supplies, pharmaceuticals, and equipment via contracts, government requests, and mutual aid that includes an arrangement of payment. Procurement is considered a subset of access.

The first section illustrates the process for acquiring supplies, pharmaceuticals, and equipment pre-surge and during a surge. It considers different types of facilities and an ACS and describes the process for accessing the SEMS structure to obtain the needed materials. Guidance is provided on the types and quantities of supplies, pharmaceuticals, and equipment that may be needed during a surge. This section makes recommendations for the types of personal protective equipment (PPE) that maybe required at existing healthcare facilities and ACSs in the event of a surge.

Once the supplies, pharmaceuticals and equipment are accessed the materials must be stored adequately. There are several considerations from both the pre-planning and the in-surge perspectives. The second section divides storage into the areas of inventory management, environmental, security, transport, and ease of access as it pertains to the areas of supplies, pharmaceuticals and equipment specifically.

When storing supplies, pharmaceuticals, and equipment, the method in which the materials are set up can significantly impact the surge response. The third section provides general recommendations on "staging' that can be specified to various sites.

The fourth section provides an understanding of how liability, licensing, and regulatory implications impact the distribution of supplies, pharmaceuticals, and equipment. This section highlights specific advanced planning mechanisms that have been implemented for the purpose of encouraging the emergency provision of care to affected patients and areas. It provides answers to questions such as "can standards be flexed for using expired

medications during a surge?" and "are there waivers for requirements that may be implausible to meet under certain circumstances?" If understood correctly, this knowledge could assist personnel in the delivery of care.

The Acquisition Process

Accessing the SEMS structure

The Standardized Emergency Management System (SEMS) is the system required by Government Code § 8607 (a) for managing response to multi-agency and multi-jurisdiction emergencies in California. SEMS consists of five organizational levels that are activated as necessary: field response which includes the on-scene responders, local government which includes county, city or special districts, operational area (OA) which includes the responsible jurisdictions within the boundary of a country, region includes operational areas and state which includes coordination integrated with federal agencies. The five SEMS organization levels, together with the private sector, represent all resources available within the State that may be applied in disaster response and recovery phases.

According to SEMS, resource requests for response and recovery originate at the level of government where the needs are unmet and are progressively forwarded to the next higher level until filled. All public health functions should be incorporated into SEMS system through the Mutual Aid System concept. The CDHS Emergency Response Plan defines mutual aid as voluntary assistance provided by agencies, local governments, and the State in the form of additional resources, facilities and other support whenever jurisdictions' resources prove to be inadequate to cope with a given situation.

The following diagram, pulled directly from the CDHS Emergency Response Plan, illustrates the mutual aid system concept and the general flow of requests and resources.

The Local Health Officer (LHO) has the authority to declare a health emergency. When a health emergency has been declared, the LHO has supervision and control over all environmental health and sanitation programs, personnel and resources employed by the county during the state of emergency.

Medical and health coordination, at the OA level, is accomplished through the designated Medical/Health Operational Area Coordinator (MHOAC). The position of MHOAC can be filled by either the LHO or a designated representative tasked by the LHO. The MHOAC is responsible for coordinating mutual aid support within the OA, and responding to mutual aid resource requests. During a disaster the MHOAC directs the medical/health branch of the OA EOC, establishes priorities for medical and health related requests, responses and resources.

The SEMS system is designed for the public sector. Health facilities, whether they are existing facilities or designated at the time of the disaster as alternate care sites, have to understand how to access mutual aid via the SEMS system during a disaster. At the present time, it is not clear how private sector health facilities will access mutual aid via the SEMS system.

Mutual aid works on the premise that health facilities will exhaust their normal access points for supplies, pharmaceuticals and equipment prior to making a formal request via the SEMS system. Some health facilities, such as hospitals, have multiple access points given existing supply chains with established retailers and wholesalers relationships. Other types of facilities, especially alternate care sites that are erected at the time of the disaster, may have considerably fewer access points and would rely primarily on mutual aid to sustain operations in the short-term. As such a process has been developed to enable a consistent and predictable approach for health facilities to access supplies, pharmaceuticals and equipment mutual aid via SEMS during a disaster.

Pre-Surge Planning Activities

During planning, it is essential that health facilities perform two preparatory activities: 1. Identify a "Duty Officer" and 2. Identify the relevant access point to the SEMS system in their respective OA.

1. A Duty Officer function should be established that will be responsible for compiling, analyzing and relaying mutual aid requests to the SEMS system during a disaster. The duty officer could represent an individual facility or multiple facilities within an OA that have Memorandum of Understanding (MOU) in place. The Duty Officer function should have 24-7 coverage and should be filled by personnel who are trained in the SEMS system and have working knowledge of their facilities' emergency response plan. This function should not be viewed as a new position and could be merged with other existing emergency preparedness roles already in existence at health facilities. For alternate care sites, the LHO should designate a representative to fill the Duty Officer role. The Duty Officer role and Alternate Care Site Administrator role should be filled by different individuals.

2. One of the first tasks of the Duty Officer should be the identification of his or her SEMS contacts. At a minimum, the following roles should be identified and their names and contact information should be maintained in the respective health facilities' emergency response plans:

    a. HRSA Coordinator
    b. Local Health Department & Officer
    c. MHOAC
    d. Local EMS Agency Administrator and Medical Director
    e. OA Emergency Operations Center (EOC)

It is recommended that the Duty Officer set up an introductory meeting with his or her MHOAC and LHO. The purpose of the meeting will be to begin a working collaborative relationship with active sharing of relevant supplies, pharmaceuticals and equipment information.

It is important that the Duty Officer understand the acquisition process for his or her health facility. The acquisition process for health facilities is usually well defined in Standard Operating Procedures and includes multiple functional areas such as operations, procurement, receiving and materials management working in collaboration.

For alternate care sites, however, an acquisition process and a supply chain may not exist. It is recommended that Local Health departments invest time to develop MOUs with existing health facilities to leverage supply chains in their OA. It is also recommended that they identify procedures and tools that enable receiving and materials management functions to support the inflow, use, and distribution of supplies, pharmaceuticals and equipment during a disaster.

During a Surge

When a health facility experiences a surge, the Duty Officer should initiate two activities:

1. Engage the facility's acquisition process for additional supplies, pharmaceuticals and equipment. Working with the relevant functional areas at his or her facility, the Duty Officer should compile information regarding patient volume and acuity, the demand placed on existing quantities of supplies, pharmaceuticals and equipment, the anticipated increase in demand and the shortage in supply over time.

2. Notify the SEMS emergency contacts identified in their emergency response plans in the following order - Local Health Department, MHOAC, and Local EMS Agency. Hospitals may use their information notification systems such as ReadyNet, EMsystem, and WebEOC to communicate with each other. When the Duty Officer contacts the personnel identified in his or her emergency response plan, he or she should share the information that has been compiled and verbalize the anticipated need for supplies, pharmaceuticals and equipment.

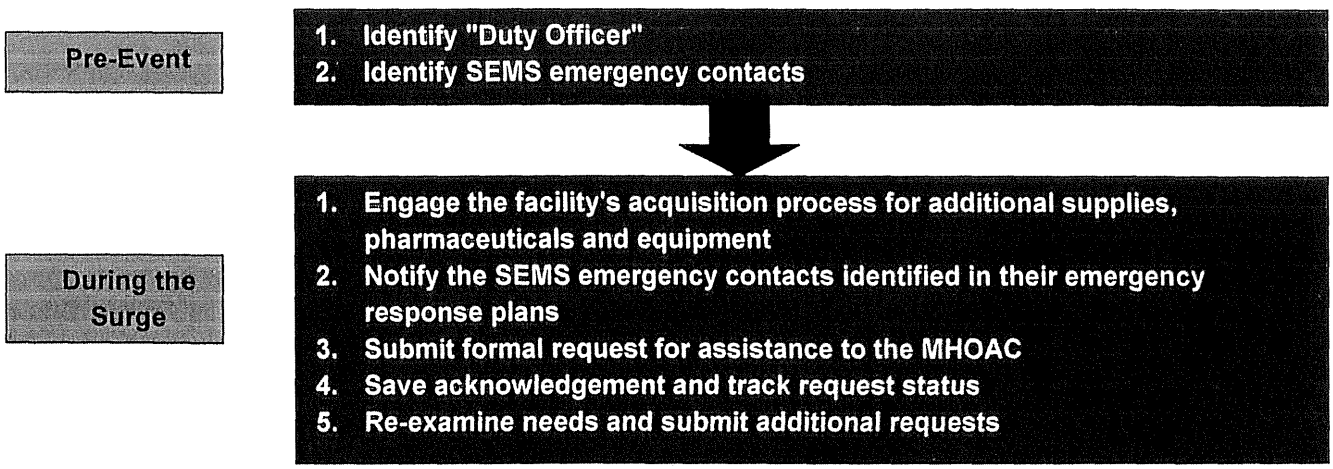
The Duty Officer should complete a status report and a formal request for assistance when the resources at his or her facility prove to be inadequate to cope with the surge. This formal request should be submitted to the MHOAC and should be specific and quantifiable. **The submission of the request for assistance from the Duty Officer to the MHOAC is the formal entry point for the facility into the SEMS system.**

The Duty Officer should ensure that when acknowledgement is received, it is saved and used to track request status. The acknowledgement should contain confirmation of the specific request that was made, the anticipated response time, and any additional information on the scope and impact of the disaster and its effect on mutual aid requests.

When creating a formal request for assistance, the Duty Officer should at a minimum take the following into consideration:

- Is the surge created by a disaster that has impacted transportation and routing capabilities?
- If requesting equipment, does the facility have the appropriate personnel trained to operate that equipment?
- If requesting pharmaceuticals, does the facility have the appropriate licensing or licensed personnel to accept receipt of the shipment?
- Does the facility have the appropriate security protocols and resources to manage the requested shipment?

The following diagram illustrates the pre-disaster and response activities described above.



When requests for assistance are submitted to MHOAC, it is important to understand how that request is processed. The MHOAC upon receiving a request for assistance forwards the request to the County EOC. The County EOC then enters the request and status report into the current request processing system - RIMS. If resources are available to fulfill the request, they are shipped to the requesting facility. However, if there demand for resources exceeds the supply, the request is escalated to the next level of the SEMS system. Request fulfillment is then prioritized and processed using a "Find and Delivery" process. The following list is an example of factors that may be taken into account in prioritizing requests:

- Affected population - Volume
- Affected population - Acuity
- Affected population - Special Needs
- Anticipated expansion of the disaster
- System-wide supply of resources
- System-wide demand of resources
- Transportation availability and access routes
- Security and safety of resources

MOUs are an effective way to leverage available supplies, pharmaceuticals and equipment within a community. The process of developing an MOU, while time and effort intensive, provides indirect benefits to the parties involved. Two major benefits of going through the process of developing an MOU are 1. an increased level of awareness and understanding of a community's needs and capabilities; and 2. an environment of trust and collaboration during a disaster. In many ways, MOUs are collaboration building tools whereby the process of developing an MOU becomes more crucial and beneficial than the resulting document. It is also beneficial to note that FEMA requires that a contract (MOU) be in existence prior to a disaster in order for facilities and organizations to be eligible for funding. MOUs could provide the basis for counties and OAs to perform realistic emergency preparedness planning and needs assessments.

Donations received from National Relief Organizations (NRO) and manufacturers are another way of increasing the pool of supplies, pharmaceuticals and equipment during a surge. In recent disasters, facilities have solicited these organizations directly for donations. This is recommended only if the facility has the adequate infrastructure, personnel and processes in place to manage the receipt, storage, maintenance, security and deployment of the donated supplies, pharmaceuticals and equipment. Instead, it is recommended that NRO and manufacturer engagement take place at the OA level by the OA EOC. This will enable the entry of additional resources at a level where it can be part of the overall system supply base and be made available for the communities that may be in most need.

Lastly, the Pharmacist plays an intricate role and their education, knowledge, and skills can be valuable if utilized strategically during a surge scenario. Below are key areas where the Pharmacist could effectively function.

- Organization and oversight of acute care dispensing activities, recognizing that they may not always be physically present during the dispensing process.
- Organization and oversight of ambulatory dispensing activities.
- Organization and oversight of mass dispensing activities, should they be necessary.
- Organization and oversight of drug acquisition from suppliers, retail facilities, and known caches.

- Organization and oversight of drug distribution within the existing facilities and the ACSs.
- Provide guidance on drug utilization, drug information and drug interactions.
- Organization acquisition of human resources by working through the Board of Pharmacy and other networks.

Preparation for Surge

The objective of the preparation for surge planning with respect to supplies, pharmaceuticals, and equipment is to make each facility as self sufficient as possible. In the event of a nuclear or radiological occurrence for example, existing healthcare facilities may need to be fully self-sufficient and sustain operations for an extended period of time to treat patients and carry on healthcare delivery. "The term sustainability describes the ability of a local health care system to tolerate an extreme event until significant outside assistance arrives."[i] Research supports that outside assistance arrived after a disaster from a range of 24 to 96 hours with peak demand time occurring within 24 hours.[ii] The Health Resources and Services Administration (HRSA) also supports the need for existing healthcare facilities to be self sufficient for an extended period of time by defining surge capacity requirements for a region as the ability to care for 500 cases per one million population with infectious diseases, 50 cases per one million with chemical toxicity, 50 cases per one million with burns or trauma (blast), and 50 cases per one million with radiation injury within a 24-hour period.[iii]

In preparation for a surge, the general recommendation is that existing healthcare facilities should have enough supplies, pharmaceuticals and equipment at their facility to be self sufficient for 72 hours at a minimum with a goal of 96 hours and operate at 20 to 25 % above their normal operating capacity. Stockpiling activity at an unreasonable increase in cost to the facility is not expected. As referenced prior, there are a diverse set of existing healthcare facilities within California. Facilities that have the capability of incurring the cost of planning for a 25% increase in patient volume for 72 to 96 hours are encouraged to do so. When considering the type of events that may occur, facilities may need to rely on the available market supply (e.g. MOUs, retailers or wholesalers) and State stockpiles for specific supplies, pharmaceuticals, and equipment. For those unable to incur a 25% increase via stockpiling, they are encouraged to increase the number of MOUs, mutual aid agreements, and relationships they have within the community (via collaborative community planning) and then rely on "just-in-time" (JIT) relief in a surge. This is however, a risky approach.

Healthcare facilities can use existing inventory and plan for 20-25% more of similar types of patients while taking into account specific characteristics of their region (e.g. proximity to a nuclear power plant). For the purposes of pre-planning for a surge, it is vital that existing healthcare facilities complete a Hazard Vulnerability Assessment (HVA) to understand what physical hazards can cause a surge situation so preparation can be strategic. Below is

an example of an HVA is below which attempts to identify the risk of the event by quantifying the probability of the event occurring and the potential severity.

EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						AMMC RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	Likelihood this will occur	*Possibility of death or injury*	*Physical losses and damages*	*Interuption of services*	*Preplanning*	*Time, effectivness, resouces*	*Community/ Mutual Aid staff and supplies*	*Relative threat**
SCORE	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = Low 2 = Moderate 3 = High*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 = N/A 1 = High 2 = Moderate 3 = Low or none*	*0 - 100%*
Hurricane	0	0	0	0	0	0	0	0%
Tornado	1	1	1	1	2	2	2	17%
Severe Thunderstorm	1	1	1	1	2	2	2	17%
Snow Fall	0	0	0	0	0	0	0	0%
Blizzard	0	0	0	0	0	0	0	0%
Ice Storm	0	0	0	0	0	0	0	0%
Earthquake	2	1	2	2	1	1	2	33%
Tidal Wave	1	0	0	0	0	0	0	0%
Temperature Extremes	0	0	0	0	1	1	1	0%
Drought	1	0	0	0	1	1	1	6%
Flood, External	1	1	1	1	1	1	1	11%
Wild Fire	0	0	0	0	1	0	0	0%
Landslide	1	0	0	0	0	0	0	0%
Dam Inundation	1	0	2	1	2	1	1	13%
Volcano	0	0	0	0	0	0	0	0%
Epidemic	2	2	0	1	1	1	1	22%
AVERAGE SCORE	0.69	0.38	0.44	0.44	0.75	0.63	0.69	4%

**Threat increases with percentage.*

RISK = PROBABILITY * SEVERITY		
0.04	0.23	0.18

Existing healthcare facilities cannot plan to rely on stockpiles from the operational area, region, state or federal within the first 72 to 96 hours. The goal of surge planning with respect to supplies, pharmaceuticals, and equipment is to have enough inventories on hand to maintain existing operations, as well as respond to acute, incremental acute needs until stock is replenished, either through routine supply chain channels or existing caches.

Guidance for acquiring Pharmaceuticals in the pre-planning and in-surge phases

There are four tools (Tools 1-4) facilities can use and when preparing for pharmaceutical needs. The decision as which tool or tools to use is site dependent, based on the existing complexity of services offered, volume expectations during a surge, and the needs of the community. Due to the financial impact, the decision to

increase existing inventories and/or cache a supply a pharmaceuticals to accommodate a surge event should be made in conjunction with hospital leadership.

When resources allow, or are available within the community, strong consideration should be given to involving key stakeholders in the planning process that include but are not limited to:

- Clinical Pharmacists
- Disaster Coordinators
- Emergency Department Directors
- Emergency Department Physicians
- Respiratory Therapists
- Pulmonologists
- Critical Care Coordinators
- Infectious Disease Physicians
- Poison Control Specialists
- Drug Information Specialists
- Radiologists
- Radiation Safety Officers
- Hospital Administrators

Tool 1 - Basic Inventory Approach

As with all departments in a hospital, pharmacy inventory levels are closely scrutinized and the challenge is often to move as close as possible to just-in-time (JIT) to enhance financial performance. The pharmacy wholesalers support these JIT efforts by providing deliveries five to six days per week. Additionally, wholesalers provide pharmacies access to historical purchase data and software tools to easily establish par levels, reorder points and reorder quantities. Despite the frequency of deliveries, pharmacies must plan for the gaps in delivery service, e.g., 24-48 hours at a minimum, and establish par levels accordingly, therefore creating a barrier to a true JIT system.

A limitation often seen with the calculation of par levels is that they are established using "averages", and therefore do not account for significant variations in utilization that are sometimes seen in hospitals, e.g., a sudden increase in the use of an antimicrobial due to seasonality changes. To compensate for the gaps in delivery service and the limitations of par level calculations, pharmacies identify key pharmaceuticals that are critical to patient care and adjust par levels on these products accordingly.

This first tool is designed to build upon existing practices within pharmacy operations and develop a systematic approach to establishing baseline inventory levels to sustain normal operations for 72-96 hours. Because of

existing gaps in delivery, many pharmacies may be currently operating at or near these levels. This tool helps creates a baseline inventory for normal operations for 72-96 hours. See the process flow below.

Steps to consider when determining pharmaceuticals needed during a surge at an Existing Facility or ACS

Step 1 — Obtain an "80/20" report from the pharmacy wholesaler

DISTRIBUTION CENTER	NDC	ITEM #	DESCRIPTION	FORM	STR	GENERIC GROUP	NET QTY	NET SALES	CUM SALES	CUM % of Total Sales
RALEIGH (B)	00075062040	270884	LOVENOX 40MG PFS 10X0.4ML	PFS	40	ENOXAPARIN SODIUM S.C.	384	$71,527.91	$71,527.91	6%
RALEIGH (B)	00173044202	453928	ZOFRAN 2MG/ML SDV 6X2ML	SDV	2	ONDANSETRON HCL	818	$68,507.50	$140,035.41	11%
RALEIGH (B)	00004196401	098772	ROCEPHIN 1 GM VL 10X10ML	VL	1	CEFTRIAXONE SODIUM	309	$67,924.36	$207,959.77	16%
RALEIGH (B)	00075062300	533844	LOVENOX 100MG PFS 10X1 ML	PFS	100	ENOXAPARIN SODIUM	71	$33,148.09	$241,107.86	19%
RALEIGH (B)	55513082310	446890	EPOGEN S40 40M UN/ML VL 10X1 ML	VL		EPOETIN ALFA	6	$26,983.08	$268,090.94	21%
RALEIGH (B)	00075062280	532770	LOVENOX 80MG PFS 10X0.8ML	PFS	80	ENOXAPARIN SODIUM	68	$25,239.31	$293,330.25	23%
RALEIGH (B)	57894004002	595579	RETAVASE HALF KIT	KIT		RETEPLASE	21	$23,859.53	$317,189.78	25%
RALEIGH (B)	00310030022	748897	DIPRIVAN 10MG/ML VL 25X20ML	VL	10	PROPOFOL	83	$22,845.54	$340,035.32	27%
RALEIGH (B)	08290094110	934861	NORMAL SALINE 0.9% W/CANN SYG 30X10ML	SYG		SODIUM CHLORIDE	1,457	$22,013.42	$362,048.74	28%
RALEIGH (B)	00074445604	232207	ULTANE PEN BTL LIQ 250ML	LIQ		SEVOFLURANE	97	$21,482.84	$383,531.58	30%

Step 2 — Identify the items on the "80/20" report that the organization believes would be impacted during a surge

Step 3 — Based on historical data, establish 72-96 hours par levels for these items

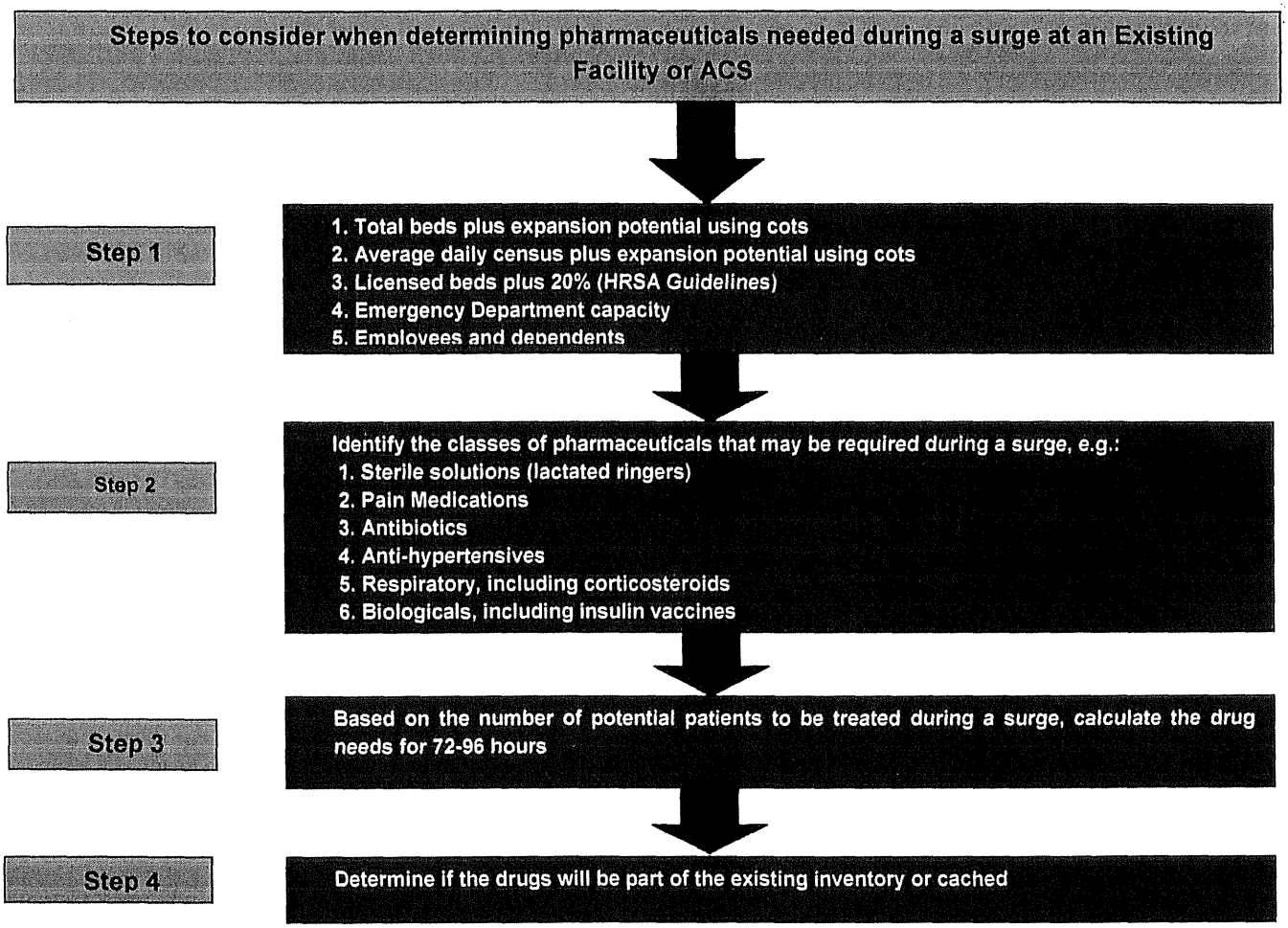
Step 4 — If sterile solutions are on the list (e.g. Lactated Ringers, are obtained from a different vendor) identify the items that the organization believes would be impacted during a surge

