

# ALAMEDA COUNTY OPERATIONAL AREA

## PEDIATRIC MEDICAL SURGE PLAN AND RESOURCES

JULY 6, 2017

### PRINCIPLES AND ASSUMPTIONS:

- Plan would be activated in response to an event that has a disproportionate number of pediatric patients.
- In a medical surge / disaster event, many patients may require a high level of acute care as normally provided in an ICU. Increased hospital ICU/PICU/NICU capacity will be a priority.
- **In a “declared disaster”** – pandemic or large MCI event, Alameda County EMS may need to expand the system-wide hospital pediatric staffed bed capability.

### GOAL

- Increase pediatric medical surge capacity and capability using hospital capability tiered approach and expansion for critical care during an MCI/disaster event
- **Expand hospital’s existing capability** – each individual hospital will determine what specific strategies to implement to meet their surge capacity target.

### PEDIATRIC MEDICAL SURGE PLAN - CONOPS

- This plan is founded on a tiered system based on capacity and capability. Therefore, patient age and acuity need to be considered when determining the location where children will be treated.
- Given the variability in pediatric care on a daily basis, all hospitals are requested to plan for an event resulting in a surge of pediatric patients. Although hospital capabilities and capacity vary, all hospitals will need to participate to meet the medical surge needs of children.
- This plan is based on caring for more critically ill children in facilities that are accustomed to caring for children and allowing them to decompress less critically ill children to other facilities.

### HOSPITAL CAPABILITY TIERED APPROACH

- Patients should be distributed to an appropriate level of care given the specific circumstances of the situation. The tiered options provide general guidelines that may be used in a surge that disproportionately affects children as a method for supporting distribution of patients throughout the County.
- A pediatric medical subject matter experts should be consulted in the triage and distribution of patients when operationalizing this plan (including at the OA EOC if activated)
- Pediatric acute patients would be cared for at facilities that may or may not typically care for children. The goal would be to triage older (over age eight), more stable patients to those facilities not accustomed to caring for children.
- The plan includes using existing PICU capacity and expanding that PICU capacity as much as possible during a surge situation. All facilities with existing PICUs would need to meet the surge for additional PICU patients. The adult trauma centers and their ICUs would also need to expand capacity and their capability to meet the PICU need. This plan calls upon hospitals with PICU capability to accommodate the surge of PICU patients. This may require a shifting of non-critical patients from these facilities so that the most critically ill children are cared for at hospitals that are accustomed to caring for and treating critically ill children. The remainder of the hospitals will be called upon to meet the pediatric acute care surge need. This means that as an event unfolds, there may be a need for secondary transfers of patients to move more stable patients to alternate locations.

HOSPITAL CAPACITY EXPANSION STRATEGIES – FOR CRITICAL CARE ICU/PICU/NICU

**HOSPITAL PEDIATRIC TIERED EXPANSION OPTIONS**  
**– FOR CRITICAL CARE ICU/PICU/NICU**

The following hospital bed expansion options for critical care will be considered.

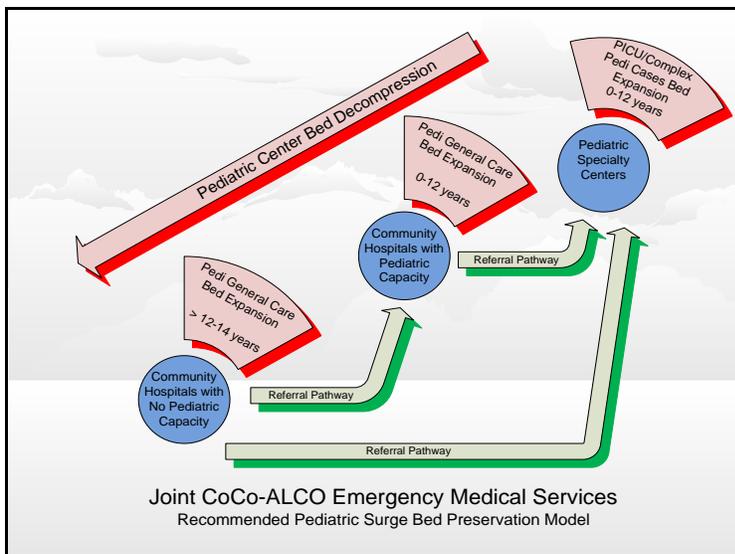
**UNDECLARED DISASTER**

- OPTION 1A** (Table 1):
  - All hospitals use 5% flex to increase their inpatient PEDIATRIC critical care capacity by 5% in PICU and ICU (not to exceed total allowed licensed beds).

**DECLARED DISASTER**

- OPTION 1B** (Table 2):
  - All hospitals increase their PEDIATRIC beds over their licensed bed capacity by 5% in PICU & ICU (above total licensed capacity).
- OPTION 2** (Table 3):
  - All hospitals in Alameda County with ICU or PICU beds, double their number of staffed ICU and PICU beds.
- OPTION 3** (Table 4):
  - All hospitals take 5 additional PEDIATRIC patients in their ICU and PICU.
- OPTION 4** (Table 5):
  - All hospitals increase their PEDIATRIC beds over their total licensed bed capacity by 10% in ICU and PICU.

