



Development of Standards and Guidelines for Healthcare Surge during Emergencies

Supplies, Pharmaceuticals, and Equipment

Supplies, Pharmaceuticals, and Equipment

1 **NOTE:** This document was developed with input from a broad group of stakeholders representing
2 constituent organizations with diverse perspectives and technical expertise. The purpose of
3 eliciting a wide range of input was to ensure the information contained in this document was as
4 comprehensive and as sound as possible.

5
6 Although the individuals referenced and the organizations they represent have provided many
7 constructive comments, information and suggestions, they were neither asked nor did they agree
8 to endorse the conclusions or recommendations represented here or in subsequent iterations.

9

10 **Background**

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

19
20 Surge planning for the healthcare system is a substantial and complex challenge. In a time of significant
21 disaster, a successful plan must provide flexibility to address capacity (volumes of patients) and
22 capabilities (types of illnesses) that emerge above baseline requirements. The issues addressed are
23 diverse and include standards of practice during an emergency, liability of hospitals and licensed
24 healthcare professionals, reimbursement of care provided during an emergency, operating alternate care
25 sites, and planning considerations for surge operations at individual hospitals.

26
27 Upon completion of this project, stakeholders will have access to a *Standards and Guidelines Manual* that
28 will serve as a reference manual on existing statutory and regulatory requirements identifying what will be
29 flexed or modified under different emergencies; *Operational Tools* that include forms, checklists and
30 templates to facilitate and guide the adoption and implementation of statutory and regulatory
31 requirements outlined in the *Standards and Guidelines Manual*; and a *Training Curriculum* outlining
32 intended audience, means of delivery and frequency of training that will enable adherence to the policies
33 and overall readiness of the healthcare delivery system.

34
35 The deliverables will serve as the basis for planning and operations of healthcare facilities, providers and
36 communities during an unexpected increase in demand for healthcare services. The deliverable will
37 focus on eight areas: (1) Declaration and Triggers; (2) Existing Facilities; (3) Alternate Care Sites; (4)
38 Personnel; (5) Supplies, Pharmaceuticals and Equipment; (6) Funding Sources; (7) Administrative; and
39 (8) Population Rights.

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43 Overview

44 The recommendations and tools presented in this document have been developed for existing facilities
45 and alternate care sites (ACS) to consider using during surge. The recommended guidelines and
46 operational tools are expected to assist in the development of surge and disaster response planning.
47

48 Under surge capacity conditions, healthcare facilities may face significant supply chain challenges around
49 the acquisition, storage, staging, and deployment of supplies, pharmaceuticals and equipment.

50 Additionally, healthcare facilities need guidance on how to access the SEMS structure when resources
51 are scarce. Finally, current laws and requirements may also limit the acquisition, storage and deployment
52 of supplies, pharmaceuticals, and equipment during surge. The focus of the SP&E work team is to
53 address these major issues and recommend solutions to facilitate operations from a supply chain
54 perspective during healthcare surge.
55

56 This document is divided into three major sections. The first section identifies the process for the
57 acquisition of supplies, pharmaceuticals, and equipment through conventional and unconventional
58 sources, and provides guidance on types and quantities that may be needed during a surge. The second
59 section addresses storage. It is divided into the areas of inventory management, environmental
60 considerations, security, transport, and ease of access. Section three addresses staging and the
61 distribution. It provides recommendations on storage to enhance the efficiency and effectiveness of
62 response during a surge. This section also addresses the liability, licensing and regulatory implications
63 on distribution of supplies, pharmaceuticals and equipment during surge. The document concludes with
64 two appendices. Appendix A contains a glossary specific to the content of this document. Appendix B
65 contains twelve tools that could be used in pre-surge planning and in response during surge.
66
67

68 1 The Acquisition Process

69 This section provides recommended action steps to be taken by facilities to prepare for and respond to an
70 unexpected increase in demand for supplies, pharmaceuticals and equipment. Guidance is provided on
71 how to sustain the supply chain during a surge and what types and quantities of supplies,
72 pharmaceuticals, and equipment including PPE should a facility plan for.

73

74 There are five tools associated with this section including:

- 75 - Tool 1: Basic Inventory Approach
- 76 - Tool 2: Pharmaceuticals by Classifications
- 77 - Tool 3: Inventory Based – Detailed Supplies and Equipment
- 78 - Tool 4: ACS Specific for Supplies and Equipment
- 79 - Tool 5: Inventory Based – PPE

80 Tools 1 and 2 focus on acquisition of pharmaceuticals, Tools 3 and 4 focus on acquisition of supplies and
81 equipment, and Tool 5 focuses on PPE. A description of all tools, as well as Tool 1, is included in the
82 body of this section. Tools 2 through 5 are located in Appendix B.

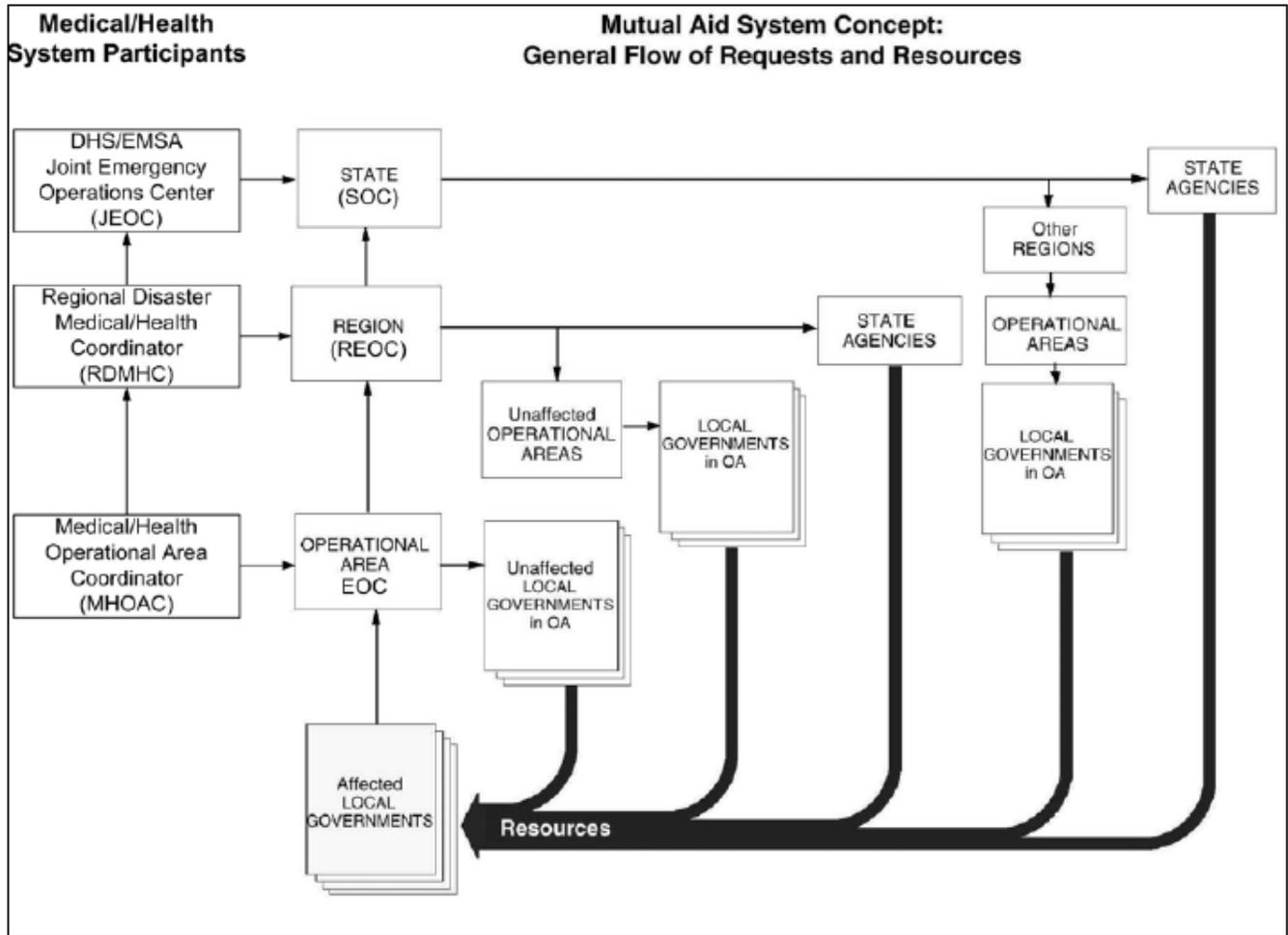
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84 1.1 Understanding how the SEMS Structure Affects SP&E

85 It is important to understand the process of how supplies, pharmaceuticals, and equipment can be
86 accessed through SEMS. According to SEMS, resource requests for response and recovery originate at
87 the level of government where the needs are unmet and are progressively forwarded to the next higher
88 level until these needs are filled. All public health functions should be incorporated into SEMS system
89 through the Mutual Aid System concept. The California Department of Health Service's (CDHS)
90 Emergency Response Plan defines mutual aid as voluntary assistance provided by agencies, local
91 governments, and the State in the form of additional resources, facilities and other support whenever
92 jurisdictions' resources prove to be inadequate to cope with a given situation¹. The following diagram, from
93 the CDHS Emergency Response Plan, illustrates the mutual aid system concept and the general flow of
94 requests and resources.

¹ California Department of Health Services Emergency Response Plan.

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96 The SEMS system is designed for the public sector. Health facilities, whether they are existing facilities
 97 or designated at the time of the disaster as alternate care sites, should include SEMS training as part of
 98 their disaster preparedness training.