Step 5 — Based on Historical Data and vendor lead time, establish 72-96 hour par levels for these items

Tool 2 - Inventory Based – General

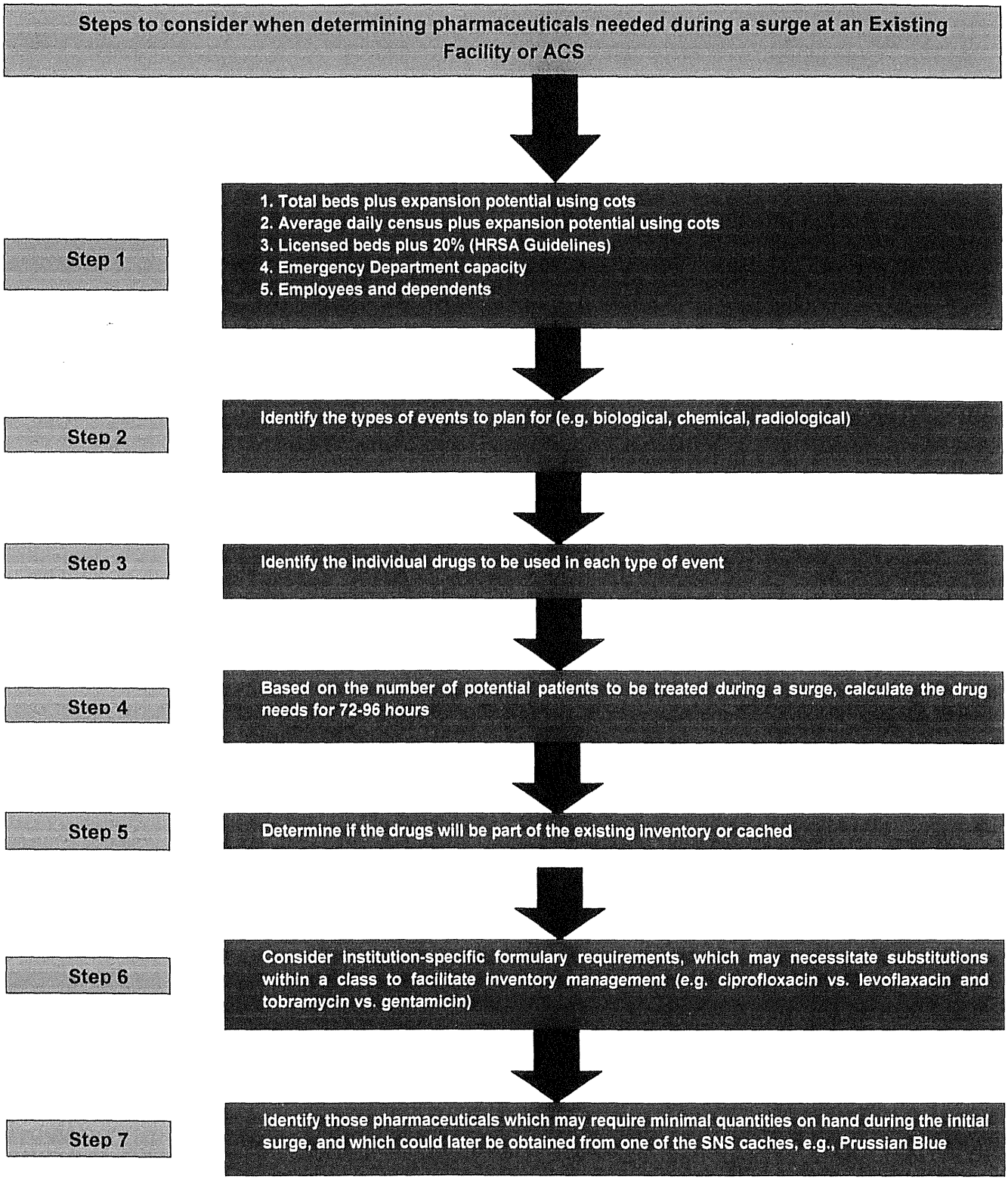
A facility may consider using the first tool to establish baseline inventory levels to maintain normal operations, and then attempt to estimate their patient capacity during a surge, e.g., what is the Emergency Department capacity? What is bed capacity if supplemented with cots? How many employees and dependents might require care?

Once total potential patient volume is estimated, the hospitals could define the classes of pharmaceuticals that may be required based on the unique needs of the community, e.g., proximity to a nuclear facility. Based on existing pharmaceutical contracts and utilization patterns, the hospital could then determine their unique pharmaceutical needs and adjust inventory levels accordingly. See the process flow below.



Tool 3 – Inventory Based – Specific

Similar to the second tool, a facility may consider using the first tool to establish baseline inventory levels to maintain normal operations, quantify their patient capacity during a surge, and define the classes of pharmaceuticals that may be required based on the unique needs of the community. Additionally, the facility could create customized drugs using those identified in the primary literature. Following the example below, a facility could create a spreadsheet and populate the data elements highlighted in yellow, e.g., package size, item number, etc. Collaboration among the various clinicians and leaders of the organization could lead to populating the doses required, the days of therapy required, and the development of MOUs with others in the area to minimize the need to carry excessive inventory. The spreadsheet could then calculate number of patients to be treated, doses required, and packages of pharmaceuticals to be stocked. See the process flow below.



Below is a sample of the tool. The complete tool can be found in the appendix.

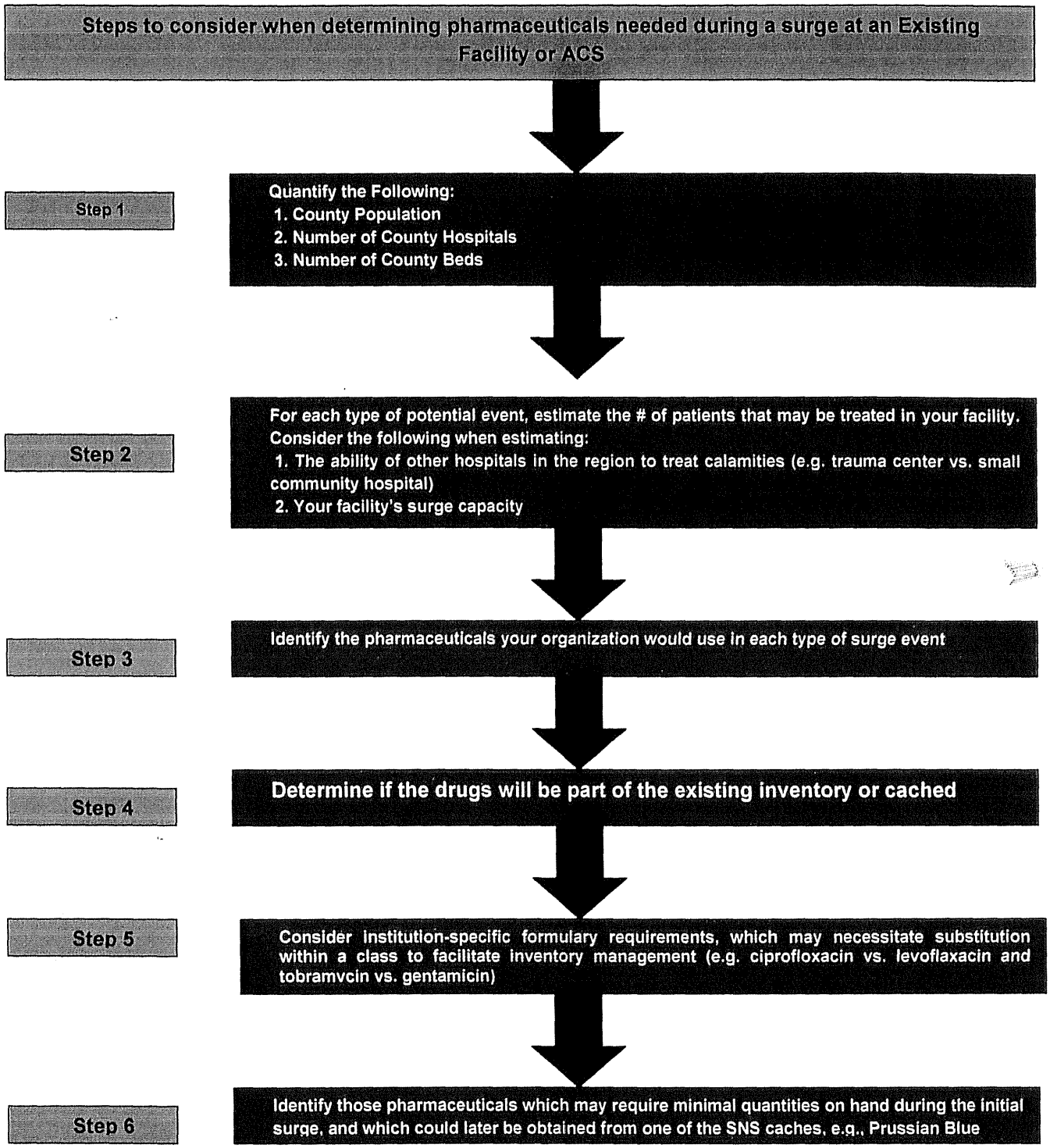
Development of Standards and Guidelines for Healthcare Surge During Emergencies

Critical Pharmaceutical That May Be Used During a Surge

Sample Pharmaceuticals Suggested During a Surge	Strength	Route of Administration	Package Size	Wholesaler Item #	Average Daily Census	Potential Surge Patients	ED Capacity	Employees	Total Potential Requiring Treatment	Doses Needed per Patient per Day	Days of Therapy Required (Max of 3 Days)	Total Doses Required	# Packages to Stock	Alternate Sourc
Antidotes for Biological Agents														
Activated charcoal 50g slurry	NA	Oral												Hospital B keeps X in s
Cidofovir	75mg/ml	Injectable												
Ciprofloxacin	400mg	Injectable												
Ciprofloxacin	500mg	Oral												
Clindamycin	600mg	Injectable												
Doxycycline Hyclate	100mg	Injectable												
Doxycycline Hyclate	100mg	Oral												
Gentamicin Sulfate	10mg/ml	Injectable												
Gentamicin Sulfate	40mg/ml	Injectable												
Penicillin GK	2MU	Injectable												
Rifampin	300mg	Oral												
Streptomycin Sulfate	400mg/ml	Injectable												

Tool 4 – Surge Based, Event Specific

Similar to the previous tools, a facility may consider using Tool 1 to establish baseline inventory levels to maintain normal operations and then utilize a more global approach to planning. This tool uses HRSA estimates of casualties.[iv] Following the example below, a facility could create a spreadsheet and populate the data elements highlighted in yellow, e.g., county population. Collaboration among the various clinicians and leaders of the organization could lead to estimating the potential number of patients that might be seen in the organization. For example, if a county has a population of three million residents, and HRSA estimates 500 cases of infectious disease cases per one million, the facility could estimate how many of these 50 cases they could potentially receive based on the number of hospitals in the county, their current service level (e.g., trauma center vs. community hospital) and their location (e.g., urban vs. rural and any MOUs they may have in place.) The spreadsheet could then calculate doses required, and packages of pharmaceuticals to be stocked. See the process flow below.


Steps to consider when determining pharmaceuticals needed during a surge at an Existing Facility or ACS
Step 1
Quantify the Following:
1. County Population
2. Number of County Hospitals
3. Number of County Beds
Step 2
For each type of potential event, estimate the # of patients that may be treated in your facility. Consider the following when estimating:
1. The ability of other hospitals in the region to treat calamities (e.g. trauma center vs. small community hospital)
2. Your facility's surge capacity
Step 3
Identify the pharmaceuticals your organization would use in each type of surge event
Step 4
Determine if the drugs will be part of the existing inventory or cached
Step 5
Consider institution-specific formulary requirements, which may necessitate substitution within a class to facilitate inventory management (e.g. ciprofloxacin vs. levoflaxacin and tobramvcin vs. gentamicin)
Step 6
Identify those pharmaceuticals which may require minimal quantities on hand during the initial surge, and which could later be obtained from one of the SNS caches, e.g., Prussian Blue

Development of Standards and Guidelines for Healthcare Surge During Emergencies Pharmaceuticals That May Be Used During a Surge		
County Population (in millions)	3	(e.g. Orange County)
Hospitals in County	29	
Beds in County	6337	
Potential County Infectious Disease Cases	1500	calculated based on HRSA estimate of 500 cases per 3 million
Estimated Potential Cases for Your Facility	10	(estimated)

Sample Infectious Diseases Pharmaceuticals Suggested During a Surge	Strength	Route of Administration	Package Size	Wholesaler Item #	Employees	Total Potential Requiring Treatment	Doses Needed per Patient per Day	Days of Therapy Required (Max of 3 Days)	Total Doses Required	# Packages to Stock	Alternate Sources
Antidotes for Biological Agents											
Activated charcoal 50g slurry	NA	Oral				10					
Cidofovir	75mg/ml	Injectable				10					
Ciprofloxacin	400mg	Injectable				10					
Ciprofloxacin	500mg	Oral	100	12345678		10	1	3	30		
Clindamycin	600mg	Injectable				10					

*The complete Pharmaceutical list is located in the appendix.

Guidance for acquiring Supplies and Equipment in the pre-planning and in-surge phases

There are four tools (Tools 5-8) to consider when preparing for supplies and equipment needs during a surge. Similar to pharmaceuticals, the decision as to which methodology to use is site dependent based on the existing complexity of services offered and volume expectations during a surge. The objective is to address the needs of the diverse set of existing healthcare facilities and potential ACSs. Information from the Hazards Vulnerability Assessment should be utilized to assist in understanding site specific needs.

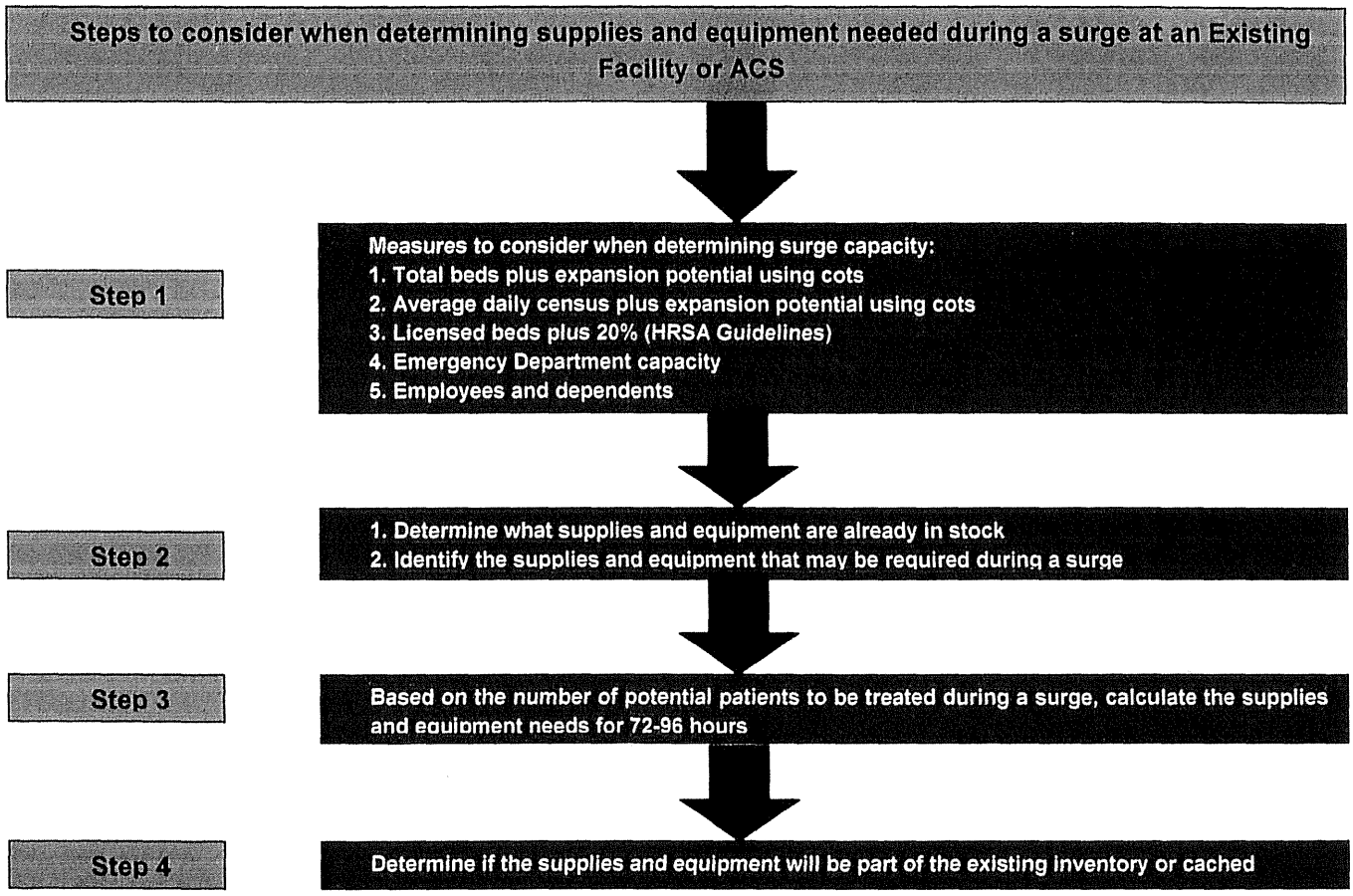
When resources allow, or are available within the community, strong consideration should be given to involving key stakeholders in the planning process that include but are not limited to:

- Materials Manager / Procurement
- Disaster Coordinator
- Emergency Department Director
- Respiratory Therapists
- Facilities / Logistics
- Medical-Surge Coordinator
- Critical Coordinator

Tool 5 – Inventory Based – Specifc

This tool encourages planners to utilize a comprehensive list to guide the ordering of specific supplies and equipment. It allows organizations the flexibility to define the classes of supplies and equipment and determine whether caches are better suited for their organization, or if increasing par levels of existing inventory is a better

strategy. The list that is used for reference is the Disaster Resource Center Medical/Surgical Supply Cache. This resource list was developed to address issues associated with surge capacity for hospitals and ACSs through the provision of supplies, pharmaceuticals, and equipment. This list should not be considered comprehensive, but should be used as a guide when considering the types of supplies and equipment are needed during a surge scenario assuming the existing facility has some stock of essential supplies and equipment. For sites other than hospitals such as an existing Physician's Office, Clinics, or Skilled Nursing Facilities (SNF), they could use both tool 5 from a hospital standpoint and tool 8 from an ACS standpoint and alter the lists according to their supply and equipment situation. In contrast to Tool 5, the ACS list assumes there are currently no supplies and equipment for use. See the process flow below.



The sample of the Disaster Resource Center Medical / Surgical Supply Cache list below has four columns which represent the following:

1. **Current Supply**: Stock on hand.
2. **Total Potential Requiring Treatment:** An estimate should be made to determine the facility's surge capacity.

3. **Package Size** (e.g.) 100/box, or simply 100.
4. **Quantity Cache**: Besides what is currently in the supply at the existing facility, what is the quantity that may be part of the facility's cache either on-site or near by.

SURGICAL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Scalpel with blade, disposable #10				
Scalpel with blade, disposable #15				
Sterile gloves, sizes 6.5, 7.0, 7.5, and 8.0				
Surgical scrub brushes with betadine				
Suture set (disposable)				
Suture removal kit				
Suture (Nylon sutures various sizes)				
ORTHOPEDIC SUPPLIES	**Current Supply**	**Total Potential Requiring Treatment**	**Package Size (if applicable)**	**Quantity / Cache**
Splint, cardboard 12"				
Splint, cardboard 18"				
Splint, cardboard 24"				
Splint, cardboard 34"				
Splint, fiberglass 3"				
Splint, fiberglass 4"				
Splint, fiberglass 5"				

*The complete DRC Medical / Surgical Supply Cache is located in the Appendix.

Example: If using Average Daily Census (ADC) as a measure for a 100 bed hospital, a facility may strive to be 25% above their normal ADC for 72-96 hours.

Using this example, this facility would need to treat 125 patients for 72-96 hours. The facility should consider the following when determining which supplies and equipment to stock:

- What types of patients would a facility expect given the results of their HVA?
- What supplies and equipment would the facility specifically choose to stock?
- What supplies and equipment are also apart of the facility's cache?

Tool 6 – Inventory Based – General

This option requires detailed planning regarding volume of patients and considers the classes of supplies and equipment that may be required during a surge, as opposed to specific supplies and equipment in Tool 5. For example there are no sizes specified in this tool (e.g. scalpel with blade #10). This allows organizations the flexibility to define the types of supplies and equipment and determine whether caches are better suited for their organization, or if increasing par levels of existing inventory is a better strategy. The only difference between Tool # 5 and Tool # 6 is that this list is by category vs. specific supply or equipment item (e.g. exact sizes of supplies are not indicated). Similar to Tool 5, this list is taken from the 2006 Revised DRC list of supplies.

*See Steps 1-4 in Tool 5 for guidance in determining surge capacity and types of supplies and equipment that may be required during a surge.

Development of Standards and Guidelines for Healthcare Surge During Emergencies Supplies and Equipment that May Be Required During a Surge				
BANDAGES AND DRESSINGS	Current Supply	Total Potential Requiring Treatment	Package Size	Quantity / Cache
Adhesive strips				
Alcohol pads				
Bandage elastic (Ace wraps-various sizes)				
Eye pad, oval sterile				
Eye Shields				
Morgan Lens				
Gauze				
Vaseline gauze				
SURGICAL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size	Quantity / Cache
Scalpel with blade (various sizes)				
Sterile gloves (varoius sizes)				
Surgical scrub brushes with betadine				
Suture set (disposable)				
Suture removal kit				
Suture (Nylon sutures various sizes)				

*The image above is a sample of the tool. The complete list is found in the appendix.

