PUBLIC VERSION

Contra Costa Health Services

Emergency Medical Services Agency

7/2/2008

Interim Healthcare Surge Plan

A. Overview

Healthcare surge, as used here, refers to a condition in which the local healthcare system is overwhelmed as a result of a catastrophic emergency. The following definition is given by the California Department of Public Health:

> ***A healthcare surge is proclaimed in a local jurisdiction when an authorized local official, such as a local health officer or other appropriate designee, using professional judgment determines, subsequent to a significant emergency or circumstances, that the healthcare delivery system has been impacted, resulting in an excess in demand over capacity in hospitals, long-term care facilities, community care clinics, public health departments, other primary and secondary care providers, resources and/or emergency medical services. The local health official uses the situation assessment information provided from the healthcare delivery system partners to determine overall local jurisdiction/Operational Area medical and health status.***[1]

Surge capacity refers to the ability of hospitals and other healthcare providers to evaluate and care for a markedly increased volume of patients – challenging or exceeding the normal capacity of a hospital or healthcare system. Individual hospitals plan for and routinely handle surge requirements resulting from seasonal fluctuations in respiratory ailments, environmentally based conditions, and community incidents. In Contra Costa County, as throughout most of California, hospitals routinely function at or near capacity. Moderately sized incidents with several to, perhaps, hundreds of patients are handled in accordance with the County's Multi-Casualty Incident Plan. Patients are transported to hospitals throughout the county and throughout the region to avoid seriously overloading any single hospital. However, very large-scale incidents or widespread disease outbreaks may overwhelm the capacity of many or all hospitals and other health care providers within a region. Responding to such incidents requires the close coordination and cooperation of hospitals, skilled nursing facilities, health centers and community clinics, governmental agencies, and other healthcare providers.

The purpose of this plan is to provide a framework for the management of healthcare surge needs resulting from an incident that overwhelms the capacity of the healthcare system in Contra Costa and nearby counties in order to meet the overall goal of minimizing mortality and morbidity.

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[1] *California Department of Public Health Standards and Guidelines for Healthcare Surge During Emergencies, Foundational Knowledge*, issued 2008, p. 11.

B. Emergency Operations and Management

The Medical Surge Capacity Plan is a tool to be used when needed in conjunction with the Contra Costa Health Services Emergency Plan and the Contra Costa County Emergency Operations Plan. Contra Costa Health Services will be the lead agency coordinating medical surge activities. Emergency operations shall be conducted in accordance with the California Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).

C. Surge Levels

Five levels of healthcare surge are recognized by the California Department of Public Health to describe the status of a local (Operational Area) healthcare system using color codes ranging from green for day-to-day operations to black for the most significant healthcare surge. The surge level, which is determined in Contra Costa County by the Health Officer or his designee, refers to the status of the healthcare system as a whole and not to the status of any specific healthcare facility.

Surge Level Green

Surge Level Green is the normal day-to-day operating level of the county's healthcare system. Under Surge Level Green, some individual hospitals may be at Census Alert 1 or 2[2], but the healthcare system as a whole is operating within normal seasonal parameters.

Surge Level Yellow

Surge Level Yellow is the condition of the healthcare system in which most healthcare facilities are experiencing surge but are able to manage the situation within their organizational frameworks. Surge Level Yellow may be proclaimed, for example, during an unusually severe seasonal influenza. Surge Level Yellow serves to alert healthcare facilities and providers within the Operational Area (county), facilities and providers outside the operational area, and officials at various levels of government of the status of the healthcare system. However, no further governmental action is required.

Trigger: All or most hospitals on Census Alert 2 for three or more consecutive days.

Procedure: Health Officer directive upon recommendation of EMS Director.

Actions:

(1) EMS notification to hospitals, County Office of Emergency Services, Region II Regional Disaster Medical/Health Coordinator/Specialist (REMHC/S), and State Emergency Medical Services Authority (EMSA) and Department of Public Health Duty Officers.

(2) Hospitals request regulatory relief as appropriate.

[2] The Census Alert system was developed by the hospitals in Contra Costa and Alameda Counties with the Hospital Council of Central and Northern California and the support of the two counties' EMS Agencies to have a common vocabulary for identifying hospital status resulting from high inpatient volume. "Census Alert 1" indicates that a hospital has initiated some pre-planned steps to handle unusually high patient volume. "Census Alert 2" indicates that a hospital has taken most or all of its pre-planned steps to handle peak patient volume.

Surge Level Orange

Surge Level Orange is issued when healthcare facilities within the operational area can no longer handle surge demands within their own organizational frameworks after taking steps to expand capacity and curtail non-essential services. A local emergency *may* be proclaimed. The Health Officer may issue appropriate appeals to healthcare providers regarding extending capacities and hours of operations and to the public to avoid seeking non-emergency care.

Trigger: All or most hospitals on Census Alert 2, all or most hospitals have sought regulatory relief, and one or more hospitals have sought local government assistance with respect to surge demand.

Procedure: County Health Officer directive upon recommendation of County Emergency Medical Services (EMS) Director.