99

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

108

109 In surge planning with respect to supplies, pharmaceuticals, and equipment the overall goal is to make
 110 each facility as self sufficient as possible. In the event of a nuclear or radiological occurrence, for

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111 example, existing healthcare facilities may need to be fully self-sufficient and sustain operations for an
112 extended period of time to treat patients and carry on healthcare delivery. “The term ‘sustainability’
113 describes the ability of a local health care system to tolerate an extreme event until significant outside
114 assistance arrives.²” Research supports that after a disaster; outside assistance arrives from a range of
115 24 to 96 hours with peak demand time occurring within 24 hours.³ The Health Resources and Services
116 Administration (HRSA) also supports the need for existing healthcare facilities to be self sufficient for an
117 extended period of time by defining surge capacity requirements for a region as the ability to care for 500
118 cases per one million population with infectious diseases, 50 cases per one million with chemical toxicity,
119 50 cases per one million with burns or trauma (blast), and 50 cases per one million with radiation injury
120 within a 24-hour period.⁴

121
122 The overall goal of surge planning with respect to supplies, pharmaceuticals and equipment is to have
123 enough inventories on hand to maintain existing operations, as well as respond to acute, incremental
124 acute needs until stock is replenished, either through routine supply chain channels or existing caches. In
125 preparation for a surge, specific recommendations based on HRSA guidelines and experience to guide
126 healthcare facilities to order the appropriate types and quantities of equipment to assist in sustaining
127 resources.

128

129 1.2 Recommendations to Maximize Sustainability

130 Below are recommendations on how to make facilities as self-sufficient as possible. Facilities should use
131 these recommendations to guide the types and quantities of supplies, pharmaceuticals, and equipment
132 they have on hand as well as where to acquire these resources (e.g. vendor, mutual aid, MOU,
133 stockpiles).

- 134 1. Existing healthcare facilities should have enough supplies, pharmaceuticals, and equipment at their
135 facility to be self sufficient for 72 hours at a minimum with a goal of 96 hours and operate at 20 to 25
136 % above their average daily census.
 - 137 – Stockpiling activity at an unreasonable increase in cost to the facility is not expected.
 - 138 – Facilities that have the capability of incurring the cost of planning for a 20 – 25% increase in
139 patient volume for 72 to 96 hours are encouraged to do so.
 - 140 – When considering the type of events that may occur, facilities may need to rely on the available

² 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.

³ 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.

⁴ 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.

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- 141 market supply (e.g. MOUs, retailers or wholesalers) and State stockpiles for specific resources.
- 142 - Healthcare facilities should use existing inventory and plan for 20-25% more of similar types of
- 143 patients while taking into account specific characteristics of their region (e.g. proximity to a
- 144 nuclear power plant).
- 145 2. Those unable to incur a 20 – 25% increase via stockpiling are encouraged to increase the number of
- 146 MOUs, mutual aid agreements, and relationships they have within the community (via collaborative
- 147 community planning) and then rely on “just-in-time” (JIT) relief in a surge.
- 148 3. Existing healthcare facilities should complete a Hazard Vulnerability Assessment (HVA) to
- 149 understand what physical hazards can cause a surge situation so preparation can be strategic.
- 150 4. Healthcare facilities should focus on their hazard vulnerability analyses when prioritizing which
- 151 supplies to stockpile.

152 Below is an example of a Natural Disaster type HVA which attempts to identify the risk of the event by

153 quantifying the probability of the event occurring and its potential severity. .

154

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EVENT	PROBABILITY	SEVERITY = (MAGNITUDE - MITIGATION)						AMMC RISK
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	<i>Likelihood this will occur</i>	<i>Possibility of death or injury</i>	<i>Physical losses and damages</i>	<i>Interruption of services</i>	<i>Preplanning</i>	<i>Time, effectiveness, resources</i>	<i>Community/ Mutual Aid staff and supplies</i>	<i>Relative threat*</i>
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%

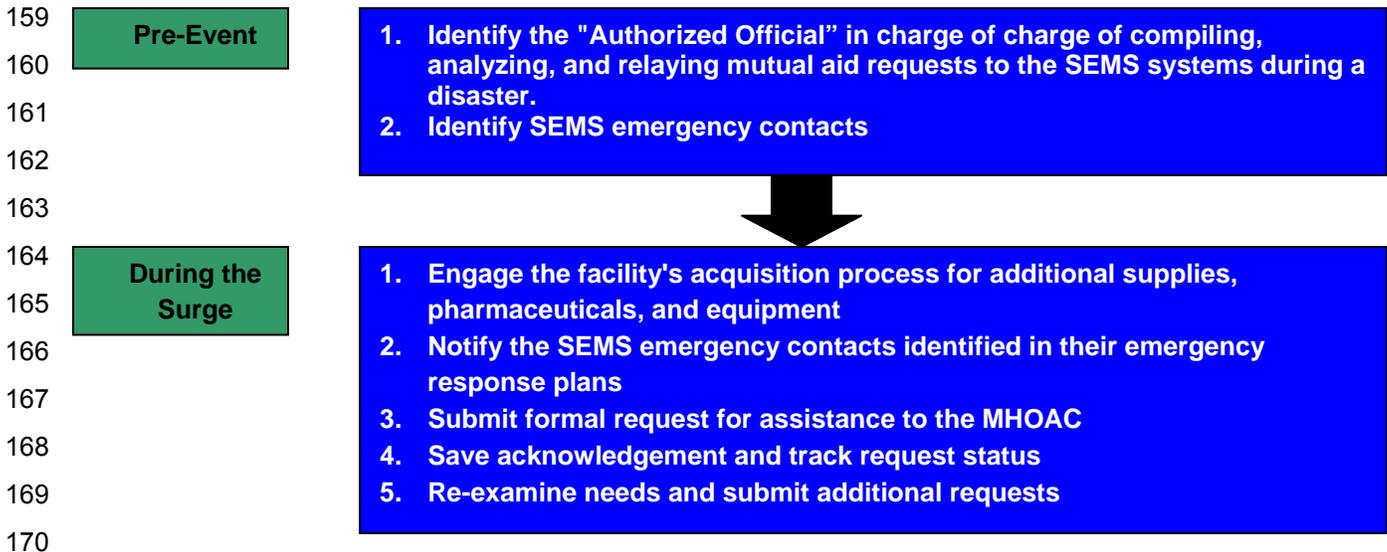
*Threat increases with percentage.

RISK = PROBABILITY * SEVERITY
0.04 0.23 0.18

156

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157 The following diagram illustrates at a high-level the pre-disaster and response activities that need to be
158 performed in the acquisition process with guidance below on how to achieve these steps:



171 The acquisition process for health facilities is usually well defined in each facility's Standard Operating
172 Procedures and includes multiple functional areas such as operations, procurement, receiving and
173 materials management working in collaboration. For alternate care sites, however, an acquisition process
174 and a supply chain may not exist. It is recommended that Local Health departments invest the needed
175 time to develop MOUs with existing health facilities to leverage supply chains in their OA. It is also
176 recommended that they identify procedures and tools that enable receiving and materials management
177 functions to support the inflow, use, and distribution of supplies, pharmaceuticals and equipment during a
178 disaster.

179
180 The following steps should be performed at the existing facility in **pre-planning**:

- 181 1. Identify the "authorized official" who is in charge of compiling, analyzing, and relaying mutual aid
182 requests to the SEMS systems during a disaster.
- 183 2. This authorized official should set up an introductory meeting with his or her MHOAC and LHO. The
184 purpose of the meeting will be to begin a working collaborative relationship with active sharing of
185 relevant supplies, pharmaceuticals and equipment information.

186

187 The following steps should be performed at the existing facility level during a **surge**:

- 188 1. Engage the facility's acquisition process for additional supplies, pharmaceuticals, and equipment.
189 Working with the relevant functional areas at his or her facility, the authorized official should compile
190 information regarding:
 - 191 a. Patient volume and acuity.
 - 192 b. Demand placed on existing quantities of supplies, pharmaceuticals, and equipment.

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- 193 c. The anticipated increase in demand and the shortage in supply over time.
- 194 d. The duration of the surge and the rate of depletion need to be considered when requesting
- 195 resources to get an accurate count.
- 196 2. Notify the SEMS emergency contacts identified in their emergency response plans in the following
- 197 order :
- 198 a. Local Health Department
- 199 b. MHOAC
- 200 c. Local EMS Agency
- 201 3. Complete a status report and a **formal** request for assistance when the resources at his or her facility
- 202 prove to be inadequate to cope with the surge.
- 203 a. This formal request should be submitted to the MHOAC and should be **specific** and
- 204 **quantifiable**. The submission of the request for assistance from the Duty Officer to the
- 205 MHOAC is the **formal entry point for the facility into the SEMS system**.
- 206 4. Ensure that when acknowledgement of the request is received, it is saved and used to track request
- 207 status. The acknowledgement should contain:
- 208 a. Confirmation of the specific request that was made.
- 209 b. The anticipated response time.
- 210 c. Any additional information on the scope and impact of the disaster and its effect on mutual
- 211 aid requests.
- 212

213 1.3 Questions to Consider During a Surge

214 The following questions represent issues/challenges that may arise during a surge followed by

215 recommendations on how to properly prepare.

- 216 1. Is the surge created by a disaster that has impacted transportation and routing capabilities?

217 **Recommendation:** If so, alternate routes and means of transportation need to be identified.

- 218 2. If requesting equipment, does the facility have the appropriate personnel trained to operate that
- 219 equipment?

220 **Recommendation:** If not, it should be considered what facilities or ACSs can better utilize the

221 equipment with appropriately trained personnel or determine if training can be done at the facility

222 in need.

- 223 3. If requesting pharmaceuticals, does the facility have the appropriate licensing or licensed personnel
- 224 to accept receipt of the shipment?

225 **Recommendation:** A decision needs to be made on the need of medications vs. the legal

226 licensing issue. As noted in the California Board of Pharmacy rules and regulations, Article 3,

227 Section 4059.5.(a), drugs may only be ordered by a licensed pharmacy and delivered to the

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228 licensed premises, and must be signed for by a pharmacist.⁵ To the extent possible, hospitals
229 are encouraged to work with the Board of Pharmacy to identify ACSs during the planning phase
230 in order to expedite approval.

231 4. Does the facility have the appropriate security protocols and resources to manage the requested
232 shipment?