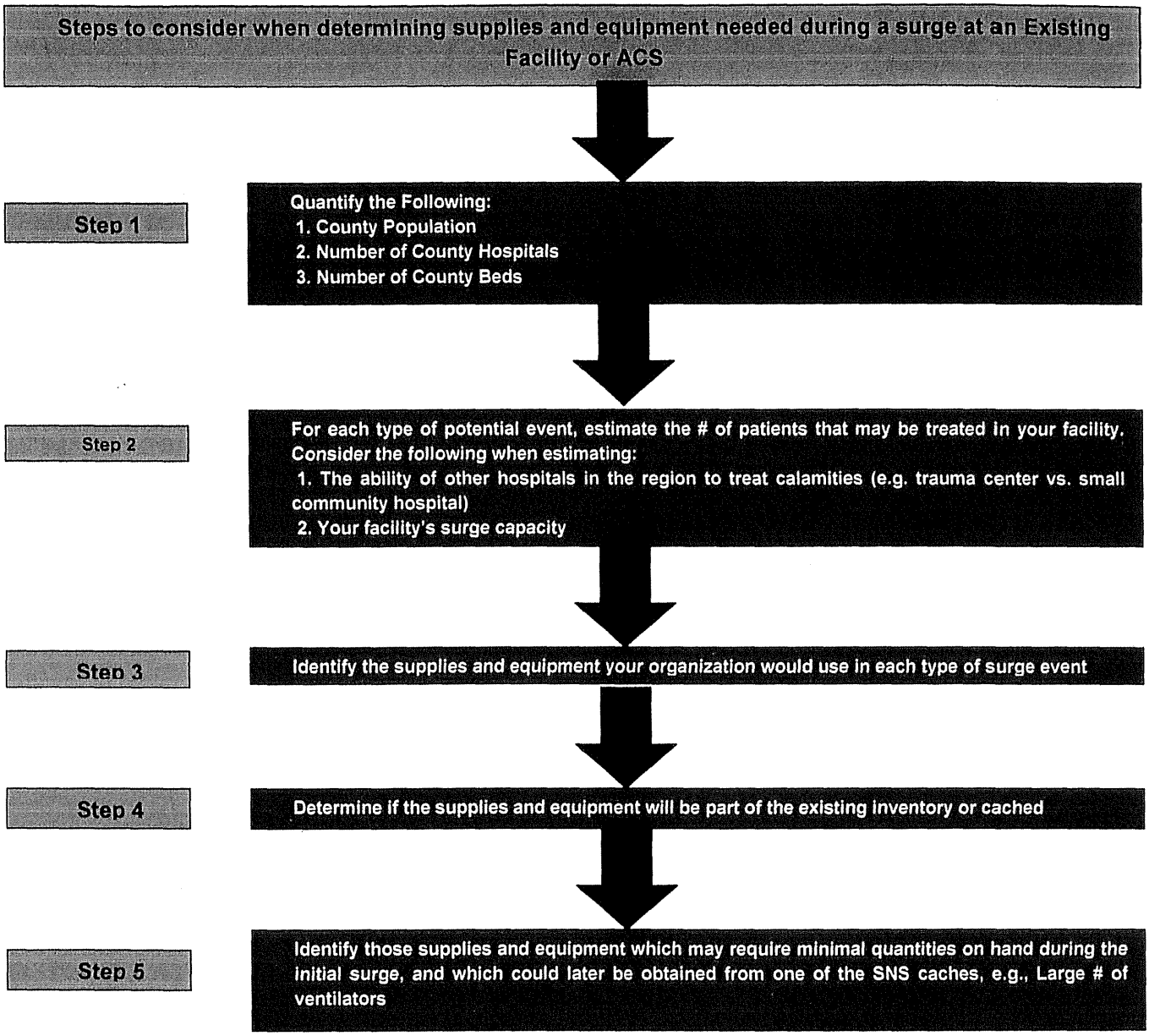
Tool 7 – Surge Based – Event Specific

This tool requires detailed planning regarding the volume of specific patient types based on HRSA guidelines, e.g., incidents per one million patients. Additionally, it allows organizations to select the supplies and equipment to be stocked based on the specific type of incident that might have a higher probability at the specific facility (e.g. a facility in a major metropolitan area with a higher probability of a nuclear incident).

HRSA Guidelines[v]:

- HRSA standards and surge capacity definition: The components necessary to care for a sudden, unexpected increase in patient volume that exceeds current capacity.
- The ability to care for 500 cases per one million population with infectious diseases, 50 cases per one million with chemical toxicity, 50 cases per one million with burns or trauma (blast) and 50 cases per one million with radiation injury within a 24-hour period.
- The goal is to be able to expand hospital capacity by 20-25% in the first 24 hours.

See the process flow below.



The sample of the Disaster Resource Center Medical / Surgical Supply Cache list below has four columns which represent the following:

1. **Current Supply**: Stock on hand.
2. **Total Potential Requiring Treatment:** An estimate should be made to determine the facility's surge capacity.
3. **Package Size** (e.g.) 100/box, or simply 100.
4. **Quantity Cache**: Besides what is currently in the supply at the existing facility, what is the quantity that may be part of the facility's cache either on-site or near by.

Development of Standards and Guidelines for Healthcare Surge During Emergencies Supplies and Equipment that May Be Required During a Surge				
County Population (in Millions)		3	**(e.g. Orange County)**	
Hospitals in County		29		
Beds in County		6337		
Potential County Infectious Disease Cases		1500		
Estimated Potential Cases for Your Facility		10	(estimated)	
BANDAGES AND DRESSINGS	**Current Supply**	**Total Potential Requiring Treatment**	**Package Size (if applicable)**	**Quantity / Cache**
Adhesive strip, 1" X 3"				
Alcohol pads				
Bandage elastic (Ace wrap) 2"				
Bandage elastic (Ace wrap) 4"				
Bandage elastic (Ace wrap) 6"				
Bandage, gauze non sterile (kerlix) 4" X 10'				
Bandage, gauze non sterile 4X4				
Bandage 4X4 sterile				
Bandage 2X2 sterile				
Eye pad, oval sterile				
Eye Shields				
Morgan Lens				
Petroleum Gauze 5" X 9" (Xeroform)				
Vaseline gauze				
Gauze Pad 5" X 9" sterile				
Tape 1" transparent				

The image above is a sample of the tool. The complete list for use is found on in the appendix.

Example

Orange County with a population of 3 million has approximately 6,337 hospital beds in 29 hospitals. Using the HRSA guidance that there may be the potential for 500 patients per million with infectious diseases, both the county and the facility could estimate the potential cases they would expect [vi]. This offers those at the county level the ability to understand the difference between how many potential beds there are and how many potential cases there may be. The information may be vital in understanding the potential need for alternate care sites (See Tool 8) or care at smaller existing healthcare facilities that may not be normally used for extensive patient care (e.g. Physician offices). From a supplies and equipment perspective, this may be useful information especially in a pandemic situation or a prolonged surge. Examples of specific equipment that may be used during a prolonged surge include face masks, alcohol based hand gels hand gloves, gowns room isolation equipment.

A facility could create a spreadsheet and populate the data elements highlighted in yellow. Collaboration among the various clinicians and leaders of the organization could lead to the development of MOUs and relationships with others in the area to minimize the need to carry excessive inventory. The spreadsheet could then calculate number of patients to be treated, supplies and equipment needed, and packages of materials to be stocked.

Tool 8 – ACSs

At the ACS level, the assumption is that there may be no materials on hand and this tool offers guidance on what types of supplies and equipment that may be needed in a surge scenario. The tool provided is moderately comprehensive and it will depend on the function of each ACS to determine what specific supplies and equipment are needed. Due to the limited organization of an ACS the list offers more guidance for an individual(s) who may be tasked with ordering the extensive materials. This list was initiated by the California Department of Health Service's (CDHS) Emergency Planning Office (EPO). It represents 420 ACS caches that will soon be available statewide for the response to any of a number of "All-Hazards" events including, but not limited to earthquake, pandemic influenza. The intent of these caches is to offer support of medical/health care for 50 patients over a period of 10-14 days (actual results may vary based on event). These caches may be utilized in either established Alternate Care Sites or to supplement impacted existing healthcare facilities.

The list is separated into 9 groups:

1. IV Fluids
2. Bandages and Wound Management
3. Airway Intervention and Management
4. Immobilization
5. Patient Bedding, Gowns, Cots, Misc.
6. Healthcare Provider Personal Protective Equipment (PPE)
7. Exam Supplies
8. General Supplies
9. Defibrillators and Associated Supplies

The sample of the ACS Cache list below has five columns which represent the following:

1. **Item #**: A # to assign to the supply or piece of equipment.
2. **Group:** A # identifying which group the item is from (See the nine groups above).
3. **Item Description**: A description of the supply or equipment.
4. **Units**: Identifies how the items are packed (e.g. individually, box)
5. **Number (#)**: How many items.

Specific recommendations regarding the storage and staging of ACS supplies and equipment is noted in those aforementioned sections.

Development of Standards and Guidelines for Healthcare Surge During Emergencies				
		Alternate Care Site (ACS) Cache (updated April 11, 2007)		
Item #	Group (see below)	Item Description	Units	#
		IV Fluids		
1	1	Alcohol Pad, Isopropyl, Sterile, 2" x 2"	EA	2000
2	1	Arm Board, Padded, Long (Size = 3" x 18")	EA	24
3	1	Band-Aid (Coverlet Patches), 1-1/2" X 2"	EA	600
4	1	Catheter, (IV), 14G x 2" (LATEX FREE), Model = Medex Jelco #4048. NO SUBS	EA	5
5	1	Catheter, (IV), 16G x 1 1/4", Gray (Safety Tip) (LATEX FREE), Model = Medex Jelco #4072. NO SUBS	EA	20
6	1	Catheter, (IV), 18G x 1 1/4", Green (Safety Tip) (LATEX FREE), Model = Medex Jelco #4065. NO SUBS	EA	200
7	1	Catheter, (IV), 20G x 1 1/4", Pink (Safety Tip) (LATEX FREE), Model = Medex Jelco #4066. NO SUBS	EA	200
8	1	Catheter, (IV), 22G x 1", Blue (Safety Tip) (LATEX FREE), Model = Medex Jelco #4050. NO SUBS	EA	150
9	1	Catheter, (IV), 24G x 1", Yellow (Safety Tip) (LATEX FREE), Model = Medex Jelco #4063. NO SUBS	EA	100
10	1	IV Administration Set, 78", w/clamp, Vented (15 Drop) Macrodrip (LATEX FREE), Model = Amsino #AA3101, NO SUBS	EA	150
11	1	IV Administration Set, 78",w/clamp,Vented (60 Drop) Microdrip (LATEX FREE), Model = Amsino #608306, NO SUBS	EA	100
12	1	IV Fluid Bags, Normal Saline 100 ml, Model = Baxter #629122A, NO SUBS	EA	200
13	1	IV Fluid Bags, Normal Saline 1000 ml, Model = Baxter #2B1324X, NO SUBS	EA	500
14	1	IV Starter Set, Model = Dixie #783 NO SUBS	EA	100

*The image above is a sample of the tool. The complete list for use is found in the appendix.

Guidance for Acquiring Personal Protective Equipment (PPE) in the pre-planning and in-surge phases

When considering, PPE the primary use will be by personnel who require a greater degree of protection which includes proper equipment and training to sustain an all-hazard event response. This document will concentrate on the first receiver component of PPE. The Occupational Safety and Health Administration (OSHA) provide guidelines that many facilities currently use. Employers are required by OSHA to use PPE to limit employee exposure to hazards and employers must determine if PPE should be used for the protection of the employees. Under Cal/OSHA Labor Code 6401, every employer must furnish protective equipment, use safety devices and safeguards and provide training.

The environmental Protection Agency (EPA) and OSHA provide guidance on four levels of protection that can be used as a starting point. Ensemble must be customized to the particular situation to provide the proper level of protection.

PPE Considerations

There are many challenges that need to be considered for facilities managing PPE and training their staff and considerations for existing healthcare facilities to plan for are:

- Equipment is often outdated and must be current for appropriate use.
- PPE takes up a large amount of space.
- PPE is not made to fit all body types.
- The environment of employees to anticipate specific PPE needs.
- Durability of PPE materials (e.g. strength of materials).
- The effects of PPE in relation to heat stress.
- Needed layers of PPE for adequate protection
- Some PPE requires personnel to be in certain physical shape to withstand the masks and body equipment.
- PPE requires maintenance and can become ineffective if not preserved correctly.
- PPE and PPE training can be costly.
- Multiple types of equipment – Staff are often not cross-trained on multiple brands of equipment.
- PPE training is often limited or has a lack of participation.

Recommendations for the Selection of PPE

- Use a HVA to consider suspected hazards that may impact a facility and the potential hazard to employees (skin, ingestion, eye contact).
- Facilities should work with other existing healthcare facilities, their county, and the state of California to increase mutual aid interoperability.
- Facilities should be at least prepared for levels C and D, but equipment selection should be site specific.

Tool 9 – Inventory Based PPE

The tool below can assist in guiding staff with understanding what is needed at their facility based on what they currently have and what OSHA recommends.

The PPE guidance list is made of five unique levels. Each level is summarized below stressing the amount of protection required :

- Level A: Greatest level of protection required for skin, eye protection and respiratory.
- Level B: Greatest level of respiratory protection, but a lesser level of skin protection.
- Level C: Emphasis is on airborne substances and the criteria for using air purifying respirators must be met.

- Level D: A work uniform that provides minimal protection to safeguard against contamination.
- Chemical Ensemble: Emphasis on providing protection against toxic products which may enter the body through skin absorption or inhalation.

For greater detail, go the OSHA website at: http://www.osha.gov/SLTC/personalprotectiveequipment/index.html

The sample of the OSHA suggested ensemble list below has four columns which represent the following:

1. **Current Supply**: Stock on hand.
2. **Total Potential Requiring Treatment:** An estimate should be made to determine the facility's surge capacity to anticipate the quantity needed to be adequately prepared for a surge.
3. **Quantity Needed:** The quantity that is needed (Total Potential Requiring Treatment – Current Supply)
4. **Alternate Source**: Known sources where PPE can potentially acquired (e.g. other existing healthcare facilities).

Training Recommendations

- Due to the complexity of using PPE training at least one time / year with an annual competency that staff must pass.
- Decontamination exercises should be included in the training.
- Facilities should work with their local field representatives from their vendors and suppliers for formalized training.
- Target Audience is the following but not limited to:
    - Emergency Department staff – including Physicians, RN's
    - Respiratory Therapists
    - Radiologists

Development of Standards and Guidelines for Healthcare Surge During Emergencies Personal Protective Equipment that May Be Required During a Surge				
Suggested Components for Chemical Protective Ensemble	Current Supply	Total Potential Requiring Treatment	Quantity Needed	Alternate Source
Protective clothing (suit, coveralls, hoods, gloves, boots)				
Respiratory equipment (SCBA, combination SCBA/ Supplied - Air Respirator (SAR), Powered Air Purifying Respirator (PAPR) Air Purifying Respirator (APR)				
Cooling system (ice vest, air circulation, water circulation)				
Communications device				
Head protection				
Eye protection				
Ear protection				
Inner garment				
Out protection (overgloves, overboots, flashcover)				
Suggested Ensemble Components – Level A	Current Supply	Total Potential Requiring Treatment	Quantity Needed	Alternate Source
A fully encapsulated, liquid and vapor protective ensemble selected when the highest level of skin, reparatory and eye protection is required				

*The image above is a sample and the comprehensive list can be found in the appendix.

Storage Considerations

Inventory Management

From a planning perspective, many healthcare facilities and public health organizations will have a stock of supplies, pharmaceuticals and equipment that must be maintained.

Pharmaceuticals

The inventory must be managed so the drugs can be effective when used. Therefore, there must be a process to monitor expiration dates and a process for rotating stock from a cache into the general inventory to minimize pharmaceuticals that may expire.

Supplies and Equipment

Items that require consistent maintenance need to be addressed. Equipment such as batteries for defibrillators and ventilators are a high priority because these items are used for life saving measures. Also, equipment that may be impacted by the environment such as ventilator seals, need to be maintained because they can become un-usable. Obsolescence is also essential to consider because supplies and equipment may become outdated due to technological advances or changes in ordering patterns. Personnel may not be knowledgeable on how to use equipment if it is obsolete and it can put a patient's life in danger. Lastly, space is a very important consideration. Many facilities have inadequate space to house their equipment and supplies and there needs to be a prioritization of what will be included in the storage space. Other options to space limitations include storing supplies and equipment at other facilities that may exist within their health system or using warehouse space

either on or off site.

Environmental Management

Pharmaceuticals and Supplies/Equipment

Pharmaceuticals and Supplies/Equipment have similar considerations regarding environmental management. The chemical nature of pharmaceuticals puts it at risk of an altered state which may impact the efficacy of the drug. Many pharmaceuticals are affected by temperature and have specific storage requirements such as room temperature or refrigeration. Also, pests can play a role in negatively influencing the nature of medications. There must be a process to monitor the environment of pharmaceuticals to meet United States Pharmacopeia (USP). Supplies and Equipment items are also impacted by temperature as significant variations can affect the durability and quality of the material. For example, there is PPE that must be stored at specific temperature. Facilities should ensure that manufacturer's storage guidelines are met.

Security

There is the need for security during a surge because of the potential disorganized environment that may occur. Resources may be scarce and there should be pre-planning for heightened security in a disaster state. The tool in the appendix addresses security needs by location type described below because of each one's unique need :

1. Existing Healthcare Facilities - Hospitals, Clinics, Skilled Nursing Facilities
2. Alternate Care Sites (ACSs)
3. Caches – Stockpiles of materials that are not considered part of the current inventory.

Pharmaceuticals and Supplies/Equipment

The recommendations for security regarding pharmaceuticals and supplies and Equipment at existing healthcare facilities, ACSs and Caches are similar. A process should be set up for the following:

- Ensuring the security of existing inventory and caches by utilizing personnel or security cameras.
- Controlling access into and within the building area.
- Identifying and tracking patients, staff, and visitors.
- Working with local authorities prior to a surge to address heightened security
- Working with private security entities prior to a surge to address heightened security.

It is important to note that the California Board of Pharmacy rules and regulations, Article 3, Section 4059.5.(a), supports that drugs may only be ordered by a licensed pharmacy and delivered to the licensed premises, and

must be signed for by a pharmacist.

Ease of Access

Staging of supplies, pharmaceuticals, and equipment to ensure ease of access is vital to accessing what is needed first. This is addressed in further detail in the Staging Section of this document.

Vendor Considerations

Many organizations rely on vendors for maintenance of their supplies and equipment. As a result, they need to consider the vendor or supplier who they acquire supplies, pharmaceuticals, and equipment from to ensure proper maintenance during storage. This group may play a large role in ensuring that materials work correctly during a surge. Below is list of considerations:

- Identify any "disaster clauses" within the contract with the vendor to understand what they are responsible for during a surge situation.
- Understand the process for the rotation of stock and inventory (control management).
- Understand the "days on hand" inventory of the vendors. This may guide the organizations determination on how much supplies, pharmaceuticals, and equipment to keep in their own stock.
- Clarify the process for how materials get delivered during a surge.
- Identify where materials will get delivered during a surge so there is one or more specific locations that delivery is expected.

*See the Checklist in the Appendix for Vendor Considerations.

Staging & Deployment of Supplies, Equipment, and Pharmaceuticals

Staging Considerations

Most hospitals have limited storage capacity, and most likely have insufficient disaster supply storage in close proximity to their designated disaster triage and treatment areas. Further, because disaster supplies are not routinely used, they are often relegated to the least convenient available space, sometimes in offsite warehouses. This can result in delays in care as hospitals try to retrieve their supplies from various storage locations.

Hospitals often organize their disaster supplies similar to other hospital materials – each item is stored with like items in the same location, e.g., cots are stored with cots, PAPR hoods are stored with PAPR hoods, medical supplies are stored with medical supplies, etc., and often different locations. This is an efficient means of monitoring and replenishing inventory under routine operating procedures; however it may not be optimal in a disaster response.

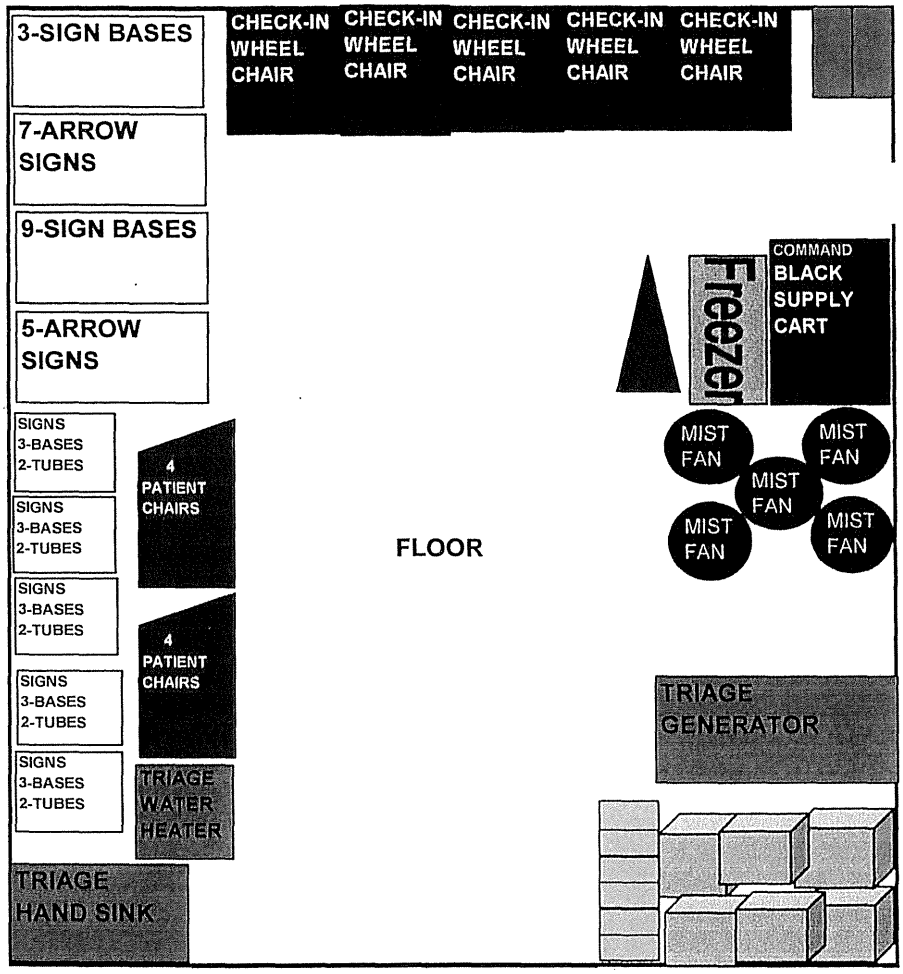
One option hospitals may wish to consider is identifying a small storage area near their designated disaster triage and treatment site. This area can be used for the "first push" of the supplies likely needed in the first moments of a crisis. For example, a small collection of cots, linens, gowns, medical supplies could be gathered here. If space allows, perhaps a casualty shelter (tent), lights, generator can be added. If environmental conditions are adequate, pharmaceutical supplies might be included. As the event evolves, and additional supplies are needed, the more remote storage areas

can be tapped to replenish or supplement the first push of supplies. Plans to retrieve the additional supplies should be activated as their first set is deployed.

