Appendix 1

Hospital Surge Capacity and Capability Planning Guide

ARIZONA DEPARTMENT OF HEALTH SERVICES
HOSPITAL SURGE CAPACITY AND CAPABILITY PLANNING GUIDE
(Developed and maintained by the Bureau of Emergency Preparedness and Response)

I. GENERAL

A. Purpose: The purpose of the Hospital Surge Capability and Capacity Plan is to provide a framework for applying federal, state, regional, and local resources and capabilities to deliver hospital based care during a large scale public health emergency. A public health emergency may consist of victims from a chemical, biological, radioactive, nuclear, high yield explosive (CBRNE) event as well as a man made, natural disaster, or pandemic event. The Arizona Department of Health Services (ADHS) will notify hospitals of any condition or situation requiring their potential or immediate response to a public health emergency.

1. Medical surge describes the ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community.

2. Capacity is the ability to evaluate and care for a markedly increased volume of patients that exceeds normal operating requirements.

3. Capability refers to the ability to manage patients requiring unusual or very specialized medical evaluation and care.

B. Scope: This document is intended to provide guidance for coordination of hospital response to public health emergencies that occur within the State of Arizona.

C. Direction and Control:

1. Incident Command: ADHS will use the Incident Command System (ICS) as outlined in the National Incident Management System (NIMS) and directed by the National Response Plan (NRP) to work with other agencies and organizations in a coordinated manner based on the size and scope of the public health emergency.

2. Hospitals: Hospitals in Arizona will use the Hospital Emergency Incident Command System (HEICS) during a public health emergency.

3. Local Health Jurisdictions: ADHS will support local jurisdictions and regions through the Health Emergency Operations Center (HEOC).

4. Emergency Management: ADHS will coordinate with the State Emergency Operations Center (EOC) and local jurisdiction EOCs.

D. Activation and System Response:

ADHS will alert hospital emergency departments, community health centers, tribal health centers, and ambulance companies of events according to the following 6 categories:

- MCI (Burn, Explosion, Chemical, Radiation, Trauma or Biological)
  - Law Enforcement
  - Evacuation
  - Natural Disaster
  - NDMS
  - Amber Alert

Information regarding activation and system response will be communicated via the EMSystem. ADHS may refer hospital personnel on the EMSystem to the Secure Integrated Response Electronic Notification (SIREN) for further detailed information.
In addition, event information will be sent through the Health Alert Network (HAN) to hospital administration and emergency departments, infection control practitioners, physicians, nurse practitioners, community and tribal health centers, local health departments and other agencies via fax, e-mail and conference calls.

II. SIX TIER SYSTEM

The Arizona plan for regional hospital surge capacity is shown in Table 1 and is consistent with the Department of Health and Human Services 6 tier plan.

A. Tier 1: Hospital patient load has increased due to a local public health emergency or an influx of patients from another county, region, or state. A Tier 1 event may not overwhelm a hospital or hospital system. Hospital administration activates the hospital over-capacity plan.

B. Tier 2: A public health emergency occurs within Arizona or one of the surrounding states that requires more emergency department or inpatient hospital beds, or both, than available through a Tier 1 response. The Governor of Arizona declares a state of emergency. Hospital administration expands the number of emergency department or inpatient beds, or both, through the opening of centers on the hospital campus. Hospitals activate mutual aid agreements. Intra-region and ADHS coordination may be required.

C. Tier 3: A Tier 3 response to a major public health emergency event requires coordination and all available resources within the region as well as ADHS coordination of hospital and healthcare facility assets. The Governor of Arizona declares a state of emergency. A public health emergency that requires a Tier 3 response may instantaneously severely damage local infrastructure as the result of a natural disaster, or terrorist event. The public health emergency also may be slow building such as a bioterrorism event or a pandemic that may come in several waves. A public health emergency that requires a Tier 3 response ay be comprised of several Tier 2 events that together stress the regional healthcare system requiring Tier 3 planning to be implemented. Healthcare facilities and systems must be prepared to implement drastic measures to save and preserve life. A public health emergency requiring a Tier 3 response may impact on all the counties in a region.