233 **Recommendation:** A facility should consider:

- 234 i. Current personnel resources they have to assist.
 - 235 ii. Relationships with the local security officials they can leverage.
 - 236 iii. Relationships with private security entities they can leverage.
- 237

238 1.4 Acquiring Resources During a Surge

239 In determining the process of how to acquire resources during a surge, the following options exist:

- 240 1. Conventional vendors / suppliers → Normal supply chain process
- 241 2. Local Government including EMS Disaster Coordinator
- 242 3. Mutual Aid / MOU → Unconventional supply chain process
- 243 4. Non-Governmental Organizations (NGOs) → Unconventional supply chain process
- 244 5. Wholesalers and Retailers – e.g. Grainger, Walmart, Costco → Unconventional supply chain
245 process

246

247 During a surge, existing facilities should use their conventional vendors and suppliers as well as utilize
248 the SEMS structure (local government) when resources are or are expected to be scarce. Below,
249 unconventional options (MOUs, NGOs, Manufacturers, Wholesalers, and Retailers) are described as
250 additional options.

251

252 1.5 Using a Memorandum of Understanding

253 MOUs are an effective way to leverage available supplies, pharmaceuticals, and equipment within a
254 community. The process of developing an MOU, while time and effort intensive provides direct benefits
255 to the parties involved. The benefits of MOUs include an increased level of awareness and understanding
256 of a community's needs and capabilities; and an environment of trust and collaboration during a disaster.

257 In many ways, MOUs are collaborative building tools whereby the process of developing an MOU
258 becomes more crucial and beneficial than the resulting document. MOUs could provide the basis for
259 counties and OAs to perform realistic emergency preparedness planning and needs assessments.

⁵ California Business and Professions Code, Section 4059.5, Section 3, subdivision(a)

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1.6 Working with NGOs, Manufacturers, Wholesalers, & Retailers

Donations received from Non-Governmental Organizations (NGOs), manufacturers, wholesalers and retailers 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 the NGO and the 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.

1.7 Using Tools to Determine Pharmaceuticals Need

The following section on Pharmaceuticals offers two tools that facilities can use when preparing for pharmaceutical needs during a surge. The two tools were selected because they address the needs of the varying types of facilities and alternate care sites that exist or may exist in California.

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. "Par Levels are the maximum desirable number of pharmaceuticals determined. The reorder quantity equals the number of units below this predetermined number."⁶ 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.

⁶ Patent Storm, United States Patent 5537313, "Point of supply use distribution process and apparatus," <http://www.patentstorm.us/patents/5537313-description.html>

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293 The decision as to which tool or tools to use is site dependent, based on the existing complexity of
294 services offered, volume expectations during a surge, and the needs of the community. Due to the
295 financial impact, the decision to increase existing inventories and/or cache a supply a pharmaceuticals to
296 accommodate a surge event should be made in conjunction with hospital leadership with consideration
297 give to the specific risks that the hospital has identified in its HVA.

298

299 When resources allow, or are available within the community, strong consideration should be given to
300 involving key stakeholders in the planning process. The list below is not limited to those acknowledged.

- 301 • Clinical Pharmacists
- 302 • Disaster Coordinators
- 303 • Emergency Department Directors
- 304 • Emergency Department Physicians
- 305 • Respiratory Therapists
- 306 • Pulmonologists
- 307 • Critical Care Director
- 308 • Infectious Disease Physicians
- 309 • Poison Control Specialists
- 310 • Drug Information Specialists
- 311 • Radiologists
- 312 • Radiation Safety Officers
- 313 • Hospital Administrators

314

315 **Tool 1 - Basic Inventory Approach**

316 This tool is recommended for use by Community Clinics, Physician Offices, Skilled Nursing Facilities
317 (SNFs), and Nursing Homes. It is designed to build upon **existing** practices within pharmacy operations
318 and develop a systematic approach to establishing baseline inventory levels to sustain normal operations
319 for 72-96 hours. Because of existing gaps in delivery, many pharmacies may currently be operating at or
320 near these levels. This tool helps create a baseline inventory for normal operations for 72-96 hours. The
321 use of an "80/20 report" is recommended if possible. An 80/20 report is a commonly used report provided
322 by pharmacy wholesalers. This report is often used to identify which of the top dollar volume drugs are
323 driving changes in the drug expenses for the institution. The intent of the "80/20 report" is that 200-300
324 lines of drugs represent 80-90% of the total dollars expended. To use this tool, simply refer to the
325 process flow below and refer to an 80/20 report for guidance.

326

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328
329 **TOOL 1 – Pharmaceuticals – Basic Inventory Approach**
330 **Steps to consider when determining pharmaceuticals needed during a surge at an Existing**
331 **Facility or ACS**



334 **Step 1** Obtain an “80/20” report from the pharmacy wholesaler



338

DISTRIBUTION							NET	CUM	CUM % of	
CENTER	NDC	ITEM #	DESCRIPTION	FORM	STR	GENERIC GROUP	QTY	NET SALES	SALES	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	453926	ZOFRAN 2MG/ML SDV 5X2ML	SDV	2	ONDANSETRON HCL	818	\$68,507.50	\$140,035.41	11%
RALEIGH (B)	00004196401	098772	ROCEPHIN 1GM 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	\$26,963.08	\$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	696679	RETAVASE HALF KIT	KIT		RETEPLASE	21	\$23,869.53	\$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)	06290094110	934861	NORMAL SALINE 0.9% W/CANN SYG 30X10ML	SYG		SODIUM CHLORIDE	1,457	\$22,013.42	\$362,048.74	28%
RALEIGH (B)	00074446604	232207	ULTANE PEN BTL LIQ 250ML	LIQ		SEVOFLURANE	97	\$21,482.84	\$383,531.58	30%



342 **Step 2** Identify the items on the “80/20” report that the organization believes would be impacted during a surge



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



349 **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



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

355 **Tool 2 – Inventory Based – Pharmaceuticals by General Classifications**

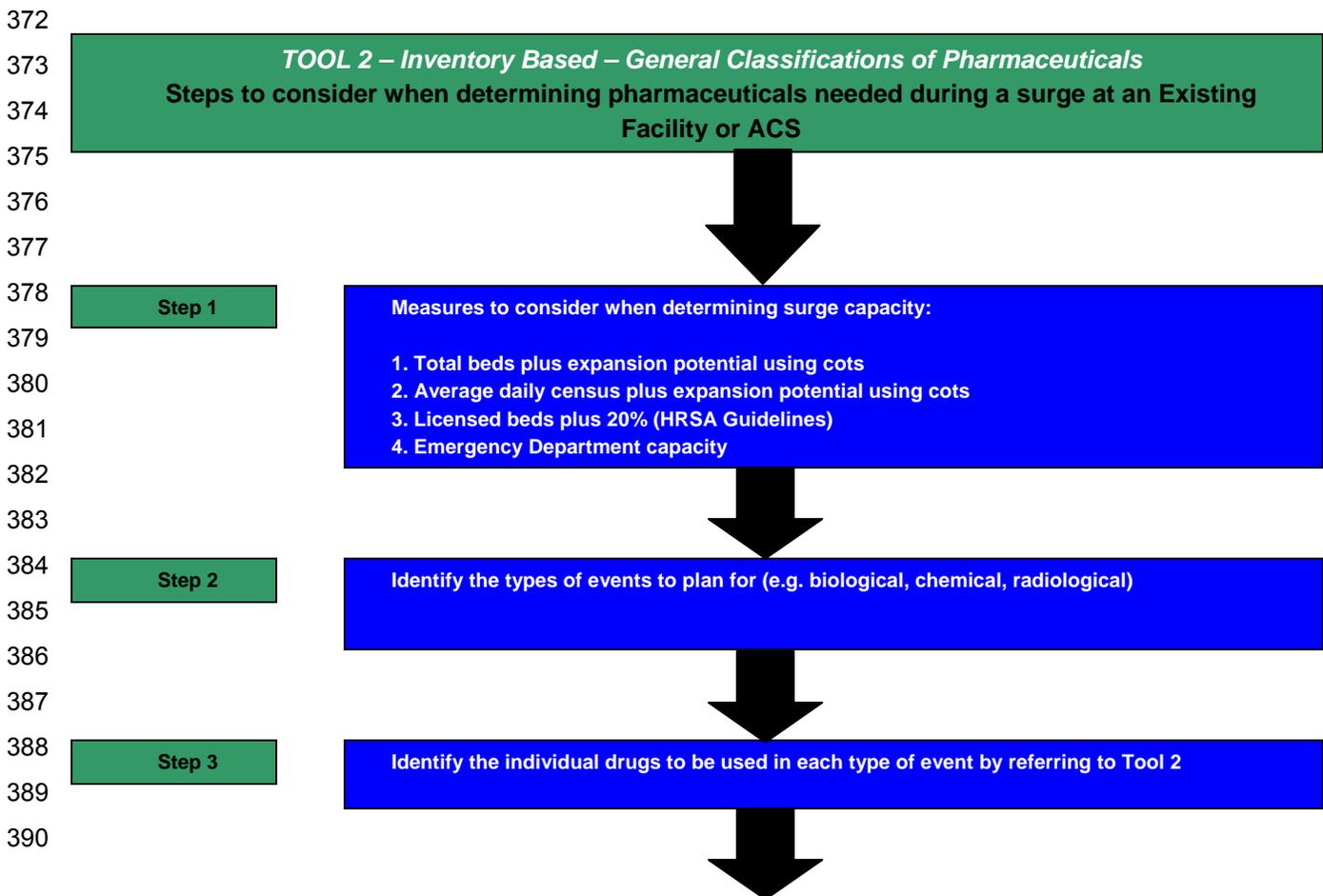
356 Tool 2 is a pharmaceutical list classified by types of drugs that may be needed for specific types of surge
357 events. This tool is recommended for use by any type of Hospital, Skilled Nursing Facilities (SNFs),