	HOSPITAL CAPABILITY (BASED ON LICENSED BEDS)	DESCRIPTION	
	<b>CRITICAL CARE FOR PEDIATRICS</b>		
	- PICU (UCSF Benioff Children’s Hospital; Kaiser Permanente Oakland)	PEDIATRIC PICU	
	- NICU	NICU	
	- ICU	ICU	
	- TRAUMA CENTERS	ADULT & PEDIATRIC TRAUMA CENTERS	
	<b>GENERAL MEDICAL/SURG CARE FOR PEDIATRICS</b>		
	- GENERAL PEDIATRIC BEDS	PEDIATRIC ACUTE BEDS	
	- GENERAL MED/SURGE BEDS; NO LICENSED PEDIATIRC BEDS		
	<b>NO INPATIENT IN-PATIENT PEDIATRIC BEDS</b>		
- NO PEDIATRIC CRITICAL CARE; NO PEDIATRIC BEDS - - - -			
- EMERGENCY ROOM ONLY			



## 5 % FLEX OPTION – ALL HOSPITALS

- In Alameda County, hospital pediatric expanded bed capacity could increase 100% using the 5% flex model and critical care expansion options.
- Each hospital may identify the 5% flex approach that is within their capabilities. Hospitals would likely be called on to do more in catastrophic events however building in a 5% flex capacity dramatically increases **the county's capacity to handle the "in-between" known to be required in disaster response based on the H1N1 experience.**
  - Each hospital may consider how far the organization can stretch without disrupting operations is key.
  - The Alameda County Medical Surge Model for pediatric and neonatal care allows hospitals to work toward a minimal level of inpatient pediatric/neonatal capacity that is both sustainable and realistic.
  - Fundamental to this approach is the understanding that all health care providers have received training in pediatric care as part of their path to licensure.
  - In addition, it is not unusual to find staff working in non-pediatric settings within the hospital who have significant experience in pediatrics.
- What follows is a description of the different pathways hospitals can use to expand neonatal or pediatric medical surge capacity. It utilizes a cafeteria plan approach for hospitals to respond.
  - **Determine with appropriate hospital leadership how your facility may be using 5% flex to accommodate the influx of neonatal/pediatric patients during a medical surge.**
  - Hospitals are allowed by CDPH to use 5% of their total licensed beds (known as Flex Beds) to accommodate patients of all types without special permissions, provided Title 22 standards of care are met for competency, equipment and staffing for the patients involved is met.
- If the number of patients cannot be managed using 5% flex, altered standards of care may be required, generating the need for additional permissions, interruptions in normal hospital operations (e.g. elective surgeries cancelled) and approval from CDPH Licensing and Accreditation prior to implementation. Hospitals who do not adhere to these strict requirements may be subject to fines and penalties.

## HOSPITALS WITH EMERGENCY DEPARTMENTS

- All hospitals in Alameda County have 9-1-1-approved emergency departments, and emergency department boarding is the most common approach used in normal and surge conditions.
- Pediatric patients have been reported to require boarding for up to 3-5 days in emergency departments under surge conditions.
- All emergency department personnel are competent in the care of pediatric patients and emergency departments are equipped with appropriate equipment to care for children.
- However, emergency department providers may lack confidence or experience in the care of the critically ill child who comes to the ED much less often.
- In any pediatric event of scale, equipment, personnel and ED pediatric boarding capacity could be overwhelmed.
- Therefore, alternatives may be considered and planned to supplement this strategy.

## HOSPITALS WITH PEDIATRIC INPATIENT CARE UNITS AND PICU

- Hospitals with inpatient pediatric units during surge are best able to manage more complex pediatric patients that may not be suitable for settings that are less familiar with this population.
- Equipment, staff and competency are part of the normal workflow.
- However, in surge it may be necessary to utilize these staff to train and supervise the care of nursing staff not experienced in pediatrics in order to accommodate numbers of children for extended periods of time.
- This allows hospitals to expand bed capacity in ways not previously anticipated yet continue to give reliable, safe patient care.
- Hospitals with these resources may be able to expand well beyond the 5% flex bed goal in these conditions.

## HOSPITALS WITH WELL BABY, SPECIAL CARE NURSERY OR NICU

- For hospitals with these resources, inpatient neonatal or pediatric capacity may include a plan to use a **hospital's licensed 5% flex bed capacity to care for children up to 1-3 years of age.**
- Equipment issues, including appropriate cribs would need to be addressed, however, all hospitals have vendors and supplies for appropriate pediatric equipment for their emergency departments.
- Additional just-in-time training to support staff competency could be rapidly achieved in this workforce and supplemented with pediatricians, mid-level pediatric practitioners or nurses with strong pediatric experience from the emergency department or pediatric unit or ambulatory care clinics as needed.
- The ESCAPE (Enhanced Surge Capacity and Partnership Effort) Project, using pediatric/neonatal ICU consultation via telehealth, has demonstrated in Critical Access Hospitals, that neonatologists, pediatricians and nursing staff are effective in managing acutely ill and selected critically ill pediatric and neonates.

## HOSPITALS WITHOUT NICU, OB OR INPATIENT PEDIATRICS

- In these facilities, it is recommended that pediatric medical surge plans utilize their 5% flex capacity to take adult-size children from age 12 to 18.
- In this scenario, equipment needs are minimized due to the patients adult size and adolescent-patient care competency is not that different from the young adults staff already interact with.
- Competency requirements and specialized staffing needs would be reduced while still accommodating pediatric patients.

## RESOURCES:

- National EMSC Pediatric Disaster Preparedness Toolbox  
<https://emscimprovement.center/resources/toolboxes/pediatric-disaster-preparedness-toolbox/>
- EMSC National Pediatric Readiness Project  
<http://www.pediatricreadiness.org/>
- California Hospital Association – Pediatric Disaster Planning  
<http://www.calhospitalprepare.org/pediatrics-nicu>
- National Pediatric Disaster Coalition  
<https://sites.google.com/site/pedineonetwork/>
- National Advisory Committee on Children and Disasters – Pediatric Surge Capacity Report  
<https://www.phe.gov/Preparedness/legal/boards/naccd/meetings/Documents/naccd-surge-capacity-rpt042815.pdf>