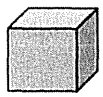
If space is sufficient, the "first push" supplies may be packaged in a cart or trailer to make deployment more rapid. Consideration should be given to the path of travel between the storage site and the destination, so that the chosen cart or trailer will successfully clear all obstacles. Further, a detailed inventory should accompany the first push of supplies, indicating "what" and "how many" of each item is immediately available, and where additional supplies are located so that they can be acquired by staff who may not be knowledgeable of how the supplies are organized and stored.[vii]

The appendix provides two sample methods on staging supplies and equipment at dispensing sites. that incorporates concepts above. Below is a sample of a bottom level of a Point of Dispensing (POD).[viii]

FRONT OF TRAILER



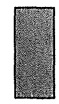
T.V. STANDS ON TOP OF T.V. MONITORS



*** 6- T.V. MONITORS

*** 6- T.V. STANDS

***** 11- RED CONES



**** 6' & 4' LADDERS

Distribution / Deployment

Liability, Licensing, and Regulatory Implications

Once at the distribution point of supplies, pharmaceuticals, and equipment, there are many regulatory issues that are relevant during a surge. They include:

- Waivers
- The liability for dispensing expired medications.
- The liability for off-label drug usage.
- Determining what designated personnel are allowed to distribute and / or disperse mediations during a surge and what their liability is.
- The liability of pharmacists, intern pharmacists, or pharmacy technicians who are not licensed in California, but who are licensed in good standing in another state, including those presently serving military or civilian duty.
- The delivery of pharmaceuticals to licensed and un-licensed sites (e.g. delivery of medications to an un-licensed dispensing site).
- The liability of using supplies and equipment beyond the manufacturer's recommended use (e.g. PPE).
- The liability for Non-Governmental Organizations (NGOs) for the distribution of medical and health supplies.

The California State Board of Pharmacy Waiver

The California State Board of Pharmacy plays a large responsibility in the function of pharmacists who play an intricate role in patients receiving needed medications. In a recent response to the potential of a surge, the California State Board of Pharmacy created a Disaster Response Policy Statement in January 2007 to ensure proper preparation and an effective response to any local, state, or national disaster. The purpose of the policy statement and potential waivers as part of the California Business and Professions Code, section 4062, subdivision (b) is to encourage pharmacists to do everything possible to do the most good for the largest amount of people.

This policy highlights that in the event of declared disaster or emergency, the Board expects to utilize its authority under the California Business and Professions Code, including section 4062, subdivision (b) to encourage and permit emergency provision of care to affected patients and areas, including by waiver of requirements that it may be implausible to meet under these circumstances.[ix] This takes into account what would be otherwise normal operating procedures that may not be able to be addressed during a surge such as record-keeping requirements, labeling requirements, employee ratio requirements, consultation requirements and other standard pharmacy practices and duties that

may interfere with the most efficient response to those affected.

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 and communicated via phone @ (916) 574-7900.

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. The Board expects that the highest standard of care possible will be provided, and once the emergency has dissipated, its licensees will return to practices conforming to state and federal requirements.[x]
*See the Disaster Response Policy Statement in the Appendix.

Use of Expired Medications

In a surge scenario, there is the potential for a shortage of appropriate medications. An example could be a pandemic flu outbreak. Specific virals and vaccines may be indicated and there may not be an adequate amount available for use. The government may prepare by stockpiling exactly for this type of situation and there is the possibility that the medications may become expired. This may become a dilemma if medical personnel have the indicated medication at their disposal, but question their liability in using the product and the efficacy of the medication to provide the desired results. Approved drugs are tested for stability and the expiration dates are based on those tests. However, most drugs remain stable far beyond the expiration date. The challenge is that the assumption cannot be made for all drugs.

Certain drug products have been qualified for shelf life extension through the Shelf Life Extension Program (SLEP), which is sponsored by the Department of Defense (DOD) and performed by the FDA. The SLEP is sponsored by the DOD because of the substantial savings to the government from extending the shelf life of certain antibiotics and other drug products that are stored in Federal stockpiles in large quantities under controlled conditions and are of strategic importance.
Absent are some approved shelf-life extension for specific drugs. The only way to determine the potency of drug stocks is to test. This is not a requirement that can be flexed by state law from a regulatory perspective.

Any restrictions on pharmacists dispensing expired drugs could be waived by the Pharmacy Board.
An emergency proclamation changing the standard of care could also provide protection.

Off – Label Drug Use

During a surge scenario, there is the possibility that the indicated medication for a diagnosis is not available. There may be other medications that have demonstrated effectiveness in the primary literature, but have not yet been granted FDA approval for a particular diagnosis. For example, many medications that are FDA-approved for antiarrthymic use are also effective for treating for hypertension. Some of the agents that are FDA-approved for depression also demonstrate effectiveness in treating pain.

If a drug is being used for off-label use, it means that the drug is approved by Federal Drug Administration (FDA), but the physician is using the drug for a use other than the one for which FDA gave the approval. The Federal Food, Drug & Cosmetic Act, Chapter V, Subchapter A, sec. 501(a) (2) (B) [21 USC 351] looks at the quality and purity characteristics of medications which are standards the FDA creates. Subsequent to a drug's approval, researchers often notice that the drug has other beneficial uses. Based on this published research, clinicians may prescribe the drug for this other use whether in a surge or not. Over time, use of the drug for this off-label use can become common practice, and be considered within the standard of care in the community.

There is no statutory or regulatory prohibition against off-label use of a drug by a physician. Consequently, pharmacists may dispense pharmaceuticals without being out of compliance. The only limitation on such off-label use is the law of medical malpractice. The more a drug is used for off-label purposes, the lower the likelihood that such use will be considered a breach of the standard of care owed to the patient. A proclamation of an emergency could include a provision making the standard of care the prevention of the greatest loss of life, which could allow some off label uses even if not generally accepted by the medical community, but consistent with the goal of saving a life.

Distribution and/or Dispensing of Pharmaceuticals by non-licensed Pharmacists

During a surge, there is a possibility that there may not be a licensed Pharmacist on-site to dispense pharmaceuticals or oversee the process from a liability perspective. The California Business and Professions Code, Section 4051 states that "it is unlawful for any person to manufacture, compound, furnish, sell, or dispense any dangerous device, or to dispense or compound any prescription pursuant to Section 4040 of a prescriber unless he or she is a pharmacist under this chapter.[xi]" To address this, the California State Board of Pharmacy may waive application of any provisions of this chapter or the regulations adopted if, in the Pharmacy Board's opinion, the waiver will aid in the protection of public health or the provision of patient care during a declared federal, state, or local emergency as noted in California Business and Professions Code, Section 4062(b)

Out – of State Licensed Pharmacists, Intern Pharmacists and/or Pharmacy Technicians

With the possibility for limited Pharmacy staff in a surge scenario, many volunteers may present to

any location where care is being provided (e.g. hospital, ACS, clinic, dispensing site) to assist in providing services that a Pharmacist, Intern Pharmacist and/or Pharmacy Technician would provide under normal operating procedures. To effectively utilize this type of volunteer it is essential to prepare for this situation and understand their potential capacity and liability.

The California State Board of Pharmacy encourages that persons outside of California will assist the residents of California. In the event of a declared disaster or emergency, the Board expects to use it powers under the California Business and Professions Code, including section 900 and section 4062, subdivision (b) to allow any pharmacists, intern pharmacists, or pharmacy technicians, who are not licensed in California, but who are licensed in good standing in another state, including those presently serving military or civilian duty, to provide emergency pharmacy services in California[xii].

Nonresident pharmacies or wholesalers that are not licensed in California but that are licensed in good standing in another state are encouraged to ship medications to pharmacies, health professionals or other wholesalers in California.

Licensing of Dispensing Sites and Alternate Care Sites

As noted in the California Board of Pharmacy rules and regulations, Article 3, Section 4059.5.(a), drugs may only be ordered by a licensed pharmacy and delivered to the licensed premises, and must be signed for by a pharmacist.[xiii] To the extent possible, hospitals are encouraged to work with the Board of Pharmacy to identify ACSs during the planning phase in order to expedite approval. This would minimize any potential delays in getting pharmaceuticals delivered to ACSs in the event of a surge situation. A pharmacist's educational background and experience should be utilized in this situation to understand if the appropriate medications have been delivered in the correct quantities so they can then utilize the pharmaceuticals in the most efficient manner.

Furnishing Medications without a Prescription

During a surge, there may be limited time to receive a prescription from a Physician. Therefore Section 4062, subdivision (a) states that a Pharmacist may in good faith, furnish a dangerous drug or dangerous device in reasonable quantities without a prescription during a federal, state or local emergency, to further the health and safety of the public.[xiv] This section states that a record containing the date, name, and address of the person to whom the drug or device is furnished, and the name, strength, and quantity of the drug or device furnished shall be maintained. The pharmacist shall communicate this information to the patient's attending physician as soon as possible.

The Use of Supplies and Equipment beyond the Manufacturers Recommended Use

In a surge scenario there is the possibility that medical supplies and equipment may be used in a different manner than its intended use which brings into consideration liability and reimbursement. An

example is the use of an adult intubation kit on a pediatric patient.
The Federal Food, Drug & Cosmetic Act, Chapter V, Subchapter E, Sec. 564 [21 USC 360bbb-3] - Authorization for Medical Products for Use in Emergencies subdivision states that the Secretary may authorize the introduction into interstate commerce, during the effective period of a declaration under subsection (b), of a drug, device, or biological product intended for use in an actual or potential emergency (referred to in this section as an "emergency use").

It may be possible, through an emergency declaration changing the overall standard of care, to use equipment in a manner not recommended if the purpose is to save the life, and still receive compensation. This may not preclude liability lawsuits, but it could lessen the likelihood of a successful claim.

As for employees, and particularly with regard to Personal Protective Equipment (PPE), the liability would be for workers compensation benefits. The Labor Code requires that every employer furnish and use safety devices and safeguards, and adopt and use practices, means, methods, operations, and processes which are reasonably adequate to render such employment and place of employment safe and healthful.

Liability for Non-Governmental Organizations (NGOs) for the distribution of medical and health supplies

There is potential for the state, regional areas and local healthcare facilities to have the need to utilize NGOs to access medical and health supplies. Because this may not be part of the normal process there can be concerns around liability. An NGO can be held liable in negligence just as any other organization. The liabilities for the distribution of medical and health supplies can be either regulatory (i.e., criminal), or civil (e.g., for damages).

Regulatory liabilities would arise where the item distributed is subject to regulatory controls and the NGO acts in violation of those controls, e.g., prescription drugs. Those controls could be waived by the Board of Pharmacy under section 4062(b) of the Business & Professions Code.

Civil liability for 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.

Long Term Recommendations

Examining the supply chain reveals that looking forward there needs to be modifications to the current system to be able handle a major surge. The long term recommendations at this time are to:

1. Develop a state-wide Database/System that enables the tracking of receipt and fulfillment of supplies, pharmaceutical, and equipment orders at each level of SEMS. The system should also enable real-time decision-making based on supply and demand (e.g. best practice of UPS, FED EX).
2. The creation of a Master Medical Health Mutual Aid Plan that enables the most effective use of resources at each level before escalating up the SEMS structure. This should include an aspect of inclusion of future anticipation of needs.

Supplies, Pharmaceuticals, and Equipment Glossary

- Pharmaceuticals: Any prescription medications, over-the-counter drugs and/or nutraceuticals administered to persons to diagnose, treat, or prevent disease or other abnormal conditions.[xv]

- Equipment: Fixed and portable equipment used for diagnosis, treatment, monitoring and direct care of individuals[xvi].

- Supplies: Durable and consumable goods which can be used in carrying out the treatment of a patient's illness or injury.

- Access: The process of acquiring supplies, pharmaceuticals, and equipment from various sources via procurement, stockpiles, caches, and other sources.
    - Procurement: The process of obtaining supplies, pharmaceuticals, and equipment via contracts, government requests, and mutual aid that includes an arrangement of payment. Procurement is a subset of access.

- Storage: The task of appropriately maintaining a supply of supplies, pharmaceuticals, and equipment that is readily accessible[xvii].

- Distribution: The allocation of supplies, pharmaceuticals, and equipment involving the mobilization and transfer of these materials from the loading point to the ordering entity.

- Stockpile Site: Place determined by each region to the location/locations for a cached of pharmaceuticals and medical supplies necessary to initially treat victims and caregivers until the Strategic National Stockpile (SNS) arrives.

- Strategic National Stockpile (National Pharmaceutical Stockpile): A national repository of pharmaceuticals and medical supplies that may be needed for an all hazards event to supplement and re-supply State and Local Public Health Agencies and hospitals.

Pharmaceutical Storage Specific Definitions:
(Taken from the US Pharmocepia guidelines (USP)

- Freezer: A place in which the temperature is maintained thermostatically between -20 degrees Celsius (C) and -10 ° C (-4 ° Fahrenheit (F) and 14 ° F).

- Cold: Any temperature not exceeding 8 ° C (46 ° F). A refrigerator is a cold place in which the temperature is maintained thermostatically between 2 ° C and 8 ° C (36 ° - 46 ° F).

- Cool: Any temperature between 8 ° C and 15 ° C (46 ° - 59 ° F). An article that requires cool storage alternatively may be stored in a refrigerator, unless otherwise specified by the individual USP monograph.

- Room Temperature: The temperature prevailing in a working area.

- Controlled Room Temperature: A temperature maintained thermostatically that encompasses the usual and customary working environment of 20 ° C to 25 ° C (68 ° F - 77 ° F) that allows for brief deviations between 15 ° C and 30 ° C (59 ° F - 86 ° F) that are experienced in pharmacies, hospitals, and warehouses. Articles may be labeled for storage at "controlled room temperature" or at "up to 25 ° C ."

- Warm: Any temperature between 30 ° C and 40 ° C (86 ° - 104 ° F).

- Excessive Heat: Any temperature above 40 ° C (104 ° F).

- Protection from Freezing: Where, in addition to the risk of breakage of the container, freezing subjects an article to loss of strength or potency, or to destructive alteration of its characteristics, the container label must bear an appropriate instruction to protect the article from freezing.

Appendix

Tools 3-9

Tool 3 – Pharmaceutical – Inventory Based - Specific

Development of Standards and Guidelines for Healthcare Surge During Emergencies

Critical Pharmaceutical That May Be Used During a Surge

Sample Pharmaceuticals Suggested During a Surge	Strength	Route of Administration	Package Size	Wholesaler Item #	Average Daily Census	Potential Surge Patients	ED Capacity	Employees	Total Potential Requiring Treatment	Doses Needed per Patient per Day	Days of Therapy Required (Max of 3 Days)
Antidotes for Biological Agents											
Activated charcoal 50g slurry	NA	Oral									
Cidofovir	75mg/ml	Injectable									
Ciprofloxacin	400mg	Injectable									
Ciprofloxacin	500mg	Oral	100	123456	500	100	50	3000	3650	1	3
Clindamycin	600mg	Injectable									
Doxycycline Hyclate	100mg	Injectable									
Doxycycline Hyclate	100mg	Oral									
Gentamicin Sulfate	10mg/ml	Injectable									
Gentamicin Sulfate	40mg/ml	Injectable									
Penicillin GK	20MU	Injectable									
Rifampin	300mg	Oral									
Streptomycin Sulfate	400mg/ml	Injectable									
Antidotes for Chemical Agents											
Amyl Nitrate 0.3ml, Crushable ampul		Inhaled									
Atropine Sulfate prefilled syringe	1mg/10ml	Injectable									
Atropine Sulfate multidose vial	8mg/20ml	Injectable									
Calcium Chloride	10mg/10ml	Injectable									
Calcium Gluconate 10%	10mg/100ml	Injectable									
Diazepam	5mg/ml	Injectable									
Dimercaprol	100mg/ml	Injectable									
Diphenhydramine HCL	50mg/ml	Injectable									
Methylene Blue 1%	10mg/ml	Injectable									
Pralidoxime Chloride	1gm/20ml	Injectable									
Pyridostigmine Bromide	30 Or 60mg	Oral									
Pyridoxine HCL	3g/30ml	Injectable									
Sodium Nitrate		Injectable									
Sodium Thiosulfate	12.5mg/50ml	Injectable									
Antidotes for Radiological & Nuclear Agents											
Aluminum Hydroxide Suspension 240ml	NA	Oral									
Calcium Carbonate	1g	Oral									
Chlorthalidone	100mg	Oral									
Deferoxamine Mesylate	1g	Injectable									
Edetic Acid	200mg/ml	Injectable									
Furosemide	100mg/10ml	Injectable									
Magnesium Sulfate		Oral									
Magnesium Oxide		Oral									
Penicillamine											
Potassium Iodide	130mg	Oral									
Prussian Blue											
Sodium Iodide	130mg	Oral									
Trisodium Calcium Diethylenetriaminepentaacetat	1g	Injectable									
Trisodium Zinc Diethylenetriaminepentaacetate	1g	Injectable									

Tool 4 – Surge Based – Event Specific

Development of Standards and Guidelines for Healthcare Surge During Emergencies

Critical Pharmaceutical That May Be Used During a Surge

Sample Pharmaceuticals Suggested During a Surge	Strength	Route of Administration	Package Size	Wholesaler Item #	Average Daily Census	Potential Surge Patients	ED Capacity	Employees	Total Potential Requiring Treatment	Doses Needed per Patient per Day	Days of Therapy Required (Max of 3 Days)
Drugs for Treating Acute Radiation Syndrome											
Acyclovir Sodium	25mg/ml	Injectable									
Acyclovir	400mg	Oral									
Antibiotics											
Ciprofloxacin	1g	Injectable									
Filgrastim	300 µg/ml	Injectable									
Fluconazole	200 mg/ml	Oral									
Ganciclovir	200-500mg	Oral									
Ganciclovir Sodium	50 mg/ml	Injectable									
Granisetron HCl	1mg/ml	Injectable									
Granisetron HCl	1mg	Oral									
Ondansetron HCl	2mg/ml	Injectable									
Pegfilgrastim	6mg	Injectable									
Trimethoprim/Sulfamethoxazole	160mg/800mg	Oral									
Trimethoprim/Sulfamethoxazole		Injectable									
Vaccines											
Smallpox											
Tetanus Toxoid											
Anthrax Treatment											
Doxycycline											
Doxycycline											
Amoxicillin											
Erythromycin											

Sources)
1)Guidelines for Managing Inpatient and Outpatient Surge Capacity - State of Wisconsin, 2005
2)Emergency Preparedness Resource Inventory (EPRI), A Tool for Local, Regional, and State PlannersAHRQ Publication, 2005
3) State of California Mass Prophylaxis Planning Guide, EMSA, June 2003.
4) Organization of a health-system pharmacy team to respond to epidemics of terrorism. Am J Health Syst Pharm Vol 60 Jun 15,2003

Development of Standards and Guidelines for Healthcare Surge During Emergencies Pharmaceuticals That May Be Used During a Surge											
County Population (in millions)	3	(e.g. Orange County)									
Hospitals in County	29										
Beds in County	6337										
Potential County Infectious Disease Cases	1500	calculated based on HRSA estimate of 500 cases per 3 million									
Estimated Potential Cases for Your Facility	10	(estimated)									
Sample Infectious Diseases Pharmaceuticals Suggested During a Surge	**Strength**	**Route of Administration**	**Package Size**	**Wholesaler Item #**	**Employees**	**Total Potential Requiring Treatment**	**Doses Needed per Patient per Day**	**Days of Therapy Required (Max of 3 Days)**	**Total Doses Required**	**# Packages to Stock**	**Alternate Sources**
Antidotes for Biological Agents											
Activated charcoal 50g slurry	NA	Oral				10					
Cidofovir	75mg/ml	Injectable				10					
Ciprofloxacin	400mg	Injectable				10					
Ciprofloxacin	500mg	Oral	100	12345678		10	1	3	30	1	MOA with UMC
Clindamycin	600mg	Injectable				10					
Doxcycline Hyclate	100mg	Injectable				10					
Doxcycline Hyclate	100mg	Oral				10					
Gentamicin Sulfate	10mg/ml	Injectable				10					
Gentamicin Sulfate	40mg/ml	Injectable				10					
Penicillin GK	20MU	Injectable				10					
Rifampin	300mg	Oral				10					
Streptomycin Sulfate	400mg/ml	Injectable				10					
Potential County Chemical Agent Cases	150										
Estimated Potential Cases for Your Facility	10										
Antidotes for Chemical Agents											
Amyl Nitrate 0.3ml. Crushable ampul		Inhaled									
Atropine Sulfate prefilled syringe	1mg/10ml	Injectable									
Atropine Sulfate multidose vial	8mg/20ml	Injectable									
Calcium Chloride	10mg/10ml	Injectable									
Calcium Gluconate 10%	10mg/100ml	Injectable									
Diazepam	5mg/ml	Injectable									
Dimercaprol	100mg/ml	Injectable									
Diphenhydramine HCL	50mg/ml	Injectable									
Methylene Blue 1%	10mg/ml	Injectable									
Pralidoxime Chloride	1gm/20ml	Injectable									
Pyridostigmine Bromide	30 Or 60mg	Oral									
Pyridoxine HCL	3g/30ml	Injectable									
Sodium Nitrate		Injectable									
Sodium Thiosulfate	12.5mg/50ml	Injectable									

Supplies, Pharmaceuticals, and Equipment

Sample Infectious Diseases Pharmaceuticals Suggested During a Surge	Strength	Route of Administration	Package Size	Wholesaler Item #	Employees	Total Potential Requiring Treatment	Doses Needed per Patient per Day	Days of Therapy Required (Max of 3 Days)	Total Doses Required	# Packages to Stock	Alternate Source
Potential County Rad/Nuc Cases	150										
Estimated Potential Cases for Your Facility	10										
Antidotes for Radiological & Nuclear Agents											
Aluminum Hydroxide Suspension 240ml	NA	Oral									
Calcium Carbonate	1g	Oral									
Chlorthalidone	100mg	Oral									
Deferoxamine Mesylate	1g	Injectable									
Edetic Acid	200mg/ml	Injectable									
Furosemide	100mg/10ml	Injectable									
Magnesium Sulfate		Oral									
Magnesium Oxide		Oral									
Penicillamine											
Potassium Iodide	130mg	Oral									
Prussian Blue											
Sodium Iodide	130mg	Oral									
Trisodium Calcium Diethylenetriaminepentaacetate	1g	Injectable									
Trisodium Zinc Diethylenetriaminepentaacetate	1g	Injectable									
Potential County Radiation Cases	150										
Estimated Potential Cases for Your Facility	10										
Drugs for Treating Acute Radiation Syndrome											
Acyclovir Sodium	25mgml	Injectable									
Acyclovir	400mg	Oral									
Antidiarrheal											
Cefepime HCL	1g	Injectable									
Filgrastim	300ug/ml	Injectable									
Fluconazole	200mg/ml	Oral									
Ganciclovir	250-500mg	Oral									
Ganciclovir Sodium	500mg/ml	Injectable									
Granisetron HCL	1mg/ml	Injectable									
Granisetron HCL	1mg	Oral									
Ondansetron HCL	2mg/ml	Injectable									
Pegfilgrastim	6mg	Injectable									
Trimethoprim/Sulfamethoxazole	160mg/800mg	Oral									
Trimethoprim/Sulfamethoxazole		Injectable									

Supplies, Pharmaceuticals, and Equipment

Sample Infectious Diseases Pharmaceuticals Suggested During a Surge	Strength	Route of Administration	Package Size	Wholesaler Item #	Employees	Total Potential Requiring Treatment	Doses Needed per Patient per Day	Days of Therapy Required (Max of 3 Days)	Total Doses Required	# Packages to Stock	Alternate Source
Vaccines											
Smallpox											
Tetanus Toxoid											
Anthrax Treatment											
Florquinolone											
Doxycycline											
Amoxicillin											
Erythromycin											

Sources:

1)Guidelines for Managing Inpatient and Outpatient Surge Capacity - State of Wisconsin, 2005

2)Emergency Preparedness Resource Inventory (EPRI), A Tool for Local, Regional, and State Planners AHRQ Publication, 2005

3) State of California Mass Prophylaxis Planning Guide, EMSA, June 2003.