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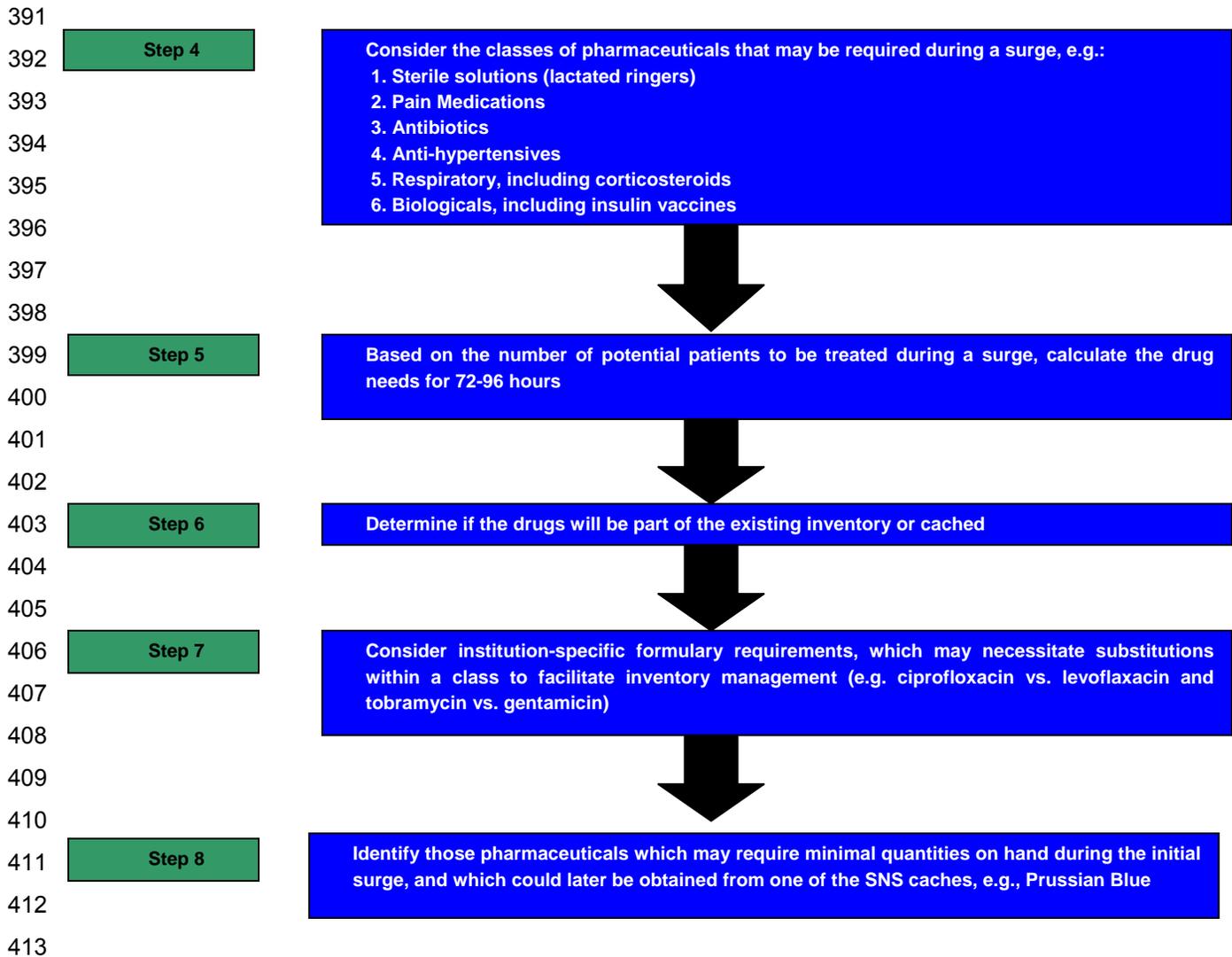
358 Nursing Homes or ACS. A facility may consider using this tool to maintain a **customized** list of
359 pharmaceuticals that would be required during a surge. Using inputs such as doses required and the
360 days of therapy required, the spreadsheet/tool can be used to calculate the number of patients to be
361 treated, the doses required, and the packages of pharmaceuticals to be stocked. The benefit of this tool is
362 that distinguishes potential pharmaceuticals needed by the following types of surge:

- 363 ▪ Biological events
- 364 ▪ Chemical events
- 365 ▪ Radiological/Nuclear events

366
367 Facilities should use Tool 2 as a guide in conjunction with their HVA when determining the specific types
368 of pharmaceuticals and quantities that should be on hand pre-surge and what may be needed during a
369 surge if a particular event occurred. This list can also be used at an ACS to specifically acquire
370 pharmaceuticals that will be required during a surge. Refer to the process flow below for guidance on
371 using Tool 2.



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414 1.8 ACS Pharmaceutical Planning

415 At the ACS level, the assumption is that there may be no materials on hand and this tool offers guidance
416 on what types of supplies and equipment that may be needed in a surge scenario. An ACS within in this
417 document is defined as a location that is not currently providing healthcare services and will be converted
418 to provide healthcare services to support outpatient and inpatient services to provide the needed patient
419 care during a surge event. These sites are not part of the assets of an existing facility (e.g. extensions of
420 a general acute care hospitals), but rather are government assets, under the authority of the local and
421 state government. There are four different types of ACSs which will require varying types of supplies and
422 equipment. Those types are described in detail in the Alternate Care Sites Document.

423
424 It will depend on the function of each ACS to determine what specific pharmaceuticals are needed. There
425 is current planning to have the use of caches and stockpiles for ACSs, but there are certain surge

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426 scenarios such as a pandemic outbreak that may warrant an ACS operating for an extended period of
427 time. If that is the case, the ordering of types of pharmaceuticals at an ACS may have to be
428 accomplished. A good reference for ACSs to utilize when ordering types of drugs is the Disaster Medical
429 Assistance Team (DMAT) Rx list. DMAT caches were utilized in Hurricane Katrina and the
430 comprehensive nature assumes that the ACS is starting with no resources. Due to the extensive nature
431 of this list, existing facilities and public health officials can gain access to this list through their MHOAC.
432

433 1.9 Using Tools to Determine Supplies and Equipment Needs

434 This section offers two tools that facilities and ACSs can use when preparing for supplies and equipment
435 needs during a surge. These three tools were chosen because they address the needs of the varying
436 types of facilities and alternate care sites that exist or may exist in California.

437
438 The stockpiling of supplies and medical equipment will be paramount in the ability to function in a
439 disaster. Facility resources may be limited and/or exhausted very quickly, therefore maintaining a cache
440 of equipment will enhance the ability to be ready immediately without having to wait for backup resources.
441 Similar to pharmaceuticals, the decision as to which methodology to use is site dependent based on the
442 existing complexity of services offered and volume expected during a surge. The objective is to address
443 the needs of the diverse set of existing healthcare facilities and potential ACSs. Information from the
444 Hazards Vulnerability Assessment should be utilized to assist in understanding site specific needs.

445
446 When resources allow, or are available within the community, strong consideration should be given to
447 involving key stakeholders in the planning process. The list below is not limited to those acknowledged.

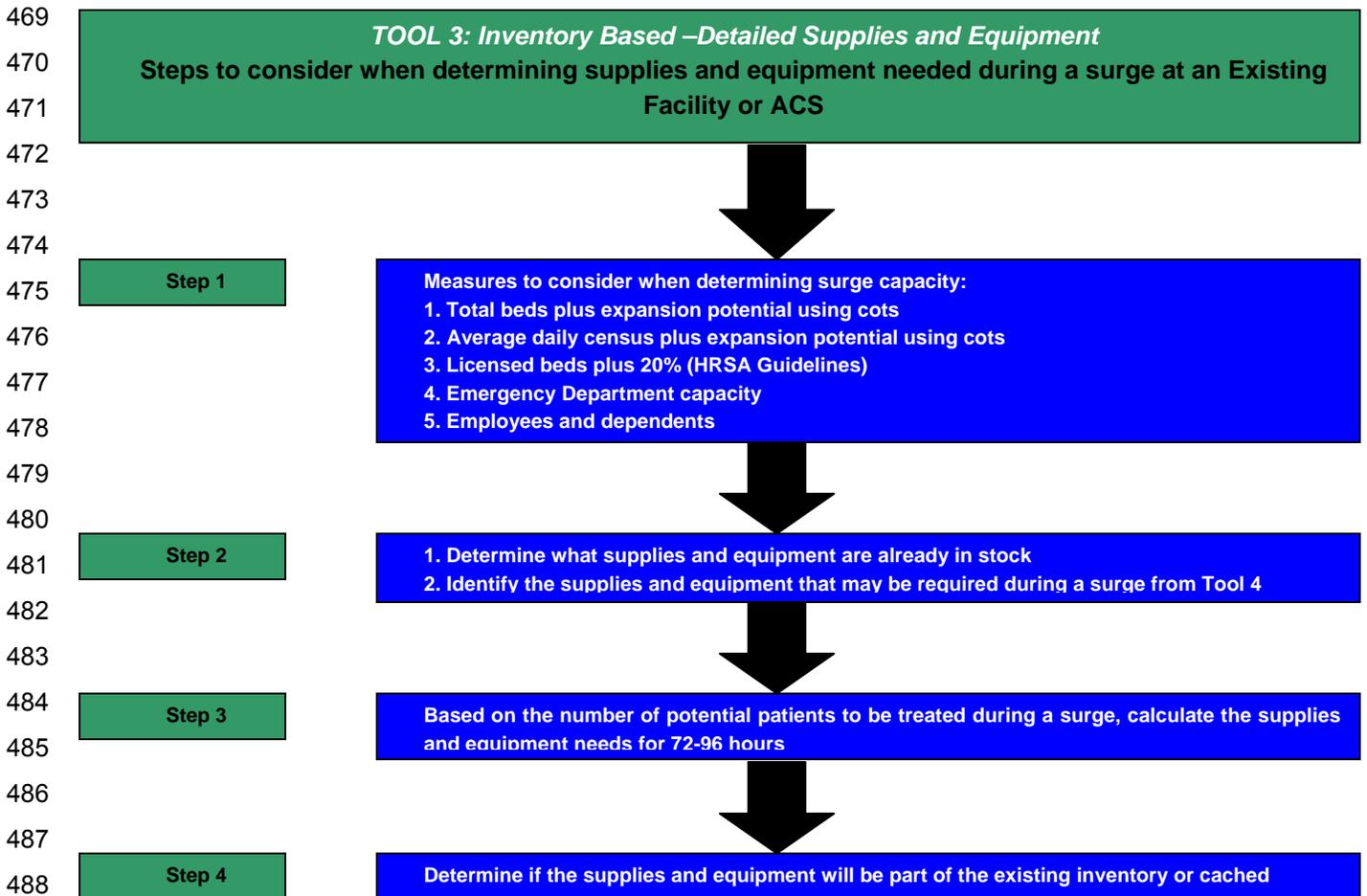
- 448 • Materials Manager / Procurement
- 449 • Disaster Coordinator
- 450 • Emergency Department Director
- 451 • Respiratory Therapists
- 452 • Facilities / Logistics
- 453 • Medical-Surge Coordinator
- 454 • Critical Coordinator
- 455