Actions:

(1) EMS notification to hospitals and other healthcare providers, County Office of Emergency Services, Region II RDMHC/S, and State EMSA and Department of Public Health Duty Officers.

(2) All hospitals request regulatory relief and begin activation of hospital surge plans as appropriate.

(3) Hospital bed polling increased from once to three times daily.

(4) Daily hospital conference call coordinated by EMS to assess hospital status and needs.

(5) Hospitals advised to cancel elective and non-essential procedures.

(6) Public information announcement issued by Health Officer.

(7) Local emergency proclamation may be issued.

Surge Level Red

Surge Level Red is issued when the local healthcare system is not capable of meeting the demand for care and assistance from outside the Operational Area is required. A local emergency is proclaimed and a State of Emergency Declaration may be issued by the Governor. Contra Costa Health Services will open its Departmental Operating Center (DOC) and the County's Emergency Operating Center (EOC) may be opened.

Trigger: All hospitals on Census Alert 2, all hospitals have sought regulatory relief, most or all hospitals are seeking local government assistance with respect to surge demand.

Procedure: Health Officer directive upon recommendation of EMS Director or Health Services DOC Director.

Actions:

(1) Action items 1 through 6, above.

(2) Hospitals activate hospital surge plans to the full extent consist with the situation at and applicable local Health Officer and gubernatorial directives, including statutory suspensions.

(2) Local emergency proclaimed and Governor's State of Emergency Declaration and appropriate emergency directives requested.

(3) State assistance requested in coordinating transfer of patients to out-of-county hospitals.

(4) Health Services Departmental Operating Center (DOC) and/or Operational Area Emergency Operating Center (EOC) activated.

Surge Level Black

Surge Level Black is issued when the local healthcare system is severely overwhelmed and is falling significantly short of meeting the demand for care. Significant medical resources from outside the Operational Area are required. A local emergency is proclaimed and the Governor is requested to issue a State of Emergency Declaration and appropriate emergency directives, including statutory suspensions. The County may consider opening Alternate Care Sites.

Trigger: All hospitals are overwhelmed and have sought regulatory relief, most or all hospitals requested local government assistance with respect to surge demand, and local government has been unable to provide needed assistance directly or through normal medical mutual aid channels.

Procedure: Health Officer directive upon recommendation of Health Services DOC Director.

Actions:

(1) Action items 1 through 4, above.

(2) California/Federal Disaster Medical Assistance Teams (CalMAT/DMAT) requested.

(3) Alternate Care Site(s) may be activated.

D. Planning Scenarios

The need for surge capacity may arise from a number of different scenarios ranging from a great earthquake to a highly toxic and widespread chemical release to pandemic influenza or other acutely infectious disease outbreak. The circumstances of such an incident may be natural or manmade, accidental or deliberate, time limited or continuing over an extensive period, localized in one county or region or spread over the state or nation. Each scenario presents its own set of considerations and constraints that will impinge on how surge capacity is handled. Key variables affecting surge capacity include:

(1) Number of patients

(2) Acuity of patients

Decontamination required?

Treat and release or hospital admission?

Specialized or complex surgical or medical treatment needed?

Ventilator needed?

Isolation required?

(3) Duration of incident

(4) Geographic scope

Are other areas impacted so that outside assistance is not available?

(5) Impact of incident on medical personnel and facilities

Earthquake damage to hospitals?

Hospital staff impacted by illness?

While each event will present its own unique set of challenges, for planning purposes four general scenarios have been considered.

Scenario #1 – Acute Infectious Disease

This scenario includes pandemic influenza, novel diseases such as severe acute respiratory syndrome (SARS), and infectious diseases thought to be potentially associated with bioterrorism such as smallpox. The scenario presents special challenges related to potential long duration, widespread impact, impact on health care workers, and impact on supply lines and community infrastructure. Additionally, there may be need for isolation and other protective measures. Large numbers of patients may be ventilator dependent. Pandemic disease outbreak presents unique problems in that (1) large numbers of healthcare personnel may be affected and (2) large areas of the state and nation may be simultaneously impacted thus limiting mutual aid response.

Scenario #2 – Acute Botulinum or other Acute Chemical Poisoning

This scenario includes major industrial accidents (refineries, chemical plants, tank cars), industrial sabotage, or terrorist attack. While relatively localized and time limited when compared to pandemic influenza, this scenario has the potential of affecting a population over many square miles and may result in patients seeking medical treatment over days or weeks. In 1993, an Oleum (sulfuric acid) railroad tank car release in Contra Costa County sent 22,000 persons to local hospitals and clinics seeking treatment over a 10-day period. While very few persons required emergency treatment or hospitalization, the sheer volume of patients severely impacted hospital resources and required the establishment of an alternate (non-hospital) to provide patient screening and triage over a period of several days. Under Scenario #2, there may be need for large amounts of nerve agent antidotes or anti-toxin not normally available in quantity at local hospitals. There may also be a demand for ventilators.