D. Tier 4: A Tier 4 response is the consequence of a catastrophic event that totally overwhelms the local and region’s ability to respond. ADHS provides intrastate coordination of hospital and healthcare facility assets. The Governor of Arizona declares a state of emergency. Additional federal aid or assistance from other states may or may not be available or required. In most cases hospitals should not rely on external assistance for a minimum of 72 hours. The victims of a public health emergency that requires a Tier 4 response, especially one of sudden onset, will fall into one of four categories in decreasing order of severity: (1) those immediately killed, (2) those destined to die regardless of any care received, (3) those whose survival depends on timely and appropriate medical care, (4) and those who will live even without medical attention. A community response network considers off campus center sufficiency of care compared to hospital standard of care for diagnosis, treatment, and transfer policy and procedures.

E. Tier 5: A Tier 5 response is the process by which Arizona and other states assist one another and coordinate management and response activities during times of crisis. The Governor of Arizona declares a state of emergency. Response efforts include all state agencies that oversee emergency management, public health, and public safety emergency preparedness and response. Collaborative efforts between Arizona and other states promote system-wide consistency in response strategies and ensure optimal utilization of available health and medical resources. The basis for an effective regional response is an open exchange of information, incident management coordination, and mutual aid support. The community response network considers off campus center sufficiency of care compared to hospital standard of care for diagnosis, treatment, and transfer policy and procedures.

F. Tier 6: A Tier 6 response is a federally declared emergency or an Incident of National Significance under Emergency Support Function #8 of the National Response Plan (NRP). The federal government may also authorize aid under the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The federal response is coordinated with Arizona’s response by the Department of Homeland Security (DHS) through the Federal Emergency Management Agency (FEMA) and the Department of Health and Human Services (HHS). The National Disaster Medical System (NDMS) may also be mobilized to provide increased medical support. During a pandemic the NDMS most likely will not be available because the teams consist of medical personnel from other states also involved in the pandemic. The community response network considers off campus center sufficiency of care compared to hospital standard of care for diagnosis, treatment, and transfer policy and procedures.
### Table 1. Hospital Surge Capacity and Capability Plan (HSCCP) Tier system

<table>
<thead>
<tr>
<th>Event Size</th>
<th>Increased</th>
<th>Large Scale</th>
<th>Surge Capacity</th>
<th>Extreme Surge Capacity</th>
<th>Far above Surge Capacity</th>
<th>Catastrophic Incident</th>
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</thead>
<tbody>
<tr>
<td><strong>Conditions</strong></td>
<td></td>
<td></td>
<td>Arizona Governor Declaration of State of Emergency</td>
<td>Presidential Declaration of State of Emergency</td>
<td>Overwhelmed situation with federal assistance required</td>
<td></td>
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<tr>
<td><strong>Localized incident</strong></td>
<td>Resulting in patient load increase.</td>
<td>Local hospitals activate mutual aid agreements. Intra-region and ADHS coordination may be required.</td>
<td>Intra-region coordination required as mutual aid provided by other resources within the region. ADHS coordination required to integrate hospital and healthcare assets with other response disciplines.</td>
<td>Intrastate coordination and mutual aid provided by other regions in Arizona with ADHS coordination of hospital and healthcare assets.</td>
<td>Interstate coordination and mutual aid provided by other states to support Arizona.</td>
<td></td>
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<table>
<thead>
<tr>
<th>Surge Level</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
<th>Tier 4</th>
<th>Tier 5</th>
<th>Tier 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resources</strong></td>
<td>Activation of hospital(s) over capacity plan(s).</td>
<td>Activation of litter use to establish on-campus centers.</td>
<td>Coordination of tactical mutual aid between jurisdictions within the region. All medical resources brought to areas of greatest need. State assets may be required by on-campus centers.</td>
<td>Full range of State health and medical resources are brought to bear. State assets required by off-campus centers.</td>
<td>Off campus center overflow. Assets from other states required by off-campus centers.</td>
<td>Off campus center overflow. DMAT, DMORT, NDMS support required.</td>
</tr>
</tbody>
</table>
G. **Conditions for Implementation:**

This plan will be implemented in response to a public health emergency resulting from terrorist action, natural disaster, or man-made catastrophe within the State of Arizona.

H. **Agencies that may be Assisting:**

(1) The National Disaster Medical System (NDMS) is a section within the U.S. Department of Homeland Security, Federal Emergency Management Agency, Response Division, Operations Branch, and has the responsibility for managing and coordinating the Federal medical and mortuary affairs response to major emergencies and Federally declared disasters.