456 **Tool 3 – Inventory Based – Detailed Supplies and Equipment List**

457 Tool 3 is a detailed list of supplies and equipment that may be needed during a surge. It is designed to
458 guide ordering of specific supplies and equipment, provide organizations with the flexibility to define the
459 classes of supplies and equipment, and to determine whether caches are better suited for their
460 organization, or if increasing par levels of existing inventory is a better strategy. The contents and

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461 quantities of the Disaster Resource Center (DRC) caches were originally developed by the Los Angeles
462 County EMS Agency. The State EMS Authority developed a recommendation for Casualty Collection
463 Points in the 1990's. This information was used as the starting point for the medical cache contents.
464 Subsequently, the DRC Coordinator group has worked with the EMS Agency to refine these caches and
465 address the perceived needs that would arise in a disaster. The number of patients that could be treated
466 varies based on the type and mix of patients⁷. This list should not be considered comprehensive, but
467 should be used as a guide when considering the types of supplies and equipment that are needed during
468 a surge scenario. Refer to the process flow below for guidance on using Tool 3.



490 The Disaster Resource Center Medical / Surgical Supply Cache list has four columns which represent the
491 following:

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

⁷ Kay Fruhwirth, County of Los Angeles, Emergency Medical Services Agency (EMSA).

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

498

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

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

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

506

507 **Tool 4 – ACS-Specific Tool for Supplies and Equipment Planning**

508 Tool 4 is a supplies and equipment list, based on the CDHS ACS Cache list, for use when determining
509 and ordering supplies and equipment for an ACS. The specific supplies and equipment to be ordered will
510 depend on the function of each ACS. Due to the limited organization of an ACS, Tool 4 offers more
511 guidance for an individual(s) who may be tasked with ordering the extensive materials. This list was
512 initiated by the California Department of Health Service's (CDHS) Emergency Planning Office (EPO). It
513 represents 420 ACS caches that will soon be available statewide for the response to any of a number of
514 "All-Hazards" events including, but not limited to earthquake, pandemic influenza. The intent of these
515 caches is to offer support of medical/health care for 50 patients over a period of 10-14 days (actual
516 results may vary based on event). These caches may be utilized in either established Alternate Care
517 Sites or to supplement impacted existing healthcare facilities.

518

519 The list is separated into 9 groups:

- 520 1. IV Fluids
- 521 2. Bandages and Wound Management
- 522 3. Airway Intervention and Management
- 523 4. Immobilization
- 524 5. Patient Bedding, Gowns, Cots, Misc.
- 525 6. Healthcare Provider Personal Protective Equipment (PPE)
- 526 7. Exam Supplies
- 527 8. General Supplies
- 528 9. Defibrillators and Associated Supplies

529

530 The ACS Cache list has five columns which represent the following:

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

536

537 1.10 Guidance on Acquiring Personal Protective Equipment

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

545

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

549

550 Some of the many challenges that facilities face around selecting, acquiring, managing/storing, and
551 training staff on their PPE are acknowledged below.

552

553 Guidance on the Selection and Acquisition of PPE:

- 554 • Facilities should be at least prepared for levels C and D, but equipment selection should be site
555 specific → This should guide facilities on the general types of PPE that may be needed during a
556 surge.
- 557 • Use a HVA to consider suspected hazards that may impact a facility and the specific potential hazard
558 to employees (skin, ingestion, eye contact) → This is site specific guidance on the types of PPE
559 needed on hand.
- 560 • Facilities should work with other existing healthcare facilities, their county, and the state of California
561 to increase mutual aid interoperability → This would set up a network pre-surge to allow for sharing of
562 scarce resources.

563

564 Managing/Storing PPE Considerations include:

- 565 • Equipment is often outdated and must be current for appropriate use.

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

578

579 Training Recommendations

- 580 • Due to the complexity of using PPE, training should occur quarterly with an annual competency that
581 staff must pass.
- 582 • Decontamination exercises should be included in the training.
- 583 • Facilities should work with their local field representatives from their vendors and suppliers for
584 formalized training.
- 585 • In addition to training on the PPE, training should also include:
 - 586 ▪ The creation of Just-in-Time (JIT) training for those that are not knowledgeable in
587 using PPE and show up to a facility or ACS **during** the surge (e.g. clinical staff).
 - 588 ▪ Just-in-Case (JIC) training in for scenario planning in **preparation** for the surge. (e.g.
589 facilities, security, housekeeping, ancillary staff).
- 590 • Target Audience is the following but not limited to:
 - 591 ▪ Emergency Department staff – including Physicians, RN's
 - 592 ▪ Respiratory Therapists
 - 593 ▪ Radiologists

594

595 Tool 5 – Inventory Based PPE

596 Tool 5 is a list of PPE that may be required during a surge. This tool works in concert with OSHA
597 recommendations and is designed to assist with determining gaps in existing PPE supplies. The PPE
598 guidance list is made of five unique levels. Each level is summarized below:

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

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602 be met.

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

606

607 For greater detail, go the OSHA website at:

608 <http://www.osha.gov/SLTC/personalprotectiveequipment/index.html>

609

610 The sample of the OSHA suggested ensemble tool has four columns which represent the following:

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

618

619 Facilities need to first understand what their risk is and then use this tool as a guide to understand what
620 type of PPE is needed. Facilities can use this list to fill out their current supply, estimate the total potential
621 requiring treatment and then determine the quantity needed. They need to work closely with their vendors
622 and suppliers to determine quantity needed. In many cases the vendor and supplier will provide the
623 training specified to the site's needs.

624

625 2 Storage Considerations

626 Whether in preparation for a surge or during a surge there are many considerations that need to be
627 addressed so that supplies, pharmaceuticals, and equipment can be accessed and used immediately.

628 This section breaks down storage into five areas including: Inventory Management, Environmental
629 Management, Security, Transport, and Ease of Access.

630

631 2.1 Inventory Management

632 From a planning perspective, many healthcare facilities and public health organizations will have a stock
633 of supplies, pharmaceuticals, and equipment that must be maintained. Pharmaceuticals and
634 supplies/equipment are addressed separately.

635

636 **Pharmaceuticals**

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

640

641 **Supplies and Equipment**

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

653

654 **Environmental Management**

655 Pharmaceuticals and Supplies/Equipment have similar considerations regarding environmental
656 management. The chemical nature of pharmaceuticals puts it at risk of an altered state which may impact
657 the efficacy of the drug. Many pharmaceuticals are affected by temperature and have specific storage
658 requirements such as "room temperature" or "refrigeration". Also, pests can play a role in negatively

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659 influencing the nature of medications. There must be a process to monitor the environment of
660 pharmaceuticals to meet United States Pharmacopeia (USP). Supplies and Equipment items are also
661 impacted by temperature as significant variations can affect the durability and quality of the material. For
662 example, there is PPE that must be stored at specific temperatures. Facilities should ensure that
663 manufacturer's storage guidelines are met.

664

665 **Security**

666 There is the need for security during a surge because of the potential disorganized environment that may
667 occur. Resources may be scarce and there should be pre-planning for heightened security in a disaster
668 state. Tools 8 and 9 in the Tool Section address security needs by location type described below due to
669 some unique considerations.

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

673

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

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

681

682 It is important to note that the California Board of Pharmacy rules and regulations, Article 3, Section
683 4059.5.(a), supports that drugs may only be ordered by a licensed pharmacy and delivered to the
684 licensed premises, and the pharmaceuticals must be signed for by a pharmacist.

685

686 **Transport**

687 It is essential to consider in the planning how supplies and equipment will get from the cache or stockpile
688 to the desired location. A plan should be in place with options on what would be the primary mode of
689 transport with secondary options. Also, the inability to access roads and facilities need to be taken into
690 account as well.

691

692 **Ease of Access**

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

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695

696 Tools 6 – Pharmaceutical Storage Consideration Checklist

697 Tool 6 is a checklist to address the vital areas that need to be considered specifically around storing
698 pharmaceuticals at an existing facility, in a cache/warehouse, or at an ACS.

699

700 Tool 7 – Supplies and Equipment Storage Consideration Checklist

701 Tool 7 is a checklist to address the vital areas that need to be considered specifically around storing
702 supplies and equipment at an existing facility, in a cache/warehouse, or at an ACS.

703

704 **3 Vendor Considerations**

705 This section examines the relationship between facilities and their current and future vendors/suppliers.
706 Considerations are highlighted for facilities to use when working with vendors and suppliers. Tool
707 98 serves as a checklist to identify some of the issues organizations should consider when working with
708 vendors.

709
710 Many organizations rely on vendors for maintenance of their supplies and equipment. As a result, they
711 need to consider the vendor or supplier who they acquire supplies, pharmaceuticals, and equipment from
712 to ensure proper maintenance during storage. This group may play a large role in ensuring that materials
713 work correctly during a surge. Below is list of considerations:

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

722

723 **Tool 8 – Vendor Considerations Checklist**

724 Tool 8 is a checklist which identifies specific considerations that should be addressed when working with
725 vendors from a surge perspective.

726

727 4 Staging & Deployment

728 This section examines the most efficient ways for facilities and ACSs to stage their supplies,
729 pharmaceuticals, and equipment pre-surge and in-surge. It also looks at how regulatory issues impact
730 distribution. This section offers three tools that facilities and ACSs can use for guidance in the staging and
731 distribution of resources:

732

733 4.1 Staging Considerations

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

739

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

745

746 One option hospitals may wish to consider is identifying a small storage area near their designated
747 disaster triage and treatment site. This area can be used for the “first push” of the supplies likely needed
748 in the first moments of a crisis. For example, a small collection of cots, linens, gowns, medical supplies
749 could be gathered here. If space allows, perhaps a casualty shelter (tent), lights, generator can be
750 added. If environmental conditions are adequate, pharmaceutical supplies might be included. As the
751 event evolves, and additional supplies are needed, the more remote storage areas can be tapped to
752 replenish or supplement the first push of supplies. Plans to retrieve the additional supplies should be
753 activated as their first set is deployed.