Scenario #3 – Trauma and Burn Care

Scenario #3 includes major earthquake and large-scale attack by explosive or incendiary device. This scenario is much more time limited and is apt to be more geographically focused. A great earthquake on the Hayward fault, however, is likely to cause widespread death and destruction throughout the East Bay and is likely to cripple hospitals located along the fault.

Scenario #4 – Radiation Induced Injury

This scenario includes spread of radioactive material over a large population by "dirty bomb" or other means, as well as attack by nuclear explosion. Depending on the device or material used, medical issues range from minor to catastrophic. Psychological effects may be profound. Staff availability may be impacted due to illness or safety concerns.

E. Resources for Medical Surge

1. Facilities

(a) Acute care hospitals

Table 1 shows the surge capacities reported by each of the county's nine acute care hospitals under each of the four planning scenarios. Surge capacity is reported as the number of additional patients (all patients and monitored patients) that could be handled by the hospital over and above the average daily census under austere medical conditions. The numbers are reflective of physical capacity without regard to staffing. The table also shows for each hospital the sources of the reported surge capacity; e.g., available staffed beds, early discharges, surge tents, etc. While surge capacity is reported without regard to staffing capability, a large proportion of the surge capacity reported by each facility (varies by scenario) is from staffed vacant beds, early discharges, and cancelled elective procedures. Thus, a certain amount of surge can be accomplished without compromising staffing levels.

Surge capacity to handle a major influenza epidemic is shown in Table 2. These figures utilize the reported surge capacities for an acute infectious disease scenario and the estimated increased hospital bed demand calculated using the Centers for Disease Control and Prevention FluSurge 2.0 software. Demand assumptions are for the peak week of a 6-week duration, 35 percent infection rate event, maximum scenario.[3] Overall, Contra Costa would have a shortage of some 223 hospital beds, including 114 monitored beds, with hospitals at their reported maximum surge capacity.[4]

(b) Other in-patient facilities

Skilled nursing and other non-acute-care in-patient facilities represent a secondary source of surge capacity. Table 3 provides a listing of all licensed in-patient facilities in the county (including the Veterans Administration Martinez Rehabilitation and Long Term Care facility, which is not licensed by the State). Not including acute care hospitals, these inpatient facilities account for a total of 3,525 beds. Assuming these facilities collectively could handle a surge of ten percent of licensed capacity, they could absorb some 350 additional patients. Primary use for

[3] These assumptions produce the highest single-week surge using the CDC FluSurge 2.0 software. Lengthening the duration, lowering the infection rate, or changing from a "maximum" to a "most likely" scenario, would reduce the maximum weekly admissions. Note also that, using CDC assumptions on length of hospital stay, results in the peak weekly admissions approximating the peak hospital census.

[4] Note that, using CDC assumptions on length of hospital stay, results in the peak weekly admissions approximating the peak hospital census.

this additional capacity would probably be for lower acuity patients discharged from acute care hospitals.

(c) Outpatient facilities

Table 4 lists Contra Costa Health Services health centers and other licensed outpatient facilities including community clinics, dialysis clinics, private psychiatric clinics, and surgi-centers. CCHS and community clinics can provide important resources for dispensing, triage, and outpatient care to divert patients away from hospital emergency departments when hospital care is not required. All community clinics are represented by the Community Clinic Consortium of Contra Costa County. Through the Consortium, community clinics have developed disaster plans, have acquired disaster and personal protective equipment and supplies, and have participated with Contra Costa Health Services in disaster exercises.

(d) Closed hospitals

The three closed hospitals – Los Medanos, VA Martinez and Doctors Pinole – are accounted for under outpatient facilities.

(e) Alternate Care Sites

Schools, hotels, or other facilities may be designated as Alternate Care Sites during a disaster or other large-scale emergency. The level of care will be primarily supportive care. Alternate Care Sites will be operated under the auspices of the Contra Costa County Employment and Human Services Department and Contra Costa Health Services with logistical support provided by the American Red Cross.

2. Personnel

Hospitals in Contra Costa and throughout most of the state operate at or near the minimum nurse staffing level required for the number of patients in the facility. While the number of personnel may be increased significantly on a short-term basis to handle certain surge situations, it is clear that, under any long-term scenario involving infectious disease or other conditions that may incapacitate hospital staff or present significant hazards to hospital staff, care may have to be provided under austere conditions that depart significantly from existing staffing ratios.

(a) Hospital and skilled nursing facility personnel can be effectively increased by 50 percent through implementation of extended shifts. Accommodation will need to be made for staff childcare.

(b) Contra Costa Health Services nursing personnel not normally assigned to hospital or health center operations may be reassigned to provide patient care at hospitals, health centers, clinics, or Alternate Care Sites.

(c) Field paramedics and EMTs may be enlisted to assist in patient care at Alternate Care Sites.

(d) Disaster Service Workers may be assigned to County-operated facilities, including Alternate Care Sites.

(d) Volunteer nurses and physicians may be recruited from the community as needed.