   (a) Disaster Medical Assistance Teams (DMAT) a group of medical and support personnel designed to provide emergency medical care during a disaster or other unusual event. Up to 3 DMATS can be deployed within 24 hours to a disaster site. To supplement the standard DMATs, there are highly specialized DMATs that deal with specific medical conditions such as crush injury, burn, and mental health emergencies.

   (b) The National Medical Response Team (NMRT) is a specialized response force designed to provide medical care following CBRNE incidents. This unit is capable of providing mass casualty decontamination, medical triage, primary and secondary care to stabilize victims for transport to tertiary care facilities in a HAZMAT environment. There are four NMRTs tasked to support the NDMS.

   (c) Disaster Mortuary Operational Response Teams (DMORT) are composed of funeral directors, medical examiners, coroners, pathologists, forensic anthropologists, medical records technicians and transcribers, finger print specialists, forensic odontologists, dental assistants, x-ray technicians, mental health specialists, computer professionals, administrative support staff, and security and investigative personnel to provide victim identification and mortuary services. There is only one WMD DMORT that can process contaminated remains.

(2) Centers for Disease Control and Prevention (CDC) may provide response teams and laboratory support to the affected region.

(3) The American Red Cross (ARC) and/or the Salvation Army, while not providing for healthcare, does provide for mass care assistance and support, when a disaster event exceeds the resources and capacity of state and local responders.

(4) Department of Defense (DOD) has several units that may assist civilian authorities under the National Response Plan (NRP). DOD medical assistance must be requested through the Principal Federal Agency charged with disaster relief subject to approval by the Secretary of Defense.

   (a) Under the NRP, U. S. Army Corps of Engineers are required to provide disaster relief during a declared emergency or an incident of National Significance.

   (b) As directed by the President or the Secretary of defense, the United States Northern Command (USNORTHCOM) provides military assistance to civil authorities, including consequence management operations.

      i. Natural Disaster Relief
      ii. Military assistance to civilian disaster organizations
      iii. Oil and hazardous substances incident and emergencies
      iv. Public health emergencies
      v. Technological and manmade disaster relief
      vi. CBRNE support including DOD’s incident management assistance for CBRNE events.

   (c) Joint Task Force Civil Support (JTF-CS) plans and integrates DOD support to the designated Lead Federal Agency for domestic CBRNE consequence management operations. When directed by the Commander of USNORTHCOM, JTF-CS will deploy to the incident site, establish command and control of designated DOD forces, and provide military assistance to civil authorities to save lives, prevent injury and provide temporary critical life support.

(5) Other Agencies as directed by the Federal Government under the activation of the NRP.
I. Hospital Assumptions:

1. The combined expertise and capabilities of government at all levels, the private sector, and nongovernmental organizations may be required to prevent, prepare for, respond to, and recover from a public health emergency.
2. Adequate staff may or may not be available at the hospital and local levels for providing healthcare during public health emergency in the State of Arizona.
3. The Governor, the Arizona State Public Health Officer, and ADHS staff will manage public health and medical support requirements.
4. Surge capacity may require a temporary redirection of personnel and financial resources from other programs.
5. In most cases, outside federal support will not begin to arrive into the public health emergency zone to assist hospitals for a minimum 72 hours into the incident.
6. Casualties may or may not be contaminated by a CBRNE or hazardous material.
7. The incident could involve CBRNE or other hazardous materials.
8. Biological weapons of mass destruction (WMD) may or may not be infectious (transmitted from human-to-human). If the pathogen (such as Bacillus anthracis) is not transmitted from human-to-human then the event will not spread and become an epidemic. If the pathogenic event is an infectious biological agent such as smallpox (variola virus) then it may become an epidemic or even a pandemic.
   a. The infectious disease outbreak may or may not be a natural event.
   b. There may or may not be an outbreak even if the disease is spread person-to-person.
   c. The first set of cases will be in one place (the origin of the exposure), however the secondary infection will spread will be to family members, workers, other people of casual (unknown contact), etc. of those contacting the primary set of cases. The cases will become non-localized to place, however, time (incubation period) should be somewhat consistent (number of days after the initial exposure to the primary individuals).
   d. There is a chance of the outbreak becoming an epidemic even proceeding to pandemic level.
9. Hospitals normally request patient remains be retrieved by local funeral homes; however, the local funeral homes may or may not accept the remains. Hospitals may or may not have to store remains until the Arizona Mass Fatality Response Plan can be implemented or the local Medical Examiner can find cold storage.