754

755 If space is sufficient, the “first push” supplies may be packaged in a cart or trailer to make deployment
756 more rapid. Consideration should be given to the path of travel between the storage site and the
757 destination, so that the chosen cart or trailer will successfully clear all obstacles. Further, a detailed
758 inventory should accompany the first push of supplies, indicating “what” and “how many” of each item is
759 immediately available, and where additional supplies are located so that they can be acquired by staff

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760 who may not be knowledgeable of how the supplies are organized and stored.⁸

761

762 **Tool 9 – Staging Recommendation Checklist**

763 Tool 9 is a checklist to identify considerations that organizations should assess when staging their
764 resources. This tool is useful for the set up of resources at ACSs, caches/warehouses, and can also be
765 utilized at existing facilities where there are areas that items are stored with the potential need for
766 immediate use.

767

768 **Tool 10 – Staging Samples #1 and #2**

769 Tool 10 contains two sample floor plan layouts suggesting how a point of dispensing (POD) site should be
770 staged to be ready for use during a surge. These two examples represent a systematic approach of
771 staging resources so that the most needed items are strategically placed for quick access (e.g. supply
772 cart right next to the entrance). Facilities and ACSs can use this for guidance in staging.

773

774 **4.2 Distribution / Deployment**

775 **Liability, Licensing, and Regulatory Implications**

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

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

792

⁸ James Lenthall. Director, Safety/Security & Emergency Management, Saddleback Memorial Medical Centers.

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793 **The California State Board of Pharmacy Waiver**

794 The California State Board of Pharmacy plays a large responsibility in the function of pharmacists who
795 play an intricate role in patients receiving needed medications. In a recent response to the potential of a
796 surge, the California State Board of Pharmacy created a Disaster Response Policy Statement in January
797 2007 to ensure proper preparation and an effective response to any local, state, or national disaster. The
798 purpose of the policy statement and potential waivers as part of the California Business and Professions
799 Code, section 4062, subdivision (b) is to encourage pharmacists to do everything possible to do the most
800 good for the largest amount of people.

801
802 This policy highlights that in the event of declared disaster or emergency, the Board expects to utilize its
803 authority under the California Business and Professions Code, including sections 4005(b) and 4062, to
804 encourage and permit emergency provision of care to affected patients and areas, including by waiver of
805 requirements that it may be implausible to meet under these circumstances.⁹ This takes into account
806 what would be otherwise normal operating procedures that may not be able to be addressed during a
807 surge such as record-keeping requirements, labeling requirements, employee ratio requirements,
808 consultation requirements and other standard pharmacy practices and duties that may interfere with the
809 most efficient response to those affected.

810

811 ***How the Waiver is communicated***

812 In the event of the waiver, the State of California Board of Pharmacy would communicate this information
813 to the Office of Emergency Services (OES) for them to distribute the information. Information would also
814 be posted on their website at www.pharmacy.ca.gov and communicated via phone @ (916) 574-7900.

815

816 The Board expects licensees to apply their judgment and training to provide medication to patients in the
817 best interests of the patients with circumstances on the ground dictating the extent to which regulatory
818 requirements can be met in affected areas. The Board also expects that the highest standard of care
819 possible will be provided, and once the emergency has dissipated, its licensees will return to practices
820 conforming to state and federal requirements.¹⁰

821

822 **Tool 11: California State Pharmacy Board Disaster Policy Statement**

823 Tool 11 is a copy of the California State Pharmacy Board Disaster Policy Statement. This policy
824 statement can be used as a reference to understand the purpose of the California State Pharmacy Board
825 waiver and how it will be utilized in the event of a surge.

⁹ California Emergency Services Act [Cal. Gov. Code §§ 8550-8668] and the California Disaster Assistance Act [Cal. Gov. Code §§ 8680-8690.7].

¹⁰ California Business and Professions Code, Section 4062, subdivision (b).

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826

827 **Use of Expired Medications**

828 In a surge scenario, there is the potential for a shortage of appropriate medications. An example could be
829 a pandemic flu outbreak. Specific virals and vaccines may be indicated and there may not be an
830 adequate amount available for use. The government may prepare by stockpiling exactly for this type of
831 situation and there is the possibility that the medications may become expired. This may become a
832 dilemma if medical personnel have the indicated medication at their disposal, but question their liability in
833 using the product and the efficacy of the medication to provide the desired results. Approved drugs are
834 tested for stability and the expiration dates are based on those tests. However, most drugs remain stable
835 far beyond the expiration date. The challenge is that the assumption cannot be made for all drugs. Any
836 restrictions on pharmacists dispensing expired drugs could be waived by the Pharmacy Board.
837 An emergency proclamation changing the standard of care could also provide protection.

838

839 **Off – Label Drug Use**

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

846

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

854

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

856 During a surge, there is a possibility that there may not be a licensed Pharmacist on-site to dispense
857 pharmaceuticals or oversee the process from a liability perspective. The California Business and
858 Professions Code, Section 4051 states that “it is unlawful for any person to manufacture, compound,
859 furnish, sell, or dispense any dangerous device, or to dispense or compound any prescription pursuant to

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860 Section 4040 of a prescriber unless he or she is a pharmacist under this chapter.¹¹ To address this, the
861 California State Board of Pharmacy may waive application of any provisions of this chapter or the
862 regulations adopted if, in the Pharmacy Board's opinion, the waiver will aid in the protection of public
863 health or the provision of patient care during a declared federal, state, or local emergency as noted in
864 California Business and Professions Code, Sections 4005(b) and 4062.

865

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

866 With the possibility for limited Pharmacy staff in a surge scenario, many volunteers may present to any
867 location where care is being provided (e.g. hospital, ACS, clinic, dispensing site) to assist in providing
868 services that a Pharmacist, Intern Pharmacist and/or Pharmacy Technician would provide under normal
869 operating procedures. To effectively utilize this type of volunteer it is essential to prepare for this situation
870 and understand their potential capacity and liability.

871

872
873 The California State Board of Pharmacy encourages that persons outside of California will assist the
874 residents of California. In the event of a declared disaster or emergency, the Board expects to use its
875 powers under the California Business and Professions Code, including section 900 and sections 4005(b)
876 and 4062 to allow any pharmacists, intern pharmacists, or pharmacy technicians, who are not licensed in
877 California, but who are licensed in good standing in another state, including those presently serving
878 military or civilian duty, to provide emergency pharmacy services in California¹².

879

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

883

Licensing of Dispensing Sites and Alternate Care Sites

884 As noted in the California Board of Pharmacy rules and regulations, Article 3, Section 4059.5.(a), drugs
885 may only be ordered by a licensed pharmacy and delivered to the licensed premises, and must be signed
886 for by a pharmacist.¹³ To the extent possible, hospitals are encouraged to work with the Board of
887 Pharmacy to identify ACSs during the planning phase in order to expedite approval. This would minimize
888 any potential delays in getting pharmaceuticals delivered to ACSs in the event of a surge situation. A
889 pharmacist's educational background and experience should be utilized in this situation to understand if
890 the appropriate medications have been delivered in the correct quantities so they can then utilize the
891

¹¹ California Business and Professions Code, Section 4051.

¹² California Business and Professions Code, section 900 and section 4062.

¹³ California Business and Professions Code, Section 4059.5, Section 3, subdivision(a)

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892 pharmaceuticals in the most efficient manner.

893

894 Furnishing Medications without a Prescription

895 During a surge, there may be limited time to receive a prescription from a Physician. Therefore Section
896 4062, subdivision (a) states that a Pharmacist may in good faith, furnish a dangerous drug or dangerous
897 device in reasonable quantities without a prescription during a federal, state or local emergency, to further
898 the health and safety of the public.¹⁴ This section states that a record containing the date, name, and
899 address of the person to whom the drug or device is furnished, and the name, strength, and quantity of
900 the drug or device furnished shall be maintained. The pharmacist shall communicate this information to
901 the patient's attending physician as soon as possible.

902

903 The Use of Supplies and Equipment beyond the Manufacturers Recommended Use

904 In a surge scenario there is the possibility that medical supplies and equipment may be used in a different
905 manner than its intended use which brings into consideration liability and reimbursement. An example is
906 the use of an adult intubation kit on a pediatric patient.

907

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

913

914 Liability for Non-Governmental Organizations (NGOs) for the distribution of medical and health 915 supplies

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

921

922 Civil liability for NGOs during a declared emergency would depend upon whether the NGO was
923 functioning as a disaster service organization, i.e., all of its employees are functioning as disaster service
924 workers. If so, the employee's would be immune to liability under Civil Code section 1714.5.

925

¹⁴ California Business and Professions Code, Section 4062, subdivision (a).

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926 Also, the Governor could issue orders that require NGOs to carry out certain functions, and they would
927 not have liability under Civil Code section 1714.6.

928

929 Recommendation on the Distribution/Deployment of Supplies, Pharmaceuticals, and Equipment:

- 930 • These liability, licensing, and regulatory issues should become apart of each existing healthcare
931 facility's policies and pertinent staff need to be educated on the regulatory aspect of distribution so
932 this information can be utilized in a surge.
- 933 • Staff needs to understand the regulatory implications so they can act to the best of their ability to save
934 lives during a surge.