3. Equipment and supplies

Contra Costa's hospitals and clinics have obtained a wide variety of disaster equipment and supplies under the federal Health Resources and Services Administration (HRSA) and Hospital Preparedness Program (HPP) grants and other federal programs aimed at enhancing preparedness of local healthcare systems. Major categories of disaster equipment and supplies that impact surge capacity are as follows: (Some items may have been ordered, but not yet delivered.)

(a) Decontamination units – All hospitals are equipped with decontamination units and related equipment and supplies.

(b) Surge shelters – All hospitals are equipped with two surge shelter tents and related equipment and supplies (cots, lighting, generators, air conditioner/heater units, etc.) to handle up to 18 non-ambulatory patients per tent.

(c) Trauma and burn cache – John Muir Trauma Center has been equipped with an augmented trauma and burn cache designed to handle 50 trauma patients.

(d) Pharmaceuticals – All hospitals have stockpiled pharmaceutical caches. Additionally, CCRMC has stockpiled Doxycycline for prophylaxis of all first responders and family members. The County has a plan in place for implementation of the Strategic National Stockpile.

(e) Ventilators – Hospitals report a total inventory of 147 full-scale ventilators and an average daily usage of 73, leaving an average availability of 74 full-scale ventilators to meet surge needs. Hospitals report that an additional 82 full-scale ventilators can be obtained from affiliated facilities or leased from vendors, bringing the total number of full-scale ventilators available for surge to about 156. Forty portable disposable ventilators are additionally stockpiled at each of the county's nine acute care hospitals, for a total of 360 portable disposable ventilators..

(f) CHEMPACKS – Three CHEMPACK caches containing enough nerve-agent antidotes to treat 2,000 persons ***(Information redacted from public release. Sensitive information for official use only)***.

(g) Protective supplies and equipment – All hospitals have obtained personal protective equipment and supplies including powered air purifying respirators (PAPRs), protective clothing, portable HEPA filters, and supplies of N95 masks. Except for the PAPRs, community clinics have obtained similar protective equipment and supplies for disaster response.

(h) Communications and infrastructure – All hospitals and community clinics have obtained portable satellite telephones for backup communications in the event of a disaster. Community clinics have upgraded computer networks, installed emergency power, and obtained outside lighting to enhance operational capabilities. Interoperable 440-mhz radios are being installed during 2008 in hospital command centers, community clinics, and skilled nursing facilities (SNFs) to link these facilities to the County's trunked public service radio system. This will provide a backup to the existing ReddiNet computer network and MEDARS radio system used to link hospital emergency departments, ambulance dispatch centers, and the County EMS Agency for day-to-day use.

4. Resource Tracking

Contra Costa has established a web-based Asset Logistics and Resources Management System (ALARMS) developed by Ecology and Environment, Inc. to inventory disaster medical supplies and equipment at each facility and to track usage during an actual disaster. Each facility has access to review all inventoried equipment and supplies and, when completed, will have access to update its own inventory.

F. Alternate Care Sites

The *California Department of Public Health Standards and Guidelines for Healthcare Surge During Emergencies* defines a government-authorized Alternate Care Site as:

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

While the development of a detailed Alternate Care Site plan for Contra Costa County has awaited the release of the above *Guidelines*, an Alternate Care Site Planning Team has been meeting to establish a concept of operations. That team includes representatives from Contra Costa Health Services (Contra Costa Regional Medical Center, Public Health, and Emergency Medical Services), Contra Costa County Department of Employment and Human Services, Contra Costa Sheriff's Office of Emergency Services, and the American Red Cross. A medical ethicist is included on the team. The basic concept of operations is as follows:

(1) One or more Alternate Care Sites will be established as needed and as resources permit to provide in-patient comfort care and minimal medical care to persons for whom hospitalization is not appropriate and for whom home care is not a viable option as population-based standards of care are adopted during a catastrophic health emergency. Because resources for care at Alternate Care Sites are expected to be extremely limited, these sites will focus on admissions directly from the community rather than transfers from licensed healthcare facilities.

(2) Location of Alternates Care Sites will be selected jointly be Contra Costa Health Services, Department of Employment and Human Services, and American Red Cross from among shelter sites identified by American Red Cross. High schools identified as shelter sites by the Red Cross will likely be most suitable for Alternate Care Site operations.

(3) Alternate Care Sites will be managed in accordance with SIMS/NEMS under a joint command including the Departments of Employment and Human Services and Health Services. Employment and Human Services will be responsible for overall management and administration of Alternate Care Sites. Contra Costa Health Services will be responsible for medical management and patient care.

(4) The American Red Cross will assist with logistical support including the provision of standard emergency shelter supplies and food. Red Cross personnel, however, will not be expected to enter an Alternate Care Site once patients are present.

(5) In selecting Alternate Care Site locations, consideration will be given to providing access to persons living in low-income communities.

(6) Disaster Services Workers from cities and County departments in addition to Employment and Human Services and Health Services as well as community health care volunteers will likely be needed to assist in the staffing of Alternate Care Sites.