III. MISSION:

A. Planning Factors:

1. Planning factors for support of the hospital efforts following an ADHS declared public health emergency must consider available commercial resources as well as local and state assets.
2. Availability of assets and facilities at, or close to hospitals during the public health emergency. These planning factors should include:
   a. Transportation, to include commercial, federal, state, county, city, and tribal systems may be needed for, evacuation, patient movement, and rapid transport of vital medical supplies from the Federal Emergency Management Agency (FEMA) airhead, or other logistics support centers.
   b. Security measures required to protect the hospital and to deliver medical supplies.
   c. Capabilities of the county or region and other privately owned agencies to expand response or increase in Tier response as the situation dictates.

IV. EXECUTION:

ADHS may receive a request for assistance from federal, state, county, and local agencies. The request may be for assistance within Arizona, to assist a neighboring state, or to augment federal support to another state, tribal government or U.S. Territory. ADHS will issue alerts, notices and bulletins to hospitals, local health departments, and other healthcare providers as required by the situation.

Key tasks that hospital administration will need to address through Tier 1 through Tier 6 depending on the public health emergency and impact on the hospital community are listed below.
A. **Key Tasks: Planning and Coordination:**

1. Activate HEICS and open the hospital command center.
2. Implement surveillance procedures as determined by the local health department and ADHS.
3. Use mutual aid agreements with other hospitals and health care agencies for additional medical supplies and equipment, pharmaceuticals, personnel, and transfer arrangements.
4. Arrange for delivery of essential goods and services, specifically, regular and disposable linen, hospital beds, additional food for patients and staff, portable negative air machines and HEPA filters, potable water and water purification equipment, and diesel fuel for the emergency generator.
5. Implement policy and procedures for patient registration and tracking, and routing and maintenance of medical record documentation when receiving a large influx of patients.
6. Coordinate with school nurses and school-based clinics, long term care facilities, home health agencies, mental health facilities, and urgent care centers.
7. Identify special patient population requirements and advise local health departments of available equipment and shortages. The special patient population includes elderly, pediatric, pregnant women, physically disabled, and behavioral health patients.
8. Manage safe disposal of increased volume of medical waste.
9. Manage unsolicited donated items.
10. Increase hospital morgue capacity with alternate storage locations; coordinate fatality management with the local Medical Examiner with legal jurisdiction.
11. Coordinate communications between the hospital Public Information Officer (PIO) and the Joint Information Center (JIC).
12. Initiate recovery plan for financial and medical records, information systems, and restoration of supply inventory, including tracking of all expenditures caused by the event.
13. Initiate plan for clean up, salvage, garbage and waste disposal, equipment and physical plant restoration.

B. **Key Tasks: Communication systems**

1. Implement procedures for receiving and distributing notifications, alerts, and activations from state and local agencies.
   (a) EMSsystem
   (b) Health Alert Network (HAN) including the Secure Integrated Response Electronic Notification (SIREN)
2. Use redundant communication systems according to established procedures if landlines, fax machines, cellular phones, and paging systems are inoperable.
   (a) Emergency Medical Systems Communications (EMSCOM)
   (b) 800 MHz radio system
   (c) RACES
   (d) Satellite telephones
   (e) Satellite intranet
   (f) Telem ecology network
3. Use automated system for group notification of a potential disaster
4. Establish a long term waiting area for patients’ families with access to information and counseling services.
5. Obtain translators and deaf interpreters.
6. Manage increased volume of telephone calls to hospital switchboard; confirm procedures for release of information and referral to external agencies.
C. **Key Tasks: Security**

(1) Determine need for total lockdown of hospital and notification of local law enforcement.
(2) Establish communication with individuals immediately outside established perimeter if hospital is in total lockdown.
(3) Provide staff access to hospital during lockdown separate from emergency department and decontamination activity.
(4) Establish control of access and egress if lockdown not indicated by the event.
(5) Confirm control of internal access to the emergency department, inpatient areas and support departments within hospital.
(6) Confirm control of access to outdoor air intakes and mechanical rooms.
(7) Provide onsite capability to produce photo identification for all staff including physicians and supplemental personnel.
(8) Verify need to augment hospital security, especially if local law enforcement unavailable, and obtain additional security personnel if needed.
(9) Establish crowd control on hospital campus.
(10) Establish routing of traffic to triage and decontamination areas.