4) State of Research in High- consequnce Hospital Surge Capacity, Carl H. Schultz, MD, Kristi L. Koenig, MD

5) Organization of a health-system pharmacy team to respond to episodes of terrorism, Am J Health-Syst Pharm-Vol 60 Jun 15,2003

HRSA Standards and Surge Capacity Definition:

The components necessary to care for a sudden, unexpected increase in patient volume that exceeds current capacity.

The ability to care for 500 cases per one million population with infectious diseases, 50 cases per one million with chemical toxicity, 50 cases per one million with burns or trauma (blast), and 5 cases per one million with radiation injury within a 24-hour period.

Tool 5 – Inventory Based - Specific

Development of Standards and Guidelines for Healthcare Surge During Emergencies Supplies and Equipment that May Be Required During a Surge				
BANDAGES AND DRESSINGS	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Adhesive strip, 1" X 3"				
Alcohol pads				
Bandage elastic (Ace wrap) 2"				
Bandage elastic (Ace wrap) 4"				
Bandage elastic (Ace wrap) 6"				
Bandage, gauze non sterile (kerlix) 4" X 10'				
Bandage, gauze non sterile 4X4				
Bandage 4X4 sterile				
Bandage 2X2 sterile				
Eye pad, oval sterile				
Eye Shields				
Morgan Lens				
Petroleum Gauze 5" X 9" (Xeroform)				
Vaseline gauze				
Gauze Pad 5" X 9" sterile				
Tape 1" transparent				
SURGICAL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Scalpel with blade, disposable #10				
Scalpel with blade, disposable #15				
Sterile gloves, sizes 6.5, 7.0, 7.5, and 8.0				
Surgical scrub brushes with betadine				
Suture set (disposable)				
Suture removal kit				
Suture (Nylon sutures various sizes)				

ORTHOPEDIC SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Splint, cardboard 12"				
Splint, cardboard 18"				
Splint, cardboard 24"				
Splint, cardboard 34"				
Splint, fiberglass 3"				
Splint, fiberglass 4"				
Splint, fiberglass 5"				

IV SETS, NEEDLES AND SYRINGES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
IV Start Kits				
IV catheter, 18 gauge				
IV catheter, 20 gauge				
IV catheter, 22 gauge				
IV catheter, 24 gauge				
IV administration set, adult				
IV administration set, pediatric				
IV piggyback tubing				
Needle disposable, 18 gauge				
Needle disposable, 22 gauge				
Needle disposable, 25 gauge				
Syringe, 1ml				
Syringe, 3 ml				
Syringe, 5 ml				
Syringe, 10 ml				
Syringe, 20 ml				
Syringe, 35cc, for wound irrigation				
Syringe/needle, 3 ml, 22gauge X 1 ½"				
Syringe/needle, 1 ml, 25 gauge X 5/8"				
Syringe/needle 1 ml, 29 gauge X ½"				
Sharps container				

Supplies, Pharmaceuticals, and Equipment

AIRWAY MANAGEMENT SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Bag-valve-mask, adult				
Bag-valve-mask, pediatric				
Airway adjunct, OP Airway				
Airway adjunct, NP Airway				
Cricothyrotomy / Shiley 4				
Endotracheal tube, cuffed 8mm				
Endotracheal tube, cuffed, 7.5mm				
Endotracheal tube, cuffed 7mm				
Endotracheal tube, cuffed, 6mm				
Endotracheal tube, cuffed 2.5mm				
Endotracheal tube, cuffed 3mm				
Endotracheal tube, cuffed, 4mm				
Endotracheal tube, cuffed, 4.5mm				
Endotracheal tube, cuffed, 5mm				
Endotracheal tube, cuffed, 5.5mm				
Endotracheal tube, non-cuffed, 2.5mm				
Endotracheal tube, non-cuffed, 3mm				
Endotracheal tube, non-cuffed, 4mm				
Endotracheal tube, non-cuffed, 5mm				
ETT Holders				
Intubation kit, incl. Blades, medium handle, stylet and case – including magill forceps				
Intubation kit (Pediatrics) , incl. Blades, medium handle, stylet and case – including magill forceps				
Nasal cannula, adult				
Nasal cannula, pediatric				
02 mask with tubing, pediatric				
02 mask with tubing, adult				
02 mask - non-rebreather, adult				
Nebulizers – hand held				
Nebulizers – masks				
Ventilator circuits				
Suction machine, portable				
Suction catheters 10 french				
Suction catheters 12 french				
Suction catheters 14 french				
Yankauer suction				
Suction tubing				
Suction Canisters				
NG Tubes				
Thoracostomy Tubes, assorted sizes				
Pleurivac & Heimlich valves				

Supplies, Pharmaceuticals, and Equipment

INFECTION CONTROL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Cover/Isolation gowns				
Splash guard for wound irrigation				
Masks surgical				
Face shield with eye shield				
Masks N-95				
Patient exam gloves, small				
Patient exam gloves, medium				
Patient exam gloves, large				
Shoe covers				
Surgical caps				
Wipes, disposable				
MISCELLANEOUS SUPPLIES	**Current Supply**	**Total Potential Requiring Treatment**	**Package Size (if applicable)**	**Quantity / Cache**
Bags, plastic 30 gallon, 8 mil				
Batteries, C for laryngoscope handle				
Batteries, D for flashlights				
Blankets lightweight				
Clipboards				
Diapers, disposable large				
Diapers, disposable medium				
Diapers, disposable small				
Diapers, disposable, large, peds				
Diapers, disposable, medium, peds				
Diapers, disposable, small, peds				
Emesis basins, plastic				
Facial tissues				
Flashlights				
Gloves work type leather/canvas				
OB kits, disposable				
Paper towels				
Patient ID bands				
Styrofoam cups				
Tongue depressors, non sterile				

Supplies, Pharmaceuticals, and Equipment

NON-DISPOSABLE MEDICAL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Blood Pressure multi-cuff kit with adult, pediatric, infant and thigh cuff				
Glucometer kit with lancets, test strips and battery				
Portable Otoscope/Ophthalmoscope set with batteries				
Pulse Oximetry, portable				
Stethoscope				
Tourniquets 1"				
Trauma/paramedic scissors				

Tool 6 – Inventory Based - General

Development of Standards and Guidelines for Healthcare Surge During Emergencies Supplies and Equipment that May Be Required During a Surge				
BANDAGES AND DRESSINGS	Current Supply	Total Potential Requiring Treatment	Package Size	Quantity / Cache
Adhesive strips				
Alcohol pads				
Bandage elastic (Ace wraps-various sizes)				
Eye pad, oval sterile				
Eye Shields				
Morgan Lens				
Gauze				
Vaseline gauze				
SURGICAL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size	Quantity / Cache
Scalpel with blade (various sizes)				
Sterile gloves (varoius sizes)				
Surgical scrub brushes with betadine				
Suture set (disposable)				
Suture removal kit				
Suture (Nylon sutures various sizes)				
ORTHOPEDIC SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size	Quantity / Cache
Splint, cardboard / fiberglass				

Supplies, Pharmaceuticals, and Equipment

IV SETS, NEEDLES AND SYRINGES	Current Supply	Total Potential Requiring Treatment	Package Size	Quantity / Cache
IV Start Kits				
IV catheter (various sizes)				
IV administration set (adult / pediatric)				
IV tubing				
Needle disposable (various sizes)				
Syringe, 1ml				
Syringes (various sizes)				
Syringe/needles				
Sharps container				
AIRWAY MANAGEMENT SUPPLIES	**Current Supply**	**Total Potential Requiring Treatment**	**Package Size**	**Quantity / Cache**
Bag-valve-mask, (adult / pediatric)				
Airway adjunct, OP Airway / NP Airway				
Cricothyrotomy / Shiley 4				
Endotracheal tube (cuff/non-cuffed)- various sizes				
ETT Holders				
Intubation kit, incl. Blades, medium handle, stylet and case – including magill forceps				
Intubation kit (Pediatrics) , incl. Blades, medium handle, stylet and case – including magill forceps				
Nasal cannula (adult / pediatric)				
Nebulizers				
Ventilator circuits				
Suction machine				
Suction catheters				
Yankauer suction				
Suction tubing				
Suction Canisters				
NG Tubes				
Thoracostomy Tubes, assorted sizes				
Pleurivac & Heimlich valves				

Supplies, Pharmaceuticals, and Equipment

INFECTION CONTROL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size	Quantity / Cache
Cover/Isolation gowns				
Splash guard for wound irrigation				
Masks surgical				
Face shield with eye shield				
Masks N-95				
Patient exam gloves (various sizes)				
Shoe covers				
Surgical caps				
Wipes, disposable				
MISCELLANEOUS SUPPLIES	**Current Supply**	**Total Potential Requiring Treatment**	**Package Size**	**Quantity / Cache**
Bags, plastic 30 gallon, 8 mil				
Batteries, C for laryngoscope handle				
Batteries, D for flashlights				
Blankets lightweight				
Clipboards				
Diapers, disposable large				
Diapers, disposable medium				
Diapers, disposable small				
Diapers, disposable, large, peds				
Diapers, disposable, medium, peds				
Diapers, disposable, small, peds				
Emesis basins, plastic				
Facial tissues				
Flashlights				
Gloves work type leather/canvas				
OB kits, disposable				
Paper towels				
Patient ID bands				
Styrofoam cups				
Tongue depressors, non sterile				

Supplies, Pharmaceuticals, and Equipment

NONDISPOSABLE MEDICAL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size	Quantity / Cache
Blood Pressure multi-cuff kit (various sizes)				
Glucometer kit with lancets, test strips and battery				
Portable Otoscope/Ophthalmoscope set with batteries				
Pulse Oximetry				
Stethoscope				
Tourniquets 1"				
Trauma/paramedic scissors				

Tool 7 – Surge Based – Event Specific

Development of Standards and Guidelines for Healthcare Surge During Emergencies Supplies and Equipment that May Be Required During a Surge				
County Population (in Millions)		3	**(e.g. Orange County)**	
Hospitals in County		29		
Beds in County		6337		
Potential County Infectious Disease Cases		1500		
Estimated Potential Cases for Your Facility		10	(estimated)	

BANDAGES AND DRESSINGS	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Adhesive strip, 1" X 3"				
Alcohol pads				
Bandage elastic (Ace wrap) 2"				
Bandage elastic (Ace wrap) 4"				
Bandage elastic (Ace wrap) 6"				
Bandage, gauze non sterile (kerlix) 4" X 10'				
Bandage, gauze non sterile 4X4				
Bandage 4X4 sterile				
Bandage 2X2 sterile				
Eye pad, oval sterile				
Eye Shields				
Morgan Lens				
Petroleum Gauze 5" X 9" (Xeroform)				
Vaseline gauze				
Gauze Pad 5" X 9" sterile				
Tape 1" transparent				

Supplies, Pharmaceuticals, and Equipment

SURGICAL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Scalpel with blade, disposable #10				
Scalpel with blade, disposable #15				
Sterile gloves, sizes 6.5, 7.0, 7.5, and 8.0				
Surgical scrub brushes with betadine				
Suture set (disposable)				
Suture removal kit				
Suture (Nylon sutures various sizes)				
ORTHOPEDIC SUPPLIES	**Current Supply**	**Total Potential Requiring Treatment**	**Package Size (if applicable)**	**Quantity / Cache**
Splint, cardboard 12"				
Splint, cardboard 18"				
Splint, cardboard 24"				
Splint, cardboard 34"				
Splint, fiberglass 3"				
Splint, fiberglass 4"				
Splint, fiberglass 5"				

Supplies, Pharmaceuticals, and Equipment

IV SETS, NEEDLES AND SYRINGES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
IV Start Kits				
IV catheter, 18 gauge				
IV catheter, 20 gauge				
IV catheter, 22 gauge				
IV catheter, 24 gauge				
IV administration set, adult				
IV administration set, pediatric				
IV piggyback tubing				
Needle disposable, 18 gauge				
Needle disposable, 22 gauge				
Needle disposable, 25 gauge				
Syringe, 1ml				
Syringe, 3 ml				
Syringe, 5 ml				
Syringe, 10 ml				
Syringe, 20 ml				
Syringe, 35cc, for wound irrigation				
Syringe/needle, 3 ml, 22gauge X 1 ½"				
Syringe/needle, 1 ml, 25 gauge X 5/8"				
Syringe/needle 1 ml, 29 gauge X ½"				
Sharps container				

Supplies, Pharmaceuticals, and Equipment

AIRWAY MANAGEMENT SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Bag-valve-mask, adult				
Bag-valve-mask, pediatric				
Airway adjunct, OP Airway				
Airway adjunct, NP Airway				
Cricothyrotomy / Shiley 4				
Endotracheal tube, cuffed 8mm				
Endotracheal tube, cuffed, 7.5mm				
Endotracheal tube, cuffed 7mm				
Endotracheal tube, cuffed, 6mm				
Endotracheal tube, cuffed 2.5mm				
Endotracheal tube, cuffed 3mm				
Endotracheal tube, cuffed, 4mm				
Endotracheal tube, cuffed, 4.5mm				
Endotracheal tube, cuffed, 5mm				
Endotracheal tube, cuffed, 5.5mm				
Endotracheal tube, non-cuffed, 2.5mm				
Endotracheal tube, non-cuffed, 3mm				
Endotracheal tube, non-cuffed, 4mm				
Endotracheal tube, non-cuffed, 5mm				
ETT Holders				
Intubation kit, incl. Blades, medium handle, stylet and case – including magill forceps				
Intubation kit (Pediatrics) , incl. Blades, medium handle, stylet and case – including magill forceps				
Nasal cannula, adult				
Nasal cannula, pediatric				
02 mask with tubing, pediatric				
02 mask with tubing, adult				
02 mask - non-rebreather, adult				
Nebulizers – hand held				
Nebulizers – masks				
Ventilator circuits				
Suction machine, portable				
Suction catheters 10 french				
Suction catheters 12 french				
Suction catheters 14 french				
Yankauer suction				
Suction tubing				
Suction Canisters				
NG Tubes				
Thoracostomy Tubes, assorted sizes				
Pleurivac & Heimlich valves				

Supplies, Pharmaceuticals, and Equipment

INFECTION CONTROL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Cover/Isolation gowns				
Splash guard for wound irrigation				
Masks surgical				
Face shield with eye shield				
Masks N-95				
Patient exam gloves, small				
Patient exam gloves, medium				
Patient exam gloves, large				
Shoe covers				
Surgical caps				
Wipes, disposable				
MISCELLANEOUS SUPPLIES	**Current Supply**	**Total Potential Requiring Treatment**	**Package Size (if applicable)**	**Quantity / Cache**
Bags, plastic 30 gallon, 8 mil				
Batteries, C for laryngoscope handle				
Batteries, D for flashlights				
Blankets lightweight				
Clipboards				
Diapers, disposable large				
Diapers, disposable medium				
Diapers, disposable small				
Diapers, disposable, large, peds				
Diapers, disposable, medium, peds				
Diapers, disposable, small, peds				
Emesis basins, plastic				
Facial tissues				
Flashlights				
Gloves work type leather/canvas				
OB kits, disposable				
Paper towels				
Patient ID bands				
Styrofoam cups				
Tongue depressors, non sterile				

Supplies, Pharmaceuticals, and Equipment

NON-DISPOSABLE MEDICAL SUPPLIES	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Blood Pressure multi-cuff kit with adult, pediatric, infant and thigh cuff				
Glucometer kit with lancets, test strips and battery				
Portable Otoscope/Ophthalmoscope set with batteries				
Pulse Oximetry, portable				
Stethoscope				
Tourniquets 1"				
Trauma/paramedic scissors				

Tool 8 - ACSs

Development of Standards and Guidelines for Healthcare Surge During Emergencies				
Alternate Care Site (ACS) Cache (updated April 11, 2007)				
Item #	Group (see below)	Item Description	Units	#
		IV Fluids		
1	1	Alcohol Pad, Isopropyl, Sterile, 2" x 2"	EA	2000
2	1	Arm Board, Padded, Long (Size = 3" x 18")	EA	24
3	1	Band-Aid (Coverlet Patches), 1-1/2" X 2"	EA	600
4	1	Catheter, (IV), 14G x 2" (LATEX FREE), Model = Medex Jelco #4048. NO SUBS	EA	5
5	1	Catheter, (IV), 16G x 1 1/4", Gray (Safety Tip) (LATEX FREE), Model = Medex Jelco #4072. NO SUBS	EA	20
6	1	Catheter, (IV), 18G x 1 1/4", Green (Safety Tip) (LATEX FREE), Model = Medex Jelco #4065. NO SUBS	EA	200
7	1	Catheter, (IV), 20G x 1 1/4", Pink (Safety Tip) (LATEX FREE), Model = Medex Jelco #4066. NO SUBS	EA	200
8	1	Catheter, (IV), 22G x 1", Blue (Safety Tip) (LATEX FREE), Model = Medex Jelco #4050. NO SUBS	EA	150
9	1	Catheter, (IV), 24G x 1", Yellow (Safety Tip) (LATEX FREE), Model = Medex Jelco #4063. NO SUBS	EA	100
10	1	IV Administration Set, 78", w/clamp, Vented (15 Drop) Macrodrip (LATEX FREE), Model = Amsino #AA3101, NO SUBS	EA	150
11	1	IV Administration Set, 78",w/clamp,Vented (60 Drop) Microdrip (LATEX FREE), Model = Amsino #608306, NO SUBS	EA	100
12	1	IV Fluid Bags, Normal Saline 100 ml, Model = Baxter #629122A, NO SUBS	EA	200
13	1	IV Fluid Bags, Normal Saline 1000 ml, Model = Baxter #2B1324X, NO SUBS	EA	500
14	1	IV Starter Set, Model = Dixie #783 NO SUBS	EA	100
15	1	Needle, 18 G x 1.5", Safety Tip, Model = Exel International #26420. NO SUBS	EA	120
16	1	Needle, 22 G x 1" or 1-1/4", Model = Exel International #26411. NO SUBS	EA	100
17	1	Needle, 25 G x 1-1/4", Safety Tip, Model = Exel International #26406. NO SUBS	EA	120
18	1	Needle, Butterfly, 21G x 3/4", Safety Tip (LATEX FREE), Model = Exel International #26704. NO SUBS	EA	50
19	1	Needle, Vacutainer, 21G, Safety Tip	EA	75
20	1	Saline Locks, Model = Amsino #AE3108 NO SUBS	EA	200
21	1	Tourniquet, 1" x 18", Disposable, (LATEX FREE)	EA	100

Supplies, Pharmaceuticals, and Equipment

Bandages and Wound Management				
23	2	Bandage, ("ACE type") Elastic, 4" x 4.5 yds(LATEX FREE), Model = Dynarex #3664 NO SUBS	EA	200
24	2	Bandage, Kerlix, Sterile, 4.5" x 4.1 Yd, Model = Medline #80342	EA	400
25	2	Bandage, Triangular, Model = ADI Medical #23040 NO SUBS	EA	150
26	2	Band-Aid, Sterile, 2" x 4.5", Model = Dynarex #3634 NO SUBS	EA	600
27	2	Cotton Tip, Sterile, Applicators, Model = Dynarex #4305 NO SUBS	EA	500
28	2	Forceps, Adult, Model = Magill #2760, NO SUBS	EA	8
29	2	Forceps, Pediatric, Model = Magill #2750, NO SUBS	EA	4
30	2	Gauze, 4x4 packs non-sterile (100 quantity per pack)	PACK	20
31	2	Irrigation Kit, Type 1, w/Syringe, Model = Amsino #AS130 NO SUBS	EA	25
32	2	Pack, Cold, Crush Activated	EA	300
33	2	Pad, ABD/COMBINE, Sterile, Model = Dynarex #3501 NO SUBS	EA	120
34	2	Pad, Chux (17" x 24")	EA	400
35	2	Pad, Eye Sterile (box of 50) Model = Dukal #841B NO SUBS	Box	1
36	2	Shears, Trauma, Model = Dixie #1800011 NO SUBS	EA	17
37	2	Suture Removal Kit, Sterile, Kit includes: 1 - Plastic tray w/ lid, 1 - Littauer scissors, 1 - 4" metal forceps, 1 - gauze sponge.	EA	10
38	2	Suture, Ethilon, Black Monofilament, 3-0, 18"	EA	22
39	2	Suture, Ethilon, Black Monofilament, 4-0, 18"	EA	44
40	2	Suture, Ethilon, Black Monofilament, 5-0, 18"	EA	22
41	2	Suture, Kit - Laceration Tray, Each kit must include: 2 - Medicine Cups - 60cc, 1 - Needle - 18g x 1-1/2"; 1 - Tray - Rectangular; 1 - Needle - 25g x 1-1/2"; 1 - Clamp - Mosquito, Curved; 1 - Needle - 27g x 1/2"; 1 - Syringe - 10cc, Luer Lock; 1 - Needle	EA	20
42	2	Suture, Silk, Black Braided, 2-0, 12-18"	EA	22
43	2	Suture, Stapler Remover	EA	33
44	2	Suture, Surgical Stapler, 15 pack, Regular Model = Conmed Reflex 8535 NO SUBS	EA	5
45	2	Suture, Vicryl, Coated, Undyed Braided, 4-0, 27"	EA	30
46	2	Suture, Vicryl, 5-0	EA	8
47	2	Safety Pins, Large	EA	144
48	2	Syringe/Needle 22g	EA	200
49	2	Syringe/Needle, (1cc) w/ 28g Needle (Safety Tip), Insulin (LATEX FREE)	EA	300
50	2	Syringe/Needle, Disposable, (3 cc) w/21g x 1- 1/2" Needle (Safety Tip) (LATEX FREE)	EA	150
51	2	Syringe/Needle, Disposable, (5cc) or (6cc) w/20g x l-1/2" Needle (LATEX FREE)	EA	150
52	2	Syringe, Catheter Tip, Disposable (30 cc) (LATEX FREE), Model = Exel International #26292 NO SUBS	EA	50
53	2	Syringe, Luer-Lok, Disposable (20 cc) (LATEX FREE), Model = Amsino AS2220D NO SUBS	EA	50
54	2	Syringe, Luer-Lok, Disposable (30 cc) (LATEX FREE), Model = Amsino AS2230D NO SUBS	EA	50
55	2	Syringe, Luer-Lok, Disposable (10 cc) (LATEX FREE), Model = Amsino AS2210D NO SUBS	EA	150
56	2	Tape, Surgical, Micropore (1") Model = Dynarex #3553 NO SUBS	EA	100
57	2	Tissue Adhesive, Brand = Johnson & Johnson Dermabond. NO SUBS	Tube	10
58	2	Tray, Incision & Drainage, Tray includes: 1 - CSR Wrap (20" x 20"), 1 - Paper Towel (13" x 19"); 1 - PVP Prep Pad, 1 - Fenestrated Drape 1 - Scalpel (No. 11), 1 - Forceps Adson Thumb (wire) Forceps, 1 - Kelly (wire) Forceps, 1 - Parapet Gauze (4" x 3").	EA	10
59	2	Tube, Drainage, Surgical, (Heimlich Valve) (LATEX FREE)	EA	10