Table 1 - Hospital Patient Surge Capacity

	CCRMC	Doctors	Kaiser Antioch	Kaiser Richmond	Kaiser WC	Muir Concord	Muir WC	San Ramon	Sutter Delta	Total
Average Patient Census										
All acute care beds	80	100	78	45	174	148	269	72	70	1,036
Monitored beds	12	25	12	45	24	20	30	10	8	186
Acute Infectious Disease Surge Capacity										
All additional patients	137	32	76	30	106	158	280	231	26	1,076
Additional monitored patients	8	6	12	10	35	5	70	24	2	172
Source of surge capacity:										
Available Staffed Beds	21	2	5	10	30	10	5	65	0	148
Early Dismissals	30	4	5	5	32	10	100	30	1	217
Canceled Elective Procedures	6	3	0	5	0	11	40	20	3	88
Currently Vacant Unstaffed Beds	0	3	0	5	0	27	0	26	0	61
Additional Bed Capacity Within Hospital (Cots, Gurneys, Hallways, etc.)	30	5	34	5	20	20	30	10	2	156
Use of Alternate Facilities Under Hospital Control (e.g. Outpatient Clinic, Day Surgery Center, Imaging Center)	0	2	0	0	0	0	25	70	0	97
Temporary Shelter on Hospital Property (including Cots in Tents)	50	13	32	0	0	80	80	10	20	285
Acute Botulinum or Other Chemical Poisoning Surge Capacity										
All additional patients	137	35	96	35	106	158	280	251	14	1,112
Additional monitored patients	4	5	12	10	20	5	70	21	7	154
Source of surge capacity:										
Available Staffed Beds	21	5	5	10	59	10	5	75	7	197
Early Dismissals	30	5	5	5	25	10	100	50	5	235
Canceled Elective Procedures	6	0	0	5	0	11	40	20	2	84
Currently Vacant Unstaffed Beds	0	5	0	5	0	27	0	26	0	63
Additional Bed Capacity Within Hospital (Cots, Gurneys, Hallways, etc.)	30	5	34	5	20	20	30	10	0	154
Use of Alternate Facilities Under Hospital Control (e.g. Outpatient Clinic, Day Surgery Center, Imaging Center)	0	5	0	5	0	0	25	60	0	95
Temporary Shelter on Hospital Property (including Cots in Tents)	50	10	32	0	0	80	80	10	0	262
Trauma or Burn Surge Capacity										
All additional patients	137	35	76	30	106	0	280	10	1	675
Additional monitored patients	4	4	0	10	20	0	70	5	1	114
Source of surge capacity:										
Available Staffed Beds	21	5	5	10	59	0	5	0	0	105
Early Dismissals	30	5	5	5	25	0	100	5	1	176
Canceled Elective Procedures	6	0	0	5	0	0	40	0	0	51
Currently Vacant Unstaffed Beds	0	5	0	5	0	0	0	5	0	15
Additional Bed Capacity Within Hospital (Cots, Gurneys, Hallways, etc.)	30	5	34	5	20	0	30	0	0	124
Use of Alternate Facilities Under Hospital Control (e.g. Outpatient Clinic, Day Surgery Center, Imaging Center)	0	10	0	0	0	0	25	0	0	35
Temporary Shelter on Hospital Property (including Cots in Tents)	50	5	32	0	0	0	80	0	0	167
Radiation Induced Injury Surge Capacity										
All additional patients	137	42	76	35	106	158	280	35	4	873
Additional monitored patients	4	5	0	10	20	5	70	5	4	123
Source of surge capacity:										
Available Staffed Beds	21	10	5	10	59	10	5	5	1	126
Early Dismissals	30	10	5	5	25	10	100	25	1	211
Canceled Elective Procedures	6	0	0	5	0	11	40	0	2	64
Currently Vacant Unstaffed Beds	0	5	0	5	0	27	0	5	0	42
Additional Bed Capacity Within Hospital (Cots, Gurneys, Hallways, etc.)	30	2	34	5	20	20	30	0	0	141
Use of Alternate Facilities Under Hospital Control (e.g. Outpatient Clinic, Day Surgery Center, Imaging Center)	0	5	0	5	0	0	25	0	0	35
Temporary Shelter on Hospital Property (including Cots in Tents)	50	10	32	0	0	80	80	0	0	252