D. **Key Tasks: Personnel**

(1) Determine current staffing capability and additional requirements for increased volume and acuity of patients. Additional staffing needs may be for a short duration for a CBRNE event and long term up to two months or more during a pandemic event.
(2) Provide credentialing and supervision of clinicians not normally working in the hospital (physicians, registered nurses, pharmacists, respiratory therapists).
(3) Use agreements with educational institutions to obtain personnel, both faculty and students.
(4) Manage unsolicited offers of help from undocumented clinicians.
(5) Implement the preparedness plan for families of staff.
(6) Provide housing and feeding of staff unable to leave the hospital.
(7) Develop a staffing plan to afford staff time off to allow a return to normal family routine if staff over worked for long periods.

E. **Key Tasks: Decontamination and use of personal protective equipment**

(1) Decontamination
   (a) Authorize implementation of decontamination procedures.
   (b) Maintain patient privacy during decontamination process.
   (c) Provide sufficient space for processing and triage of patients.
   (d) Provide security for patients and staff during decontamination process.
   (e) Monitor procedures according to the hospital decontamination plan.
   (f) Monitor hot and cold water supply, especially for special population patients.
   (g) Establish emergency power and lighting at the decontamination site if required.
   (h) Provide radiation monitors at the decontamination site.
   (i) Establish and monitor effluent (runoff) collection procedures.
   (j) Track contaminated and decontaminated patients through the process.
   (k) Establish procedures for collection of personal effects and clothing according to law enforcement requirements if the public health emergency is determined to be a crime scene.
   (l) Establish procedures for managing law enforcement weapons during the decontamination process.
   (m) Provide decontamination procedures for special population patients, specifically, pediatric, pregnant, elderly, chronically ill, and disabled patients.
   (n) Provide decontamination procedures for animals and pets. Local Animal Control, Humane Society, and animal shelter assistance may be required for animal restraint and or decontamination assistance.
(2) Determine PPE requirements:
   (a) Initiate hospital policy and procedures for use of PPE (Level C, N95 and surgical masks), storage, and preventive
       maintenance.
   (b) Obtain access to documentation of training and fit testing during an event.

F. Key Tasks: Pharmaceutical:

   (1) Conduct inventory of medications of choice and alternate medications to obtain a minimum supply for 3 days
       prophylaxis for designated employees and their families. Report inventory and shortages in medications and
       administration supplies to the local health department.
   (2) Implement dispensing of prophylaxis and vaccination procedures as indicated by the event to staff and their families.
   (3) Receive and distribute medications and administration supplies from other sources, including the Strategic National
       Stockpile.
   (4) Initiate protocols for dispensing of drugs to asymptomatic and symptomatic patients as well as prophylaxis to patient
       family members.

G. Key Tasks: Hospital laboratory:

   (1) Comply with special protocols and packaging for sampling CBRNE as directed by the State Laboratory.
   (2) Alert the Arizona State Laboratory if samples are being sent and method of transportation.
   (3) Manage clinical specimens if laboratory is contaminated or overwhelmed by a large influx of patients.

H. Key Tasks: Patient Transfer

   (1) Implement patient triage, transfer, and discharge procedures to create open beds.
   (2) Implement arrangements to transport patients to other healthcare facilities and initiate tracking procedures.
   (3) Distribute instructions for home care specific to the agent or event during a public health emergency in case large
       numbers of patients are unable to be admitted due to resource limitations.
   (4) Initiate plan for processing prescriptions for discharged patients.
   (5) Implement procedures to evacuate the hospital in a disaster.
   (6) Plan for medical evacuation of patients to out of state locations.
   (7) Plan for receiving patients that have been sent to hospitals out of region or out of Arizona.

I. Key Tasks: Alternate Care Site

   (1) Work with county, region, and state agencies to open an off campus center, obtaining: medical, nursing, and ancillary
       staff, security personnel, medical record and patient tracking systems, equipment and supplies, medical waste pickup,
       pharmaceuticals and facility maintenance.
   (2) Prepare to receive patients arriving at the center, possibly by alternate methods of transportation (busses, vans, etc.)
       Confirm location for ease of transferring patients.
   (3) Communicate with other hospitals and first responders regarding patient transfers once security is in place at each
       facility.
   (4) Implement plan to incorporate DMATs and DMORTS into system of hospital and off campus centers in coordination
       with county, region, and ADHS.