		Airway Intervention and Management		
61	3	Airway, Nasopharyngeal 24 Fr. (LATEX FREE) Model = Sun-Med #1-5075-24 NO SUBS	EA	20
62	3	Airway, Oral, 100 mm (Adult), Model = Dynarex #4755 NO SUBS	EA	20
63	3	Airway, Oral, 40 mm (Neonatal/Infant), Model = Dynarex #4715 NO SUBS	EA	10
64	3	Airway, Oral, 80 mm (Sm Adult/Child), Model = Dynarex #4735 NO SUBS	EA	10
65	3	Cricothyrotomy Catheter Set, 3.5mm ID, Model = Melker #C-TCCS-350 NO SUBS Set must include: 1 - TFE Catheter Needle, 1 - Curved Radiopaque Dilator, 1 - Amplatz Extra Stiff Wire Guide with Flexible Tip, 1 - Emergency Cricothyrotomy Catheter (3.5mm), 1 -	EA	4
66	3	Cricothyrotomy Catheter Set, 6mm ID, Model = Melker #C-TCCS-600 NO SUBS Set must include: 1 - TFE Catheter Needle, 1 - Curved Radiopaque Dilator, 1 - Amplatz Extra Stiff Wire Guide with Flexible Tip, 1 - Emergency Cricothyrotomy Catheter (6mm), 1 - Perc	EA	6
67	3	Disposable Mouth Piece for Flow Rate Meter (Adult), Model = Assess #168200 NO SUBS	EA	25
68	3	Disposable Mouth Piece for Flow Rate Meter (Large Adult), Model = Assess #168200 NO SUBS	EA	25
69	3	Disposable Mouth Piece for Flow Rate Meter (Pediatric), Model = Assess #168200 NO SUBS	EA	25
70	3	End Tidal Carbon Dioxide Monitor, Model = Mercury Medical #StatCO2 NO SUBS	EA	50
71	3	Batteries for Laryngoscope (Extra) = C Size Batteries	EA	30
72	3	Laryngoscope Kit w/Pouch, Model = Sun-Med #5-5333-57 NO SUBS	EA	16
73	3	Laryngoscope Light Bulbs, Model = Sun-Med #5-0240-52 NO SUBS	EA	20
74	3	Laryngoscope, Handle (GR Spec Fiber Optic), Model = Sun-Med #5-0236-11 NO SUBS	EA	4
75	3	Laryngoscope, Mac Blade (# 2 GR Spec FO), Model = Sun-Med #5-5332-02EA NO SUBS	EA	2
76	3	Laryngoscope, Mac Blade (# 4 GR Spec FO), Model = Sun-Med #5-5332-04EA NO SUBS	EA	4
77	3	Laryngoscope, Miller Blade (# 0 GR Spec FO), Model = Sun-Med #5-5333-00EA NO SUBS	EA	2
78	3	Laryngoscope, Miller Blade (# 2 GR Spec FO), Model = Sun-Med #5-5333-02EA NO SUBS	EA	4
79	3	Laryngoscope, Miller Blade (# 3 GR Spec FO), Model = Sun-Med #5-5333-03EA NO SUBS	EA	4
80	3	Lubricant, Surgical (Individual Packets)	EA	250
81	3	Mask, Bag Valve (Ambu Bag) (Adult) (LATEX FREE), Ambu Model #42024000 NO SUBS	EA	15
82	3	Mask, Bag Valve (Ambu Bag) (Neonatal) (LATEX FREE), Ambu Model #430213000 NO SUBS	EA	4
83	3	Mask, Bag Valve (Ambu Bag) (Pediatric) (LATEX FREE), Model = Ambu Model #440212000. NO SUBS	EA	10
84	3	Mask, Oxygen (Adult), Medium Concentration, with 7 ft Tubing (LATEX FREE) Model = Amsino #AS74010 NO SUBS	EA	50
85	3	Mask, Oxygen (Non-Rebreather, Adult) with patient safety vent, 7 ft tubing and resevoir bag (LATEX FREE) Model = Amsino #AS75010 NO SUBS	EA	50
86	3	Mask, Oxygen (Non-Rebreather, Pediatric) with patient safety vent, 7 ft tubing and resevoir bag (LATEX FREE), Model = Amsino #AS75020 NO SUBS	EA	20
87	3	Mask, Oxygen (Pediatric), Medium Concentration, with 7 ft Tubing (LATEX FREE), Model = Amsino #AS74030 NO SUBS	EA	20
88	3	Mask, Pocket (Adult), Model = Ambu Res-Cue Mask NO SUBS	EA	10
89	3	Nebulizer Air Pump, Model = Hsiner #ME8308 NO SUBS	EA	10
90	3	Nebulizer Med Adminstration Kits (Includes mask, canister, and 6' of O2 tube), Model = Hsiner #ME7402 NO SUBS	EA	200

		Airway Intervention and Management		
91	3	Oxygen Nasal Cannula (LATEX FREE) Adult, Model = Cardinal #1310 NO SUBS	EA	100
92	3	Oxygen Nasal Cannula (LATEX FREE) Pediatric, Model - Amsino #75090 NO SUBS	EA	50
93	3	Oxygen Nebulizer, Inline, Handheld (Includes: breathing device, canister and 6' of O2 tube) (LATEX FREE), Model = Hsiner #ME7401 NO SUBS	EA	50
94	3	Peak Expiratory Flow Rate Meter - Low Range (LATEX FREE), Model = Assess NO SUBS	EA	5
95	3	Peak Expiratory Flow Rate Meter (LATEX FREE), Model = Assess NO SUBS	EA	5
96	3	Stylete, Intubation (Adult), Model = Sun-Med #9-0204-25 NO SUBS	EA	26
97	3	Stylete, Intubation (Ped), Model = Sun-Med #9-0204-14 NO SUBS	EA	12
98	3	Suction Catheter, 14FR (LATEX FREE)	EA	50
99	3	Suction Catheter, 6FR (LATEX FREE)	EA	20
100	3	Suction Catheter, 8FR (LATEX FREE)	EA	20
101	3	Suction Unit, Manual, V-Vac , Double Male Connector, Model = Laerdal #985003 NO SUBS	EA	80
102	3	Suction Unit, Manual, V-Vac, 18 Fr. Catheter (Specific To V-Vac), Model = Laerdal #98532 NO SUBS	EA	80
103	3	Suction Unit, Manual, V-Vac, Adapter Kit, Model = Laerdal #98526 NO SUBS	EA	48
104	3	Suction Unit, Manual, V-Vac, Cartridge (Spare), Model = Laerdal #95421 NO SUBS	EA	48
105	3	Suction Unit, Manual, V-Vac, w/Cartridge (Starter Kit), Model = Laerdal #98362 NO SUBS	EA	24
106	3	Suction Unit, V-Vac manual unit = V-Vac Handle, Model = Laerdal #985030 NO SUBS	EA	12
107	3	Suction Unit, Portable (LATEX FREE) Model = Laerdal #880020 NO SUBS	EA	5
108	3	Suction Unit, Portable, Collection Jar, Canister, 1200 cc (LATEX FREE) Model = Laerdal #883000 NO SUBS	EA	100
109	3	Suction Unit, Portable, Spare Battery, Model = Laerdal #884301 NO SUBS	EA	40
110	3	Suction Unit, Portable, Tubing (Sterile) 9/32 ID x 6', Tubing Non-Cond 7mm (LATEX FREE)	EA	400
114	3	Thoracic Vents Kit for Pneumothorax - Kit to include: Thoracic vent, Trocar, Aspiration cannula, Suction tubing set, 60cc syringe, 3cc syringe, Safety needle (25G x 5/8"), Safety needle (22G x 1 1/2"), Scalpel, 2 Gauze sponges, Fenestrated drape, CSR wra	EA	5
115	3	Thoracic Vents Kit for Pneumothorax - Kit to include: Thoracic vent, Trocar, Aspiration cannula, Suction tubing set, 60cc syringe, 3cc syringe, Safety needle (25G x 5/8"), Safety needle (22G x 1 1/2"), Scalpel, 2 Gauze sponges, Fenestrated drape, CSR wra	EA	15
116	3	Tube, Endotracheal 3.5 w/o Cuff (LATEX FREE), Model = Sun-Med #1-7330-35 NO SUBS	EA	12
117	3	Tube, Endotracheal 4.5 w/o Cuff (LATEX FREE), Model = Sun-Med #1-7330-45 NO SUBS	EA	12
118	3	Tube, Endotracheal 5.0 w/ Cuff (LATEX FREE), Model = Sun-Med #1-7333-50 NO SUBS	EA	10
119	3	Tube, Endotracheal 6.0 w/ Cuff (LATEX FREE), Model = Sun-Med #1-7333-60 NO SUBS	EA	12
120	3	Tube, Endotracheal 7.0 w/ Cuff (LATEX FREE), Model = Sun-Med #1-7333-70 NO SUBS	EA	15
121	3	Tube, Endotracheal 7.5 w/ Cuff (LATEX FREE), Model = Sun-Med #1-7333-75 NO SUBS	EA	15
122	3	Tube, Endotracheal 8.0 w/ Cuff (LATEX FREE), Model = Sun-Med #1-7333-80 NO SUBS	EA	12
123	3	Tube, Nasal Gastric (NGT), 10FR (LATEX FREE)	EA	20
124	3	Tube, Nasal Gastric (NGT), 18FR (LATEX FREE)	EA	40
125	3	Tube, Nasal Gastric (NGT), 6FR (LATEX FREE)	EA	20

		Immobilization		
127	4	Cervical Collar, Adjustable, Oversized trachea opening and open rear ventilation panel, One Size Fits All, Model = Philadelphia EMT's Choice NO SUBS	EA	10
128	4	Crutches w/Tips/Pads Installed, Adult	EA	10
129	4	Crutches w/Tips/Pads, Installed, Youth	EA	10
130	4	Fiberglass splint material 3" x 4 yds, BSN-MED #6823A NO SUBS	Roll	3
131	4	Fiberglass splint material 4" x 4 yds, BSN-MED #3874 NO SUBS	Roll	3
132	4	Splint, AlumaFoam, 3/4" x 18" Model = Conco #61340000 NO SUBS	EA	20
133	4	Splint Kit-Adult/Pediatric, Prosplints Combo Kit (13 pieces + carrying case) Model = Med Spec #113918 NO SUBS	EA	1
134	4	Splint, HARE Traction, Adult NO SUBS	EA	2
135	4	Splint, HARE Traction, Pediatric NO SUBS	EA	1
		Patient Bedding, Cots, Misc.		
137	5	Adult Diapers Med (12 per pack)	Pack of 12	20
138	5	Adult Diapers Small (12 per pack)	Pack of 12	20
139	5	Basin, Wash, Plastic, Model = Medline #80321 NO SUBS	EA	100
140	5	Bed Pan, Model = Medline #80245 NO SUBS	EA	200
141	5	Blankets, Polyester/Non-woven (Minimum size = 50" x 84") Model = Graham Medical #5238 NO SUBS	EA	150
142	5	Patient cots	EA	55
143	5	Patient cots, 4 wheels, collapsible, adjustable back, min. of 2 patient restraint straps	EA	10
144	5	Pillows, disposable (size = 18"x24", 15 oz)	EA	120
145	5	Sheet, Bed , White, Disposable, Poly/Tissue (size = 40" x 90"), Model = Graham Medical #323 NO SUBS	EA	300
146	5	Short Arm Board (size = 2" x 6")	EA	50
147	5	Urinal, Male, Disposable	EA	80
148	5	Wash Cloth	EA	500

		Healthcare Provider Personal Protective Equipment (PPE)		
150	6	Brush, Scrub, Surgical, w/PCMX	EA	45
151	6	Gloves, Examination, Nitrile, Powder Free, Lrg (LATEX FREE)	Box 100	20
152	6	Gloves, Examination, Nitrile, Powder Free, Med (LATEX FREE)	Box 100	20
153	6	Gloves, Examination, Nitrile, Powder Free, Small (LATEX FREE)	Box 100	20
154	6	Gloves, Examination, Nitrile, Powder Free, X-Lrg (LATEX FREE)	Box 100	20
155	6	Gloves, Surgeons, Sterile, Size #6.5 (LATEX FREE)	PR	100
156	6	Gloves, Surgeons, Sterile, Size #7.0 (LATEX FREE)	PR	100
157	6	Gloves, Surgeons, Sterile, Size #7.5 (LATEX FREE)	PR	100
158	6	Gloves, Surgeons, Sterile,Size #8 (LATEX FREE)	PR	100
159	6	Goggle, Eye	EA	600
160	6	Gown, Exam, Model = Banta #920431 NO SUBS	EA	600
161	6	Gown, Isolation, Protection, Brand = Dynarex, Model #2141 NO SUBS	EA	300
162	6	Gowns (for staff—splash resistant—case of 12) LATEX FREE, Brand = Dynarex, Model #2141 NO SUBS	EA	10
163	6	Hand Sanitizer, 4 oz bottle w/ flip top, 62% alcohol w/ skin moisterizer, Model = Kutol #5635GP NO SUBS	EA	3600
164	6	Insect Repellant, 20% Deet, SPF-15 (Spray)	EA	12
165	6	Mask, HEPA, N95 Respirators, Flat Fold, Individually wrapped, Donning instructions on each individual N95 package	EA	1000
166	6	Mask, Surgical	EA	1000
167	6	Sharps Container w/Needle Remover, (Size = 8 gallon)	EA	15
168	6	Sharps Shuttle, Small Conical, case of 24, Model = Tyco #8301	case	2
169	6	Shield, Eye, Plastic	EA	10
170	6	Shield, Full Faceguard, Clear Model = Dynarex #2202 NO SUBS	EA	60

		Exam Supplies		
172	7	Monitor, Blood Glucose, Glucometer Kit w/ extra set of batteries, Model = Precision Extra #99837-20 NO SUBS	EA	5
173	7	Monitor, Blood Glucose, Lancets, Disp., Model = Roche "Soft Click" # 971 NO SUBS	EA	300
174	7	Monitor, Blood Glucose, Test Strips, Model = Precision Extra #99838-35 NO SUBS	Bottle	10
175	7	Opthalmoscope/Otoscope, Pocket Set w/Handle & Pouch, w/ needed amount of batteries to operate + 1 extra set of batteries, Model = Reister #20313030 NO SUBS	EA	6
176	7	Pulse Oximeter, handheld, w/ needed amount of batteries to operate + 1 extra set of batteries - Must include 4 extra sensors: 2 x Durasensor (DS100A) Adult Finger Clip Sensor and 2 x Both Dura-Y Multisite sensor (D-YS/D) and Pedicheck Pediatric Spot-Chec	EA	20
177	7	Speculum, Ear, Disp, Model = Specline #7400	EA	500
178	7	Sphygmomanometer, Aneroid Set, Nylon Blue Cuff w/Case (Adult), Model = Dixie Medical #143401 NO SUBS	EA	10
179	7	Sphygmomanometer, Aneroid Set, Nylon Blue Cuff w/Case (Adult, Lrg), Model = Dixie Medical #143425 NO SUBS	EA	10
180	7	Sphygmomanometer, Aneroid Set, Nylon Blue Cuff w/Case (Child), Model = Dixie Medical #143406 NO SUBS	EA	4
181	7	Sphygmomanometer, Aneroid Set, Nylon Blue Cuff w/Case (Infant), Model = Dixie Medical #143407 NO SUBS	EA	2
182	7	Stethoscope, Single Head, Black (LATEX FREE), Model = Dixie Medical #143100 NO SUBS	EA	10
183	7	Thermometer, Disposible (Temp-a-Dot), Brand = 3M NO SUBS	EA	250
184	7	Thermometer, Infrared, w/ needed amount of batteries to operate + 1 extra set of batteries	EA	6
185	7	Tongue Blades	EA	500

		General Supplies		
187	8	AED, Stat padz II HVP Multi-Function Electrodes Individual Pairs (To be included with AED Pro System) Brand = Zoll, Model #8900-0801-01 NO SUBS	PR	2
188	8	Defibrillator, stat padz II HVP Multi-Function Electrodes 12 pair/case, Brand = Zoll, Model #8900-0802-01 NO SUBS	CASE	1
189	8	Defibrillator, pedi padz II Multi-Function Electrodes 6 pair/case, Brand = Zoll, Model #8900-0810-01 NO SUBS	CASE	1
190	8	AED, AED Pro Non-Rechargeable lithium battery pack, Brand = Zoll, Model #8000-0860-01 NO SUBS	EA	2
191	8	AED, AED Pro ECG Cable AAMI, Brand = Zoll, Model #8000-0838 NO SUBS	EA	2
192	8	Defibrillator, Box of 200 packs of 3-lead EKG disposable monitoring electrodes, Brand = Zoll NO SUBS - 8900-0003	Box	1
193	8	Backboard, 16"W x 70"L, Weight Capacity = 500lbs, X-ray translucent (Orange Color), Model = Dixie Medical #540055 NO SUBS	EA	2
194	8	Basin, Emesis, Model = Medline #5685521 NO SUBS	EA	200
195	8	Body Bags, Black (Black 17 ml, 6-Handle, Envelope Zipper)	EA	25
196	8	Broselow Pediatric Tape, Model = Broselow/Hinkle #AE-4800 NO SUBS	EA	6
197	8	Catheter, Foley, Tray, 16Fr, Closed System, Sterile (LATEX FREE) Tray must include: 1,000 cc Outer Basin Tray, 1 ea Prefilled 10 cc Syringe of Sterile Water, 1 Pair of Stretchy Vinyl Gloves, 1 ea Waterproof Drape, 1 ea Pkg Lubricating Jelly, 1 ea Fenestra	EA	50
198	8	Catheter, Foley, Tray, 20Fr, Closed System, Sterile (LATEX FREE) Tray must include: 1,000 cc Outer Basin Tray, 1 ea Prefilled 10 cc Syringe of Sterile Water, 1 Pair of Stretchy Vinyl Gloves, 1 ea Waterproof Drape, 1 ea Pkg Lubricating Jelly, 1 ea Fenestra	EA	20
199	8	Diaper, Huggies, Ultra-trim, 6 -14 lb.	EA	240
200	8	Dry Erase Boards, 4 feet x 4 feet	EA	4
201	8	Dry Erase Markers (4 different colors)	sets of 4	10
202	8	Felt Pens (e.g., Sharpie Permanent Marker – Medium)	EA	50
203	8	Flashlight w/ needed amount of batteries to operate + 1 extra set of batteries	EA	20
204	8	IV Poles -4 hook, 5 ballbearing swivel casters, telescopic, stainless steel	EA	25
205	8	Obstetrical Kit, Emergency - Each kit to include: (1) Pair Sterile Non-Latex Gloves, (1) Sterile Scalpel, (1) Sterile OB Pad, (4) Sterile Gauze 4x4", (1) Sterile Bulb Syringe, (2) Sterile Umbilical Clamps, (1) Plastic Underpad, (1) Receiving Blanket, (3)	EA	4
206	8	Patient Charting Erasable Clip Boards	EA	50
207	8	Razor, Disposable	EA	20

General Supplies				
211	8	Duct Tape, 2" x 60yd	Roll	40
212	8	Cable Ties, Bags of 100, Variety of sizes from 7" to 25"	Bag	20
213	8	Drill, Cordless, 18 volt, w/ backup batt, Must include drill bits (#1 & #2)	EA	2
214	8	Drill, Corded, 110 Capatable	EA	1
215	8	Extension Cord, 14 AMP, 50'	EA	3
216	8	Power Surge Strip, 6 outlets per strip	EA	3
217	8	Screws, 2", 5 LB Boxes	Box	2
218	8	Screws, 1", 5 LB Boxes	Box	1
219	8	Screws, 3", 5 LB Boxes	Box	1
220	8	Hammer, 16oz	EA	2
221	8	Hammer, 20oz	EA	2
222	8	Nails, 2", 5 lb boxes	Box	2
223	8	Nails, 1", 5 lb boxes	Box	1
224	8	Nails, 3", 5 lb boxes	Box	1
225	8	Plastic Construction Sheeting, 10' x 100' Roll, Minimum of 6 mil thickness	Roll	4
226	8	Tarp, 10' X 20'	EA	15
227	8	Tarp, 20' X 40'	EA	5
228	8	Container for Sterilizing Instruments, 1200cc	EA	5
229	8	Cavicide for Instrument Sterilization, 20 gal bottle	Bottle	1

		Defibrillators and Associated Supplies		
231	9	Defibrillator, 5 Year Warranty, Brand = Zoll, Model #8778-0107 NO SUBS	EA	2
232	9	Defibrillator, 5 year Maintenance Program, including Battery Exchange every 18 mo, Brand = Zoll NO SUBS	EA	2
233	9	Defibrillator, Carry Case for IVP and paddle storage, XL with rear and side pockets, Brand = Zoll, Model #8000-0657 NO SUBS	EA	2
234	9	Defibrillator, Zoll Base PowerCharger 4x4, Brand = Zoll, Model #8050-0012-01 NO SUBS	EA	1
235	9	Defibrillator, Cuff, All Purpose, Pediatric/Small Adult, 17-25 cm, Brand = Zoll, Model #8000-1650 NO SUBS	EA	2
236	9	Defibrillator, Cuff, All Purpose, Large Adult 34-48cm, Brand = Zoll, Model #8000-1654 NO SUBS	EA	2
237	9	Defibrillator, Cuff, All Purpose, Adult 25-34cm, Brand = Zoll, Model #8000-1652 NO SUBS	EA	2
238	9	Defibrillator, Cuff, All Purpose, Adult 25-42cm, Brand = Zoll, Model #8000-1653 NO SUBS	EA	2
239	9	Defibrillator, stat padz II HVP Multi-Function Electrodes 12 pair/case, Brand = Zoll, Model #8900-0802-01 NO SUBS	CASE	2
240	9	Defibrillator, pedi padz II Multi-Function Electrodes 6 pair/case, Brand = Zoll, Model #8900-0810-01 NO SUBS	CASE	2
241	9	Defibrillator, LNCS Adult Reusable Pulseox Probe, 1 each, Brand = Zoll, Model #8000-0294 NO SUBS	EA	2
242	9	Defibrillator, LNCS Pediatric Reusable Sensor, 1 each, Brand = Zoll, Model #8000-0295 NO SUBS	EA	2
243	9	Defibrillator, M series/E Series External Paddle Assembly Apex/Sternum with controls and built in pediatric electrodes, Brand = Zoll, Model #8000-1010-01 NO SUBS	EA	2
244	9	Defibrillator, ETCO2 Capnography (Mainstream), Brand = Zoll, Model #8000-0264-01 NO SUBS	EA	2
245	9	Defibrillator, Capnography (Mainstream) Adult/Pediatric Airway Adaptor, Box of 10, Brand = Zoll, Model #8000-0260-01 NO SUBS	Box	2
246	9	Defibrillator, Operator Manual/Instructions, Brand = Zoll. NO SUBS	EA	2
247	9	Defibrillator, 3-Lead ECG Monitoring Cable (Spare), Brand = Zoll, Model #8000-0025 NO SUBS	EA	2
248	9	Defibrillator, Box of 200 packs of 3-lead EKG disposable monitoring electrodes, Brand = Zoll, Model #8900-0003 NO SUBS	Box	2
249	9	Defibrillator, BP hose (spare) 1.5 meter, Brand = Zoll, Model #8000-0655 NO SUBS	EA	2
250	9	Defibrillator, Pediatric disposable pulse oximetry probes, 20/case Brand = Zoll Model #8000-0321 NO SUBS	case	4
251	9	Defibrillator, Reuseable pulse oximetry cable - 4 ft (spare) Brand = Zoll, Model #8000-0298 NO SUBS	EA	2
252	9	Defibrillator, rechargeable Battery, Lead Acid Brand = Zoll, Model #8000-0299-01 NO SUBS	EA	4
253	9	maintained by the Supplier and arranged for delivery at the State of California's request	EA	4
254	9	Defibrillator, Recorder Paper 80mm Fan Fold, Brand = Zoll, Model #8000-0302 NO SUBS	Pack	20

NO SUBS = No Substitutions
PVP = providone iodine
CHG = chlorhexidine gluconate
PCMX = parachlorometaxylenol

Tool 9 – Inventory Based PPE

Development of Standards and Guidelines for Healthcare Surge During Emergencies Personal Protective Equipment that May Be Required During a Surge				
Suggested Components for Chemical Protective Ensemble	**Current Supply**	**Total Potential Requiring Treatment**	**Quantity Needed**	**Alternate Source**
Protective clothing (suit, coveralls, hoods, gloves, boots)				
Respiratory equipment (SCBA, combination SCBA/ Supplied - Air Respirator (SAR), Powered Air Purifying Respirator (PAPR) Air Purifying Respirator (APR)				
Cooling system (ice vest, air circulation, water circulation)				
Communications device				
Head protection				
Eye protection				
Ear protection				
Inner garment				
Out protection (overgloves, overboots, flashcover)				
Suggested Ensemble Components – Level A	**Current Supply**	**Total Potential Requiring Treatment**	**Quantity Needed**	**Alternate Source**
A fully encapsulated, liquid and vapor protective ensemble selected when the highest level of skin, reparatory and eye protection is required				
Positive pressure, full face-piece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH). Closed-circuit Rebreather/ open circuit SCBA				
Totally-encapsulating chemical-protective suit				
Gloves, outer, chemical-resistant				
Gloves, inner, chemical-resistant.				
Boots, chemical-resistant, steel toe and shank, outer booties				
Disposable protective suit, gloves and boots (depending on suit construction, may be worn over totally-encapsulating suit)				
Coveralls.				
Long underwear Hard hat (under suit), personal cooling system, chemical resistant tape.				