Table 2 - Hospital Patient Surge Capacity for Pandemic Influenza

	CCRMC	Doctors	Kaiser Antioch	Kaiser Richmond	Kaiser WC	Muir Concord	Muir WC	San Ramon	Sutter Delta	Total
Average Patient Census:										
All acute care beds	80	100	78	45	174	148	269	72	70	1,036
Monitored beds	12	25	12	45	24	20	30	10	8	186
Acute Infectious Disease Surge Capacity:										
All additional patients	137	32	76	30	106	158	280	231	26	1,076
Additional monitored patients	8	6	12	10	35	5	70	24	2	172
Total Capacity (Average Patient Census + Surge Capacity):										
All patients	217	132	154	75	280	306	549	303	96	2,112
Monitored patients	20	31	24	55	59	25	100	34	10	358
Peak Weekly Demand - 35% Attack Rate, 6-Week Duration:										
All additional patients	133	81	95	46	172	188	338	186	59	1,299
Additional monitored patients	16	25	19	44	47	20	80	27	8	286
Total Demand - Average Patient Census + Peak Influenza Demand:										
All patients	213	181	173	91	346	336	607	258	129	2,335
All monitored patients	28	50	31	89	71	40	110	37	16	472
Surplus (Shortfall) Surge Capacity:										
All patients	**4**	**(49)**	**(19)**	**(16)**	**(66)**	**(30)**	**(58)**	**45**	**(33)**	**(223)**
Monitored patients	**(8)**	**(19)**	**(7)**	**(34)**	**(12)**	**(15)**	**(10)**	**(3)**	**(6)**	**(114)**
Isolation Capability:										
Number of Airborne Infection Isolation Rooms	8	3	11	6	9	14	11	4	4	70
Number of fixed High Efficiency Particulate Air (HEPA) isolation systems.	0	8	11	6	5	0	0	1	4	35
Number of portable HEPA isolation systems on site	2	0	1	6	5	4	2	6	5	31
Number of additional portable HEPA isolation systems can be leased, rented or purchased	0	0	10	0	25	2	4	2	0	43
Ventilators:										
Number of operational ventilators in facility (traditional, full scale)	10	15	16	8	32	24	22	12	8	147
Average number in daily use	3	9	8	3	15	10	16	5	4	73
Number of transport and disposable ventilators in facility	2	2	2	3	4	1	5	1	1	21
Number of ventilators that can be mobilized from associated facilities	2	0	0	10	5	8	0	0	0	25
Number of ventilators that can be leased, rented, or purchased to accommodate a sudden surge of patients	2	20	5	10	5	4	4	2	5	57
Total number of ventilators available					61	47	47	20	18	193
Number of ventilators available to accommodate surge	13	28		28	31	27	15	10	10	162