935

936 Long Term Recommendations

937 Examining the supply chain reveals that looking forward there needs to be modifications to the current
938 system to be able handle a major surge. The long term recommendations regarding supplies,
939 pharmaceuticals and equipment at this time are:

- 940 1. All hospitals should consider becoming apart of HRSA funded facilities to be able to receive funded
941 supplies and equipment and to become further integrated into a system for mutual aid.
- 942 2. Develop a state-wide Database/System that enables the tracking of receipt and fulfillment of supplies,
943 pharmaceutical, and equipment orders at each level of SEMS. The system should also enable real-
944 time decision-making based on supply and demand (e.g. best practice of UPS, FED EX).
- 945 3. The creation of a Master Medical Health Mutual Aid Plan that enables the most effective use of
946 resources at each level before escalating up the SEMS structure. This should include an aspect of
947 inclusion of future anticipation of needs.
- 948 4. Existing healthcare facilities including state and private, local government, operational areas, regional
949 areas, the State need to continue to work and collaborate with suppliers and manufacturers to
950 understand how they can anticipate and manage during a surge together.

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1025

1026 Appendix A - Glossary

- 1027 • **Pharmaceuticals:** Any prescription medications, over-the-counter drugs and/or nutraceuticals
1028 administered to persons to diagnose, treat, or prevent disease or other abnormal conditions.¹⁵
1029
- 1030 • **Equipment:** Fixed and portable equipment used for diagnosis, treatment, monitoring and direct care
1031 of individuals¹⁶.
1032
- 1033 • **Supplies:** Durable and consumable goods which can be used in carrying out the treatment of a
1034 patient's illness or injury.
1035
- 1036 • **Access:** The process of acquiring supplies, pharmaceuticals, and equipment from various sources
1037 via procurement, stockpiles, caches, and other sources.
 - 1038 ▪ **Procurement:** The process of obtaining supplies, pharmaceuticals, and equipment via
1039 contracts, government requests, and mutual aid that includes an arrangement of payment.
1040 Procurement is a subset of access.
1041
- 1042 • **Storage:** The task of appropriately maintaining a supply of supplies, pharmaceuticals, and equipment
1043 that is readily accessible¹⁷.
1044
- 1045 • **Distribution:** The allocation of supplies, pharmaceuticals, and equipment involving the mobilization
1046 and transfer of these materials from the loading point to the ordering entity.
1047
- 1048 • **Stockpile Site:** Place determined by each region to the location/locations for a cached of
1049 pharmaceuticals and medical supplies necessary to initially treat victims and caregivers until the
1050 Strategic National Stockpile (SNS) arrives.
1051
- 1052 • **Strategic National Stockpile (National Pharmaceutical Stockpile):** A national repository of
1053 pharmaceuticals and medical supplies that may be needed for an all hazards event to supplement
1054 and re-supply State and Local Public Health Agencies and hospitals.
1055
- 1056 • **Sustainability** describes the ability of a local health care system to tolerate an extreme event until

¹⁵ Joint Commission.

¹⁶ Joint Commission.

¹⁷ Joint Commission.

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1057 significant outside assistance arrives.¹⁸

1058

1059 • **Par Levels:** The maximum desirable number of pharmaceuticals determined. The reorder quantity
1060 equals the number of units below this predetermined number.

1061

1062 • **Alternate Care Site (ACS):** An ACS within in this document is defined as a location that is not
1063 currently providing healthcare services and will be converted to provide healthcare services to
1064 support outpatient and inpatient services to provide the needed patient care during a surge event.
1065 These sites are not part of the assets of an existing facility (i.e. extensions of a general acute care
1066 hospitals), but rather are government assets, under the authority of the local and state government.

1067

Pharmaceutical Storage Specific Definitions:

1068 **(Taken from the US Pharmacopeia guidelines (USP))**

1069

1071 • **Freezer:** A place in which the temperature is maintained thermostatically between -20 degrees
1072 Celsius (C) and -10 ° C (-4 ° Fahrenheit (F) and 14 ° F).

1073

1074 • **Cold:** Any temperature not exceeding 8 ° C (46 ° F). A refrigerator is a cold place in which the
1075 temperature is maintained thermostatically between 2 ° C and 8 ° C (36 ° - 46 ° F).

1076

1077 • **Cool:** Any temperature between 8 ° C and 15 ° C (46 ° - 59 ° F). An article that requires cool storage
1078 alternatively may be stored in a refrigerator, unless otherwise specified by the individual USP
1079 monograph.

1080

1081 • **Room Temperature:** The temperature prevailing in a working area.

1082

1083 • **Controlled Room Temperature:** A temperature maintained thermostatically that encompasses the
1084 usual and customary working environment of 20 ° C to 25 ° C (68 ° F - 77 ° F) that allows for brief
1085 deviations between 15 ° C and 30 ° C (59 ° F - 86 ° F) that are experienced in pharmacies, hospitals,
1086 and warehouses. Articles may be labeled for storage at "controlled room temperature" or at "up to 25
1087 ° C ."

1088

1089 • **Warm:** Any temperature between 30 ° C and 40 ° C (86 ° - 104 ° F).

¹⁸ 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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1090

1091 • **Excessive Heat:** Any temperature above 40 ° C (104 ° F).

1092

1093 • **Protection from Freezing:** Where, in addition to the risk of breakage of the container, freezing
1094 subjects an article to loss of strength or potency, or to destructive alteration of its characteristics, the
1095 container label must bear an appropriate instruction to protect the article from freezing.

1096

Appendix B - Tools

1097

Tool #	Title	Description of Tool
1	Pharmaceuticals – Basic Inventory Approach (in body of document)	Uses existing practices and an “80/20 Report” to order the appropriate pharmaceuticals to be self sufficient for 72 – 96 hours.
2	Pharmaceuticals – Inventory Based- Pharmaceuticals by Classification	A Pharmaceutical list classified by types of drugs that may be needed for specific types of surge events.
3	Supplies & Equip. – Detailed Supplies & Equipment	Uses the Disaster Resource Center (DRC) comprehensive list to guide specific ordering. The list includes items that may be needed during a surge.
4	Supplies & Equip. - ACS	Uses CDHS ACS Cache list to guide ordering of supplies and equipment for an ACS.
5	Inventory Based - PPE	Uses OSHA A-D guidelines to guide ordering of appropriate PPE.
6	Pharmaceutical Storage Consideration Checklist	A Checklist for issues that organizations should consider when developing pharmaceutical caches.
7	Supplies & Equipment Storage Consideration Checklist	A Checklist for issues that organizations should consider when developing supplies and equipment caches.
8	Vendor Considerations Checklist	Checklist considerations specific to surge when working with vendors.
9	Staging Recommendations Checklist	Checklist which identifies considerations that organizations should assess when staging their resources.
10	Staging Samples #1 and 2	Model of how a Point of Dispensing (POD) storing resources can be staged.
11	California State Board of Pharmacy Disaster Response Policy Statement	Background on how the CA State Board of Pharmacy Waiver allows for the emergency provision of care in a “declared” disaster.

1098

1099

Supplies, Pharmaceuticals, and Equipment

Tool 2 – Inventory Based – Pharmaceuticals by Classification

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 Sources
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	10950	110	MOA with UMC
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												
Dimeracaptopril	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 Diethylenetriaminepentaacetate	1g	Injectable												
Trisodium Zinc Diethylenetriaminepentaacetate	1g	Injectable												

Supplies, Pharmaceuticals, and Equipment

Tool 2 – Inventory Based – Pharmaceuticals by Classification (Continued)

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 Sources
Drugs for Treating Acute Radiation Syndrome														
Acyclovir Sodium	25mg/ml	Injectable												
Acyclovir	400mg	Oral												
Antidiarrheal														
Cetepime 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												
Vaccines														
Smallpox														
Tetanus Toxoid														
Anthrax Treatment														
Fluoroquinolone														
Doxycycline														
Amoxicillin														
Erythromycin														
Sources:														
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2) Emergency Preparedness Resource Inventory (EPRI), A Tool for Local, Regional, and State Planners AHRQ Publication, 2005														
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Tool 3: Inventory Based – Detailed Supplies and Equipment

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)				

Supplies, Pharmaceuticals, and Equipment

Tool 3: Inventory Based – Detailed Supplies and Equipment (Continued)

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

Tool 3: Inventory Based – Detailed Supplies and Equipment (Continued)

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

Tool 3: Inventory Based – Detailed Supplies and Equipment (Continued)

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				

Supplies, Pharmaceuticals, and Equipment

Tool 3: Inventory Based – Detailed Supplies and Equipment (Continued)

MISCELLANEOUS Equipment	Current Supply	Total Potential Requiring Treatment	Package Size (if applicable)	Quantity / Cache
Ventilators - dual use Adult/Pediatric				
Portable/disposable vents				
Equipment Trailer				
18 X 24 Tent				
10 X 10 Tent				
Temps Beds				
Simpler Life Cots				
Junkin Cots				
Blankets/Sleeping Bags/Linen				
Tables				
Chairs				
Lights				
Portable Generator				
Heating System/Fan				
HEPA Filtration System				
Staff Notification/Recall System				
HAM Radio Equipment				
Communication Equipment (radios, walkie talkie)				
Evacusleds				
Evacuation Chairs				
CBRNE Detection/Monitoring Equipment				
Emergency Food/Water Supply Cache				
Portable Toilets				
Portable handwashing				
Outdoor Lighting				
EZ Up Shades				
Security Upgrades and hardening				
Post Decontamination clothing sets				
Pharmacy Cache				
CHEMPACK location site				
Medical/Surgical Supply Cache				
Prime Mover (tow vehicle)				
Sources:				
1) Disaster Resource Center Supplies List -Revised 2006				
2)State of Research in High- consequence Hospital Surge Capacity, Carl H. Schultz, MD, Kristi L. Koenig, MD				
<p>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 radiatin injury within a 24-hour period.</p> <p>The goal is to be able to expand hospital capcity by 20-25% in the first 24 hours.</p>				

Supplies, Pharmaceuticals, and Equipment

Tool 4 - 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) Macro drip (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

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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 1-1/2" 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

Supplies, Pharmaceuticals, and Equipment

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 Administration Kits (Includes mask, canister, and 6' of O2 tube), Model = Hsiner #ME7402 NO SUBS	EA	200

Supplies, Pharmaceuticals, and Equipment

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

Supplies, Pharmaceuticals, and Equipment

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

Supplies, Pharmaceuticals, and Equipment

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

Supplies, Pharmaceuticals, and Equipment

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	Ophthalmoscope/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, Disposable (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

Supplies, Pharmaceuticals, and Equipment

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

Supplies, Pharmaceuticals, and Equipment

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

Supplies, Pharmaceuticals, and Equipment

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

Supplies, Pharmaceuticals, and Equipment

Key:

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

Supplies, Pharmaceuticals, and Equipment

Tool 5 – 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				
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				
Coveralls				
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				

Supplies, Pharmaceuticals, and Equipment

1 Tool 6 : Pharmaceutical Storage Consideration Checklist

2

3 **Inventory Management**

4 A process for monitoring the expirations dates.

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

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

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

10 Repacked pharmaceuticals require proper labeling.

11 These labels are important for lot number and patient tracking in the event of
12 contamination, adverse reactions, or medication error.