Supplies, Pharmaceuticals, and Equipment

Suggested Ensemble Components – Level B	Current Supply	Total Potential Requiring Treatment	Quantity Needed	Alternate Source
A liquid-splash-resistant ensemble used with the highest level of reparatory protection				
Positive pressure, full-face piece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved)				
Hooded chemical-resistant clothing (overalls and long-sleeved jacket; coveralls; one or two-piece chemical-splash suit; disposable chemical-resistant overalls)				
Gloves, outer, chemical-resistant				
Gloves, inner, chemical-resistant				
Boots, outer, chemical-resistant steel toe and shank				
Boot-covers, outer, chemical-resistant				
Hard hat, personal cooling system, chemical resistant tape				
Coveralls				
Face shield				
Suggested Ensemble Components – Level C	**Current Supply**	**Total Potential Requiring Treatment**	**Quantity Needed**	**Alternate Source**
A liquid-splash-resistant ensemble, with the same level of skin protection as Level B, used when the concentration(s) and type(s) of airborne substances(s) are known and the criteria for using air-purifying respirators are met				
Pappers or half-mask, air purifying respirators (NIOSH approved)				
Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls)				
Gloves, outer, chemical-resistant				
Gloves, inner, chemical-resistant				
Boots (outer), chemical-resistant steel toe and shank				
Boot-covers, outer, chemical-resistant				
Coveralls* Hard hat, face shield, personal cooling system				
Escape mask				
Face shield				

Supplies, Pharmaceuticals, and Equipment

Suggested Ensemble Components – Level D	Current Supply	Total Potential Requiring Treatment	Quantity Needed	Alternate Source
A work uniform affording minimal protection: used for nuisance contamination only				
Coverallss				
Boots/shoes, chemical-resistant steel toe and shank				
Boots, outer, chemical-resistant (disposable)				
Gloves				
Safety glasses or chemical splash goggles				
Hard hat				
Escape mask				
Face shield				

The following checklist identifies some of the issues organizations should consider when developing caches of *Supplies*, *Pharmaceuticals*, and *Equipment* for use in a surge.

Pharmaceuticals

Inventory Management

☐ A process for monitoring the expirations dates.

☐ A process for rotating stock from the cache into the general inventory to minimize outdates, if applicable.

☐ A process for returning stock to the vendors for replacement or credit, if applicable.

☐ Medications from large dispensing sites may come in unit dose (a single packaged pill) or in bulk bottles (a bottle containing 100 pills) that will require local repackaging.

- Repacked pharmaceuticals require proper labeling.
- These labels are important for lot number and patient tracking in the event of contamination, adverse reactions, or medication error.

Environmental

☐ A process for monitoring the environment to meet United States Pharmacopeia (USP) standards, e.g., temperature, humidity, pests,

☐ Most medications require adequate room temperature, as specified in the Strategic National Stockpile guidelines, to range between 68° and 77° F.

☐ Local planning should ensure that manufacturer's storage guidelines are met.

Security

Existing Healthcare Facility *(assuming a heightened state of security)*

☐ A process for ensuring the security of the caches.

☐ A process for controlling access into the building or area.

☐ A process for controlling access within the building.

☐ A process for Identifying and tracking of patients, staff, and visitors.

☐ Monitoring of facilities with security cameras.

☐ Security locks on pharmaceuticals in place.

☐ A process for working with local authorities prior to surge to address heightened security needs.

☐ A process for working with private security entities prior to surge to address heightened security needs.

Alternate Care Sites *(ACSs)*

☐ A process for ensuring the security of the pharmaceuticals provided to the ACS (e.g. locks, security personnel).

☐ A process for controlling access into the area.

☐ A process for controlling access within the area.

☐ A process for Identifying and tracking of patients, staff, and visitors.

☐ A process for working with local authorities prior to surge to address heightened security needs.

☐ A process for working with private security entities prior to surge to address heightened security needs.

Caches *(external to an existing facility or ACS)*

☐ A process for ensuring the security of the caches.

☐ A process for controlling access into the area.

☐ A process for controlling access within the area.

☐ A process for working with local authorities prior to surge to address heightened security needs.

☐ A process for working with private security entities prior to surge to address heightened security needs.

Licensing

☐ Depending on the location of the cache, consider any licensing needs, e.g., Board of Pharmacy.

☐ Consider the location of the cache and if it is licensed to receive a delivery of pharmaceuticals.

Ease of Access

☐ A process for staging the layout of pharmaceuticals to ensure ease of access, e.g., what is needed in the first 24 hours? (see Staging section for an example)

*See Appendix for the CA Board of Pharmacy Waiver

Supplies and Equipment

Inventory Management

☐ A process for monitoring and maintaining preventive maintenance requirements:

- ☐ Batteries
- ☐ Ventilator seals
- ☐ Electrical equipment

☐ A process for returning stock to the vendors for replacement or credit, if applicable.

☐ A process for monitoring the obsolescence of equipment, e.g., AEDs.

☐ Considerations for storing large amounts of supplies and equipment .

- ☐ Is storage space limited on-site?
- ☐ Can supplies and equipment be stored at other sites (e.g. warehouses, other facilities in health system).

Environmental

☐ A process for monitoring Personal Protective Equipment (PPE) e.g. Temperature.

Security

Existing Healthcare Facility *(assuming a heightened state of security)*

☐ A process for ensuring the security of the supply and equipment caches.

☐ A process for controlling access into the building or area.

☐ A process for controlling access within the building.

☐ A process for Identifying and tracking of patients, staff, and visitors.

☐ Monitoring of facilities with security cameras.

☐ A process for working with local authorities prior to surge to address heightened security needs.

☐ A process for working with private security entities prior to surge to address heightened security needs.

Alternate Care Sites *(ACSs)*

☐ A process for ensuring the security of the supplies and equipment provided to the

ACS (e.g. locks, security personnel).

☐ A process for controlling access into the area.

☐ A process for controlling access within the area.

☐ A process for Identifying and tracking of patients, staff, and visitors.

☐ A process for working with local authorities prior to surge to address heightened security needs.

☐ A process for working with private security entities prior to surge to address heightened security needs.

Caches *(external to an existing facility or ACS)*

☐ A process for ensuring the security of the supply and equipment caches.

☐ A process for controlling access into the area.

☐ A process for controlling access within the area.

☐ A process for working with local authorities prior to surge to address heightened security needs.

☐ A process for working with private security entities prior to surge to address heightened security needs.

Transport

☐ A process for obtaining the caches and transporting to the desired locations.

☐ A process for loading supplies and equipment in an efficient manner (e.g. loading docks).

Ease of Access

☐ A process for staging the layout of supplies and equipment to ensure ease of access, e.g., what is needed in the first 24 hours? (see Staging section for an example)

Staging Recommendations – Check List

Consider the Following:

☐ A process for determining what items will be needed first → Concept of last in, first out.

☐ Do not place one type of material all in one place (e.g. cots all in one area).

☐ How the materials will be moved (e.g. deployable cart).

☐ How items are set up once they are taken out of storage (e.g. tents, tables, carts, and provisions for temperature control, such as ice, ice chests, etc.).

☐ Space is often a limiting factor.

- ☐ Consider alternate sites to stage supplies, pharmaceuticals, and equipment (e.g. off-site warehouses).

☐ Pushcarts can be utilized for moving materials efficiently.

- ☐ Pushcarts need to be labeled with all materials and expiration dates.

☐ Accountability for property

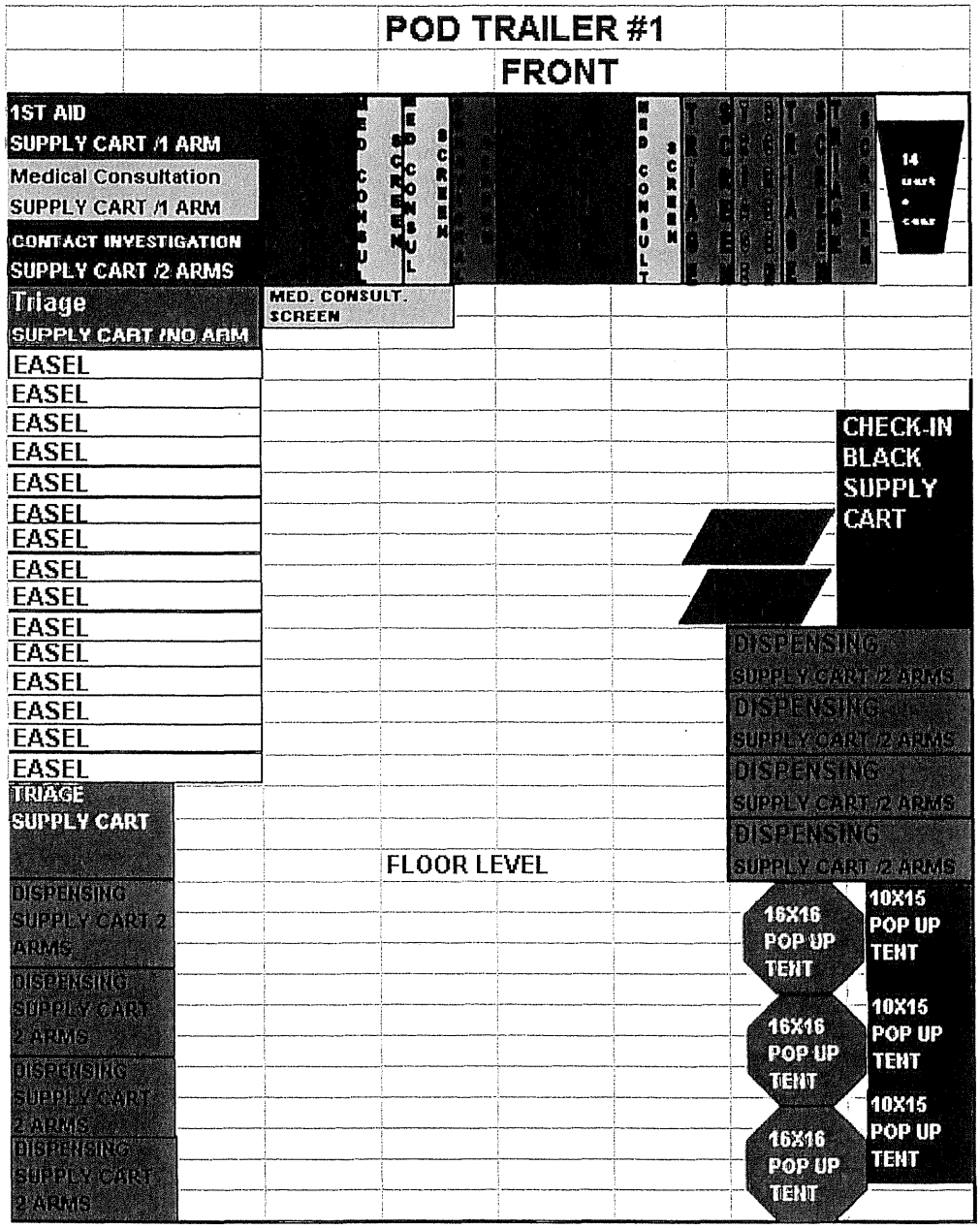
☐ Ownership of staging areas (state vs. local) and who is responsible for identifying Points of Distribution (PODS).

☐ Pharmaceutical caches should be stored in secure containers that can be easily transported (e.g. plastic totes with tear away locks).

☐ Non-expired medical supplies should be kept separate from medical supplies that have expiration dates.

☐ Covering supplies, pharmaceuticals, and equipment for protection from the elements for purposes of reducing spoilage and the need to repackage materials.

Staging Sample # 1: Bottom Level


POD TRAILER #1
FRONT
1ST AID
SUPPLY CART /1 ARM
Medical Consultation
SUPPLY CART /1 ARM
CONTACT INVESTIGATION
SUPPLY CART /2 ARMS
Triage
SUPPLY CART /NO ARM
MED. CONSULT. SCREEN
EASEL
EASEL
EASEL
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EASEL
EASEL
EASEL
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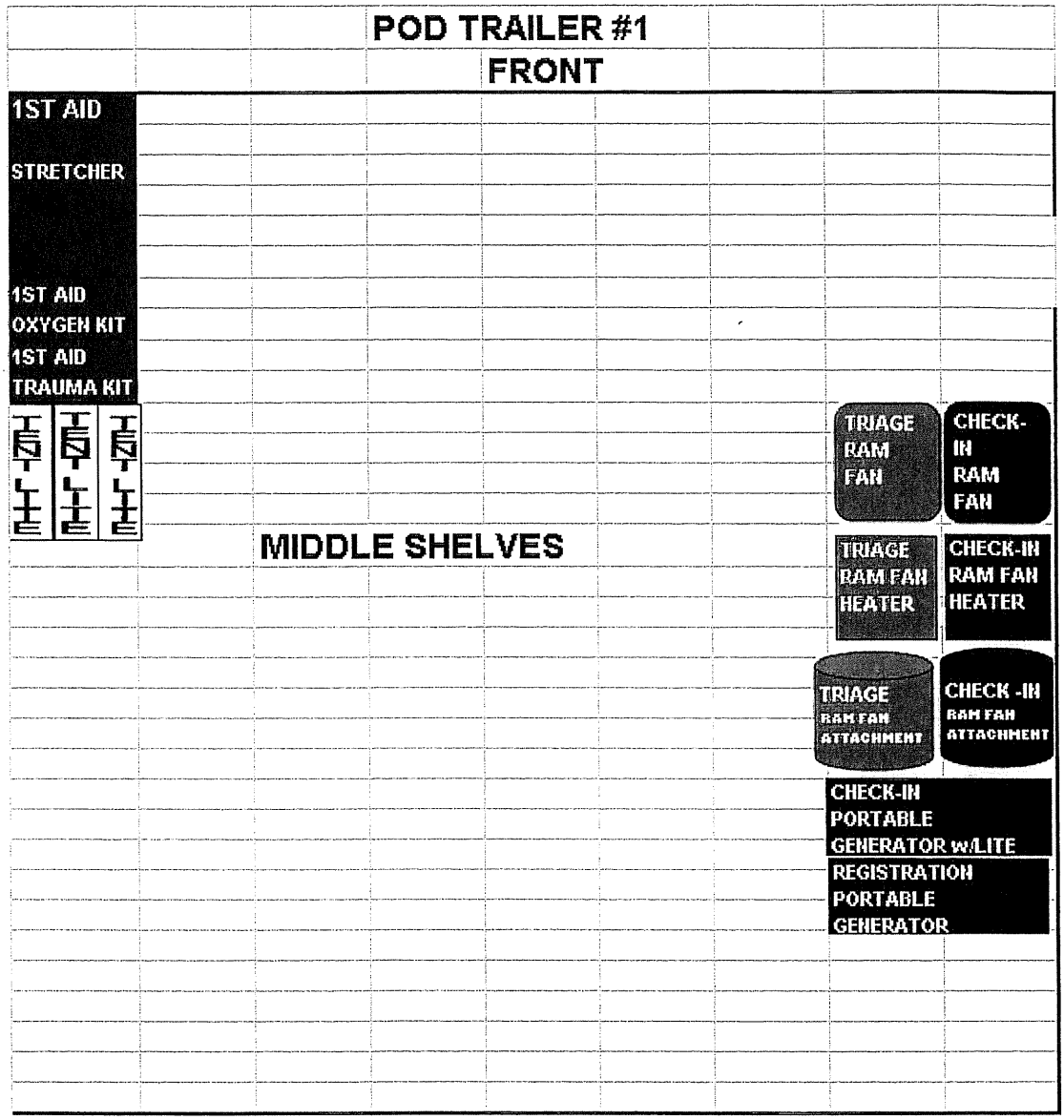
EASEL
EASEL
EASEL
EASEL
EASEL
CHECK-IN
BLACK
SUPPLY
CART
DISPENSING
SUPPLY CART /2 ARMS
DISPENSING
SUPPLY CART /2 ARMS
DISPENSING
SUPPLY CART /2 ARMS
DISPENSING
SUPPLY CART /2 ARMS
TRIAGE
SUPPLY CART
FLOOR LEVEL
DISPENSING
SUPPLY CART 2
ARMS
DISPENSING
SUPPLY CART
2 ARMS
DISPENSING
SUPPLY CART
2 ARMS
DISPENSING
SUPPLY CART
2 ARMS
16X16
POP UP
TENT
10X15
POP UP
TENT
16X16
POP UP
TENT
10X15
POP UP
TENT
16X16
POP UP
TENT
10X15
POP UP
TENT

Staging Sample #1: Middle Level



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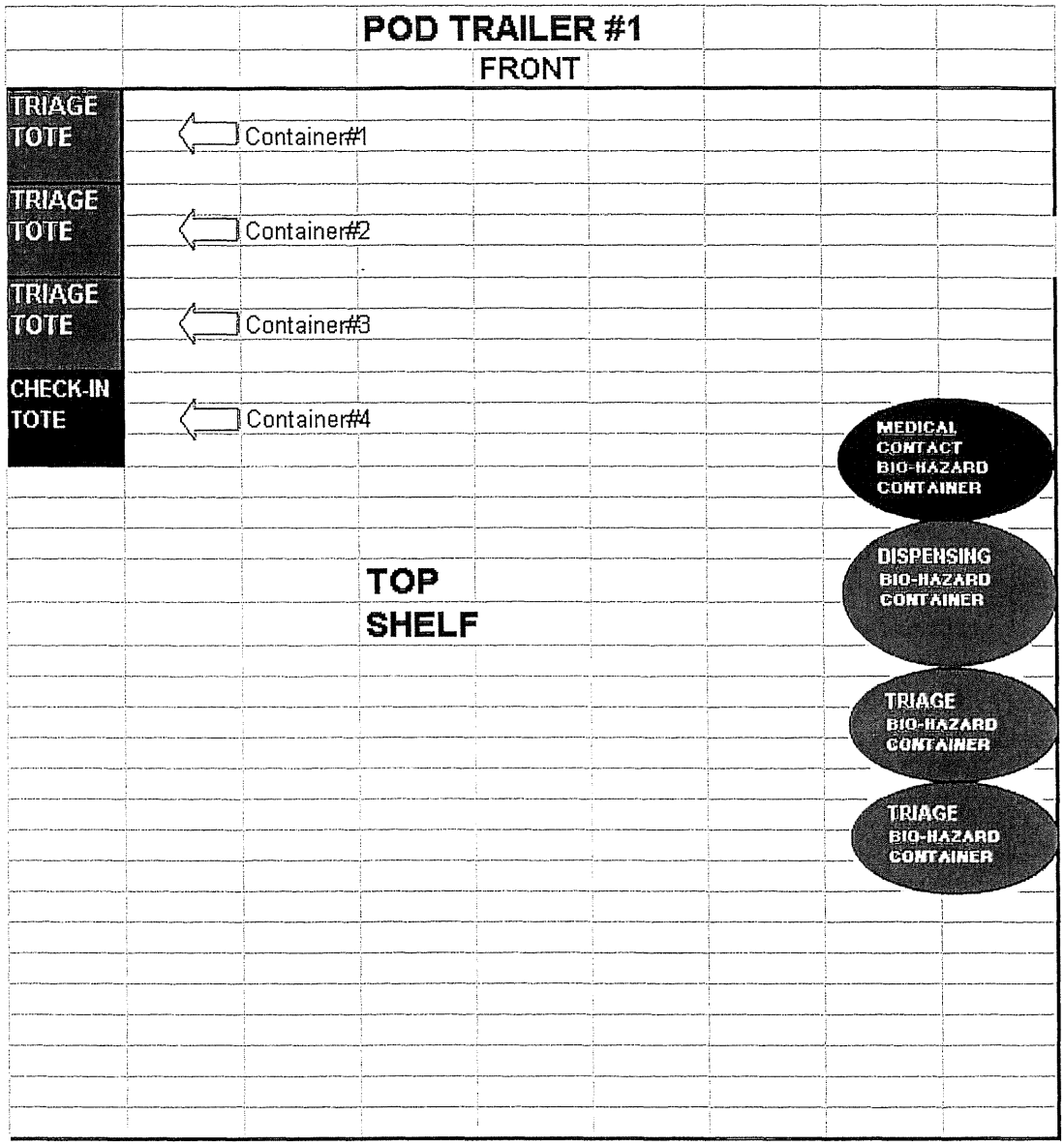