Table 3 - Licenced In-Patient Facilities

Facility	Address	City	Region	Type	Beds	Staffed Beds
CONTRA COSTA REGIONAL MEDICAL CENTER	2500 ALHAMBRA AVENUE	MARTINEZ	C	GAC	164	164
DOCTORS MEDICAL CENTER - PINOLE CAMPUS (closed)	2151 APPIAN WAY	PINOLE	W	GAC	136	0
DOCTORS MEDICAL CENTER - SAN PABLO CAMPUS	2000 VALE ROAD	SAN PABLO	W	GAC	247	232
JOHN MUIR MEDICAL CENTER, CONCORD CAMPUS	2540 EAST STREET	CONCORD	C	GAC	254	254
JOHN MUIR MEDICAL CENTER, WALNUT CREEK CAMPUS	1601 YGNACIO VALLEY ROAD	WALNUT CREEK	C	GAC	322	321
KAISER FND HOSP - ANTIOCH	4501 SANDCREEK ROAD	ANTIOCH	C	GAC	130	78
KAISER FND HOSP - WALNUT CREEK	1425 SOUTH MAIN STREET	WALNUT CREEK	C	GAC	233	229
KAISER FNDN HOSP - RICHMOND CAMPUS	901 NEVIN	RICHMOND	W	GAC	50	50
SAN RAMON REGIONAL MEDICAL CENTER	6001 NORRIS CANYON ROAD	SAN RAMON	S	GAC	123	123
SAN RAMON REHABILITATION HOSPITAL (closed)	7777 NORRIS CANYON ROAD	SAN RAMON	S	GAC	80	0
SUTTER DELTA MEDICAL CENTER	3901 LONE TREE WAY	ANTIOCH	E	GAC	110	111
VETERNS ADMINISTRATION CENTER FOR REHAB & EXT CAR	150 MUIR ROAD	MARTINEZ	C	VA	122	
JOHN MUIR BEHAVIORIAL HEALTH CENTER	2740 GRANT STREET	CONCORD	C	PSYCH	73	
HOSPICE HOUSE - ALAMO	2849 MIRANDA AVENUE	ALAMO	S	CLF	6	
ALHAMBRA CONVALESCENT HOSPITAL	331 ILENE STREET	MARTINEZ	C	SNF	44	
ANTIOCH CONVALESCENT HOSPITAL	1210 A STREET	ANTIOCH	E	SNF	99	
BAYBERRY CARE CENTER	1800 ADOBE STREET	CONCORD	C	SNF	99	
BROOKVUE CARE CENTER	13328 SAN PABLO AVENUE	SAN PABLO	W	SNF	108	
CARE CENTER OF ROSSMOOR	1224 ROSSMOOR PARKWAY	WALNUT CREEK	C	SNF	180	
CREEKSIDE HEALTHCARE CENTER	1900 CHURCH LANE	SAN PABLO	W	SNF	80	
DANVILLE HEALTH CARE CENTER	336 DIABLO ROAD	DANVILLE	S	SNF	54	
DIAMOND RIDGE HEALTHCARE CENTER	2351 LOVERIDGE ROAD	PITTSBURG	E	SNF	120	
GREENRIDGE SENIOR CARE	2150 PYRAMID DRIVE	RICHMOND	W	SNF	60	
HOME FOR JEWISH PARENTS	4000 CAMINO TASSAHARA	DANVILLE	S	SNF	60	
LAFAYETTE CONVALESCENT HOSPITAL	1010 FIRST STREET	LAFAYETTE	C	SNF	52	
LONE TREE CONVALESCENT HOSPITAL	4001 LONE TREE WAY	ANTIOCH	E	SNF	99	
MANORCARE HEALTH SERVICES	1975 TICE VALLEY BLVD.	WALNUT CREEK	C	SNF	120	
MANORCARE HEALTH SERVICES - ROSSMOOR PARKWAY	1226 ROSSMOOR PARKWAY	WALNUT CREEK	C	SNF	155	
MARTINEZ CONVALESCENT HOSPITAL	4110 ALHAMBRA WAY	MARTINEZ	C	SNF	36	
MUIR SENIOR CARE	1790 MUIR ROAD	MARTINEZ	C	SNF	96	
OAK PARK CONVALESCENT HOSPITAL	1625 OAK PARK BOULEVARD	PLEASANT HILL	C	SNF	51	
ORINDA CONVALESCENT HOSPITAL	11 ALTARINDA ROAD	ORINDA	C	SNF	49	
PATTERSON CARE CENTER	550 PATTERSON BOULEVARD	PLEASANT HILL	C	SNF	166	
PITTSBURG CARE CENTER	535 SCHOOL STREET	PITTSBURG	E	SNF	49	
RHEEM VALLEY CONVALESCENT HOSPITAL	348 RHEEM BOULEVARD	MORAGA	C	SNF	49	
ROSEWOOD CARE CENTER	1911 OAK PARK BOULEVARD	PLEASANT HILL	C	SNF	113	
SAN MARCO NURSING AND REHABILITATION CENTER	130 TAMPICO STREET	WALNUT CREEK	C	SNF	128	
SAN MIGUEL VILLA	1050 SAN MIGUEL ROAD	CONCORD	C	SNF	190	
SHIELDS NURSING CENTER	3230 CARLSON BOULEVARD	EL CERRITO	W	SNF	45	
SHIELDS/RICHMOND NURSING CENTER	1919 CUTTING BOULEVARD	RICHMOND	W	SNF	84	
ST. THOMAS ANTHONY'S HOSPITAL	2140 VALE ROAD	SAN PABLO	W	SNF	45	
STONEBROOK HEALTHCARE CENTER	4367 CONCORD BOULEVARD	CONCORD	C	SNF	120	
VALE HEALTHCARE CENTER	13484 SAN PABLO AVENUE	SAN PABLO	W	SNF	202	
VALLEY MANOR REHABILITATION CENTER	3806 CLAYTON ROAD	CONCORD	C	SNF	190	
VINTAGE ESTATES OF RICHMOND	955 - 23RD STREET	RICHMOND	W	SNF	35	
WILLOW PASS HEALTHCARE CENTER	3318 WILLOW PASS ROAD	CONCORD	C	SNF	81	
WOODLAND NURSING INN	3721 MT. DIABLO BOULEVARD	LAFAYETTE	C	SNF	30	
YGNACIO VALLEY CARE CENTER	1449 YGNACIO VALLEY ROAD	WALNUT CREEK	C	SNF	99	