13

14 **Environmental Management**

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

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

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

20

21 **Security**

22

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

24 A process for ensuring the security of the caches.

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

26 A process for controlling access within the building.

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

28 Monitoring of facilities with security cameras.

29 Security locks on pharmaceuticals in place.

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

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

Supplies, Pharmaceuticals, and Equipment

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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 **Tool 11** for the CA Board of Pharmacy Waiver

Supplies, Pharmaceuticals, and Equipment

68 Tool 7: Supplies and Equipment Storage Consideration Checklist

69 Inventory Management

70

71 A process for monitoring and maintaining preventive maintenance requirements:

72 Batteries

73 Ventilator seals

74 Electrical equipment

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

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

77 Considerations for storing large amounts of supplies and equipment .

78 Is storage space limited on-site?

79 Can supplies and equipment be stored at other sites (e.g. warehouses, other
80 facilities in health system).

81

82 Environmental Management

83

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

85

86 Security

87

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

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

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

91 A process for controlling access within the building.

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

93 Monitoring of facilities with security cameras.

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

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

98

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Supplies, Pharmaceuticals, and Equipment

101 **Alternate Care Sites (ACSs)**

102 A process for ensuring the security of the supplies and equipment provided to the
103 ACS (e.g. locks, security personnel).

104 A process for controlling access into the area.

105 A process for controlling access within the area.

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

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

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

111

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

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

114 A process for controlling access into the area.

115 A process for controlling access within the area.

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

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

120

121 **Transport**

122

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

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

126

127 **Ease of Access**

128

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

131

132

Supplies, Pharmaceuticals, and Equipment

Tool 8: Supplies, Pharmaceuticals and Equipment Vendor Considerations Checklist

- Identify any “disaster clauses” within the contract and understanding the requirements of the vendor.
- Understand the options of how supplies, pharmaceuticals, and equipment will be delivered during a surge.
- Understand where supplies, pharmaceuticals, and equipment will be delivered during a surge (e.g. where at the facility they will be delivered to).
- Understand who the supplies, pharmaceuticals, and equipment will be delivered to during a surge.
- Identify the vendor lead time of critical supplies, pharmaceuticals and equipment.
- The Rotation stock and inventory (control management) agreement.
- Identify payment terms under a surge scenario.
- Understand the “days on hand” inventory of the vendors.

Supplies, Pharmaceuticals, and Equipment

Tool 9: Staging Recommendations Checklist

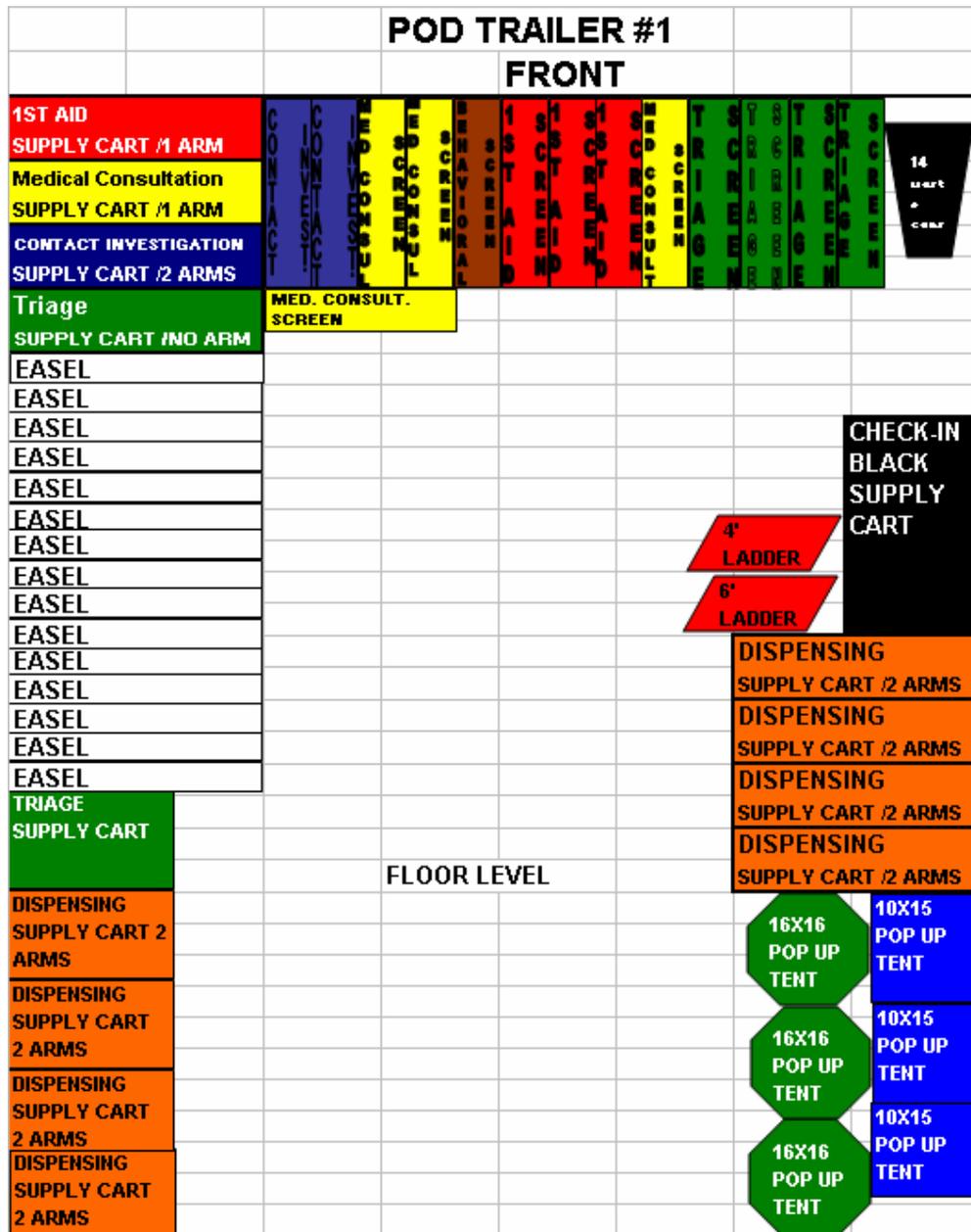
The following checklist identifies considerations organizations should assess when setting up their materials for both planning for and when in a surge:

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.

Supplies, Pharmaceuticals, and Equipment

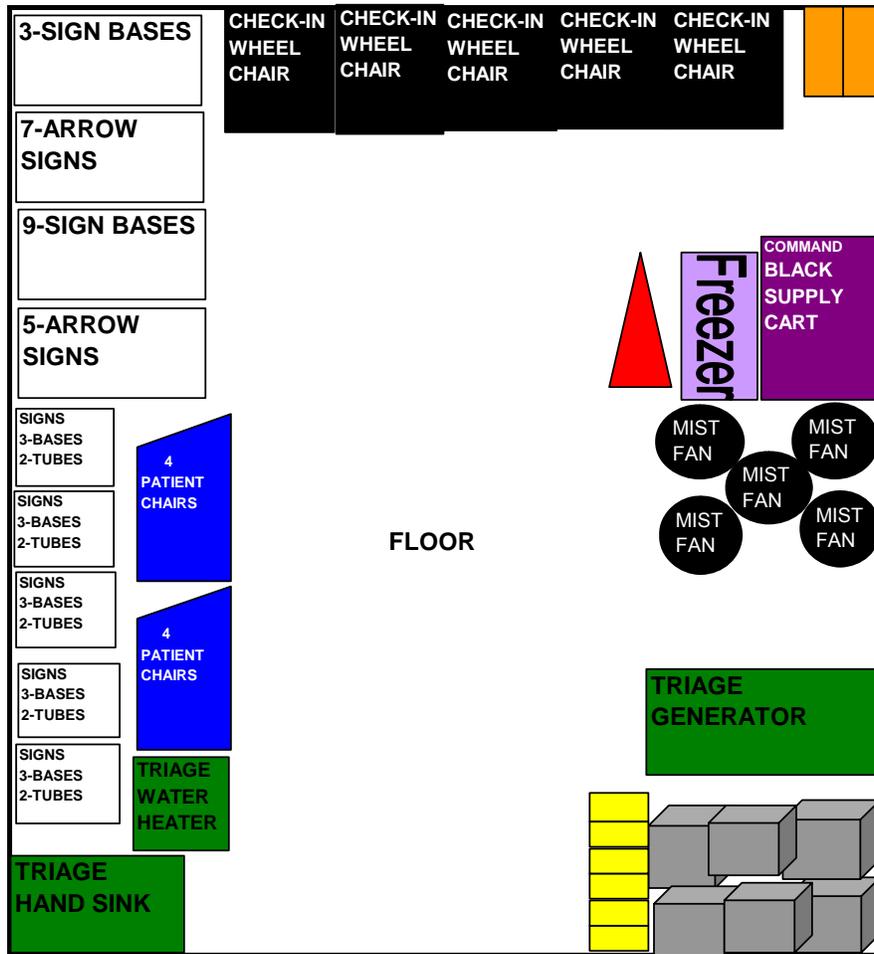
Tool 10: Staging Sample # 1



Supplies, Pharmaceuticals, and Equipment

Tool 10: Staging Sample # 2

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

Supplies, Pharmaceuticals, and Equipment

Tool 11: 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

Supplies, Pharmaceuticals, and Equipment

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. October 25 and 26, 2006, Board Meeting Minutes - Page 14 of 52 pages 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.

¹Expanded 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.

²See 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.