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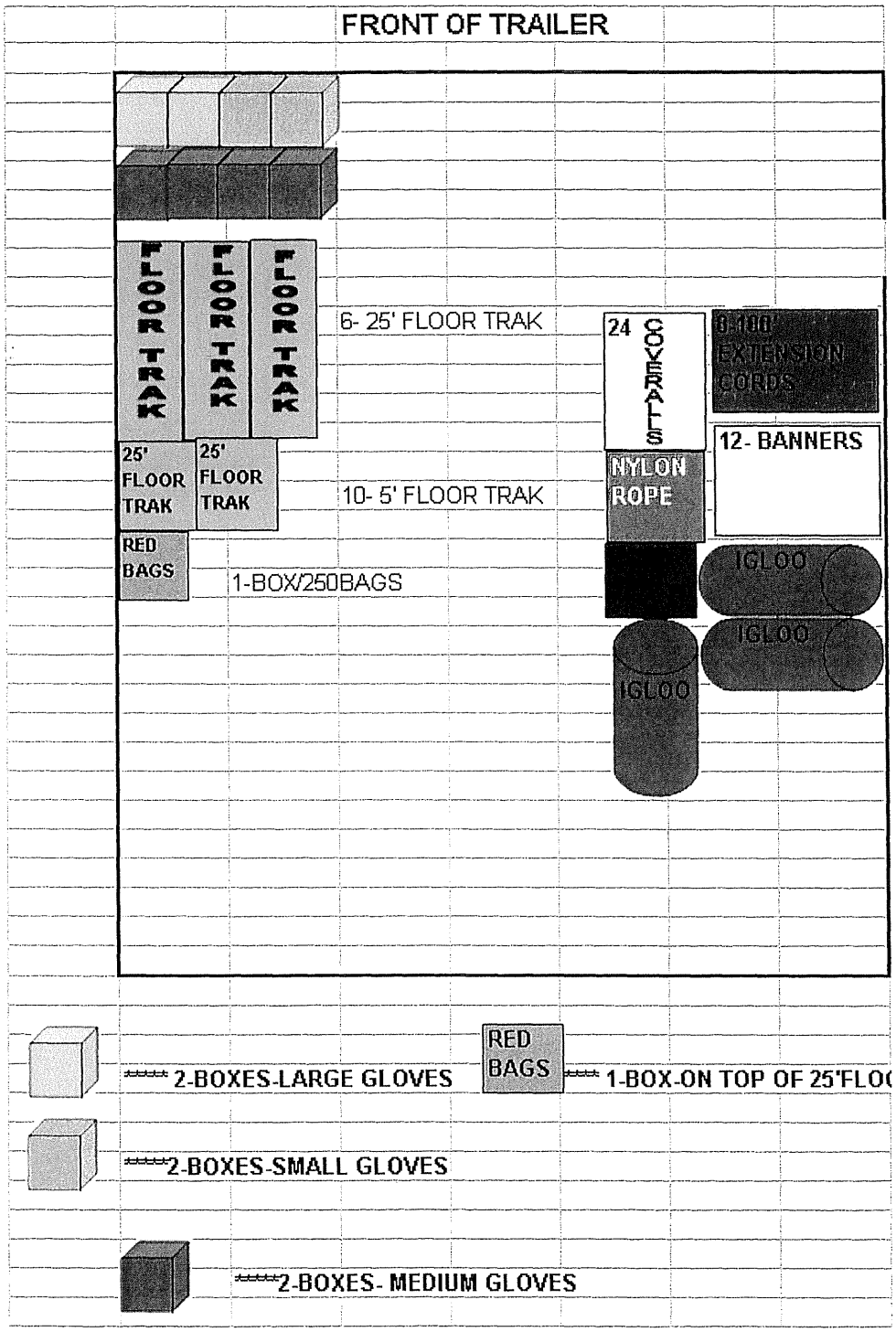

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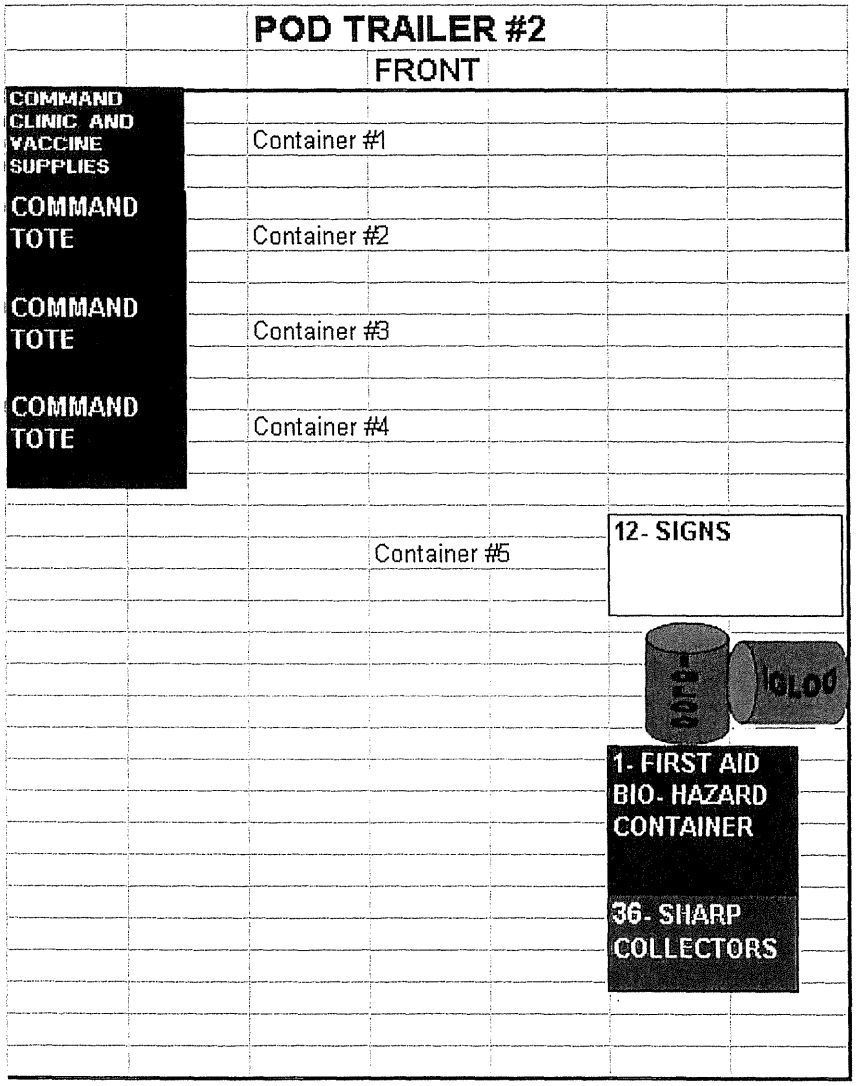

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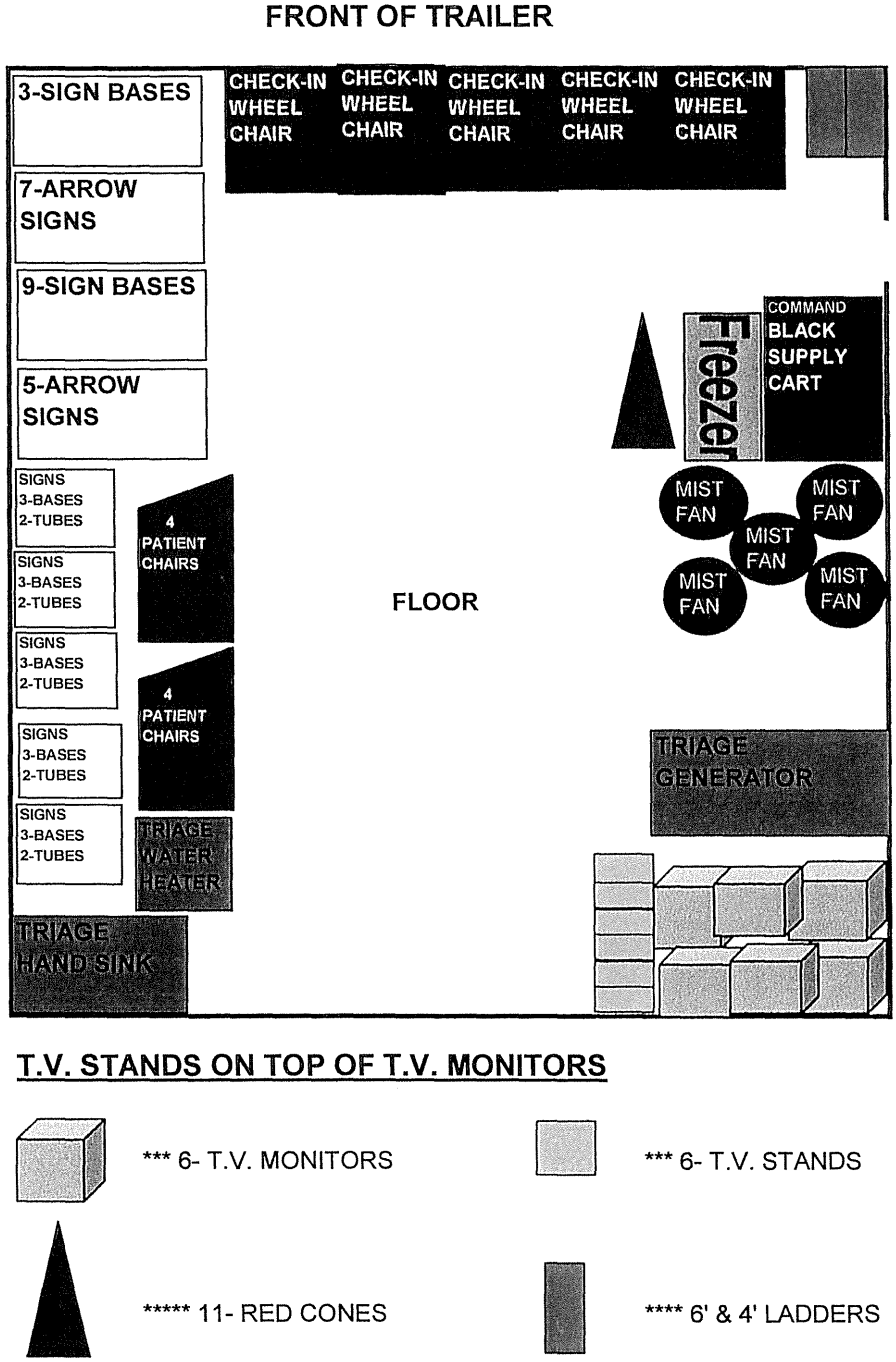

California State Board of Pharmacy Disaster Response Policy Statement

The California State Board of Pharmacy wishes to ensure complete preparation for, and effective

response to, any local, state, or national disaster, state of emergency, or other circumstance requiring expedited health system and/or public response. Skills, training, and capacities of board licensees, including wholesalers, pharmacies, pharmacists, intern pharmacists, and pharmacy technicians, will be an invaluable resource to those affected and responding. The board also wishes to encourage an adequate response to any such circumstance affecting residents of California, by welcoming wholesalers, pharmacies, pharmacists, intern pharmacists, and pharmacy technicians licensed in October 25 and 26, 2006, Board Meeting Minutes - Page 13 of 52 pages good standing in other states to assist with health system and/or public response to residents of California.

The board encourages its licensees to volunteer and become involved in local, state, and national emergency and disaster preparedness efforts. City or county health departments, fire departments, or other first responders can provide information on local opportunities. The Emergency Preparedness Office of the California Department of Health Services is a lead agency overseeing emergency preparedness and response in California, particularly regarding health system response, drug distribution and dispensing, and/or immunization and prophylaxis in the event of an emergency. At the federal level, lead contact agencies include the Department of Health and Human Services, the Centers for Disease Control, and/or the Department of Homeland Security and its Federal Emergency Management Agency (FEMA). Potential volunteers are encouraged to register and get information at www.medicalvolunteer.ca.gov (California) and www.medicalreservecorps.gov (federal).

The board also continues to be actively involved in such planning efforts, at every level. The board further encourages its licensees to assist in any way they can in any emergency circumstance or disaster. Under such conditions, the priority must be protection of public health and provision of essential patient care by the most expeditious and efficient means. Where declared emergency conditions exist, the board recognizes that it may be difficult or impossible for licensees in affected areas to fully comply with regulatory requirements governing pharmacy practice or the distribution or dispensing of lifesaving medications.

In the event of a declared disaster or emergency, the board expects to utilize its authority under the California Business and Professions Code, including section 4062, subdivision (b) thereof, to encourage and permit emergency provision of care to affected patients and areas, including by waiver of requirements that it may be implausible to meet under these circumstances, such as prescription requirements, record-keeping requirements, labeling requirements, employee ratio requirements, consultation requirements, or other standard pharmacy practices and duties that may interfere with the most efficient response to those affected.1 The board encourages its licensees to assist, and follow directions from, local, state, and national health officials. The board expects licensees to apply their judgment and training to providing 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. The board further expects that during such emergency, the highest standard of care possible will be provided, and that once the emergency has dissipated, its licensees will return to practices conforming to state and federal requirements.

Furthermore, during a declared disaster or emergency affecting residents of California, the board hopes that persons outside of California will assist the residents of California. To facilitate such Expanded powers in the event of a disaster are also granted to the Governor and/or other chief executives or governing bodies within California by the California Emergency Services Act [Cal. Gov. Code, §§ 8550-8668] and the California Disaster Assistance Act [Cal. Gov. Code, §§ 8680-8690.7], among others. Section 8571 of the Government Code, for instance, permits the Governor to suspend any regulatory statute during a state of war or emergency where strict compliance therewith would prevent, hinder, or delay mitigation assistance, in the event of a declared California disaster or emergency, the board expects to use its powers under the California Business and Professions Code, including section 900 and section 4062, subdivision (b) thereof, to allow any pharmacists, intern pharmacists, or pharmacy technicians, who are not licensed in California but who are licensed in good standing in another state, including those presently serving military or civilian duty, to provide emergency pharmacy services in California. The board also expects to allow nonresident pharmacies or wholesalers that are not licensed in California but that are licensed in good standing in another state to ship medications to pharmacies, health professionals or other wholesalers in California.

Finally, the board also expects to allow use of temporary facilities to facilitate drug distribution during a declared disaster or state of emergency. The board expects that its licensees will similarly respond outside of the state to disasters or emergencies affecting populations outside California, and will pursue whatever steps may be necessary to encourage that sort of licensee response.

[1]Expanded powers in the event of a disaster are also granted to the Governor and/or other chief executives or governing bodies within California by the California Emergency Services Act [Cal. Gov. Code, §§ 8550-8668] and the California Disaster Assistance Act [Cal. Gov. Code, §§ 8680-8690.7], among others. Section 8571 of the Government Code, for instance, permits the Governor to suspend any regulatory statute during a state of war or emergency where strict compliance therewith would prevent, hinder, or delay mitigation.
[2]See also the Interstate Civil Defense and Disaster Compact [Cal. Gov. Code, §§ 177-178], the Emergency Management Assistance Compact [Cal. Gov. Code, §§ 179-179.5], and the California Disaster and Civil Defense Master Mutual Aid Agreement [executed 1950], regarding cooperation among the states.

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Endnotes

[i] Samuel J. Stratton and Robin D. Tyler, "Characteristics of Medical Surge Capacity Demand for Sudden – impact Disasters," The Society for Academic Emergency Medicine, doi: 10.1197/j.aem.2006.05.008.
[ii] Samuel J. Stratton and Robin D. Tyler, "Characteristics of Medical Surge Capacity Demand for Sudden – impact Disasters," The Society for Academic Emergency Medicine, doi: 10.1197/j.aem.2006.05.008.
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[iv] Health Resources and Services Administration. National Bioterrorism Hospital Preparedness Program: Fiscal Year 2004 Continuation Guidance. Available at http://www.hrsa.gov/bioterrorism/hrsa04biot.htm#beds. Accessed April 11, 2006.
[v] Health Resources and Services Administration. National Bioterrorism Hospital Preparedness Program: Fiscal Year 2004 Continuation Guidance. Available at http://www.hrsa.gov/bioterrorism/hrsa04biot.htm#beds. Accessed April 11, 2006.
[vi] Health Resources and Services Administration. National Bioterrorism Hospital Preparedness Program: Fiscal Year 2004 Continuation Guidance. Available at http://www.hrsa.gov/bioterrorism/hrsa04biot.htm#beds. Accessed April 11, 2006.

[vii] James Lenthall. Director, Safety/Security & Emergency Management, Saddleback Memorial Medical Centers.
[viii] Gustavo Plasencia and Carlos Cruz. POD Trailer 2007, Health Disaster Management Division, County of Orange Health Care Agency.
[ix] California Emergency Services Act [Cal. Gov. Code §§ 8550-8668] and the California Disaster Assistance Act [Cal. Gov. Code §§ 8680-8690.7].
[x] California Business and Professions Code, Section 4062, subdivision (b).

[xi] California Business and Professions Code, Section 4051.

[xii] California Business and Professions Code, section 900 and section 4062.

[xiii] California Business and Professions Code, Section 4059.5, Section 3, subdivision(a)

[xiv] California Business and Professions Code, Section 4062, subdivision (a).

[xv] Joint Commission.

[xvi] Joint Commission.

[xvii] Joint Commission.

State of California—Health and Human Services Agency

California Department of Health Services

SANDRA SHEWRY
Director

ARNOLD SCHWARZENEGGER
Governor

May 14, 2007

Dear Healing Arts Board Executive Officer:

In December 2006, the California Department of Health Services (CDHS) undertook a major healthcare surge initiative to help California's healthcare system prepare for a major disaster. CDHS entered into a contract with PricewaterhouseCoopers (PwC) to carry out an aggressive six-month project to develop the following deliverables:

- A standards and guidelines manual that addresses the existing statutes and regulations that currently govern the standards of care, and identifies those that may be flexed or waived during a declared emergency;
- Operational tools that will guide healthcare planners in the adoption and implementation of new temporary standards; and
- A training curriculum to support the planning and preparation for optimal surge response.

A number of Boards have participated in this project and we want to extend our sincere gratitude to you for your participation and for making this project a priority.

As part of the deliverables for this project, a key issue to be addressed is that of licensed healthcare professionals' scope of practice and the extent to which it may be expanded, or flexed, in response to a declared emergency. The purpose of this letter is to seek your advice on what services healthcare practitioners licensed by your Board are allowed to provide outside their "normal" scope of practice. For example, we are aware that the Pharmacy Board has outlined a set of guidelines that identifies the flexed scope of practice for pharmacists during a declared emergency (See enclosure: Pharmacy Practice Act – Business & Professions Code 4052.1, 4052.2).

Our specific questions are:

- What flexibility in the usual scope of practice does your Board allow during emergencies?
- Are there requirements for supervisory oversight of the professionals licensed by your Board? (For example, current law limits a physician to supervise no more than two physician assistants at any time.) What changes to supervisory oversight requirements are modified/waived during an emergency?

- Are these policies or procedures documented in written form? If not, we would like to discuss with you how to incorporate them into the Standards and Guidelines Manual that will serve as a reference tool, identifying what may be flexed or modified under emergency situations.

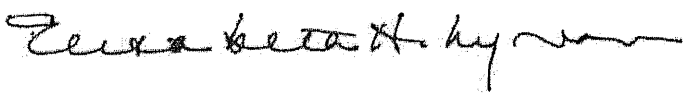
- Has any planning or thinking been done around allowing individuals who are not currently licensed by the respective California Board, but have the ability and expertise to perform some or all of the necessary services licensed by such board, to practice during emergencies? (For example, the Respiratory Care Board might consider allowing paramedics to operate ventilators during a catastrophic event; and what planning advice can you provide on allowing students to practice, what services should they be authorized to provide, and under what level of supervision?)

Please forward any available information to Mia Toribio, the PwC staff lead for this area. Mia can be reached at maria.carmina.c.toribio@us.pwc.com, or (310) 938-9590.

If you have questions on this or would like to talk with one of CDHS' Surge Team, please contact Ted Selby at tselby@dhs.ca.gov or (916) 650-6416.

Thank you in advance for your assistance in this aspect of this important project.

Sincerely,



Elisabeth H. Lyman
Deputy Director
Public Health Emergency Preparedness

Enclosure

Pharmacy Practice Act – Business & Professions Code 4052.1, 4052.2

4052.1.
(a) Notwithstanding any other provision of law, a pharmacist may perform the following procedures or functions in a licensed health care facility in accordance with policies, procedures, or protocols developed by health professionals, including physicians, pharmacists, and registered nurses, with the concurrence of the facility administrator:

(1) Ordering or performing routine drug therapy-related patient assessment procedures including temperature, pulse, and respiration.
(2) Ordering drug therapy-related laboratory tests.
(3) Administering drugs and biologicals by injection pursuant to a prescriber's order.
(4) Initiating or adjusting the drug regimen of a patient pursuant to an order or authorization made by the patient's prescriber and in accordance with the policies, procedures, or protocols of the licensed health care facility.

(b) Prior to performing any procedure authorized by this section, a pharmacist shall have received appropriate training as prescribed in the policies and procedures of the licensed health care facility.

4052.2.
(a) Notwithstanding any other provision of law, a pharmacist may perform the following procedures or functions as part of the care provided by a health care facility, a licensed home health agency, a licensed clinic in which there is a physician oversight, a provider who contracts with a licensed health care service plan with regard to the care or services provided to the enrollees of that health care service plan, or a physician, in accordance with the policies, procedures, or protocols of that facility, home health agency, licensed clinic, health care service plan, or physician, and in accordance with subdivision (c):

(1) Ordering or performing routine drug therapy-related patient assessment procedures including temperature, pulse, and
respiration.
(2) Ordering drug therapy-related laboratory tests.
(3) Administering drugs and biologicals by injection pursuant to a prescriber's order.
(4) Initiating or adjusting the drug regimen of a patient pursuant to a specific written order or authorization made by the individual patient's treating prescriber, and in accordance with the policies, procedures, or protocols of the health care facility, home health agency, licensed clinic, health care service plan, or physician. Adjusting the drug regimen does not include substituting or selecting a different drug, except as authorized by the protocol. The pharmacist shall provide written notification to the patient's treating prescriber, or enter the appropriate information in an electronic patient record system shared by the prescriber, of any drug regimen initiated pursuant to this paragraph within 24 hours.

(b) A patient's treating prescriber may prohibit, by written instruction, any adjustment or change in the patient's drug regimen by the pharmacist.

(c) The policies, procedures, or protocols referred to in this subdivision shall be developed by health care professionals, including physicians, pharmacists, and registered nurses, and shall, at a minimum, do all of the following:

(1) Require that the pharmacist function as part of a multidisciplinary group that includes physicians and direct care registered nurses. The multidisciplinary group shall determine the appropriate participation of the pharmacist and the direct care registered nurse.
(2) Require that the medical records of the patient be available to both the patient's treating prescriber and the pharmacist.
(3) Require that the procedures to be performed by the pharmacist relate to a condition for which the patient has first been seen by a physician.

(4) Except for procedures or functions provided by a health care facility, a licensed clinic in which there is physician oversight, or a provider who contracts with a licensed health care plan with regard to the care or services provided to the enrollees of that health care service plan, require the procedures to be performed in accordance with a written, patient specific protocol approved by the treating or supervising physician. Any change, adjustment, or modification of an approved preexisting treatment or drug therapy shall be provided in writing to the treating or supervising physician within 24 hours.

(d) Prior to performing any procedure authorized by this section, a pharmacist shall have done either of the following:

(1) Successfully completed clinical residency training.
(2) Demonstrated clinical experience in direct patient care delivery.

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. (Business & Professions Code 4062 (b))