Table 4 - Outpatient Facilities

NAME	ADDRESS	CITY	TYPE
ANTIOCH HEALTH CENTER	3505 LONE TREE WAY	ANTIOCH	CCHS CLINIC
BAY POINT FAMILY HEALTH CENTER	215 PACIFICA AVENUE	BAYPOINT	CCHS CLINIC
BRENTWOOD HEALTH CENTER	171 SAN CREEK ROAD	BRENTWOOD	CCHS CLINIC
CONCORD HEALTH CENTER	3052 WILLOW PASS ROAD	CONCORD	CCHS CLINIC
CONCORD PUBLIC HEALTH CLINIC	2355 STANWELL CIRCLE	CONCORD	CCHS CLINIC
MARTINEZ FAMILY PRACTICE CENTER	2500 ALHAMBRA AVENUE	MARTINEZ	CCHS CLINIC
MARTINEZ SPECIALITY CENTER	2501 ALHAMBRA AVENUE	MARTINEZ	CCHS CLINIC
NORTH RICHMOND CENTER FOR HEALTH	1501 THIRD STREET	RICHMOND	CCHS CLINIC
PITTSBURG HEALTH CENTER	2311 LOVERIDGE ROAD	PITTSBURG	CCHS CLINIC
RICHMOND HEALTH CENTER	100 38TH STREET	RICHMOND	CCHS CLINIC
BROOKSIDE COMMUNITY HEALTH CENTER	2023 VALE ROAD, STE. 107	SAN PABLO	COMMUNITY CLINIC
CONCORD PUBLIC HEALTH CLINIC	2355 STANWELL CIRCLE	CONCORD	COMMUNITY CLINIC
LA CLINICA MONUMENT	2100 MONUMENT BLVD.	PLEASANT HILL	COMMUNITY CLINIC
LA CLINICA PITTSBURG - DENTAL	339 E. LELAND DRIVE	PITTSBURG	COMMUNITY CLINIC
LA CLINICA PITTSBURG - MEDICAL	2240 GLADSTONE DRIVE, NO.4	PITTSBURG	COMMUNITY CLINIC
PITTSBURG PUBLIC HEALTH CLINIC	2311 LOVERIDGE ROAD	PITTSBURG	COMMUNITY CLINIC
PLANNED PARENTHOOD - ANTIOCH	1104 BUCHANAN ROAD, C10	ANTIOCH	COMMUNITY CLINIC
PLANNED PARENTHOOD OF CONTRA COSTA-CONCORD CENTER	2185 PACHECO STREET	CONCORD	COMMUNITY CLINIC
PLANNED PARENTHOOD OF CONTRA COSTA-RICHMOND CENTE	2970 HILLTOP MALL, STE 307	RICHMOND	COMMUNITY CLINIC
PLANNED PARENTHOOD OF CONTRA COSTA-WALNUT CREEK	1357 OAKLAND BOULEVARD	WALNUT CREEK	COMMUNITY CLINIC
PLANNED PARENTHOOD SAN RAMON CENTER	130 RYAN INDUSTRIAL COURT NO.115	SAN RAMON	COMMUNITY CLINIC
PREGNANCY CARE CLINIC	4991 CLAYTON ROAD	CONCORD	COMMUNITY CLINIC
RICHMOND PUBLIC HEALTH CLINIC	100 38TH STREET	RICHMOND	COMMUNITY CLINIC
ROSSMOOR MEDICAL CENTER, INC.	1220 ROSSMOOR PARKWAY	WALNUT CREEK	COMMUNITY CLINIC
WEST COAST CHILDRENS CENTER	545 ASHBURY AVENUE	EL CERRITO	COMMUNITY CLINIC
ANTIOCH DIALYSIS CENTER	3100 DELTA FAIR BLVD.	ANTIOCH	DIALYSIS
DIABLO RENAL SERVICES	2386 BUCHANAN ROAD	ANTIOCH	DIALYSIS
DIABLO RENAL SERVICES OF CONCORD	508 D CONTRA COSTA BLVD. NO.D	PLEASANT HILL	DIALYSIS
DIABLO RENAL SERVICES OF WALNUT CREEK	1911 SAN MIGUEL DRIVE	WALNUT CREEK	DIALYSIS
DIABLO RENAL SERVICES, INC - PITTSBURG UNIT	2155 LOVERIDGE ROAD	PITTSBURG	DIALYSIS
FRESENIUS MEDICAL SERVICES OF BRENTWOOD	4510 O'HARA AVENUE, SUITE B	BRENTWOOD	DIALYSIS
GAMBRO HEALTHCARE - EL CERRITO	10690 SAN PABLO AVENUE	EL CERRITO	DIALYSIS
GAMBRO HEALTHCARE - SAN PABLO	14020 SAN PABLO AVE., SUITE B	SAN PABLO	DIALYSIS
WALNUT CREEK DIALYSIS CENTER	108 LA CASA VIA, NO.106	WALNUT CREEK	DIALYSIS
PORTIA BELL HUME BEHAVIORAL HEALTH AND TRAINING CTR	2151 SALVIO STREET, STE. T	CONCORD	PSYCHIATRIC
BLACKHAWK SURGERY CENTER, INC	4165 BLACKHAWK PLACE CIRCLE	DANVILLE	SURGICAL CLINIC
CALIFORNIA EYE CLINIC	3747 SUNSET LANE, SUITE A	ANTIOCH	SURGICAL CLINIC
DANVILLE AMBULATORY SURGERY CENTER	905 SAN RAMON VLY BL BLDG B110	DANVILLE	SURGICAL CLINIC
EYE CENTER OF NORTHERN CALIFORNIA SURGICENTER	6500 FAIRMONT	EL CERRITO	SURGICAL CLINIC
LASER SURGERY CENTER, LTD	2021 YGNACIO VLY RD BL H NO.102	WALNUT CREEK	SURGICAL CLINIC
PREMIER SURGERY CENTER	2222 EAST STREET, SUITE 200	CONCORD	SURGICAL CLINIC
SAN RAMON ENDOSCOPY CENTER, INC.	5801 NORRIS CANYON ROAD, SUITE 22	SAN RAMON	SURGICAL CLINIC
SEQUOIA SURGICAL PAVILION	2405 SHADELANDS DRIVE	WALNUT CREEK	SURGICAL CLINIC
SIERRA SURGI-CENTER	1601 YGNACIO VALLEY	WALNUT CREEK	SURGICAL CLINIC
TRESANTI MEDICAL CORPORATION, THE	5201 NORRIS CANYON ROAD, SUITE 10	SAN RAMON	SURGICAL CLINIC